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## Part II

# Capital Consumption as Measured by Business Enterprises



## Chapter 3

# Capital Consumption as Defined by Accounting Records

### TREATMENT OF EXPENDITURES ON DURABLE GOODS

DURABLE goods we define as those used in the process of production for periods that exceed the usual (annual) fiscal period in length.

There are five possible ways of accounting for durable goods and recording the costs incurred in their use: <sup>1</sup>

- 1) Expenditures upon durable goods may be charged immediately to current expense, no attempt being made to allocate part of the cost to later periods. This amounts to a form of cash accounting.
- 2) Instead of being written off immediately, expenditures upon durable goods may be placed upon the books of business enterprises by a charge to fixed assets. Expenditures for replacements, renewals, and other maintenance are then charged to current expense as they are made. Fixed assets not kept up by current maintenance are charged to expense when they are retired. This may be called retirement or maintenance accounting.
- 3) Expenditures upon durable goods may be placed upon the books by a charge to fixed assets, as in the preceding method;

<sup>1</sup> These are not looked upon with equal favor by accounting authorities. We are concerned here with the actual run of accounting practices, not with the best or preferred practices.

but charges to current expense are then based upon estimates of depreciation rather than upon actual expenditures for maintenance. Depreciation charges may be supplemented by charges for retirements inadequately anticipated by depreciation charges. This is ordinary depreciation accounting.

4) Expenditures upon durable goods may be charged to current expense, inventories being taken at the end of each fiscal period. Changes in inventories are then applied to decreasing or increasing the amount already charged to expenses. This may be called deferred-charge accounting.

5) Expenditures upon durable goods may be placed upon the books by a charge to fixed assets, and when items are retired their value may be transferred from fixed assets to a suspense account and charged to expense over several fiscal periods following the date of retirement. This is suspense accounting.

Several criteria are used to determine just which accounting treatment to accord any particular expenditure upon durable goods: the possibility of estimating the life and future value of the goods; the degree of durability of the goods; the ease and cost of detailed accounting treatment; and the financial condition of the business enterprise. An item the life of which is known but vaguely and the value of which depends on factors considered to be extremely uncertain may immediately be charged to current operations. Among these items are costs of drilling oil wells and other mining development expenses, and intangibles such as organization expenses, research, and advertising. Expenditures upon tools, dies, patterns, and other equipment of relatively short life may be treated as deferred charges. Expenditures upon minor repairs may be charged to cost of maintenance, as may also alterations and renewals by certain public utilities. Larger items of renewal and new machinery, equipment and structures, if they exceed a certain minimum amount, are added to the property account (or charged to the depreciation reserve) and placed upon a depreciation basis. Unusually large retirements may be placed in a suspense account, especially if current profits are low.

The current value of durable goods used up in current production, which we have defined as capital consumption, is therefore measured in accounting records by expenditures on durable goods not capitalized on the books as well as by periodic or other deductions from capitalized items. The entries used to record the consumption of durable goods include those arising out of:

- 1) Depreciation
- 2) Depletion
- 3) Retirement and abandonment
- 4) Provision for destruction by accident
- 5) Repairs, renewals, and maintenance
- 6) Credits to deferred charges
- 7) Charges of capital expenditures directly to current operations

If we can assemble these data we shall have a complete statement of the using up of durable goods as it is recorded in business enterprises.

From a strict business accounting point of view the sum of the above entries is too inclusive. Although derived from accounting records the sum of the entries differs from the measure implied in the accounting concept of capital consumption. The latter is narrower. It is confined to credits to capital asset accounts (or valuation accounts such as reserves for depreciation), and does not include items charged directly to current operations. For our purpose, however, the broader concept is more suitable since it makes room for all expenditures on durable goods.

Entries on the books of business enterprises are not the only available figures relating to estimates of capital and capital consumption. The prices of business enterprises or of shares in business enterprises also reflect estimates of capital, and through changes in these, of net capital consumption. The estimates based on accounting records seldom agree with those quoted in the market. Our reasons for choosing the former as our starting point are several. Market values relate to total assets (including intangibles and current assets) less liabilities,

and not alone to fixed capital. Also, data on book values provide details of gross increase and decrease in business capital and therefore constitute a more convenient basis for a measure of capital consumption as we have defined it.<sup>2</sup> Further, fewer irrelevant factors affect book values. Speculation and purchases on margin affect greatly the amplitude of stock price movements, at least in the short run. Stock prices may fall drastically because stock market loans must be met on call. The desire for liquidity is a dominant short-run factor although it is only indirectly related to anticipated profits. Finally, stock prices reflect equity values alone. To obtain market evaluations of total capital it would be necessary to consider bond prices also. And even of equities, stock prices represent only shares; the whole proprietary interest could not be bought or sold at the stock market price. In short, the relation between economic measures of capital and stock market prices of shares in business enterprises is extremely complex, much more so than the relation between economic measures of capital and book values.

#### GENERAL CHARACTERISTICS OF AVAILABLE RECORDS

A measure of capital consumption based on the accounting entries listed above is merely a first approximation. The records are compiled from a point of view somewhat different from ours. We must pass from this preliminary measure of capital consumption to one suitable in economic measures of net capital formation and national income. It is therefore necessary to examine the characteristics of the records in order to know the kind of modification required to obtain correct economic measures, or the kind of implicit assumption made when the available data are used without change. Many characteristics of the available business records will be apparent

<sup>2</sup> When a measure of *net* change in total capital over long periods is desired, stock prices provide useful information not available otherwise (cf. Oskar Morgenstern, *Kapital- und Kurswertänderungen der an der Wiener Börse notierten Österreichischen Aktiengesellschaften 1913 bis 1930*, *Zeitschrift für Nationalökonomie*, Bd. III, Heft 2, Wien, 1932).

from an examination of the figures obtained from them. Some are so specific that they are best considered later in a detailed analysis of each record. We may take a bird's eye view at the beginning of our examination, however, and list some of the more obvious features of the manner in which business records are kept that force us to use them with caution.

Business records are based upon a body of evolving accounting usage applied under the changing influence of two sets of factors: factors external to the business enterprise, and internal factors. Among the factors affecting business records that are external to the individual business enterprise are tax regulations, public utility rate regulations, demands made at the sources of credit and capital (the stock exchanges, bankers' and credit men's associations), and the pressure of economic events. The influence upon depreciation and depletion records of the income tax amendment to the Constitution, for example, has been great. It is true that the causal relations are not in one direction alone: legislative acts often try or tend to follow the better existing usages within the limits imposed by administrative needs. However, this imposes the necessity upon the general run of accounting usage to adapt itself to the higher level of practice.

Within the large business enterprise itself a multiplicity of interests often influences business records and their content. Several classes of owners exist, each of which may be affected differently by the choice of one or another of the alternatives open in the estimation of such costs as depreciation charges. The immediate control exercised by management is largely separated from the legal ownership of stockholders, yet it is under the control of the management that costs are estimated and annual profits determined. The place assumed by the stock market in the calculations of corporate officers also has affected the records occasionally. Here too we must recognize that the clash of interests is not solely a disturbing influence upon accounting usage. Much of this usage has developed to



satisfy the need of adjudication among different interests within the corporate structure.

Another characteristic of accounting usage is its conservatism, a conservatism often in conflict with the spells of optimism and pessimism indulged in by business men. Confronted by a changing economic situation in which the future can be seen but dimly, accountants tend to be conservative. Losses are recorded even when anticipated with incomplete certainty. Profits are recorded only when actually realized. But even conservatism is no longer unqualified. "The simple rule of conservatism, under which profits were never anticipated but probable or even potential losses were provided for, was satisfactory as long as the interests of only long-time stockholders had to be considered."<sup>3</sup> The growth in the complexity of the corporate financial structure is modifying accounting practice.

The various influences mentioned find play in the generality of the prescriptions of accounting theory. There are always several ways of carrying out a given objective, the one selected depending upon these influences. This leads to diversity of accounting practice, both from time to time and concern to concern. Secular variation is found in the body of accounting practice and cyclical variation in the application of well established rules. An example of a secular change in business computation, already mentioned, is the gradual development of depreciation accounting. In the actual application of a given 'level' of accounting, current conditions and the prevailing mood will influence estimates of obsolescence and maintenance. We find different accounting practices also in different industries and in concerns of different size. Thus, depreciation accounting tends to be practiced more frequently than maintenance accounting in manufacturing and less frequently among public utilities.

<sup>3</sup> George O. May, *External Influences Affecting Accounting Practice, Twenty-Five Years of Accounting Responsibility, 1911-1936*, Essays and Discussions, ed. by Bishop C. Hunt (New York, 1936), I, 70.

## NON-CORPORATE RECORDS

Most of what we know about accounting records relates to those of business corporations. It is these that are available, and these that are prescribed by governmental bodies in most detail. The records of partnerships and single proprietorships are likely to be looser, less consistent, more confused with personal accounts. Conclusions based on corporate practices, therefore, may not apply with equal validity to the accounts of unincorporated business enterprises. Nor may the data on capital consumption that are available for corporations be used to make estimates for non-corporate organizations without a recognition of the possible error involved. On the other hand, even the records of partnerships and sole proprietorships must meet the basic requirements of the income tax regulations set up by the Treasury Department. For this reason, and because non-corporate establishments are relatively unimportant in most industries, we shall present estimates for corporate and non-corporate enterprises combined, even though the available basic data, before being raised to cover non-corporate businesses, are taken from corporate records alone. The single exception will be that of unincorporated farmers. Because of the preponderant importance of individual farmers in agriculture the figures for agricultural corporations alone cannot be used as a basis for estimating consumption of all farm capital. Nor is our assumption that corporate and non-corporate records are homogeneous as valid for this industry as it is for other industries. For information on agriculture we shall turn to Department of Agriculture estimates.

We have outlined the directions in which we must look in the examination of the data at our disposal. We now take up in detail each entry listed in the first section of this chapter and assemble the available data. The various factors conditioning the interpretation of these data will be examined in Chapter 5.