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## CHAPTER 3

### Depreciation and Depletion

THIS CHAPTER IS CONCERNED WITH THE PROBLEMS AND TECHNIQUES of writing-off the book value of assets subject to depreciation and depletion. In the detailed discussion to follow, the importance of the basis of depreciable property, treated in the preceding chapter, must not be overlooked. Unfortunately, the relative importance of these two sources of differences in income cannot be determined from the statistics. This and the preceding chapters must then, in a sense, be considered as constituting parts of the same subject—a discussion of differences in the treatment of depreciable and depletable assets.

In the course of almost any business undertaking, some of the productive property will inevitably have a limited service life. Productive property is ordinarily acquired in exchange for a valuable consideration and recorded as an asset to the extent of its cost. The difference between the original cost of property and the amount, if any, received for it when it is finally sold or scrapped is part of the cost of holding and using in production. This cost cannot be accurately measured until the property is finally disposed of. But any interim measurements of the profitability of the enterprise and any measurements of production costs that ignore this gradual exhaustion will be seriously misleading. The function of depreciation accounting is to allocate to each period its proper share of the

cost of holding productive property that has a limited service life.<sup>1</sup>

The limited service life of productive property is attributable to many factors. Most obvious is the ordinary wear and tear which eventually makes it more economical to buy new equipment than to continue to use old equipment. New inventions may so increase efficiency that it becomes desirable to scrap existing machinery before its normal useful life has expired; or the market may change in such a manner that different methods and equipment have to be adopted even though the existing ones were suitable for a previously existing volume or type of production. This situation often arises when an expanding market makes it possible to use automatic or special purpose machinery instead of hand-controlled or general purpose machinery. In somewhat similar fashion, it may become desirable to use a single larger though similar unit instead of operating an additional small unit; e.g., in a generating plant. Other types of property, e.g., patents and copyrights, may have a limited service life because they consist of terminable legal rights.

Since the service life of depreciable property usually depends upon a great many factors, known and unknown, in many cases it is difficult if not impossible to estimate accurately in advance. But the probable inaccuracy is no excuse for ignoring depreciation, because even an incorrect estimate is preferable to complete omission. The total profitability of an enterprise cannot be known until it is finally wound up and the amount realized on the disposition of capital assets determined. Imperfect though they are, estimates of costs and profits are absolutely essential as a basis for current action.

The principal differences between tax and business accounting for depreciation may be resolved into those which cancel out over a period of years (e.g., simple differences in the rates

<sup>1</sup> For a discussion of the development of the meaning of depreciation see Accounting Research Bulletins, No. 16 (1942), No. 20 (1943), and No. 22 (1944), Reports of the Committee on Terminology.

of depreciation applied), and those which do not balance out over time (e.g., the possible treatment for business purposes of extraordinary obsolescence or the loss or gain on the retirement of property as direct charges or credits to surplus while for tax purposes they are carried through the income account and included in the determination of taxable income). Also, some assets that are not recognized as depreciable property for tax purposes may be depreciated or amortized for business purposes. The varying long run effects of differences in basis were described in the preceding chapter.

Divergences in income figures arising from different methods of depreciation may be expected to balance out unless they indirectly influence aggregate income through gain or loss on final retirements. Changes in the estimates of useful life, the treatment of which is prescribed for tax purposes, may or may not give divergences between taxable and business income figures, depending upon which of several business accounting procedures is adopted. During the period when losses on retirement were included in capital losses and allowed only in part, taxable income would almost inevitably differ from book income for companies subject to the loss limitation. Likewise, the tax policy of not permitting depreciation allowable in an earlier year to be made up in a later year will presumably yield different total income figures for companies affected by the restriction.

One accountant who reviewed this manuscript noted, even in connection with the statistical results in Part Two, the importance of the practice of the Bureau of Internal Revenue as well as of the regulations and the litigated cases. The tendency of Bureau of Internal Revenue personnel to question and alter depreciation figures is a subject of recurring complaint by businessmen. In the frequent situations when litigation is not deemed worth while, amended returns will commonly be filed for the later years that are still open. Differences of this sort are not revealed in the statistics, but are of great concern to

those involved in the cases, even though the differences may wash out over the years.

#### A TAX TREATMENT OF DEPRECIATION

The tax laws, beginning with the 1909 Act, have allowed a deduction for depreciation in computing net income. The Internal Revenue Code, Section 23 (1) provides for the deduction, in computing net income, of

“a reasonable allowance for the exhaustion, wear and tear of property used in the trade or business, including a reasonable allowance for obsolescence.”

Regulations 111, Section 29.23 (1)-1, states that the proper allowance for depreciation is the amount that should be set aside for the taxable year in accordance with a reasonably consistent plan (not necessarily at a uniform rate) whereby the aggregate of the amounts so set aside, plus the salvage value, will equal the cost or other basis of the property at the end of its useful life in the business.

The recovery of the cost or other basis of property subject to depreciation is made through what may be termed ordinary depreciation, through extraordinary obsolescence, and through charges for losses on retirement. These three charges are distinguished clearly for tax purposes and each is covered separately below.

Despite this customary allowance for depreciation in all the tax laws, the general theory of the courts has been that as a matter of constitutional necessity neither depreciation nor depletion is an *essential* deduction in determining taxable income. Although from the accounting standpoint depreciation and depletion are elements of cost that must be provided for before there can be said to be any gain,<sup>2</sup> the concept of the courts is in sharp opposition. When the question is of the sale of a capital asset, the courts recognize that income is only the excess of the amount received over the cost or other basis of

<sup>2</sup> G. O. May, *Twenty-Five Years of Accounting Responsibility*, II, 273.

the asset.<sup>3</sup> But when the question is of a deduction, depreciation and depletion are not thought of as costs that must be deducted before income constitutionally subject to taxation can be determined. Gross income, before the allowance of any deductions for depletion or depreciation, is considered taxable; depreciation and depletion, together with other deductions, are held to be matters of legislative grace and discretion.<sup>4</sup> In practice, of course, Congress has always allowed a full deduction for depreciation and in the last twenty years, an extraordinarily generous deduction for depletion.

Even though the accounting and tax practice may not diverge widely, the difference in fundamental theory is important. Since from the tax angle depreciation is considered a matter of grace, not a constitutional necessity, the deduction can be conditional, modified, or even disallowed. The continuing vigor of the tax theory that depreciation is a matter of grace appears in a Supreme Court decision of 1934, with the observation that "unquestionably Congress has power to condition, limit, or deny deductions from gross income in order to arrive at the net it chooses to tax".<sup>5</sup>

### *Nature of Depreciable Property*

Depreciation is allowed with respect to certain kinds of property, both tangible and intangible. The necessity for the allowance on tangible property arises from the fact that certain tangibles gradually approach a point where their usefulness in the trade or business is exhausted; the allowance is confined to this type of property. Depreciation is therefore not allowed on

<sup>3</sup> *Doyle v. Mitchell Brothers*, 247 U.S. 179 (1918).

<sup>4</sup> See discussion in *Magill*, op. cit., Ch. 9. The question has arisen particularly with reference to depletion.

<sup>5</sup> *Helvering v. Independent Life Insurance Company*, 292 U.S. 371. The Court held under the 1921 Act that when a life insurance company occupied in whole or in part a building that it owned, no depreciation could be taken on the building unless the company returned as income the rental value of the space occupied. The Court admitted that the rental value of property occupied by the owner was not taxable income, but held that the right to take a deduction for depreciation could be conditional.

land, stock in trade, or inventories. On assets such as oil and gas wells, the tangible physical property, other than natural resources, is depreciable. Intangible drilling costs, i.e., the costs of the 'hole in the ground' as distinguished from the costs of physical structures, may be capitalized or treated as expense at the option of the taxpayer; if capitalized, all costs are depletable except the installation costs of casing, equipment, derricks, and other physical structures, which may be depreciated. Intangible drilling costs are often taken as expense for tax purposes but capitalized for book purposes; individuals familiar with the oil and gas industry report that this practice causes substantial divergences between taxable income and book profit.

Natural resources, as in mining and oil properties, are subject to a separate depletion allowance distinct from that for depreciation. Tangible physical property involved in the process of extracting natural resources, however, is subject to depreciation.<sup>6</sup>

The statute restricts the deduction to property used in the trade or business. Therefore a building or plant in the process of construction is not a depreciable asset; but depreciation is allowed on idle plant, since for income tax purposes it is regarded as used in the trade or business.

Depreciation is applicable only to assets with a limited useful life. The useful life of most tangible assets, except land, is clearly limited by natural forces. Intangible assets, on the contrary, do not necessarily have a limited useful life and a gradual loss in value. Depreciation is allowed only on intangibles that have a specifically limited life period, such as patents, copyrights, licenses, and franchises, and intangibles known from experience to have a limited useful life.

Among the intangibles not subject to depreciation for tax purposes are goodwill, organization expense, trade names, trade brands, subscription lists, and rights to royalties [Reg.

<sup>6</sup> For the distinctive optional treatment provided for intangible drilling costs on oil properties, cf. Sec. D, last paragraph.

111, Sec. 29.23 (1)-3]. Their life is of indefinite duration; although exhaustion may be taking place, it cannot be measured.

### *Ordinary Depreciation*

#### 1 *Methods of computation*

The Bureau of Internal Revenue has never prescribed methods of charging off depreciation. According to Regulations 111, Section 29.23 (1)-5, "the capital sum to be recovered shall be charged off over the useful life of the property either in equal annual instalments or in accordance with any other recognized trade practice, such as an apportionment of the capital sum over units of production."

The essential requirements of the Bureau are that, whatever method is adopted, it must be reasonable and administratively practicable, and must be consistently used. The simplicity of the straight-line method, in which the annual charge is determined by dividing the total sum to be recovered by the number of years in the estimated useful life of the property, makes it administratively desirable. While it is the method most generally used in computing depreciation for tax purposes, other methods are preferred if they more accurately reflect actual depreciation.

Since the actual use of property for certain purposes varies greatly from year to year, particularly in industries especially influenced by cyclical fluctuations, some method of relating computed depreciation to use may be more accurate. This can be done by estimating the useful life in terms of either the total number of units to be produced or the hours to be worked, and taking depreciation on the basis of units produced or hours worked. The Bureau of Internal Revenue has, however, narrowly limited the application of the unit of production method, restricting it largely to "property used in the exploitation of natural resources, such as mineral deposits or timber, the available reserves of which limit the useful life of the depreciable property" (Bulletin F, rev., Jan. 1942). The job basis method, which allows as depreciation the difference between



the cost of special purpose machinery and its saleable value at the end of a job, has also been permitted for tax purposes.

Even if depreciation is not related to activity in some formal system, it is often desirable to accelerate depreciation when a company is unusually active. Ordinary wear and tear is a function of use as well as of time, and may be expected to increase as operations are put on a two- or three-shift basis. In fact, wear and tear may increase more than proportionately, both because the extra labor force is likely to be less skilled and because maintenance work is likely to be less effective. However, if technical obsolescence is the crucial factor in fixing the date of retirement, accelerated depreciation is not justified by abnormal activity.

The diminishing or declining balance and the sinking fund methods of calculating depreciation have been more discussed than used in this country. Both are discouraged for tax purposes.<sup>7</sup> In the diminishing balance method, a constant rate is applied each year to the remaining undepreciated cost of property, that is, each year's depreciation in effect reduces the balance in the property account; and this diminishing balance is written off at a constant rate. The depreciation charge is lower in each successive year, and though the property is never fully written off, the balance remaining upon retirement may be expected to approximate the salvage value. An advantage claimed for the diminishing balance method is that it shows high depreciation when property is new and maintenance and repairs are low; in later years when repair expense is high, depreciation will be lower. Since the combined cost of holding and using the property consists of depreciation plus main-

<sup>7</sup> According to I.T. 2369, Cumulative Bulletin VI-2, p. 63 (1927), the Bureau of Internal Revenue would neither approve nor disapprove the diminishing balance method prior to audit of a return. It has been both approved and disapproved by the Board of Tax Appeals. Two professional experts who reviewed this manuscript commented on the recent change in Treasury policy to approve the method when it is regularly used by the taxpayer in its books and results in a reasonable depreciation allowance. See I.T. 3818, Internal Revenue Bulletin 19, p. 5 (Sept. 23, 1946).

tenance and repairs, the decrease in depreciation offsets the increase in repairs and gives a relatively steady figure over the years.

In the sinking fund method, the annual charges are so established that, at an assumed rate of interest, they would build up to the amount to be recovered at retirement. This gives an increasing total annual charge, since the assumed interest is considered part of the depreciation expense.

The discussion thus far has been pertinent to a system in which each item of depreciable property is listed and separately accounted for. It has become increasingly common to keep detailed plant records for control and cost purposes as well as to ensure greater accuracy in the general accounts. If, however, several similar units with similar life expectancies are owned, they may be grouped for purposes of depreciation. A single rate based on the estimated normal useful life of the property will allocate the total cost reasonably. The routine retirement of a single unit before its estimated life-span is up will not justify a loss deduction, because some units may well be used for shorter and some for longer periods than the estimated period. The depreciation charge and reserve must be considered as applying against the whole group of separate items.

Items of property with different estimated useful lives may be grouped together though, for purposes of depreciation, the Bureau of Internal Revenue considers depreciation by items; or by groups of items having practically identical physical characteristics and length of life, to be the soundest method of accounting. Composite rates applied to property as a whole are ordinarily discouraged but have been used extensively in the past and are still found. One strong objection to them is the difficulty or impossibility of determining whether depreciation in excess of 100 percent is being recovered.<sup>8</sup> When depreciation is computed for groups of items having general similarity of physical characteristics and expected life-spans, the rate is pre-

<sup>8</sup> See the discussion of Bureau of Internal Revenue policy in Bulletin F (revised, Jan. 1942).

sumed to be an average rate; losses on the normal retirement of assets are therefore not allowable as a deduction since an average rate precludes the determination of loss until all the assets in the group have been retired.

Beyond the general requirement that the method of computing depreciation should be reasonable, the tax law imposes certain broad restrictions. A major requirement, obviously necessary for tax purposes, is that no deduction for depreciation can be allowed after the cost of the property has been fully recovered through prior depreciation allowances. A further requirement is that each year must stand by itself: the taxpayer cannot take depreciation in one year that should have been deducted in another year. Both requirements are met by adherence to the rule that the basis for depreciation must be reduced by the depreciation allowed (but not less than the amount allowable) in preceding years.

## 2 *Rates*

Theoretically, depreciation rates are fixed so as to return over the useful life of the property the difference between its cost and its salvage value. Based on expected useful life, the depreciation rate includes an allowance for 'normal' obsolescence; i.e., obsolescence arising from a gradual reduction in the usefulness of a property due to the accumulated effect of small improvements or changes.<sup>9</sup> The tax law distinguishes sharply between normal and extraordinary obsolescence which is caused by a radical change in the industry. Normal obsolescence must be deducted, if at all, in the annual depreciation allowance.<sup>10</sup> Extraordinary obsolescence, being much less subject to prior estimate, is not covered by the depreciation allowance.

Until 1931 the Bureau had no guide for determining rates that would ensure approximately uniform treatment to all tax-

<sup>9</sup> See Bulletin F (revised, Jan. 1942), Introduction, paragraph 4. Similar statements appear in earlier editions.

<sup>10</sup> Appeal of Benjamin Booth and Company, 4 B.T.A. 248 (1926).

payers. A study of depreciation rates, begun by it in conjunction with trade associations and business organizations, culminated in January 1931, with the issuance of the 'Depreciation Studies'. Bulletin F, revised at the same time, also contained specific depreciation rates. Revised again in January 1942, it is currently used, though the rates are not prescribed by the Bureau; they merely represent substantially correct rates under normal conditions. The proper rate for any one taxpayer depends upon the particular use to which the property is subjected and upon the repair policy. Under the present law the taxpayer has the burden of proof to substantiate the deduction, and therefore the rate, claimed. Nevertheless, the rates of the depreciation studies remain as guideposts in determining the proper rate for any particular taxpayer.

3 *Change in Bureau of Internal Revenue Policy in 1934, T.D. 4422*

In the early days of the income tax, inadequate attention was given to depreciation and there was little uniformity in field practice. In 1934 legislative proposals were made to reduce arbitrarily all depreciation allowances by some uniform rate, for example, 25 percent. Treasury officials said they believed administrative changes could produce similar increases in revenue and do so more equitably. T.D. 4422, issued later in the year, indicated the nature of the administrative changes.<sup>11</sup> Although the new regulations did make certain changes in practice, their real importance lay not in any change of method but in the evidence that the Bureau of Internal Revenue was tightening its depreciation policy.

The specific changes were several. The burden of proof was placed squarely on the taxpayer to sustain the deduction claimed. The deduction was stated to be the ratable amount necessary to recover the unrecovered cost or other basis during the remaining useful life of the property. The importance of this provision lies in the method of allocating the unrecov-

<sup>11</sup> T.D. 4422, Cumulative Bulletin, XIII-1, p. 58 (1934).

ered cost when there is a change in the estimate of the useful life of property, discussed in the next section. A further change associated with the Treasury Decision, though actually announced several days later in an explanatory ruling, established the requirement for schedules on depreciable property and limited deductions for losses on retirement when composite rates were used.<sup>12</sup>

*Effect of Changes in Estimates of Useful Life*

The present rule is as stated above: the depreciation deduction for any year shall be limited to the ratable amount necessary to recover during the remaining useful life of the property the unrecovered cost or other basis.<sup>13</sup> If the useful life of the property is re-estimated, the depreciation deductions for preceding years are undisturbed and the deductions for subsequent years are so fixed as to spread the unrecovered cost over the re-estimated useful life. A larger or smaller depreciation for later years does not necessarily mean that the depreciation taken in the early years was incorrect.<sup>14</sup> The procedure may be clarified by a simple illustration. If a piece of equipment is originally believed to have a useful life of ten years, it will be depreciated at 10 percent per year on a straight-line basis; no salvage value is assumed. At the end of five years the depreciation reserve would be 50 percent of cost. If at that time it is realized that the equipment still has a useful life of ten years, or a total of fifteen, the rate would be reduced to 5 percent. Total depreciation would equal 100 percent—the first five years at 10 percent and the last ten years at 5 percent. The reverse of this situation may be illustrated by a case with an original life estimate of fifteen years and a depreciation rate of  $6\frac{2}{3}$  percent. At the end of five

<sup>12</sup> Mimeo. 4170, Cumulative Bulletin, XIII-1, p. 59 (1934).

<sup>13</sup> Regulations 111, Sec. 29.23(l)-5. This provision first appeared in the regulations after the amendment made by T.D. 4422. There is some difference of opinion whether the provision was an actual change or merely a clarification of previous practice. For a contemporary discussion, see R. E. Paul and J. Mertens, Jr., *Law of Federal Income Taxation*, Sec. 20.31.

<sup>14</sup> Washburn Wire Company v. Commissioner, 67 F(2d) 658 (CCA-1st, 1933).

years, total depreciation would amount to  $33\frac{1}{3}$  percent. If at that time it is realized that the total useful life will be only ten years, the depreciation rate would be increased to  $13\frac{1}{3}$  percent for the remaining five years, giving a total depreciation of 100 percent—five years at  $6\frac{2}{3}$  percent and five at  $13\frac{1}{3}$  percent.

The changes in estimates of useful life may be so extreme as to justify a special deduction for extraordinary obsolescence. The provision of the Internal Revenue Code allowing a deduction for depreciation includes a "reasonable allowance for obsolescence".<sup>15</sup> 'Obsolescence' as used in the law and the regulations refers only to extraordinary obsolescence, since normal obsolescence, which arises from the gradual introduction of minor improvements and changes in the industry and is practically bound to occur, is treated as depreciation and included in determining the depreciation rate. The deduction for extraordinary obsolescence is in addition to the deduction for depreciation and is spread only between the time the process begins and the time the property becomes obsolete.<sup>16</sup> The purpose of the deduction for extraordinary obsolescence is to return the capital investment to the taxpayer over the commercially useful life of the property, irrespective of the asset's normal useful life. Extraordinary obsolescence is distinguished from normal obsolescence in that it includes such unusual and unpredictable events as revolutionary inventions, abnormal growth or development, radical economic changes, or other unpredictable factors which may force the retirement or other disposition of property before its normal useful life is spent.<sup>17</sup>

To obtain a deduction for obsolescence, the taxpayer must show substantial reasons for believing that an asset is in the process of becoming obsolete. No deduction is permitted merely because, in the opinion of the taxpayer, the property may become obsolete. Before the process of obsolescence has set in, the deduction cannot be allowed, for, at that time, any

<sup>15</sup> Sec. 23(1). The deduction for obsolescence was first provided in the 1918 Act.

<sup>16</sup> O.D. 381, Cumulative Bulletin (Income Tax Rulings) 2, p. 138 (1919).

<sup>17</sup> Bulletin F (revised, Jan. 1942), Introduction, paragraph 4.

loss from obsolescence is purely contingent; the general purpose of the tax law is to allow any losses that are sustained during the taxable year. A further requirement for the deduction is that the time when the asset will become obsolete must be known with a reasonable degree of certainty [Reg. 111, Sec. 29.23 (1)-6].

The law recognizes, however, that the amount of obsolescence properly chargeable to any year cannot be measured precisely. A reasonable approximation of the amount that may fairly be included in the accounts of any year is all that is required.

The distinction between deductions for obsolescence and loss of useful value upon the abandonment of assets [Reg. 111, Sec. 29.23 (e)-3], considered in the next section, is difficult to draw. Extraordinary obsolescence is distinguishable from normal obsolescence on the ground that it is not certain to occur, with the result that the loss is spread over only the period subsequent to a reasonable prediction of obsolescence, not over the entire useful life of the asset. The interval over which the deduction is spread may serve to distinguish also extraordinary obsolescence from loss upon the retirement of assets. While extraordinary obsolescence is spread over a shorter period than normal obsolescence, it ordinarily covers more than one year. On the other hand, a loss upon the retirement of assets is occasioned by a sudden termination of usefulness; the loss is recognized in one year rather than in several.

#### *Loss upon the Retirement of Depreciable Assets*

When depreciation is computed on groups of items having comparable life periods, the rate is presumed to be an average rate.<sup>18</sup> Losses on the normal retirement of the assets are not allowable. An average rate allows for the normal retirement of assets both before and after the end of the average life has been reached; therefore, any actual loss cannot be ascertained until

<sup>18</sup> Mimeo. 4170, Cumulative Bulletin XIII-1, p. 59 (1934).

all the assets contained in the account have been retired.<sup>19</sup> An exception to this disallowance of loss upon retirement is made when the taxpayer, by consistent practice, bases his depreciation rate on the expected life of the longest-lived asset in the account; in such a case the loss upon the retirement of the assets is allowed.<sup>20</sup>

Depreciable property may be disposed of, however, for reasons other than exhaustion, wear and tear, and normal obsolescence. When retirement is due to sudden obsolescence, casualty, or sale a deduction is allowed of the difference between the adjusted basis of the property and its salvage value or the amount realized upon its disposition. These losses are allowed only when it is clear that such disposition of the asset was not contemplated when the depreciation rate was set.<sup>21</sup>

If the loss is realized by a sale there is a closed transaction for income tax purposes. But the Bureau of Internal Revenue recognizes a loss on depreciable property also when it is not evidenced by a sale.<sup>22</sup> When, through some change in business conditions, the usefulness of certain assets is suddenly terminated and the taxpayer thereupon discontinues the business or permanently discards certain assets from use in the business, he may claim a loss in the amount of the difference between the adjusted basis of the assets and their salvage value [Reg. 111, Sec. 29.23 (e)-3]. When the loss is not evidenced by a sale, the taxpayer must give proof of some unforeseen cause by reason of which the property was prematurely discarded. Further, to obtain the deduction, the property must be permanently abandoned or permanently devoted to some other use.

<sup>19</sup> Losses upon normal retirement are of course disallowed also when a composite rate is used.

<sup>20</sup> Regulations 111, Sec. 29.23(e)-3. Mimeo. 4170.

<sup>21</sup> Regulations 111, Sec. 29.23(e)-3. See U.S. Industrial Alcohol, 42 B.T.A. 1323; affirmed CCA-2, 1943, 137 F(2d) 511, for a detailed discussion of the problems of determining basis in the case of special retirements under composite depreciation accounting.

<sup>22</sup> There are other exceptions to the general rule requiring a sale or other disposition of the property to establish a loss; see Section 23(g)(2), loss from worthless securities, and Section 23(k)(2), loss from bad debts evidenced by securities.



When depreciable property is discarded or abandoned, there has been no sale or exchange. Accordingly, limitations on the deductibility of capital losses do not apply.<sup>23</sup> In the 1934 Act the capital loss deduction was limited to the amount of capital gains plus \$2,000. At present corporations are not permitted to deduct a net capital loss, but are permitted a five-year carry-over. Prior to the 1938 Act any loss realized on a sale of depreciable property was subject to the capital loss limitations. An important change made by the 1938 Act was to exclude depreciable assets from the category of capital assets, with the result that the loss from the sale of depreciable assets, not being capital assets, became allowable in full.<sup>24</sup> In other words, losses from the retirement of assets, not foreseen when the depreciation rate was fixed, are allowable in full whether the losses are evidenced by a sale or by abandonment. This modification removed one cause for divergence between taxable and business income existing in the years covered by Part Two.

This treatment of losses on depreciable assets is now supplemented by a treatment favorable to taxpayers on gains from sales or exchanges and from involuntary conversion. Section 117 (j) of the Code, providing that recognized net gains from the disposition of property used in a trade or business shall be considered as gains from the sale or exchange of capital assets held more than six months, makes net gains subject to the favorable capital gains tax rates under the alternative method and exempts net losses from the restrictions applying to capital losses.

## B ACCOUNTING TREATMENT OF DEPRECIATION

As indicated in preceding sections, there is a reluctance to permit any deductions for tax purposes until it is certain that all the events justifying them have occurred. From the tax standpoint, the distortion of the annual reported income that may be occasioned is of no concern, and an assurance that deduc-

<sup>23</sup> Regulations 111, Sec. 29.23(e)-3. Earlier regulations state the same rule.

<sup>24</sup> Internal Revenue Code, Sec. 117(a).

tions will not be anticipated protects the immediate revenue and minimizes the risk that deductions may in some manner be taken more than once. But for business purposes, to postpone entirely taking deductions because of uncertainty concerning their precise timing and amount is highly inappropriate. It leads to a distortion of income and to a temporary overstatement of income and assets.

### *Nature of Depreciable Property*

For business purposes, depreciation is generally taken on any owned property that has a limited useful service life even though its exact length cannot be clearly foreseen. Depreciation cannot be taken on land, but can be taken on buildings and fixtures and on all types of tangible personal property, except that held for sale and included in inventory. Though, as for tax purposes, only intangible assets with a definite terminable life are usually considered subject to depreciation, other intangible assets are often amortized even though their useful life is not definitely fixed. The amortization of other intangible assets for business purposes is contrary to tax practice.

The difference between amortization and depreciation of intangible assets is purely verbal. Some intangible assets are amortized for conventional rather than purely logical reasons.<sup>25</sup> Organization expenses, for instance, are usually capitalized and carried as deferred charges in the early years of a business, because when a company is being organized there is no income against which they can be charged. But although the necessary outlay for organization expenses is of continuing value as long as the company remains in business, it is customary to write off organization expenses over a five-year or some other arbitrary period. Purchased goodwill is also frequently written off even when it may be presumed to be of continuing value. These write-offs are often made because of a traditional reluctance to show the assets as continuing balance sheet items. Neither

<sup>25</sup> For a discussion of amortization of different types of intangible assets see Accounting Research Bulletin 24, *Accounting for Intangible Assets* (1944).

charge would be permitted for tax purposes unless a definite termination of the use of the asset could be foreseen, for instance, if the purchased goodwill consisted of an agreement to refrain from competition for a specific period.

Amortization of organization expenses and ordinary purchased goodwill, if charged to income, will produce an understatement of income during the period of the write-off. In the subsequent period when income is relieved of this charge the company still has the benefit of being organized and the reputation or advantages of established trade connections represented by the goodwill. However, an understatement of income, on grounds of conservatism, has been considered less serious than an overstatement, even though the immediate understatement will give a specious appearance of improved profitability in later periods.

### *Ordinary Depreciation*

#### *1 Methods of computation*

The principal alternative methods of computing depreciation, described briefly above, Section A1, need not be repeated here. Straight-line depreciation is most common. Diminishing balance and sinking fund methods have occasionally been used for book purposes but not accepted for tax purposes. The major difference in method arises from retirement accounting by railroads and some public utilities. This is of such major importance that it is covered separately in Section C below.

The observations on group and composite depreciation methods in Section I should not be taken as indicating that at times annual depreciation charges have not been determined rather loosely. Even a single rate applied to items of property with greatly varying probable useful lives is not unknown. Increasing stringency in tax allowances, conspicuously that introduced by T.D. 4422, has kept pace with increasing care in depreciation calculations for book purposes. Annual reports, increasingly based on detailed plant ledger accounts, occasionally indicate both the methods used and the rates applied.

The influence of taxation on depreciation policy and practices has been commented on repeatedly. Some industries in certain regions found that their customary write-down of property to nominal value as rapidly as earnings permitted was not acceptable for tax purposes. Others did not become seriously interested in depreciation until its deductibility came to be of pecuniary significance. The relative importance of these contradictory forces has not been measured, nor would measurement be of great value. Nevertheless, a discussion of divergences between the tax and business treatment of depreciation would be incomplete without passing reference to the subject.

## 2 *Rates*

Any discussion of differences in depreciation rates applied in business and allowed for tax purposes would almost immediately become lost in detail; moreover, data on individual rates for specific items and classes of property are not available. In general, though, the tendency of the Treasury to postpone deductions until the evidence is conclusive runs counter to the traditional conservatism mentioned in the preceding paragraph. On the other hand, the monetary advantage of taking depreciation when it was allowed for tax purposes led to greater attention to depreciation in the early years of income taxation. Disagreement over proper rates has unquestionably been significant, though it seems likely that divergences arising from differences in basis and from depletion and retirement accounting have been more important in leading to differences in income arising from divergences in the treatment of depreciable assets.

Determination of a proper rate of depreciation requires a balancing of many significant factors. Estimates of the rate of wear and tear, policies of maintenance and replacements of parts, probabilities of steady technical progress and possibilities of sudden revolutionary technical changes, forecasts of market requirements in terms of quantity and design, the period of availability of raw materials, and changes in the gen-

eral price level influencing replacement costs are among the more obvious factors to be considered. Past records for standard items are most useful; judgment alone can assure a reasonable treatment of unique property. The figures desired are the best possible estimates of the probable useful life of the property and its salvage value at the end of that life. An underestimate, leading to overdepreciation, distorts income figures as seriously as does an overestimate.

#### *Effects of Changes in Estimates of Useful Life*

When the estimate of the useful life of depreciable property is changed, the most obvious manner of making adjustments is that required for tax purposes: to write off the remaining balance over the remaining period. It is also the most common manner for book purposes.

In the illustrations for tax requirements the original life estimate was first found to be too short, then too long. The total cost of the property was properly charged to operations in each situation by writing off the remaining balance over the remaining period. No single year would reflect the depreciation that would have been charged annually if the actual life had been correctly estimated from the beginning. In the first case, income would in fact be understated in the earlier years and overstated in the later years. In the second case, the early income would be overstated and the later income understated. The total income for the entire period of the property's use would be correctly stated, as far as depreciation was a determining factor, but the accuracy in the total would be attained by offsetting unintentional errors in early years by intentional errors in later years.

Other procedures may be preferable from a business standpoint though they would be unacceptable for tax purposes. Were it desired to record true depreciation in the later years after the revision in estimated life, total depreciation over the entire life of the property would be incorrectly stated. If a life estimate of ten years were, after five years, revised to fifteen

years, and depreciation taken for the final ten years at  $6\frac{2}{3}$  percent, total depreciation charged to income would be  $116\frac{2}{3}$  percent of cost. If an original estimate of fifteen years were, after five years, revised to ten years, depreciation for the final five years would be taken at 10 percent and the total depreciation expense would be  $83\frac{1}{3}$  percent. Under this method the reserve for depreciation would be adjusted in the year in which the life estimate was revised to bring the reserve to the amount it would have been had the true annual depreciation been known at the beginning. In the first illustration, the reserve would be reduced from 50 to  $33\frac{1}{3}$  percent at the end of five years; in the second it would be increased from  $33\frac{1}{3}$  to 50 percent. If the adjustment in the reserve were carried directly to surplus on the theory that it was a correction of a prior error, total reported income would reflect the excess or deficiency in total depreciation. The adjustment in the reserve might be carried through the income account as a special charge or credit not designated as depreciation, with full recognition that income in the year in which the correction was made would be distorted, but that total income, though not total depreciation, would be properly stated for the entire period in which the depreciable property was used, and that depreciation and income in the final years would be correctly stated. By running the adjustment in the reserve through the income account the unintentional errors of the earlier years would be offset by a single distorting charge or credit in the year when the error was discovered.

It is apparent that the choice among the various methods of adjustment for changes in estimates of useful life of depreciable property should depend upon the purposes for which income figures are to be used. If a common stockholder or an investment analyst places great reliance upon average earnings for a long period, the balancing of errors will be satisfactory, and the usual practice of writing off the remaining balance in the remaining period will be suitable. If the trend of earnings is

considered especially important, no method is altogether satisfactory, but an adjustment of the reserve and the use of true depreciation in the later periods is least misleading. If the current earnings in each year are relied on as a basis for action, any distortion of a single year will be unfortunate. Any interested party, stockholder or creditor, who uses current earnings as an indication of future earning power will be misled by an intentional distortion in later years to offset unintentional distortions in earlier years. Management also may be confused about the costs and the profitability of the enterprise and make unwise decisions on pricing, dividend policy, and plant replacement and expansion.

The precise distinction made for tax purposes between ordinary and extraordinary obsolescence is of little significance for business purposes. New and unexpected events may require and justify more rapid depreciation, and will in fact be likely to be taken into account even before assurance is great enough to meet the tax rules concerning certainty. The question whether the additional charge should be shown as a separate item on the income account or even carried directly to surplus will depend upon its relative importance and the point of view. The arguments on the relative merits of different procedures are similar to those described above on the routine adjustments of estimates of useful life. In the case of rather spectacular unexpected obsolescence, for example, cases arising from the suppression of the brewing and liquor industry in 1918 and 1919, or revolutionary changes in technology, the obsolescence charge is likely to be so large as to require special treatment.

The problem of adjustments for prior errors in estimating the useful life of depreciable property is likely to be acute in the present postwar period. Accelerated depreciation and special amortization were wisely allowed during the war because of the complete impossibility of calculating the length of the emergency or the subsequent use and value of emergency plants. If property was written off for tax purposes during the war, there is clearly no reason to allow additional depreciation

for tax purposes now, regardless of the use of the plants and equipment.

For business purposes, however, it may be highly desirable to make adjustments in the depreciation reserve and take normal depreciation over the remaining life, if any, of the emergency plants. For instance, if a single company with a fully depreciated plant rationally or irrationally ignores depreciation in its cost calculations and on the basis of low costs thus determined becomes a price leader in an industry, it may force other companies to cut prices to levels that yield them no profits, with disturbing effects on the postwar cycle. If the company with the fully depreciated plant follows the prices set by others in the industry, it will give a specious impression of unusual profitability as long as it can use its existing equipment. Full discussion of the actual method of handling depreciation, and of the alternative cost and profit figures that would be shown under different methods, would seem necessary to ensure wise action by management, government agencies, and investors.

This problem of plants that turn out to be greatly over or under depreciated was discussed briefly in the preceding chapter. Full consideration would raise many problems of price policy and cyclical behavior. It is enough here to note that depreciation is likely to be a major factor in divergences between taxable and business income for some time to come and to call attention to its broader implications.

### C RETIREMENT ACCOUNTING FOR RAILROADS AND PUBLIC UTILITIES

A single special reason is responsible for much of the divergence between taxable and business income in the railroads and public utilities group. Before corporation income taxation was introduced in 1909, railroads had traditionally carried depreciable assets at cost until they were physically retired, when their cost was charged as an expense of the current year. This procedure was sanctioned by the Interstate Commerce Com-



mission and became common in public utilities generally. Depreciable assets were thus handled on what came to be called a retirement accounting basis rather than by depreciation accounting. This method has been accepted for tax purposes.<sup>26</sup> However, the larger immediate deductions under ordinary depreciation accounting induced many railroads and utilities to adopt depreciation accounting for tax purposes while continuing to use the retirement system, at least for some categories of property, for book and rate purposes.

During the period covered in Part Two, fundamental and very significant changes were developing in the policies on accounting for fixed assets by railroads and utilities. Most of these changes have been put into effect since the last date included in the statistical material. The Interstate Commerce Commission in 1920 was authorized and directed by statute to provide for depreciation accounting. The necessary studies consumed a considerable period. A decision in 1931 required the adoption of straight-line depreciation accounting beginning in 1932, but the application of this rule was suspended until 1943 because of the condition of the railroads during the 'thirties. In the same period, the National Association of Railroad and Utilities Commissioners also adopted policies favoring depreciation accounting. By 1936 it had switched from support of retirement to support of depreciation accounting. Its Committee on Depreciation noted in 1938 that retirement accounting was being abandoned after having been seriously abused in that income statements generally showed less than actual cost of operations, balance sheets did not reflect adequate provision for loss of value, and larger dividends were paid than earnings warranted. The developments in this area were greatly complicated by the interrelated problems of determin-

<sup>26</sup> Bulletin F, see discussion under Steam Railroads. It has been held that a railroad using retirement accounting may not change to depreciation accounting for a single year for part of its property (Central Railroad Company of New Jersey, 35 B.T.A. 501). Nor may railroads using retirement accounting switch retroactively to a straight-line basis; *Chicago & North Western Railway, et al v. Commissioner*, 35 B.T.A. 66, affirmed (CCA-7), 114 F(2d) 882 (1940).

ing rate bases and operating expenses under a succession of Supreme Court decisions.<sup>27</sup>

For railroads, accounting for roads and structures must be distinguished from accounting for equipment. The Interstate Commerce Commission required depreciation accounting for equipment as early as 1915 and was given the power to fix depreciation rates on equipment in 1920. When this power was used in 1935 total depreciation did not differ greatly from preceding years, indicating that depreciation accounting for equipment had already been adopted generally.

In theory, over the entire lifetime of a company from organization to and including dissolution, the retirement and depreciation procedures should give the same deductions for depreciable property and the same net income figures. The timing of the deductions would differ greatly. The theory behind depreciation accounting is that the difference between the cost and the salvage value of plant and equipment is properly attributable to the entire period of its expected use or availability and that the total amount should be allocated to these periods in some standard manner, without reference to any actual variations in resale value during the period. On the other hand, the assumption under retirement accounting is that as long as property is used, there is no significant diminution in its service value and that the loss or cost is determinable only when the property is retired, scrapped, or salvaged. At that time, the difference between original cost and the amount realized is deemed an expense.

One point should immediately be noted. After a railroad or large public utility company has reached its full development, retirements are made piecemeal and, except for cyclical influences, may be expected to be spread out fairly evenly over the years. Rails are replaced and bridges rebuilt on a continuing basis, and these retirement expenses, for a mature company,

<sup>27</sup> For an analysis of the entire subject and the developments with reference to modifications in railroad and utility accounting see G. O. May, *Financial Accounting: A Distillation of Experience*, Ch. VII-VIII.

may closely approximate what the depreciation charges would be. The differences are conspicuously large in the early years of a company, or during and immediately after any other period of growth, and in any period of contraction. Until some assets are old enough to have reached the stage of retirement, there will be no retirement expense, though on a depreciation basis, the expense would start with acquisition, or at least with use. The avoidance of the expense charge in the earlier years is balanced in full by the large charges that must be made on contraction or dissolution, a period when there is likely to be little income to absorb the expense. Certainly complete dissolution would entail charges vastly larger than those of a normal operating year and would almost inevitably involve reductions in capital accounts. The retirement system is in fact reasonable only on an assumption of perpetuity. In case of sudden dissolution, it is unlikely that even depreciation accounting would have reduced book values to anything approximating the amount realizable.<sup>28</sup>

The chief advantages of retirement accounting from a company's standpoint are the higher profits that can be shown in early years, when earnings from operations may be low, and the flexibility in making retirements and charging retirement expense. The first advantage may well have been the pragmatic reason responsible for the adoption of the policy in the first place. Flexibility also may operate to give desirable results on reported income over the swings of booms and depressions. In bad times, if financial stringency limits replacements, old property can be continued in use and retirements postponed.

<sup>28</sup> In connection with retirement accounting, some reference should be made to the British system of accounting for depreciable assets for income tax purposes. It is commonly believed and said that traditionally no allowance is made for depreciation in income taxation in the United Kingdom. Though literally true, in the sense in which we use the word depreciation, the statement is seriously misleading. British income tax law has permitted deductions for retirements of plant and equipment to the extent that such retirements were covered by current replacements. Thus, in a rather circuitous manner, the cost of keeping capital assets intact was recognized as an expense. For an enterprise that was liquidating or for any other reason not replacing plant, such an allowance was not significant.

This practice would show higher income, or smaller losses, than would otherwise be shown. In subsequent periods of prosperity, replacements and retirements would be stepped up and reported income less than under a procedure giving fairly steady annual charges. A factor working in the opposite direction, to accentuate rather than minimize income fluctuations, would be expected in a mature industry with much old property. The decreased activity during a depression may permit, even force, unusually heavy retirements, although replacements cannot be financed at the time and may not be contemplated for the future. A special situation arises during war periods, when retirement and replacement may be physically impracticable though the financial inducements are great, and when even previously retired property may be brought back into use.

In some cases fluctuations in annual retirement expense have been considered objectionable and have led to what at first sight may seem a rather curious procedure. A typical or estimated average retirement expense provides the basis for a relatively steady annual charge to operations. When actual retirements fall short of this figure, a retirement reserve is created or built up, against which any unusually large actual retirements in subsequent years may be charged. Such a policy approaches depreciation accounting in that it provides a fairly steady annual charge but still leaves the early years of growth untouched and the late years of liquidation and dissolution to bear large charges.

The effect of retirement accounting on income stability, referred to above, appears to depend in considerable degree on the maturity of the industry, on the nature of the property and equipment used, and on the market served. A difference in maturity, together with the differing extents to which retirement accounting was used, may explain the rather surprisingly small statistical differences between book profit and statutory net income for transportation companies as compared with other public utilities. Steam railroads and other transportation

companies typically showed a close correspondence between book profit and statutory net income. Other public utilities, especially gas and electric light and power companies, on the contrary, typically reported book profits substantially larger, algebraically, than their statutory net incomes.

It seems reasonable to suppose that in the case of railroads depreciation on equipment, together with continuing retirements under the influence of secular and cyclical factors in the period covered by Part Two, kept book profits in line with statutory net income. Unfortunately, the extent of retirements of fixed property cannot be determined since they are merged with repairs in the statistics. Gas and more especially electric light and power companies, on the other hand, had recently been expanded greatly. With newer equipment, retirements were less justified; they were also less necessary because demand for gas and electricity is relatively stable. In this, as in other cases, only by a detailed inquiry into the characteristics of an industry as they effect management policy can differences between taxable and business income be explained fully.

#### D DEPLETION

Differences in depletion accounting are responsible for some of the most spectacular divergences between taxable and business income. Their main sources are two: the practice of some extractive companies not to record depletion in public statements and the special depletion provisions in the tax law providing for the use of discovery value as a basis or for percentage depletion.

##### *Accounting Treatment*

Formerly it was accepted accounting practice to ignore depletion on a company's books and in its reports to stockholders. Some companies still follow this early procedure. Apparently wasting assets that take the form of exhaustible mineral, oil, or other deposits with economic value were distinguished from depreciable property in the form of plant and equipment be-

cause of the peculiarly difficult problem of estimating the future life of the deposit with any degree of accuracy. Accordingly, a depletion charge based on the best possible estimate might be grossly misleading. The estimate is rendered especially difficult by the possibility that additional deposits may be discovered or new methods of extraction developed, making deposits previously regarded as uneconomic profitable. A frank nonrecognition of depletion charges under such circumstances, it may be contended, is preferable to any specious accuracy suggested by crude estimates.

Two further reasons are given for nonrecognition in company accounts. One is that, by its very nature, a company in an extractive industry is intended and expected to exhaust its natural resource and wind up its affairs. Such a company is essentially speculative, and investors in it are said to think of their annual returns as in effect terminable and variable annuities. Also it is suggested that if funds representing depletion were retained, the management might not be skilled in handling them. These arguments have the flavor of mid-nineteenth century small-scale single-mine ventures, whose operations provided the setting for the early accounting practice on depletion. The analogy is made with single-ship companies and other earlier pecuniary associations of gentlemen adventurers. British income tax law has traditionally denied allowances for depletion deductions, but it has denied also depreciation deductions except as and to the extent that they represented outlays for replacement. On the grounds that mineral deposits were not replaced, the disallowance of depletion is logical. The typical extractive company in England deals with types of deposit—coal, iron, and Cornish tin—which, mined as they have been mined, have lasted for decades, even generations.

The above discussion is a further illustration of the proposition that accounting rules must be viewed in the light of the circumstances in which they developed and that they do not represent absolute truth but rather expedient ways of dealing with situations to get desired and properly understood results.

Entirely different rules are appropriate for large-scale extractive companies, designed to explore and exploit successive deposits of natural resources. Virtually all our large modern oil companies and a major proportion of our principal mining companies are in this category. The exhaustion of wasting assets are proper charges to current operations, and the successive turnover of individual properties is properly shown by writing off individual asset accounts and replacing them with others. Depletion accounting achieves both objectives.

In view of the very real difficulties of estimating future exhaustion in deposits that cannot be or are not fully blocked out, some continuing companies still do not provide for depletion accounting. They do, however, typically consider as current expense the exploration and development costs connected with new physical resources. Thus, over the years net income may be expected to reflect something approaching a true net income in the sense that maintenance of assets and continuity will be assured. The annual figures vary, however, with outlays for development, not with exhaustion of resources.

Despite the many arguments in favor of not recording depletion, it is seldom suggested that the total earnings before depletion should be considered as income; the decision is one of expediency rather than principle.<sup>29</sup> The important fact seems to be that though depletion may not be provided for, any statement of earnings that ignores it differs significantly from the usual concept of net income.

<sup>29</sup> An exception is found in an English case in which the analogy was made to an annuity that for income tax purposes was held to be income without allowance for return of capital. The grounds for such treatment were stated to be that the annuitant himself typically regarded and treated his entire annuity as income (*Coltney Iron v. Black*, I.T.C. (1881), p. 308). One may decide or be forced to live on his capital. A life annuity is a convenient means of converting principal into recurring sums to be spent currently. But this should be distinguished from the variable return from a mining venture when the termination of the return will only by remote chance coincide with the termination of the desire for income. The purchase of a life annuity may be the act of a prudent man. But to ignore the exhaustion of capital in a mining venture that provides no depletion would be the act of a wastrel.

*Tax Treatment*

Consistent with the American policy of distinguishing return from capital from the capital that provides the return, we have in this country allowed depletion deductions in computing taxable income in all legislation under the 16th Amendment. To have done otherwise would have penalized investors in extractive industries and put them at a disadvantage in their efforts directly, or through their companies, to maintain capital intact. The decision to allow depletion deductions, however, did not in any way resolve the difficult problems involved in fixing the extent of the annual allowance. The total to be allowed was readily determinable; the allocation to individual years presented the difficult problems—for reasons already given.

In actual practice, decisions on the proper depletion charge for tax purposes have involved the same sort of judgment as that involved in depreciation, though the margins of error were probably wider. But if total allowances were limited to the total cost of depletable property, rough justice ordinarily would have been attained. Though companies typically have taken depletion for tax purposes, they by no means universally show it for public reports, for reasons set forth above. Divergences between taxable and business income arising from depletion accounting were thus introduced from the start.

The business practice of not showing depletion but charging costs of new development as current expense has not been allowed for tax purposes. The charges under such a method are not in any sense related to the cost of resources being exhausted. Though it is a proper and acceptable procedure for management purposes, and with full disclosure may be eminently desirable from the stockholders' point of view, its acceptance for tax purposes would appear to provide monetary inducements to increase the outlays (and deductions) and to build up assets indefinitely at the expense of tax revenues. However, since 1919 companies developing oil and gas properties have been



treated even more liberally, as is shown below after the discussion of the percentage depletion method.

*Discovery Value Basis and Percentage Depletion*

Two special provisions on depletion have been added to income-tax legislation: discovery value and percentage depletion. The first, introduced for other than tax reasons, tended to complicate the administration of the law still further; the second greatly simplified it but at the expense of accuracy and also of the revenue. Any increase in production induced by the percentage depletion allowance may, however, offset the revenue lost directly.

In the Revenue Act of 1918, at least ostensibly under the pressures of wartime shortages of raw materials, provision was first made for the use of the discovery value basis for depletion. To the unsolved problem of what the annual rate should be, this added an unsolvable problem of what the total amount to be recovered over the years should be. To encourage exploration and new development, discovery value depletion permitted the cost basis for depletion to be increased to the fair market value on the date of discovery, or within thirty days thereafter, when and if such fair market value was materially disproportionate to the cost. Such discovery value might of course be many times the actual cost of the property.

In addition to special favoritism to extractive industries, the discovery value provision posed great administrative difficulties. Was there really a new discovery? If so, what was its value within thirty days thereafter? The law defined new discovery, as distinguished from further development of existing properties, very generally and there has been much controversy over its application. Valuations likewise were the subject of conflicting evidence and opinion.

However suitable the provision may have been to encourage mining activities, it introduced an additional cause for divergence between taxable and business income. Only in the unlikely case of a write-up of assets with the creation of some form

of capital surplus, with subsequent depletion of the augmented value of assets charged to operations, would the two forms of reported income be similar. Given the traditional approach to depletion accounting in company reports, any general adoption of such procedures was not to be expected.<sup>30</sup>

In the Revenue Act of 1926 percentage depletion was allowed for oil and gas wells; in the 1932 Act the allowance was extended to coal, metal, and sulphur mines. Percentage depletion means that a stipulated percentage of gross income is allowed as a deduction without any reference to original cost, adjusted cost, or discovery value. For industries authorized to use percentage depletion, discovery value was in fact dropped as an alternative basis for depletion and has now become of negligible importance.

It is inappropriate to review here the extended arguments on the merits of percentage depletion. The percentages adopted have apparently been liberal, as indicated by the consistent excess of book over statutory income in the extractive field throughout the period covered by our statistics, a period that included operation under both the discovery value and the percentage depletion methods. Percentage depletion leads to continuing and nonbalancing divergences between business and taxable income. By no conceivable acceptable manipulation could it be applied to a company's own records indefinitely. Since the annual allowance is without reference to the asset value, total depletion over the years will presumably either exceed or fall short of the stated asset value. Depletion in excess of stated value is virtually a contradiction in terms, but the allowances have apparently been sufficiently large to exceed stated value in many cases. Such excess depletion is merely a deduction from income before calculating the tax; the excess depends upon the percentages selected.

<sup>30</sup> As a conspicuous exception to the general practice see Climax Molybdenum Company, Annual Report, 1940, in which 'Discovered Increment' is shown as \$74,131,250 against \$934,326 for cost of mine properties, with separate depletion charges.

For tax purposes, corporations developing oil and gas properties have been granted an option since 1919 to capitalize intangible drilling costs or to treat them as current expenses. When treated as an expense, depletion is still permitted by either of the two regular methods, cost or percentage. Treatment as expense is usually preferable because capitalization and subsequent depletion gives an effective tax deduction only if depletion based on cost exceeds percentage depletion.<sup>31</sup> This tax treatment goes even beyond any business practice of ignoring depletion and considering as current expenses the costs of new development work, on the theory that an aggregate of properties will thereby be maintained.

<sup>31</sup> Regulations 111, Sec. 29.23(m)-16. For a discussion of applications see *Oil and Gas Federal Income Tax Manual*, Arthur Andersen & Co. (4th ed., 1946); passim, especially p. 99.