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Prize Essay

THE PRINCIPLES WHICH SHOULD GOVERN THE DETERMINATION OF CAPITAL AND THE AMOUNTS AVAILABLE FOR DISTRIBUTION OF DIVIDENDS IN THE CASE OF CORPORATIONS, WITH SPECIAL REFERENCE TO THE SYSTEM OF CAPITAL STOCKS WITHOUT A PAR VALUE

By S. GUNDELFINGER

INTRODUCTION

IN March, 1923, the American Institute of Accountants Foundation announced a prize competition for papers to be submitted on the subject which forms the title of this thesis.

Past and present practice in the determination of capital and of the amount available for distribution of dividends reveals a multiformity of treatment which points clearly to the existence of uncertainty, confusion and—in not a few instances—fraudulent intent.

A call for the enunciation of the principles which should govern the treatment of these vexing questions should be of more than academic interest. The values to be ascertained by the faithful application of such principles to the affairs of corporate enterprise constitute factors of the most vital importance in the economy of an age in which by far the greatest portion of industrial wealth is concentrated in and administered by corporations. Although endowed by the law with a personality and with proprietary and other capacities and attributes separate and distinct from those of their members, these corporations nevertheless act vicariously in the last analysis and thus make dispositions affecting directly

stockholders and creditors and, indirectly, a potentially unlimited field of interests.

When to these considerations is added due recognition of the widespread distribution and ease of transfer of corporate securities of every description, the need becomes apparent of a reliable guide in the determination of capital and of the amounts available for distribution of dividends.

It is hoped that the principles herein developed will be found to constitute such a guide at least in a generality of situations. They are based upon fundamental considerations and elaborated, the author is fond to believe, with reasonable consistency.

This ideal of consistency he has striven to pursue with especial rigor in the treatment of the problem as affecting capital stocks without a par value and submits his conclusions to the scrutiny and candid criticism of the reader. The inclusion, by special reference, of this relatively novel system of capital stocks, which still seems to be shrouded in mystery, should dispel much of the occultism now surrounding it and permit it to emerge into the light of day.

CHAPTER I

The Problem Stated

At the outset of an inquiry of the nature of the present one it is well to state, as precisely as may be, the scope of the investigation. Such a statement has the twofold advantage of tracing the limits within which the inquiry is confined, and of excluding therefrom that with which it is not proposed to deal. But while it is useful thus to discriminate at the very inception, the choice must not be dictated by predilection and prejudice, but by an earnest endeavor to determine what is and what is not consistent with the subject of the inquiry considered as a whole.

We are here concerned with the enunciation of the principles which should be applied in the determination of two things: capital, and the amounts available for distribution of dividends, in the case of corporations.

While the term dividends is well and generally understood, the use of the term capital is attended with considerable looseness and vagueness. The economist, the lawyer, the financier, the accountant—each has a number of varying definitions of the term and some employ it interchangeably with varying and by

no means sharply circumscribed significations. It is not surprising, however, that among the many conflicting definitions of capital there are some which answer the requirements of more than one department of knowledge, and so it has happened that the common characteristics of otherwise conflicting concepts have pointed the way to a better and clearer understanding of the nature of capital.

The statement may be accepted as self-evident that, before dividends can be paid, there must be available for that purpose an amount or amounts from which it is both possible and lawful to pay them. Now, the power of declaring dividends is not an absolute power. Its legitimate exercise is predicated upon the preservation of assets equivalent to the aggregate amount of all liabilities and of the fixed amount of the capital stock. Viewed from the legal side alone, there is always a limit in excess of which dividends may not be paid, and that limit is determined by a process of subtracting certain known values from other known values.

Now, the classes of value which play the rôles of minuends and subtrahends in that process have this single characteristic in common: that their determination and orderly statement constitute the peculiar province of accounting. It is in the field of accounting, therefore, that we shall seek for that meaning of the term capital which is appropriate to our inquiry.

It will be our first task to develop the principles applicable to the determination of capital. Having decided upon the accountant's use of this term as most befitting our subject, we shall necessarily have to define capital as properly used in accounting. In doing so, we propose to show that the meanings assigned to this term in the best-considered definitions of economics, law and finance, so far from being in contrast with the accountant's concept of capital, in reality merely involve different aspects of the same thing. A definition of what capital is does not, however, determine what "the capital" is in a given case. Definition refers to quality; determination to quantity. By the former, we determine the nature of a thing; by the latter, we take its measure. Thus we shall be inevitably led to the subject of valuation and of the principles and modes of expressing valuations in formal statements of financial position.

At the risk of anticipating some of our conclusions, it may be stated that in developing the principles underlying the determina-

tion of capital there will be no occasion for giving special consideration to the system of capital stocks without a par value. That system we shall have to take into account in connection with the second phase of our investigation, covering the principles which should govern the determination of the amounts available for distribution of dividends. It may be well to state at this point that we have no intention of embracing within the scope of our inquiry those scraps of paper which are popularly known as stock dividends, but which are not dividends at all. Indeed, with the sole exception of the true dividend, this part of our treatise will deal with but one class of values, that of true reserves, including in that term not only certain values conventionally so designated, but also share capital and the nondescript, but nevertheless familiar, reserve called surplus.

With this, our programme will be completed. Passing notice will have to be paid to such matters as the proper interpretation of business transactions involving income and expense, but this will be requisite only in view of the effect of such interpretation upon book values of assets, liabilities and capital. But beyond the immediate effect of the transaction there are other factors, less palpable but by no means less powerful, which act and react upon financial condition. The recognition and evaluation of these influences are essential to the determination of both capital and dividends. For this reason, the principles which we are about to formulate must include those by which and in accordance with which those influences shall be given definite shape and expression.

THE PRINCIPLES WHICH SHOULD GOVERN THE DETERMINATION OF CAPITAL

CHAPTER II

Definitions of Capital

In the preceding chapter the position was taken that the signification of the term capital most appropriate to our inquiry must be sought in the field of accounting. It is here proposed to establish that position more firmly. To this end it is desirable to develop the accountant's definition of the term from an inquiry

into the meaning or variety of meanings which attach to the word capital in economic, legal and financial nomenclature. Probably no department of science has been more prolific of variety in definitions than has been that of economics in the definition of capital. The following is but a partial gleaning from a synopsis given by Professor Irving Fisher (*The Nature of Capital and Income*, chap. IV, sec. 2):

> Adam Smith's concept of capital is wealth which yields "revenue." He would therefore exclude a dwelling occupied by the owner. Hermann, on the other hand, includes dwellings, on the ground that they are durable goods. But a fruiterer's stock in trade, which is capital according to Smith, because used for profit, according to Hermann does not seem to be capital, because it is perishable. Knies calls capital any wealth, whether durable or not, so long as it is reserved for future use. Walras attempts to settle the question of durability or futurity by counting the uses. Any wealth which serves more than one use is capital. A can of preserved fruit is therefore capital to Knies if stored away for the future, but it is not capital to Walras because it will perish by a single use. To Kleinwächter, capital consists only of "tools" of production, such as railways. He excludes food, for instance, as passive. Jevons, on the contrary, makes food the most typical capital of all, and excludes railways, except as representing the food and sustenance of the laborers who built them.

While all the foregoing distinctions are distinctions of kinds of wealth, there are equally numerous differences among economists as to other attributes of wealth, both inherent and external. The intention of the owner of wealth as to how he shall use it; the effect of wealth on the laborer; the amount of wealth possessed; the productivity of wealth; the utility of wealth; the value of goods as distinct from the concrete goods themselves; the kind of product yielded by wealth—all of these and many more have been proclaimed as criteria of capital.

Professor Fisher arrives at the conclusion that "the failure to agree on any dividing line between wealth which is and wealth which is not capital, after a century and a half of discussion, certainly suggests the suspicion that no such line exists." And Professor Marshall concedes that "whatever we do with the *word* capital, we cannot solve problems of capital by classifying wealth." ("Distribution and Exchange," *Economic Journal*, 1898, p. 50.)

Consistent with these conclusions, Professor Fisher includes all wealth, but recognizes that

> when we speak of a certain quantity of wealth we may have reference either to a quantity existing at a particular instant of time, or to a quantity produced, consumed, exchanged, or transported during a period of time. The first quantity is a *stock* (or *fund*) of wealth; the second

quantity is a *flow* (or *stream*) of wealth. The contents of a granary at noon, January 1, 1906, is a stock of wheat; the amount of wheat which has been hoisted into it during a week, or the amount of wheat which has been exported from the port of New York during 1905, is a flow of wheat. The term "wealth" by itself is insufficient to determine which of the two kinds of magnitudes is meant. . . .

The distinction between a fund and a flow has many applications in economic science. The most important application is to differentiate between capital and income. Capital is a fund and income a flow. This difference between capital and income is, however, not the only one. There is another important difference, namely, that capital is *wealth*, and income is the *service* of wealth. We have therefore the following definitions: A *stock of wealth* existing at an *instant* of time is called *capital*. A *flow of services* through a *period* of time is called *income*.

Thus, by the introduction of the element of time as a decisive factor, a clearer conception has been obtained of the nature of capital, not indeed as distinct from wealth—attempts at making such a distinction having so far proven futile—but as distinct from income. Yet, even Professor Fisher admits several interpretations of the term, which he states is employed as an abbreviation of either of the compound terms capital-goods or capital-value. And, although he expressly restricts his own use of the term capital to the meaning capital-value, this meaning itself includes a variety of concepts. It may reflect either assets and liabilities in general or net capital. The latter, in turn, may mean either original capital or present capital and, to add to the complication, the former of these is either nominal capitalization or actual paid-up capital, while the latter denotes sometimes the sum of the book values of shares in the capital stock, of surplus and of undivided profits and sometimes the market value of the shares!

The designation of capital as a fund existing at a given instant of time must be conceded to be the best-considered partial description yet advanced by writers on economic subjects. It is only when the term is indiscriminately applied to well-differentiated concepts such as those enumerated that we must object to its abbreviated use. If the terms wealth, goods, instruments, rights, value, are by themselves insufficient to indicate whether a fund or a flow is meant, then the term capital by itself is insufficient, in the absence of express reservation, whether it means a fund of instruments, of rights, of assets and liabilities in general, of original nominal value, of original paid-in value, of present book value or of present market value.

Historically, little or no difficulty was experienced in the application of the term capital prior to the advent of economists.

The term was preëminently a business term and, as such, was and is well understood. P. L. Simmonds' *Commercial Dictionary* defines capital as "the net worth of a party." Palgrave's *Dictionary of Political Economy*, under "assets," says: "The assets remaining after the discharge of liabilities are a person's actual capital." And F. W. Lafrentz ("Economic Aspects of Accounting and Auditing," *The Journal of Accountancy*, April, 1906) speaking of the difference between assets and liabilities, states: "The residue will be the net worth of the proprietor—the capital of the proprietor." Finally, Professor Fisher, discussing the balance-sheet (capital account) employed in business (loc. cit., chap. V, sec. 1), observes: "It is strange that any treatment of these accounts is generally omitted from economic text-books. There seems to be no systematic study of capital accounts in any work on political economy"; and he then proceeds to the following concrete definition, which is here reproduced for its admirable precision:

> A capital account is a statement of the amount and value of the property of a specific owner at an instant of time. It consists of two columns, —the assets and the liabilities. The liabilities of an owner are the debts and other obligations owing to others; that is, they are the property-rights of others for which such owner is responsible. The assets or resources of the owner are all his property-rights, irrespective of his liabilities. The assets include both the property which makes good the liabilities, and the property, if any, in excess of the liabilities. They also include, if exhaustively considered, the person of the owner himself.
>
> The owner may be either an individual human being, or a collection of human beings, such as a family, an association, a joint stock company, a corporation, or a government. With respect to a debt or liability, the person who owes is the debtor and the person owed is the creditor.
>
> Every item in a capital account is an *element* of the owner's total capital, the assets being positive elements and the liabilities being negative. Consequently, the algebraic sum of the elements of capital, or the difference in value between the total assets and the total liabilities, is the *net capital*, or *capital-balance* indicated in the account.

With such authoritative endorsement of common business usage, it would seem proper for us to restrict the use of the term capital to the signification "net worth" as employed in business accounting. This application is, moreover, in keeping with the more advanced interpretations of the term in the field of jurisprudence, as disclosed by judicial decisions. That this branch of knowledge has not been immune from the confusion created by a host of economic writers is evidenced in *Smith v. Dana*, 60 Atl. 117, 121; 77 Conn. 543; 69 L. R. A. 76; 107 Am. St. Rep. 51:

> "Capital" is a term which, as applied to private corporations as ordinarily constituted, is used with widely varying significations.

In one sense—the strict sense—it is employed to designate specifically the fund, property, or other means contributed or agreed to be contributed by the share owners as the financial basis for the prosecution of the business of the corporation; such contribution being made either directly through stock subscriptions, or indirectly through the declaration of stock dividends. As thus used, the term signifies those resources whose dedication to the uses of the corporation is made the foundation for the issuance of certificates of capital stock, and which, as the result of the dedication, becomes irrevocably devoted to the satisfaction of all obligations of the corporation. . . .

Sometimes the term "capital" is used when what is meant to be designated is that portion of the assets of a corporation, regardless of their source, which is utilized for the conduct of the corporate business, and for the purpose of deriving therefrom gains and profits. . . .

Frequently the term is employed in a still wider sense, as descriptive of all assets, gross or net, of a corporation, whatever their source, investment or employment.

It is not difficult to see that looseness of terminology such as is exhibited by the above synopsis makes for confusion rather than certainty. Of the several meanings of capital enumerated in *Smith v. Dana*, supra, the first corresponds to what is also termed capital stock; the second to so-called capital assets as distinct from circulating assets; and the third to either gross assets in the sense of assets in general or to net assets in the sense of assets equivalent to net worth. It is true that in some jurisdictions a clearer understanding has come to prevail, but it must be remembered that the decisions are largely of persuasive and limited authority only. Thus, in *Person & Riegel Co. v. Lipps*, 67 Atl. 1081, 1083, 1084; 219 Pa. 99, the court said:

. . . there is a well-understood distinction, universally recognized, between "the capital or property" of incorporated companies and "their capital stock." "The term 'capital' applied to corporations is often used interchangeably with 'capital stock,' and both are frequently used to express the same thing—the property and assets of the corporation—but this is improper. The capital stock of a corporation is the amount subscribed and paid in by the shareholders, or secured to be paid in, and upon which it is to conduct its operations; and the amount of the capital stock remains the same, notwithstanding the gains or losses of the corporation. The term 'capital,' however, properly means not the capital stock in this sense, but the actual property or estate of the corporation, whether in money or property. As was said in a New York case: 'It is the aggregate of the sums subscribed and paid in, or secured to be paid in by the shareholders, with the addition of all gains or profits realized in the use and investment of these sums, or if losses have been incurred, then it is the residue after deducting such losses.' . . ."—Clark and Marshall on *Corporations*, 1140. . . .

The foregoing definition of capital stock as distinct from capital is adduced here because of the useful part it is destined to play in our consideration of the problem of determining the aggregate value of shares of stock without a par value. For our present purpose, the distinction made is of especial value in clarifying the

legal concept of capital in its strict sense. This sense, while still expressive of things and rights, no longer insists on their identification or separation, but rather upon their amount or measure of value.

Capital as measure of value would seem to be a singularly appropriate aspect of our subject from the point of view of finance. But the measures of value which form the subject matter of finance, while including net worth, refer not so much to the determination of existing magnitudes as to the providing and administration of funds. The three problems of financial management, according to Gerstenberg (*Materials of Corporation Finance*, p. xvii), are those of maintenance, the provision of working capital and the distribution of surplus. To solve these problems, financial management must have access to reliable opinion, i. e., to statements of financial operation, and statements of financial position, measured in terms of value. These statements of financial position constitute the ultimate goal of accounting. When properly prepared, they fairly reflect economic, legal and financial status with a reasonably high degree of accuracy. They exhibit, therefore, capital in several senses of the term. More particularly, they exhibit debts and other forms of negative capital and, finally, they include as a specific class of values the algebraic sum of positive and negative elements—the accounting capital in the sense of net worth.

It must not be supposed that capital in the accounting sense is always used to designate net worth. Accounting terminology is no exception to the rule which seems to apply to all nomenclature except that of mathematics, namely, divergence of usage, looseness of application and dependence upon context and intent. Moreover, accounting, being the handmaid of economics, law and finance, properly makes use of their technical terms, vague as they may be. And so we find that in accounting, too, the term capital is associated with assets. To illustrate, it is one of the most important functions of accounting to reveal impaired capital. Capital is said to be impaired when either through losses or through improper payment of dividends there remain assets of a value less than the sum of all liabilities and of the fixed amount of the capital stock. An impairment of capital means an impairment of assets; and this meaning attaches to the expression in accounting no less than in law or in finance. What is important, however, is that, in good corporate

accounting at least, the impairment is always disclosed by the exhibition of a deficit, which measures the financial extent of the impairment. Where capital is unimpaired there is, of course, no deficit; but even here the capital—in the sense of net assets—is not cognizable from the list of assets, but from a group of items consisting of the amounts of capital shares, true reserves and surplus, and constituting in their entirety the net worth or capital in the proper accounting sense.

Capital, then, in the signification to which we shall adhere throughout the remaining stages of our study, is the difference in value between the total assets and the total liabilities of a business entity at a given instant of time and, as such, is a measure of momentary value.

Capital is either positive (net worth) or negative (true deficit). In the case of unincorporated business, positive capital is expressed in a single capital account or in the aggregate of the capital accounts of the several partners or associates. In the case of corporations, it is represented by the aggregate values of the accounts reflecting share capital, true reserves and surplus. In the case of corporations, moreover, positive capital may coexist with a lesser corporate deficit, which measures impairment of the capital stock and precludes the existence of true reserves and surplus but does not necessarily imply insolvency.

Capital is negative (a true deficit) when and to the extent that the sum of all liabilities exceeds the sum of all assets.

Capital is nonexistent (zero, neither positive nor negative) when the aggregate of all assets is equal to the sum of all liabilities. In corporate business this is the case when the corporate deficit is equal to the fixed amount of the share capital.

The foregoing exposition of the various phases of capital as a measure of momentary value is believed to be sufficiently clear to establish the specific concept with which the first part of our investigation proposes to deal. The object of our inquiry is not, however, to establish the nature of capital, but to formulate the principles which should govern the determination of its amount. Since capital is a measure of value, the principles applicable to its determination are principles of measurement. And since capital is the measure of an excess value, positive or negative, resulting from a process of arithmetical subtraction, it is requisite that minuend and subtrahend be expressed not merely in terms of value in general, but in terms of comparable value,

i. e., of value relating to a common standard. This common standard is the monetary unit.

The measurement of value is called valuation. The measurement of capital, therefore, must be preceded by and based upon the valuation of two primary classes of elements, namely:

1. Positive elements, conventionally known as assets;
2. Negative elements, conventionally known as liabilities.

And because many of these elements do not consist of actual money or of symbols of money, the measurement of their money values cannot be taken by a mere process of counting. In order to establish the monetary valuation of such elements with a degree of accuracy justifying reliance, it is essential that the valuation be made in accordance with well-defined principles.

These principles it will be our aim to formulate in succeeding chapters. Before we can address ourselves to this task profitably, however, a general understanding must be had of the manner in which financial position is technically presented by accountants—in other words, of the structure of the balance-sheet.

CHAPTER III

The Structure of the Balance-Sheet

ALL statements of financial position express the fundamental fact that

What I own + What I claim = What I owe + What I am worth.

And since what I claim constitutes rights which I have, the equation may be reduced to the following form:

What I have = What I owe + What I am worth,

or, to substitute technical accounting terms,

Assets = Liabilities + Capital.

Conforming to the position of the elements entering into the above equation, double-entry bookkeeping assigns to them corresponding places in the ledger—asset values on the one side are opposed to values representing liabilities and capital on the other. But there are other classes of value which are housed on opposing sides of the ledger.

> It is sometimes desirable for some special reason to separate the account of an asset, of a liability, or of a proprietor into two accounts, usually in order to present two different valuations. We shall call the supplementary account an *offset* or an *adjunct* to the principal account, according as it is intended to be subtracted from or added to the principal account. (Sprague, *Philosophy of Accounts*, Sec. 135.)

The supplementary accounts designated by Sprague as offsets are of three kinds—offsets to assets, offsets to liabilities, and offsets to capital—and are exemplified, respectively, by

1. Reserves (improperly so called) for depreciation, appearing on the ledger side opposite to and in accounts separate from those showing the cost of corresponding assets;
2. Unamortized discount on bonds issued and outstanding, appearing on the ledger side opposite to and in an account separate from that showing outstanding bonded debt;
3. Corporate deficit, appearing on the ledger side opposite to and in an account separate from that showing the fixed amount of the capital shares.

The accounts exemplified by the first of the foregoing examples appear in the ledger on the same side as those showing liabilities and capital, but they signify neither. They represent merely corrective values, applicable against or as a partial offset to the values shown by the accounts of the corresponding assets. The designation reserves generally given this type of accounts is unfortunate in that it is identical with the name properly assigned to another type of accounts which we shall have occasion to consider in detail. To the former, some writers have attempted to assign the name provisions (e. g., provision for depreciation), but the author is unable to perceive what is provided by these accounts, unless it be a means of determining the present depreciated values of the assets affected. Their sole purpose and function is to render possible the presentation of two and the calculation of a third value: the cost of the asset, the accumulated depreciation and, by comparison of the two, the depreciated cost value of the asset. The designation offsets assigned to them by the late Charles Ezra Sprague, is by far the most fitting. Hatfield (*Modern Accounting*, p. 50) has termed them valuation accounts from the German "Bewertungskonten." Owing to the general currency which the term reserves, as applied to this class of offsets, has attained, it is deemed desirable, for our purposes,

to distinguish the members of this class of offsets as pseudo-reserves.

The type of offsets represented by unamortized discount on bonds issued and outstanding will be more fully discussed under the subject of deferred charges. It must be admitted that the concept of offset to a liability, applied to this class of account, is rather forced and artificial.

The third example, corporate deficit, is a true offset, in that it measures the impairment of the supposedly fixed value of the shares in capital stock. Its presentation as an offset may be considered compulsory in view of the fact that in contemplation of law the capital stock, which forms the basis for the issuance of shares therein, is inviolable.

The supplementary accounts designated by Sprague as adjuncts are likewise of three kinds—adjuncts of assets, adjuncts of liabilities and adjuncts of the capital-shares account. Their consideration will be reserved for a future portion of our study.

Offsets—with the exception of corporate deficit—and adjuncts are not absolutely necessary to a proper presentation of financial status in the ledger. The accumulated depreciation, for example, might be written off the corresponding asset account, with the same effect upon capital. But the use of offsets and adjuncts is convenient and instructive, and facilitates current and subsequent analysis.

As amplified by these conventional forms of account, a ledger maintained in accordance with the principles of double-entry bookkeeping, and from which accounts signifying income and expense, gains and losses have been eliminated through the process of "closing," will exhibit the financial position of the business at the given instant of time by account balances ranged on opposite sides and representing values of

Assets	Liabilities	
Adjuncts to assets	Adjuncts to liabilities	
Offsets to liabilities	Offsets to assets	
Offsets to capital shares	Capital shares	} Capital
True deficit	Adjuncts to capital shares	

Conforming to conventional accounting technique, balance-sheets are frequently presented in account form, opposing positive goods and negative proprietorship on the one side to negative goods and positive proprietorship on the other. But it is proper

and conducive to lucidity if offsets, instead of being shown, as they are on the ledger, opposite their principal accounts, are shown as items subtracted from the latter. The balance-sheet, after all, is not a mere reproduction of account balances. It is, or should be, a readable statement, free from complicated matter and detail. It is

> almost always condensed by grouping into a single item many balances of similar nature. . . . This gives a more comprehensive view of the business at the moment, but a less minute one. (Sprague, supra, sec. 71, 72.)

In the words of M. Bara, the Belgian minister of justice, it is a "reduced photograph of the inventory." It may be deftly retouched here and there, but obviously not at the sacrifice of its likeness to the original. Thus it would be misleading if claims against debtors, amounting to $10,000, and liabilities to creditors aggregating $8,000, were merged in the balance-sheet into one item showing claims against debtors to be $2,000. While such a presentation would have no effect upon the amount of the capital, it would nevertheless misrepresent the relation of the business to its customers and entirely conceal its liability to creditors.

While the foregoing illustration exemplifies one of the grosser cases of misrepresentation and concealment, numerous other opportunities exist for rendering the balance-sheet of doubtful or negative value as a means for forming an intelligent and reliable judgment about the financial state of affairs. The presentation of the owner's equity in real property only, instead of both the cost price and the purchase-money mortgage given in part payment; the inclusion under the one caption of "accounts receivable" of customers' accounts, loans to officers and employees and amounts due from subsidiaries—these and similar abbreviations and combinations have been and are being used either in ignorance of their significance or with intent to defraud. "Even the improper division of an account may be resorted to in order to hide the fact that a company is too largely involved in a single line of investment." (Hatfield, *Modern Accounting*, p. 57.)

Another source of uncertainty is found in the looseness and vagueness of terminology. Much has already been accomplished toward the attainment of uniformity by the action of the Interstate Commerce Commission in prescribing a certain nomenclature in railroad accounting. But the task seems almost hopeless. The use of the term reserve to designate both a part

of capital and an offset to certain assets has already been criticised. Other terms to which no single signification has as yet been authoritatively assigned, are treasury stock, reserve fund and adjustment account. The American Institute of Accountants, through a standing committee on terminology, is giving the subject of uniform nomenclature renewed thought and attention. It is to be hoped that the coöperation not only of the accounting profession, but also of associations of bankers, manufacturers and trading concerns can be permanently enlisted in this important mission.

The importance of a clear and truthful presentation of the elements entering into the balance-sheet becomes even more evident when it is considered that upon such presentation depends the degree of accuracy with which the amount available for distribution of dividends can be determined. It is at this point that we are confronted with a formidable difficulty, inherent in the nature of accounting itself, which, at best, can never be free from error. Hence, "a balance-sheet is not a statement of facts, but rather an expression of opinion." Being an opinion, it must contain elements of uncertainty. These appear principally in the matter of valuation, both of assets and of liabilities.

The subject of valuation, and the formulation of the principles which should govern the measurement of the positive and negative elements requiring expression in the balance-sheet constitute the theme of our next chapter.

CHAPTER IV

The Principles of Valuation

When we speak of an object as possessing a certain money value, we express the measure of its purported equivalent in money. But this measurement, unlike that of a dynamo in terms of horse-power, or of wheat in terms of bushels, is not a statement of fact, but a statement of opinion. In measuring wheat or in determining the capacity of a dynamo we have reference only to a standard unit, the bushel or the horse-power. In measuring the money value of anything but money, the standard unit is one of several elements entering into our processes of thought. For in our expression of the money value of a given object, we tacitly imply:

1. That the object is capable of satisfying certain wants;
2. That in order to obtain satisfaction of these wants, certain persons are willing to sacrifice other goods.

The first of these premises involves either the direct use of the object in question, or its surrender in exchange for other objects. Depending on whether the former or the latter is intended, the value assigned to the object is either use value or exchange value.

The second premise requires the existence of a demand and thus necessarily implies reference to persons. Only persons exchange goods or pay money. But here, too, there are alternatives. The person implied may be either a single individual—as, for example, the owner of the object—or a generality of individuals—as, for example, the inhabitants of a country. Depending on whether the object is desired by a particular single individual or by a generality of individuals, the value assigned to it is either its particular value or its general value. Accordingly, the value of a given object may be any one of the following four values:

1. Particular use value;
2. General use value;
3. Particular exchange value;
4. General exchange value.

From these considerations it is apparent that money value is not an inherent quality of an object; that it is not absolute, but relative; and that it is not objective, but subjective.

The question as to which of the foregoing four kinds of value are properly applicable to the several elements entering into the balance-sheet has given rise to much controversy. It was long held—and the view still possesses limited currency—that at the basis of valuation for balance-sheet purposes lies a fictitious general liquidation of the business at the time for which the balance-sheet is drawn, i. e., that valuations are to be made as though all assets were to be sold and all liabilities liquidated at the time. And because assets which have to be sold on a given day will bring much less than their value if preserved to their owner and to their former purposes, the advocates of this theory demand that the effect of sudden liquidation should be disregarded.

H. V. Simon, from whose *Die Bilanzen der Aktiengesellschaften* has been adapted the greater portion of the matter treated in this chapter, justly ridicules the suggestion that a valuation

based on an assumed liquidation can at the same time disregard the effect of such liquidation.

He claims, on the other hand, that it is necessary to find a general viewpoint from which the valuations of the several elements can be justified. The function of the balance-sheet—the determination of the net worth of a business at a given moment of time—presupposes the existence and application of principles which are not contradictory, but harmonious and consistent; else it would not be a statement of financial position, but a conglomerate of unrelated and irrelevant gossip.

An harmonious and consistent principle of valuation for balance-sheet purposes, such as we require, can only be formulated with due regard to the nature and purposes of the balance-sheet itself. Now, the balance-sheet, as we have seen, purports to be a statement of the financial position of a definite business entity at a given moment of time. Divorced from the business entity to which it specifically applies, the several elements composing this statement of financial position assume a new character. In other hands their values change; some are not transferable at all. What is an object of use for one owner is an object of exchange for another. What one may be able, by virtue of advantageous connections, to sell at a great profit, another is compelled to dispose of with little or no gain. Moreover, the same object may possess different use values for different persons, dependent upon the purposes they have in mind and upon the means which they are able to expend.

Obviously, for the purposes of the balance-sheet, it is a matter of indifference to the owner of an object what value it possesses in the hands of another. Equally irrelevant is the use value of an object which its owner intends to sell or the sale value of an object intended for permanent use in the operations of the business. Legitimately, the owner is interested only in the value possessed by each object for his particular purposes—in each object's particular value—at the given moment of time.

Of the four types of value which we have considered, two types are thus eliminated from the purview of valuation for balance-sheet purposes, and the only choice lies between particular use value on the one hand and particular exchange value on the other.

In consonance with these conclusions, we are now able to gen-

eralize the principles which should govern the determination of capital. They are as follows:

1. The values to be assigned to the several elements entering into the determination of the capital of a given business entity are the values which they severally possess to that particular business entity at the moment of time for which the capital is to be determined.
2. In the valuation of several elements entering into the determination of the capital of a given entity, the purposes for which they are severally intended at the given point of time must always be taken into consideration.

This general statement of principles applies to both positive and negative elements of capital. In the application of these principles there is neither room nor need for exceptions. The moment we admit the existence of exceptions to a principle, we deny the existence of the principle. Hence, in grammar, where there are exceptions we have not principles, but rules.

A detailed discussion of the application of these principles to each of the multitude of elements which may enter into the composition of a business entity's capital is not within the scope of this treatise. It behooves us, however, to illustrate their application in a general way and incidentally to draw attention to some current fallacies.

And first, as to the fundamental distinction, from the point of view of a particular business entity, between elements intended for permanent use in the operations of the business and elements intended for sale or exchange. We shall designate the former as use elements and the latter as exchange elements.

To be classified properly as a use element, it is not necessary that the object be in actual use in the operations of the business at the moment of time for which the balance-sheet is drawn; it is sufficient—and it is also necessary—that it be *intended* for such use *permanently*. For example, a railroad company which has acquired a piece of land on which it intends to erect a terminal may, pending commencement of building operations, lease the ground to others during the interval, but will be justified in classifying it as a use element. On the other hand, an industrial concern which has come into ownership of real property as a result of the foreclosure of a mortgage held by it, may temporarily employ the property in its own industrial operations but will properly treat it as an "exchange element" if it intends its sale.

The purpose for which an object is held may, of course, change. Failure to find a purchaser for land intended for sale may induce the owner to devote it henceforth to his own use as, for instance, by building warehouses., Conversely, property originally intended and actually used for industrial purposes may become superfluous or otherwise undesirable. In such an event the owner may decide to abandon its use and offer it for sale. A special case of conversion from the class of use elements to that of exchange elements occurs in the general liquidation of a business.

Use elements may be tangible or intangible. They may consist of land, buildings, plant and equipment and of such items as good will, franchise, patents, trade-marks and copyrights. What stamps them as use elements is not their character, but the purpose for which they are intended in the hands of their present owner. For this reason materials intended for use in the construction or enlargement of use elements are themselves use elements.

That certain objects may be either use elements or exchange elements is illustrated by the class of assets known as investments. Normally, stocks and bonds are not held for permanent use in the operations of a business. This applies especially to the securities in which sinking funds and replacement funds are frequently invested. They are intended to be sold for the purpose of raising the moneys necessary, respectively, to liquidate funded debt and to replace outworn plant and equipment. Similarly, funds invested and reserved for unforeseen contingencies cannot be said to have any other purpose than exchange for liquid funds in the event of the happening of such contingencies. All these investments constitute exchange elements. As use elements may be considered those investments of a business entity which are intended to be held permanently either for the revenue they yield or for the control of policy they confer. The holdings of federal reserve bank stock by member banks illustrate the former, while industrial stocks held for the purpose of permanent participation in and financial and administrative control of related enterprises is an example of the latter type of investments.

The significance of the distinction between use elements and exchange elements becomes apparent in the application of particular value to objects which on the date for which the balance-

sheet is drawn have a market value less than original cost. If the object is intended for sale or exchange—if it is an exchange element—its particular value to the business can no longer be said to be its cost. The shrinkage from cost to a lower market value has been accompanied by at least an equal shrinkage in its particular value. Not so in the case of an object intended for permanent use—a use element. A 50-horse-power dynamo devoted to the permanent use of lighting a factory building may have a market value far lower than its cost to the factory owner; yet its market value has no effect upon the particular use value of the dynamo to its owner. It is altogether without significance, because there is no intention to sell it.

This use value, while possibly equal to cost, will normally be less than cost by reason of wear and tear and the ravages of time. Valuation at cost is not a norm, but a limit. Depreciation through use, non-use or abuse inevitably affects the value of an object to its owner and must accordingly find expression in the valuation of the object. This is accomplished either through writing off or through setting up pseudo-reserves. The scope of the present treatise does not include a discussion of the principles applicable to the determination of depreciation or of the several methods by which equal or varying amounts of depreciation are distributed over the useful life of an object. However, a word seems in order on the subject of depreciation through obsolescence. There is no doubt that obsolescence may compel the premature abandonment of an object and the practice must be commended of making provision against such an event while the object is in active use. What is objected to is not this practice, but the expression which it frequently receives in the accounts and balance-sheets affected. Depreciation from wear and tear and depreciation from obsolescence differ in that the former is a flow and the latter usually a blow. The former is properly expressed as an accumulated and accumulating diminution of the particular value of the asset affected. But when the effect of obsolescence is anticipated by periodical provisions, these provisions constitute not diminutions of value, but reservations of value. They are not pseudo-reserves, but true reserves; not offsets to assets, but adjuncts of capital stock.

Depreciation of certain intangible objects is due to the lapse of time. Terminable concessions such as mining rights, patents, copyrights and the like diminish in value with the approach of

their expiration. Not infrequently their value is exhausted prematurely.

A diminution of value may be experienced also in the case of rights against persons such as customers. Obviously, a claim of this nature which is known to be uncollectible must be valued at zero. Similarly, an appropriate reduction of book value must be made in the case of claims the realization of which is thrown in doubt by the financial embarrassment or insolvency of the debtor and of claims which are in litigation. Such reductions are usually expressed as offsets in the guise of pseudo-reserves.

Claims against debtors constitute exchange elements in the sense that the debtors themselves purchase these claims through payment. In a similar sense, liabilities to creditors must be considered exchange elements because they are ultimately extinguished by the surrender of another exchange element, cash. Like all other elements, they are subject to valuation on the basis of the principles which we have formulated. Some of them will be further discussed in a subsequent chapter.

Needless to say, it is immaterial to the status of an exchange element that it requires further treatment before it can be sold or exchanged or that it is entirely consumed in the conduct of the business during the period following the date of the balance-sheet. The fact that it is not intended for permanent use in the operations of the business constitutes it an exchange element. For this reason, raw materials, unfinished goods, consumable supplies and unexpired services are exchange elements; and this applies equally to unearned income, a type of liability or commitment corresponding to prepaid expenses such as unexpired services. Nor is it necessary, in the case of rights, that they are matured, or of liabilities that they are due at the date of the balance-sheet, to justify or require their inclusion in the balance-sheet as exchange elements. They possess a determinable value.

That exchange elements are subject to depreciation as well as use elements is universally conceded. In the case of physical exchange elements, depreciation is due to decline in market value and deterioration. In the case of immaterial exchange elements, such as claims against debtors, commercial paper and current investments, it may be due either to decline in market value or to the accomplished or threatened failure of the debtor and, in some cases, to the doubtful legality of the claim.

Considerable difficulty has been experienced by writers on

accounting in explaining a cherished precept of good accounting practice—the precept which demands that an increase in the market value of an object must be disregarded in all circumstances. We have already seen that in the case of use elements the market value is entirely irrelevant, regardless of whether it is higher or lower than cost. But in the case of exchange elements, colorable argument has been adduced to show that increase in the market value of an exchange element affects its particular exchange value to the owner.

Simon (*Die Bilanzen der Aktiengesellschaften*) was compelled to face the issue by a provision in the German commercial code which expressly prohibits valuation in excess of cost. He goes so far as to state that this requirement, when applied to exchange elements, in fact compels an understatement of the particular exchange value, thus creating a compulsory secret reserve. And Hatfield (*Modern Accounting*, pp. 101 et seq.) maintains that the principles of valuation in strict logic demand

> that merchandise for sale be valued at the present selling price, with a reduction to cover selling expenses. A real change having taken place in selling value, the original cost is of no effect, for whether bought at a high or low cost, its value to the concern is determined at the normal price at which it can now be sold. But the German commercial code, in many respects a guide to those whose accounting practices are so free from legal control, in attempting to prevent overvaluation prescribes that the cost price of merchandise must be taken, except where there is a publicly quoted price—as for instance for grain in a produce exchange—which is lower than the cost price. . . .
>
> American practice agrees with German law.

Simon denies that the prescription is aimed against overvaluation and attributes it solely to a desire to prevent the payment of dividends out of unrealized profits. Accordingly, he claims that the prescription does not affect the determination of capital but the determination of the amount available for distribution of dividends.

We disagree with both writers. We do not insist that the cost of an object always measures its particular exchange value, for the object may have deteriorated or it may be possible to duplicate it at a lesser cost. We deny, however, that a given object can have a value to its owner in excess of cost. For in that case, there could be no profit from sales. The owner who assigns to such an object a value in excess of cost does so in contemplation of a future sale and thereby disregards the fact that the balance-sheet applies to a point of time anterior to such sale. An owner's unwillingness to part with the object at cost does not increase its

value. It merely proves that he hopes to realize more than cost. It may even be that his persistent refusal to sell may altogether deprive the object of its character as an exchange element and transform it into a use element, if its nature and that of the business permit. In the latter case, its valuation in excess of cost would be admittedly meaningless. Even where a contract for the future sale has been entered into, it is not the object to be sold, but the owner's present right against the future purchaser which embodies the additional value.

If valuation at cost were simply a compromise of principle to prevent the payment of dividends out of unrealized profits, there could be no excuse for the inclusion of unsecured claims against debtors either at book value or at any value. For in such claims not only the profit, but even the cost of the elements the sale of which has given rise to the claims has passed out of the vendor's control and is, therefore, unrealized.

The contention that the practice referred to has no bearing upon the determination of capital and is dictated solely by considerations having to do with the determination of the amount available for distribution of dividends involves other fallacies. It involves that valuation at cost does not properly apply in the case of liquidation, for during liquidation the payment of dividends ceases. It is at least conceivable that even in the process of winding up a business some objects will yield a profit. This is recognized by Simon, who arrives at the remarkable conclusion that valuations may be higher for a business in liquidation than for the same business as a going concern.

Finally, the contention criticized implies that the determination of the amount available for distribution of dividends demands a more conservative valuation than the determination of capital. Nothing could be farther from the truth. Not a different basis of valuation, but an accurate presentation of the exact nature of all the elements and of their relation to each other and to the business as a whole is required for the determination of dividends. The inference that valuation of capital conflicts with valuation of distributable capital (dividends) imputes to the balance-sheet the impossible function of serving incompatible purposes. The imputation is refuted by the long-established and successful use of the balance-sheet as the only available documentary instrument for the determination of both capital and dividends. The statement that valuation of exchange elements

at cost, where their market value is higher, creates a secret reserve must therefore be characterized as due to a misapprehension of the significance of the particular exchange value of a given object to a given business entity at a given moment of time.

Cost, as here used, means the totality of expenditures incurred by the particular business entity in the acquisition of production of a given element. More particularly, it includes such items as freight, insurance during transportation, commissions, unloading and installation. It does not include trade discounts and cash discounts taken or rebates and similar allowances. However, the determination of cost is by no means always an easy matter.

Exchange elements are usually bought in different lots and at different prices and sold in smaller quantities. Unless positively capable of identification, the remaining inventory should be valued on the basis of the average purchase price. The average here referred to is, of course, the weighted—not the general—average. A little reflection will show that any other basis must be misleading. Moreover, the purchase price must be genuine and not one artificially created for balance-sheet purposes. To illustrate, a company owning bonds of the par value of $100,000 for which it paid $90,000, in order to establish a technical basis for placing this item in the balance-sheet at $100,000, sells these securities on December 1, 1923, at par with an option to repurchase at par on or before December 31, 1923. At the same time it gives the purchaser an option to sell at par on or before December 31, 1923. Depending upon the market value of the bonds during the term of the option, either the company will elect to repurchase or the holder ad interim will elect to sell. In either event, the company reacquires the bonds, for which it originally paid $90,000, at $100,000. It is obvious that the entire transaction is merely a scheme to establish a record of purchase at a price which in truth is $10,000 in excess of cost—for at no time was there a transfer of ownership bona fide.

Much controversy has arisen over the question of what constitutes cost of production. In the broadest sense, all expenditures are cost, but not all expenditures are production costs. Modern accounting practice tends to allocate expenditures as far as possible to the products which absorb or are supposed to absorb the objects of expenditures. This tendency has given

rise and momentum to a special branch of accounting—known as cost accounting—which is chiefly concerned with the problem of where, when and how to allocate what it conceives to be the production costs of a business. There is as yet, however, no unanimity of either principles or practice, with the result that cost accounts are lacking in uniformity of treatment.

The chief value of cost accounting lies in the establishment of a danger signal in the fixation of the selling price of a product; and this it accomplishes, broadly speaking, by more or less judicious distribution of direct, indirect and overhead expenses and costs over the product. That the ingenuity of cost accountants has thus provided an invaluable instrument for the determination of selling price even under conditions of keenest competition will, we believe, be generally acknowledged. But there is ample reason to take exception to the claim that even the most approved methods of cost accounting determine the actual cost of a product beyond a moderate degree of plausibility.

Indeed, weighty arguments may be advanced in support of the claim that conventional cost accounting does not determine the cost of production. Depreciation of plant and equipment takes place during idleness as well as production. Even the propriety of adding to the cost of the product the amount of depreciation due to production may be questioned. For while it is certain that the manufacturer must consider depreciation in the calculation of the selling price, its inclusion in the cost of the unsold product means the annulment, through valuation, of a diminution of value. The contention that depreciation has been incurred for the purpose of production does not state a fact. A manufacturer does not produce for production's sake, but for the sake of selling the product at a profit. If he fails to sell at all, he can derive little satisfaction from the transfer of the amount of depreciation of his plant and equipment to the cost of his product.

Analogous reasoning may be applied to other costs which are conventionally distributed as production costs. What actually constitutes a cost of production is a question of fact which must be answered in each individual case after full consideration of all the conditions and circumstances. Generally speaking, production cost is the cost of those objects of expenditure which have been specifically imparted to the product (Simon, loc. cit. p. 347).

The difficulties of determination of cost of production are not exhausted by the uncertainties as to its nature. Materials and wages are subject to fluctuations. The fact that some of the products are sold in the course of the accounting period renders it almost impossible to determine just which raw material and what wages have gone into the remaining stock. The cost accounts will normally show only the total cost of production for each kind of product during the accounting period. Normally, therefore, the average cost of production must be applied to each unit of the remaining inventory. It is only where the individual cost of production is ascertainable beyond question that the more specific individual cost is a proper basis of valuation. In the absence of reliable cost data there remains no alternative but appraisal. Whether cost is determined by cost accounts or by appraisal, as a basis of valuation for balance-sheet purposes, it yields to a lower market value.

Appraisal becomes necessary in cases where property is acquired by the issuance of shares of capital stock without a par value and in cases where a variety of objects are acquired for a lump sum. With the principles of appraisement we are not here concerned. Suffice it to say that in each instance it is the particular use value or the particular exchange value, as the case may be, which is required for balance-sheet purposes.

Frequently, a repartition of cost, involving appraisal of the parts of an originally uniform whole, is required. To illustrate, a tract of land is acquired and subsequently improved and subdivided for sale. Part of the land is set aside for streets and other public purposes. The remaining portion will normally be composed of parcels of particular exchange value varying by reason of location. If the average cost per acre is $100, some parcels will have a particular exchange value of less and some of more than that amount per acre. If the average were used and a uniform percentage added to fix the selling price, the most valuable parcels would be taken up at once, while the least valuable would remain unsold, with the result that their particular exchange value would have to be accepted when it was too late to retrieve the loss incurred through the undervaluation of the parcels sold. Valuation, in such cases, must be by parcels. Notable instances are the state land settlements at Durham and Delhi, California.

Finally, appraisal is necessary in the case of objects which

have been acquired by gift. That such objects should be valued at zero is a fantastic suggestion which fails to recognize the mathematical significance of the expression "cost equals zero." That significance is that cost does not exist. Such being the case, it cannot be used for comparison with any other basis of valuation, such as market value or use value. Surely, no one advocates that money acquired by gift should be valued at zero.

Consistent application of the principles outlined demands, as we have seen, that valuation of use elements should never be in excess of cost and that valuation of exchange elements should never exceed either cost or market value. But consistent application of these principles demands with equal force that the values to be assigned must be those which the elements severally possess to the particular business entity at the given moment of time. Obviously, then, any undervaluation is an improper valuation for balance-sheet purposes. Undervaluation may take place either directly by the understatement of the value of a given object—including the omission of the object from the balance-sheet—or indirectly by erroneous or fraudulent book entries. The treatment, in the books of account, of so-called capital expenditures as revenue expenditures, the writing off of excessive amounts of depreciation or bad and doubtful debts and failure to take into the balance-sheet accrued income and prepaid expense are illustrative of the many methods which may be employed, either ignorantly or with fraudulent intent, in the undervaluation of capital.

The plea of conservatism is put forward in justification or excuse of such practice for balance-sheet purposes. But "it is hard to believe that so good a cause as financial conservatism needs such unholy allies as misrepresentation and deception." For it is evident that every undervaluation of assets and, correspondingly, every overvaluation of liabilities, creates a secret reserve of capital which, in the words of Hatfield, "may be used as a means of refusing to pay dividends really earned, which, so far as it applies to holders of income bonds or noncumulative preferred stock, may work an irreparable loss. Even where there are no such divisions of interests, it may lead ignorant stockholders, thinking the balance-sheet correct, to dispose of their stock at less than its real value." (*Modern Accounting*, p. 254.)

The foregoing considerations seem to us to justify the demand that in the valuation of capital for balance-sheet purposes the

unctuous admonitions of a false conservatism be resisted no less firmly than the tempting allurements of an extravagant optimism.

Valuation of capital deals with realities and requires, therefore, not the perfunctory expression of conjectures, but a statement of mature opinion based upon careful analysis in accordance with the principles herein developed and illustrated.

(To be continued)