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SHARP differences of opinion have characterized the reactions of accountants to proposals to revise the traditional rules of accounting as they apply to inventories. The discussion which follows is an endeavor to cut through the many problems of accounting technique in order to get a clear view of the fundamental economic conditions which lie behind these proposals.

I.

BUSINESS AND DEPRESSIONS

Almost every time business turns upward in cyclical revival, the business community turns from its memories of crimson ink and looks at the rosier hues on the future's horizon with an almost fatalistic assurance that the uptrend will mean the return of profits. The past becomes a closed book. Its losses were as inevitable as the ensuing profits probably will be. Business goes on, buffeted and tossed on the economic waves, giving much less thought to moderating their excess than to riding the next swell for all it is worth.

It is highly debatable whether government reforms and hypodermic treatments have done much to reduce the amplitude of business fluctuations, but there is little doubt that business itself, in its occasional efforts to subdue the cyclical swings, has scored an almost perfect zero. This may be partly a result of the fact that business has been preoccupied with its eternal struggle to make profits, when the making was good, and to avoid bankruptcy when it wasn't. The government—whose motives include other aims than business profits and whose concern over bankruptcy is more remote than the businessman's—has been able to proceed with a relatively free hand.

But the depression problem is essentially a business affair. It is affected, to be sure, by acts of God, by wars, and political upheavals, but it stubbornly persists as an endemic condition in the business organism. And since business profits are the mainspring of industry and one of the most important factors in the depression problem itself, business may well turn to a careful examination of certain aspects of profits which are particularly related to the business cycle.

The purpose of business in the economic system is to produce goods and services for current or future consumption, to provide employment—in general, to provide the means for converting the productive resources of the nation into goods and services that will satisfy human wants.

This sounds theoretical, and indeed it is, when compared with the simple, and more common, statement that the purpose of business is to make profits. But it brings out the fact that the real goal of business is a better standard of living for everyone. Profits are the incentive, the guide, and the reward to the individual business which contributes toward this end.

There are, then, two important functions of profits. First, they provide a guide in the conduct of a business and, second, they measure the income of the owners of the business. In both of these respects the nature of profits, as they emerge from our very complicated account books, can bear a careful reexamination. Do profits as now defined provide businessmen with a satisfactory guide to make their operations as stable and as productive as possible? And do they give the best possible measure of income from year to year?

Take the question of profits as a guide. The business executive bends every effort to make his operations profitable, and it has often been contended that if an operation does not earn a profit, it must not be satisfying any very important need of society. There is, in other words, a social loss in undertakings that fail to earn their costs. But once profits are earned, they serve as a further guide to business policy. It is the amount of profits which determines whether it is desirable to pay dividends, to expand the business, to build new plants, to increase wages, or any number of things. Moreover each of these decisions has a profound influence upon whether *business in general* will expand or contract. The importance of measuring business profits as accurately as possible is obvious.

II.

The Nature of Inventory Profits

One of the really important determinants in arriving at the business results of any given year is the valuation at which inventories are carried. If we could stand away a few paces and look at a business in its proper perspective, we might have some doubts about how well this item is handled.

Here is a firm which, as a going concern, has money invested in plants, equipment, and in inventories (raw materials, goods in process, and finished products) which are needed to keep the plants going. Unlike the plant and equipment, the inventories do not consist of the same goods from one period's end to the next. But they do represent pretty much the same kinds of goods. What is more important, the person who is going to stay in business can be sure that this investment in inventories cannot be liquidated if he is to continue to operate. Each business has a basic inventory requirement which represents a capital investment. It is, like the water required to fill the pipes of a hydraulic system, never sold out. Therefore it seems illogical that, because prices rose from 10 cents to 15 cents, a company's basic inventory investment should have to be marked up from $50,000,000 to $75,000,000 and the appreciation taken up as a profit.

It seems obvious that when prices rise or fall, the increases or decreases in the value of this stock of inventories (assuming no change in its physical volume) are in the nature of unrealized capital gains (or losses) which should be distinguished from current income. The only way they can really become expendable income is for the business to liquidate and close down. Even in this case, the company is liquidating a capital investment and its profit or loss is a capital gain or loss and not a part of current operating income.

How do these inventory value fluctuations get into the profit-and-loss account? Businessmen will claim that they regularly take inventory markdowns into account, but never an inventory markup. They follow the "lower of cost or market" method in valuing their inventories.

The inventory profits and losses which we are discussing are a matter quite apart from the price adjustments which are made to take account of the lower of cost or market. They come about in an entirely different way.

A simple illustration will indicate how ordinary accounting methods give rise to inventory profits. Assume a business having opening inventories of 10,000 units valued at $10 per unit and closing inventories of the same number of units, but because of advancing costs they are valued at $11 per unit. Sales (which are on a cash basis) may have amounted to two or three hundred thousand dollars, and throughout the period they showed a profit over the cost of the goods sold. This profit over the cost of goods sold, let us assume, is $10,000, or an amount equal to one-tenth of the value of the opening inventory. The books of the company will therefore show the following items:

1. Opening inventory (at lower of cost or market)	$100,000
2. Closing inventory (at lower of cost or market)	110,000
3. Profit for the period.....	10,000
4. Cash: No change from opening balance-sheet	

In this oversimplified example, all the profits resulting from sales go directly back into the higher-cost inventories to replace the goods sold, so that at the end of the period the business has gained no expendable or cash, profits—nor any "real" profits (i.e., has no more goods on hand).

It is true that cash could be realized by failing to replace a portion of the inventories as they are sold, but this would mean a dissipation of a part of the capital needed to run the business.

It may be concluded, therefore, that inventory profits are profits re-invested in higher-cost inventories, that is, in inventories which cost more per unit than the cost of the goods they replace. There is something suspicious about profits that come with *increased* costs, particularly when these profits cannot be converted into cash without depleting the inventory which is needed to run the business. Inventory profits, which are represented by unsold inventories rather than cash, are not only unrealized profits, but they are also unrealizable if the business is to continue to operate. Any dividends paid on the basis of inventory profits must be drawn from other sources than the company's current business operations —often from bank loans.

To put it figuratively, the investment in inventories has been tied by accounting rules to the pendulum of prices, so that the unit value of that investment increases as prices rise and contracts again as prices fall. The profits resulting from these inventory-value fluctuations are fictitious and unreal. They contribute nothing to cash income. Moreover, their coming and going is beyond the control of the business manager. And, as shown in the following section, since they are fictitious, they are distinctly misleading rather than helpful in guiding the conduct of business.

III.

Effect on Business Cycles

Under accepted accounting principles, inventories are valued at the lower of cost or market, rather than at a fixed "investment" value which would eliminate fictitious inventory gains or losses from the record. The physical fact that inventories are turned over in the process of doing business is allowed to outweigh the economic fact that the investment in inventories cannot be liquidated (at "cost" or "market" or any other price), so long as the firm is to stay in business. Goods are sold and replaced in the inventory but the inventory goes on as long as the wheels keep turning.

The inventories may be included as "working capital" and "liquid assets" in the working out of current ratios and other computations which are important to the financial community, but they certainly represent a permanent investment for the lifetime of the business, as far as the possibility of converting them into cash is concerned. They are, therefore, too "fixed" to make it desirable to have their value marked up and down with every cyclical swing of commodity prices.

If we had no important variations in commodity prices, the problem of inventory profits would never be serious. Indeed, one is tempted to conclude that the accounting methods now in use were designed for a stable price system.

But the fact is that we do have very important price movements, and we also have an accounting system which permits these price swings to be reflected in the value of what is in effect a permanent part of a company's capital.

These are the facts of the case. What are their consequences upon the conduct of business?

In the first place it should be stated that most businessmen have failed to realize that in periods of rising prices their reported profits are not all real. They assume that their books record profits which are in available form, ready to be distributed as dividends or to be used for expanding the business, or for retiring its funded debts. They proceed to use them in one of these ways. The first thing they encounter is a shortage of cash—the inventory profits are not cash, but inventories. The next step, however, is to turn to the banker who is ready to lend money to a business which has a strong working capital position, particularly one which is reporting substantial profits.

It is only natural that a profitable business should declare dividends—particularly if there is a penalty tax on undistributed profits.* Moreover, it is a time-honored custom to associate the increased use of bank credit with the coming of prosperity.

Money is borrowed not only to be distributed as dividends, but also to "expand the business" with new plants or equipment, increased overhead or sales expenses. In any event the borrowed money is spent. It is often spent for things that will not make it easy to pay back the loans at a later date, as in the case of borrowing money to pay dividends, where it is perhaps assumed that the bank debt can, in a rough way, be set off against the higher value of the inventory.

As prices move upward, the large reported profits are regarded uncritically as true earnings of the business. Upon the expectation that they will continue (not realizing that they are as temporary as the period of advancing prices) the business community—as well as the security markets—is prone to capitalize these fictitious earnings and to use them as the basis for grandiose plans for expansion. Demands for higher wages are readily granted. All the elements of a good-sized boom are present.

Then, as the price rise begins to taper off—note that it does not require an actual price downturn—the increment to profits which had been coming from price increases dries up. Business appears to be less profitable. A general program of retrenchment begins, and with it the downward spiral. The disappearance of profits is quickly followed by the desire to "unload," and prices turn sharply downward.

As inventory values fall, the inventory profits go very much as they came. They prove to have been both fictitious and temporary. But not so the debts that were incurred in the rush to spend the so-called profits. It now becomes apparent that it was not profits that were spent, but borrowed money. And the debts are added burdens to plague the depression-ridden executive.

This is, of course, a very sketchy and inadequate outline of the sequence of events, but it serves to indicate the seriousness of failure to recognize the fictitious nature of inventory profits.

IV.

Variable Inventories

There is one other aspect of the question of inventory gains and losses which needs to be clarified. So far, we have discussed the problem as though the physical volume of a company's inventories never changed. But this is not always the case; many businesses

* The tax on undistributed profits, which practically forced companies to distribute all their reported earnings, brought out very clearly the fact that these earnings were often not available in cash. Borrowings and stock issues were resorted to in order to pay out as dividends earnings which did not exist except in the book values at which inventories were carried.

own much larger stocks of goods at one time than at another. Would it not be possible to convert a considerable portion of our inventory profits into cash profits by buying extra supplies when prices are low and selling the goods out at the top of the market?

An examination of the facts indicates that these gains are not as frequently converted into cash as might be supposed. First, the inventories are generally geared to operating needs, and liquidation is not often an easy matter, because it must take the form of reducing the work-in of raw materials below the rate at which the firm is selling its finished products. A going concern must retain its minimum inventories in any event, and even for the excess inventories, businessmen are reluctant to reduce work-in before they see any signs of a slowing down of business. Then, when business slows down, sales of finished products are likely to fall off just as fast as raw material work-in can be reduced. This is especially true when cutting down means plant idleness and layoffs which may not prove to be wise.

Operating requirements are not the only factor limiting the ability of a business to liquidate its inventories at peak prices. Businessmen have not yet found the means of making infallible forecasts of future price movements. They are therefore suffering from poor vision as well as from having their hands tied by operating requirements.

Past experience seems to indicate that business in general loses more than it makes from the business cycle variations in inventory prices. The typical business cycle—according to such statistics of the physical volume of inventories as are available—shows the smallest inventories during the early recovery phase (when they are cheap), then rising inventories as business improves, and peak inventories at some time during the period of general price collapse. While a few firms may sell out and take their profits, the important thing is that someone is holding this larger volume of goods and taking the losses on them.

V.

Industries Affected

Inventory profits are not restricted to any small group of industries. They affect all firms which own inventories of merchandise (raw, process, or finished), as long as the unit value of these inventories moves up and down as prices fluctuate. Service industries, such as transportation, communications, public utilities, etc., are largely free from inventory gains and losses because they do not carry significant amounts of merchandise inventories. Some contracting businesses do not own the materials they process, and thus escape. While farmers are among those most severely affected, they present a special problem because they do not generally have accounting records in such a form as to reflect inventory profits in the same way that business accounts do.

Businesses which hedge their inventories on futures markets can escape inventory gains and losses by matching them against hedging losses or gains.

Among the industries not listed above as exceptions, the importance of inventory profits and losses in the total results of a business varies with the size of the inventories carried and the violence of the price fluctuations by which they are affected. How serious the results of inventory fluctuations may be can be indicated by comparing the average value of inventories with the average earnings of a company, then examining how widely the prices of the goods it handles typically fluctuate. Industries with a long production process, like tanning or nonferrous metal processing, must carry large inventories. But so must industries which handle large volumes of goods with a small margin of mark-up. Their annual profits are often small compared with the large value of the inventory upon which they carry the price risk, as in the case of large mail-order organizations, chain stores, meat packers, and the like. In all these cases there is not only a large inventory in proportion to the average earnings, but the inventory is also subject to fairly violent price fluctuations.

VI.

What to do about It

Business must not go on ignoring the fact that inventory profits are fictitious, unexpendable, and temporary—coming with price advances, going with price declines. To consider them as income is clearly to mislead and confuse those who make important business policy decisions. Any effort to spend or distribute such inventory appreciation, in the form of dividends or otherwise, encounters the difficulty that the gains are not expendable and the funds distributed will have to be secured from other sources—very likely from bank borrowings.

Once the fictitious, unexpendable, and temporary nature of inventory profits is recognized, the next step is to do something about it. It is not enough for a business merely to recognize these fictitious gains and leave them on the books as undistributed profits. They should be excluded from the reported earnings if they are to avoid being misinterpreted. Their exclusion can be brought about in several ways, and there is a considerable volume of accounting and other literature explaining the methods.*

As between the two general methods of approach which are most frequently discussed—the inventory reserve method on the one hand, and the base-stock or last-in first-out methods on the other hand—the latter have the advantage that they eliminate inventory profits, both from the operating statement and the balance-sheet. They hold the basic inventory investment at a constant unit value and charge current raw material costs against current sales. The disadvantage of the inventory-reserve method, which estimates the amount of inventory profits and puts them in a reserve account rather than in profit and loss, is that those making the business decisions—and other analysts as well—may still feel that these reserves represent "profits" (and will be guided accordingly), even though they are earmarked.

For some industries, one method is more adaptable than another. The essential points of all the plans are, first, that profits are based on replacement costs, and second, that fluctuations in the price of the basic inventory are not allowed to affect earnings.

It should be pointed out, incidentally, that over a period as long as a business cycle the inventory gains are practically matched and canceled by the inventory losses that follow them. In other words, the proposed redefinition of earnings affects only the short-time or yearly estimates of income and would not alter the longer-time results of a business.

In addition to their own accounting methods, businessmen can promote the wider recognition of the illusory character of inventory profits through other channels. Among the most powerful influences in determining how profits will be defined and understood by the rank and file of businessmen, are the tax rulings of the Commissioner of Internal Revenue. These rulings conform with what the Commissioner recognized as "the best accounting practice in the trade or business, and as most clearly reflecting the income."

The revenue act of 1938 contains a new provision giving certain industries in the nonferrous metals and tanning fields permission to employ the last-in,

* See bibliography at end of this article.

first-out method in handling inventories. This provision of the law was opposed to the earlier rulings of the Commissioner of Internal Revenue, who objected chiefly on the grounds of its apparent unorthodoxy. The fact that the last-in, first-out accounting method has been written (although in a limited way) into the tax law gives a precedent for its further extension, and the wider adoption of the method in practice would probably do much to overcome the remaining official objections.

The reluctance of the Bureau of Internal Revenue to accept a definition which excludes inventory gains and losses from taxable income is one of the most important oversights in governmental efforts to stabilize economic conditions. Considering the wording of the legal provision quoted above, the bureau could hardly be expected to initiate such a redefinition of income. But in view of the importance of continuing stable tax receipts, to say nothing of the public interest in economic stability,* it is hoped that businessmen will soon be able to secure the active coöperation of the tax authorities.

Another group in the economic setup which has not been fully aware of the significance of the inventory-profits problem includes the bankers and commercial lenders. Two primary criteria of the soundness of a commercial (bank) loan are the working capital ratio and the profits record of a company. If, in a period of rising prices, unexpendable inventory appreciation is to be recorded both in profits and in the working capital figures, the banker is misled into an easy optimism; an optimism which is violently reversed into a severe pessimism when prices turn downward and the illusory inventory gains are replaced by equally illusory losses.

Little mention has been made of the attitude of the accounting profession itself toward the inventory-profits problem. The changes in accounting methods discussed above have as their advocates many influential practising accountants. Others have not expressed themselves at all on the subject, and there are a few who have indicated their doubts of the desirability of the proposed methods. It is not the purpose of this article to resolve any differences of opinion which exist, nor to settle the many perplexing and detailed questions which the proposed solutions encounter when applied to individual businesses.

It is enough to know that a considerable number of eminent and highly practical accounting authorities are convinced that accounting procedures which are both adequate and legitimate are available. If the importance of the problem is recognized by businessmen, its solution will not be impeded by the lack of accounting tools for handling it.

As was stated earlier in this article, the depression problem is essentially (though perhaps not exclusively) a business affair. The vital importance of a correct definition of business profits cannot be denied. The failure to recognize that inventory profits introduce an important fictitious element in the earnings of many corporations has been a major factor in aggravating and intensifying the ups and downs of business. The purpose of the present discussion is to emphasize first, the significance of this fact, and second, the importance of doing something about it.

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* It should be added that the Securities and Exchange authorities, whose primary function is to protect investors and the public against misleading corporate reports and statements, have been surprisingly inactive upon the inventory-profits matter. The question may not have been raised as an active issue in any specific case the Commission has so far handled, but the whole matter of whether unexpendable inventory gains should pass as earned income is one to which the Commission might well devote attention.

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