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CAPITAL MAINTENANCE: A NEGLECTED NOTION

Abstract: This paper traces in descriptive fashion some of the developments of thought about capital maintenance during this century. The adverse consequences of neglecting the subject are mentioned after a basic review of the concepts. Contrasts among the theories from the United Kingdom and Ireland, Canada, Australia and other countries are also made.

Introduction

To have income is to have an increment of capital; to have a loss is to have lost some capital. Capital maintenance and income are interdependent building blocks of financial accounting. All other notions either derive from or build on those foundation stones. Despite that mutual dependency, they have not had equal attention in the development of financial reporting in the United States. Neglect of capital maintenance in the development of income theory has not been without penalty to financial reporting. This paper traces some developments of thought about capital maintenance during the twentieth century. The paper is largely descriptive of the issues. Attention is not directed to strengths and weaknesses of arguments that have been made about the issues. Sterling et al [1981] have done that well. Some brief comments are made about adverse consequences of the neglect of capital maintenance.

Some simple thoughts about capital maintenance and income are offered first. The substance of financial accounting for a business enterprise concerns investment in assets looking towards a return of and on the investment. Investment in that sense refers to the act of giving up assets in exchange for other assets to be used in producing a return on the investment. Return of the investment refers to the receipt of assets equivalent to the assets relinquished in making the investment. Return on the investment is income, that is, the receipt of assets in excess of the return of investment.

Capital maintenance concerns the division of the aggregate return into its two components: return of and on investment.

Financial accounting cannot, of course, assure that capital is maintained. It can only report whether the aggregate return includes any income or, if it does not, that there has been a loss of capital. Capital maintenance refers therefore to a threshold — on one side is income; on the other, a loss. An increment of capital is income; a decrement is loss.

Financial accounting is not very tidy in the use of terms. Investment refers to the act of acquiring an asset. Investment also is used to refer to certain kinds of assets so acquired, such as, stocks, bonds, mortgages, and the like.

Capital also is used to mean several things. The most fundamental use is in characterizing an element of the accounting equation, in which capital appears as the excess of assets over liabilities. Capital also is used to characterize a kind of asset and a kind of expenditure. So capital is used to identify a kind of element on the right side of the balance sheet and an element on the left side. Anthony [1983] has recommended that the term capital be confined to the left side to characterize resources. In a capital maintenance context the same ambivalence exists. One view holds that assets themselves (or perhaps net assets), including similarly useful assets, constitute capital. An opposing view is that a measure of the wealth (or financial well-offness) represented by the assets of the enterprise is the capital.

Capital Maintenance Issues

To identify issues about capital maintenance, some elemental matters are considered first. An individual makes an investment of \$1,000 in a monetary instrument (whatever its form). Suppose that the aggregate return is \$1,200. To determine the income one first determines the amount required to maintain capital. The amount of cash invested, \$1,000, surely is a candidate. Suppose, however, that the inflation rate currently is 10 percent. Is \$1,000 adjusted for 10 percent inflation, that is \$1,100, also a candidate? Suppose further that the return is \$1,200 but that the price of the asset in which the investment was made has increased to \$1,150 at the same time that the inflation rate is 10 percent. Is \$1,150 also a candidate for the amount of capital to be maintained? Income would be \$200, \$100, and \$50, respectively, for the three candidates.

Turn now to business income. New complications are inevitable. Note first, however, that the fundamental notion of capital maintenance is much the same as for an individual investor. The business is an investor in assets. There is a sought

after return on the investment. Income (if any) of the business therefore is the portion of the aggregate return that exceeds the amount deemed to be a return of investment. Income is anything left over after capital is maintained.

The characteristics of a business give rise to issues in determining the capital that were not present in the situation for an individual investor. A business invests in and deploys a mix of assets. Some are monetary, some are nonmonetary subject to amortization over varying service lives. Some expire unexpectedly because of technological supersession. Further, a business ordinarily is leveraged to some extent. The leveraging involves short-term debt, long-term debt often for significant amounts, and may involve preferred stock.

Finally, a business is impersonal in the sense that it is a constructed alter ego of individual owners with residual interests in the business — a proprietary view. Or, the business may be viewed as free standing with its own capital and its own income — the entity view.

Capital — Physical or Financial

The unique characteristics of a business produce a set of issues concerning capital maintenance that may be added to the issues highlighted earlier for an individual investor, that is, the consequences of inflation and of changes in specific prices.

The argument that capital is physical in nature had its roots in the proprietary view of a business. The proprietary view focusses on the residual interest in identifying the capital sought to be maintained. The argument is made that residual interests often are concerned about and interested in a sustained level of income from the mix of assets comprising the business as an operating unit. Accordingly, the capital to be maintained is the operating capability or capacity of the business. The argument supports the conclusion that the capital is a physical phenomenon.

Maintenance of financial capital stands in opposition to maintenance of physical capital. The financial capital view assumes that capital is a financial manifestation of wealth and, accordingly, that the physical characteristics of assets are not an appropriate focus to determine income. Those who hold that view may disagree about the attribute (invested cost, current cost, realizable value, etc.) used to measure wealth, but they agree that capital is a financial phenomenon. At this point it is noted, without elaboration, that the system of accrual ac-

counting practiced currently in the United States is based essentially on maintenance of financial capital.

Before commenting on some world-wide developments concerning the nature of capital, brief observations are made about implications of the proprietary and entity views of a business enterprise.

The entity view raises some unique questions bearing on the nature of capital. One concerns the role of creditors and the return to them in measuring capital. One view is that creditors and equity interests (preferred as well as residual) should be treated alike in accounting for the capital of the business enterprise. One possible consequence is that there should be an accounting for the "cost" of equity capital as an expense similar to the accounting for interest paid to creditors. One might argue, of course, that returns to creditors and returns to owners would be treated alike also if neither is treated as a cost, but rather that both are treated as distributions of entity income.

The most pervasive capital maintenance issue is whether capital is financial or physical. Consideration of that issue has been sporadic in the United States. Indeed, as mentioned earlier, capital maintenance was a neglected issue in the United States for almost all of the first three quarters of the current century. The issue was addressed somewhat earlier in other countries of the world. Since the principal effects of the choice between financial capital and physical capital concern changes in prices of assets, differences in the timing and degrees of inflation in various countries have influenced differences in the timing of attention to the subject.

Theodore Limperg of the Netherlands is credited with being the principal originator of the physical capital notion. Limperg, accountant and self-taught business economist, entered the profession of accountancy in its formative years in the Netherlands. He also was a professor of business economics at Amsterdam University. Limperg's thinking and theories dominated business economics and accountancy in the Netherlands for more than forty years, beginning about 1920. [van Sloten, 1981].

Central features of Limperg's general theory of business income were the derived conclusions that (a) in normal circumstances, where the business is profitable, cost of replacement is the recordable amount for the means of production and (b) profit is the disposable accretion to wealth of those dependent on the production process. The second of those conclu-

sions has become the building block for the view that operating capability, a physical quality, is the capital threshold for determining business income.

Limperg's influence on accounting in the Netherlands carried over into practices followed by a few well-known Dutch companies, including N. V. Philips Gloeilampen fabrieken, Koninklijke Wessanen N. V., and the Group, comprising AKU and KZO. A study conducted by the Economic Institute of the Free University, Amsterdam in 1968 shows, however, that replacement value accounting was not the prevailing practice in Netherlands. Various aspects of replacement value accounting were reflected, however, in the financial statements by a significant minority of the companies studied [Burgert, 1972].

Holding Gains and Losses

Determination of income for a period by comparing capital at the beginning of the period with capital at the end of the period ceased, as a practical matter, at least in the United States, very early in the history of public financial reporting. Accrual accounting in which periodic income is determined by deducting invested (historic) costs from revenues assumes that the costs deducted measure the capital used up during the period. Articulation of the income statement with the opening and closing balance sheets presumably provides the test as to whether the invested capital has been maintained.

In that context, a physical capital approach would call for the matching of replacement costs of operating capability with revenues. Since operating capability in an environment of changing technology is not susceptible to direct measurement, surrogates are necessary. The usual assumption is that replacement costs of productive assets in use generally will serve as a satisfactory surrogate.

In a replacement cost system that articulates through double entry accounting, changes in replacement costs of specific assets necessarily give rise to credits or debits offsetting the recorded changes in replacement costs. Those offsetting credits and debits have come to be called holding gains and holding losses — gains if costs have increased, losses if they have declined. To label cost increases as gains and decreases as losses may seem twisted, depending on the perspective. From a capital maintenance perspective, a cost increase is a gain because of the advantage gained in using an asset for which the actual outlay was less than the outlay for that asset would have

been today, and vice versa for a cost decrease. In short, gains and losses measure opportunities forgone.

The controversy about whether capital is financial or physical focusses principally on the accounting for holding gains and losses. They are income credits or charges for financial capital purposes, since they manifest changes in wealth in financial terms. They are capital adjustments for physical capital purposes, since they manifest changes in the measure of operating capability, rather than a change in operating capability itself.

Standard Setting Developments

United States

As mentioned earlier, little attention was given to capital maintenance in the United States during the first seventy-five years of this century. In 1976 the Financial Accounting Standards Board exposed for public consideration a Discussion Memorandum concerning a conceptual framework for financial accounting and reporting. Among the issues dealt with were the attributes (historical costs, current costs, and others) of financial statement elements. Capital maintenance necessarily was an issue to be addressed if attributes other than historical cost are studied. In 1979 the FASB issued Statement of Financial Accounting Standards No. 33 requiring certain companies to report certain information supplementally about current costs of assets and constant dollar measurements. The Statement contained a discussion of financial capital views and physical capital views, but did not contain an expression of the Board's preference, although the earlier Exposure Draft did contain an expression of the Board's preference for financial capital. The matter has not had further Board attention. The recent decision to withdraw the requirement of Statement No. 33 probably means indefinite postponement of standard-setting attention to capital maintenance in the United States.

United Kingdom

In January 1976 the Chancellor of the Exchequer and Secretary of State for Trade and Industry of the British government appointed a committee to inquire into inflation accounting. The committee, commonly referred to as the Sandilands Committee, submitted its report in June 1975. The committee indicated a preference for "value to the business" as the measure of assets for balance-sheet purposes. Value to the business of an asset may be replacement cost, net realizable

value or “economic value,” depending on the circumstances. As a practical matter, however, replacement cost ordinarily would represent value to the business. The accounting proposed was entitled current cost accounting. The Committee concluded that the most useful representation of enterprise income would exclude all holding gains and losses in order to come to a figure characterized as operating profit. A leaning toward physical capital was thus set in motion for standard setters.

In March 1980 the Accounting Standards Committee of the United Kingdom and Ireland issued Statement of Standard Accounting Practice No. 16 on current cost accounting. The Statement required certain companies to present current cost financial statements either as a supplement to the historical cost statements or a replacement for those statements. Income would be shown in two tiers:

- Current cost profit (of the enterprise), and
- Current cost profit attributable to shareholders.

Physical capital underlies the determination of enterprise income. Recognition is given to net monetary working capital as a necessary element of operating capability. As prices of goods and services change, additional (or lesser) net monetary working capital is required. Accordingly, current cost profit is adjusted for those required capital changes.

Provision is made for a gearing adjustment in determining current profit attributable to shareholders. The gearing adjustment reflects the effect of leveraging on what is distributable to common shareholders. It recognizes that operating capability (which requires working capital) will have been financed in part by borrowing and to that extent holding gains and losses (less interest paid on the borrowings) accrue to shareholders. Lemke states that the “rationale for the gearing adjustment is quite straightforward. It assumes that a firm’s debt-equity ratio will remain fairly stable and that a portion of current cost increases can therefore be financed by debt (without changing the risk characteristics of the firm)” [Sterling et al, 1980].

Australia

In October 1976 the Australian Society of Accountants and the Institute of Chartered Accountants in Australia issued a provisional statement on current cost accounting, which was amended in 1978 and superseded in November 1983 by Statement of Accounting Practice, *Current Cost Accounting*. The

Statement is unequivocal on the capital maintenance issue, where it states: "Profit under CCA is measured by increments in capital, defined as operating capability. This avoids the inadvertent erosion of operating capability which may occur as the result of conventional measurement of profit" [p.x].

The Statement strongly recommends presentation of supplementary current cost financial statements in addition to conventional statements. The portion of holding gains and losses attributable to monetary liabilities and monetary assets would be taken to a current cost reserve — a proprietary view.

The Statement offers an interesting comment on the proprietary/entity view of an enterprise by illustrating how a proprietary result would be calculated, together with the following comment:

As gains on loan capital do not increase operating capability, and hence are not an element of the CCA net profit of the entity, any distributions to shareholders from the gain on loan capital reserve constitute a reduction in the operating capability of the entity unless replaced by additional equity funds or loan capital [p.x].

Canada

In December 1982 the Accounting Research Committee of the Canadian Institute of Chartered Accountants recommended that large publicly held companies present as a supplement to their historical cost financial statements (a) certain information about the current cost of inventory and property, plant and equipment and (b) certain information measured in constant dollars. The recommendations were characterized as intended to assist in assessing maintenance of enterprise operating capability, as well as maintenance of operating capability financed by common shareholders, thus opting for maintenance of physical capital in determining income (loss).

The recommendations accommodate varying views of the nature of capital by recommending disclosure of a financing adjustment that might be useful in assessing maintenance of the common shareholders' proportionate interest in operating capability. Also recommended for disclosure is a constant dollar financing adjustment intended to assist in assessing maintenance of financial capital. The financing adjustment concerns the portion of holding gains and losses presumed to have been financed by borrowings and, accordingly, to that extent are not borne by (or a benefit to) common shareholders.

International

The International Accounting Standards Committee, in issuing IAS 15, *Information Reflecting the Effects of Changing Prices* [1981], referred to two approaches to the determination of income:

- (a) income after the general purchasing power of shareholders' equity has been maintained, and
- (b) income after the operating capacity of the enterprise has been maintained, which may or may not include a general price level adjustment [p.x].

Except for those indirect references, capital maintenance is not mentioned in the Statement.

Neglect of Capital Maintenance — Consequences

Two factors contributing to the dormancy of attention to capital maintenance in the United States until the 1970s were (a) an inflation rate modest enough not to upset the usual assumption that the effects of inflation could be ignored for purposes of financial accounting and (b) a focus on the matching of costs with revenues as a driving mechanism for periodic income determination. Capital maintenance was assumed to be a fall out of a "good" match.

Neglect of capital maintenance as the conceptual twin of income led to some developments in financial reporting that might be characterized as instinctive reactions to symptoms, rather than reasoned analysis with an anchor.

The first of those reactions grew out of the perception that if prices have risen, the conventional historical cost system would produce an "unreal profit" element in income unless replacement or current costs were matched with revenues. Thus was born a family of patches on the conventional accrual system, including Lifo costing of cost of sales and accelerated depreciation charges. Holding gains and losses under those practices were not accounted for (or, at least, the accounting was delayed) and, accordingly were excluded from income, thus tending to a physical capital effect in a system ostensibly based on maintenance of financial capital. Thus the capital maintenance and income notions inherent in the system were mixed. The resulting capital maintenance notion was uninterpretable except to say that capital was partly financial in nature based on some historical measures of changes in wealth and partly physical.

The second instinctive reaction concerned the nature of periodic income, as compared with lifetime income. Many observers long have been uneasy with the idea that a measure of periodic income, for a year or any part of enterprise lifetime, should be similar in nature to income for a lifetime. Although there is agreement that lifetime income runs from the point of cash (or cash equivalence) invested by owners in forming a business to final cash distribution to owners upon liquidation, there has been concern that periodic income would be distorted if a cash grounding were the basis for determining periodic income. Cash grounding in an accrual system means that revenues manifest likely cash prospects and expenses represent actual or probable cash outlays. The uneasiness led to putting more patches on the system. A notable example was the deferred method of allocating income taxes under which events with probable cash consequences, like a change in tax rates, are ignored currently. Another example was the earlier practice of providing for no insurance (commonly called self insurance) even though the timing and amount of cash outlays for risks not insured were not predictable with reasonable accuracy. Patches like that fly in the face of the idea that income is a capital increment. Whatever the nature of capital, so is the nature of income.

The third reaction is more subtle. Standard setters for financial reporting have visited and revisited on a number of occasions the question of financial statement geography or display of the effects of extraordinary, unusual, or nonrecurring happenings. Treatment of those effects have been modified many times. Eventual erosion of the results has not been unusual. In the 1940s the tugging forces were characterized as the operating performance view of an income statement versus the all-inclusive view. In the 1980s the same forces are tugging at each other. Continuing debate about treatment of nonrecurring items is a manifestation of an unresolved issue that is much more fundamental than issues of display.

The argument that the capital sought to be maintained should be that which produces a sustainable source of income implies that the effects of windfalls, or of unforeseen happenings should be excluded from income. Presumably, the effects of windfalls, gains in some instances and losses in others, tend to be offsetting over time and accordingly, so the argument goes, should be ignored in determining the capital necessary to sustain a level of income. Attention to conceptual issues concerning capital maintenance would have, at least, provided a

reasoned basis for resolving issues about extraordinary items. The ad hoc approach has not withstood the forces of erosion.

Unfortunately, attention to capital maintenance spurts and flags, depending on the rate of change in inflation. Continuing attention through periods of modest inflation, as well as periods of high inflation, would heighten chances for improved financial reporting and, most certainly, would provide a better rationale for any patches put on the financial accounting model.

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