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Preparing Price-Level Adjusted Financial Statements

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In the most general terms, financial statements serve a variety of functions to their varied users. To stockholders, they serve as a medium to indicate the level of management's performance during the previous year. To potential investors, they tell the current financial condition of the entity and can serve as an indicator of its future position. To creditors, they indicate the ability of the entity to repay debts as they come due. To regulatory authorities, they serve as a vehicle by which all pertinent information concerning an entity is transmitted to all current and potential users.

In each of the above cases, the user will look to the same set of financial statements for answers to the above question. Consequently, the problem for the accountant becomes one of deriving that set of financial statements which will best provide the desired information to these users. In order to provide for comparability and consistency between entities and within an entity over successive years, accountants have relied upon a set of generally accepted accounting principles as the basis for all statement preparation. One of those principles traditionally included in this grouping is the stable dollar principle, which is based upon the assumption that the purchasing power of the dollar has remained unchanged, or has changed very little, during the life

of the entity. While this assumption may have been true for much of the twentieth century, it is obvious that today it no longer reflects economic reality.

As a result of these changing economic conditions, numerous proposals have been advanced for an accounting approach which gives effect to changes in the purchasing power of the dollar. Among these are proposals to prepare financial statements based upon either current values or changes in the general purchasing power. At the present time, debate exists within the accounting profession concerning which method should be adopted.

The purpose of this article is not to review the many arguments concerning the advantages of each of these proposals, as the literature in that area is already extensive. Instead, this article concentrates upon only one of these methods—the adjustment of financial statements for changes in the general purchasing power of the dollar (as measured by the GNP Implicit Price Deflator). Specifically, it illustrates some of the problems that the accountant faces in the preparation of these statements.

As can be imagined, the major problem for the accountant is in the initial year's restatement of the financial statements. Fortunately, much of this work is confined to relatively few balance sheet

accounts, primarily inventories, fixed assets and deferred taxes. Once these three classifications have been completed, the remainder of the balance sheet restatement is basically procedural and can be accomplished by following the guidelines shown in the Exposure Draft issued by the Financial Accounting Standards Board.¹

For traditional accounting purposes, the valuation of inventories is essentially a two-step process. First, the quantity of a particular item on hand is determined. Second, a cost per unit is obtained. When adjusting inventories for price level changes, however, a third step is necessary. That step involves determining the period for which that unit cost applies. Thus, items in the ending inventory acquired during the most recent quarter need not be restated, while units acquired prior to that quarter must be adjusted. Thus, for companies using a FIFO valuation, much of the inventory can probably be assumed to have been acquired recently; hence, little adjustment for price level changes is necessary.

Just the opposite holds true for companies valuing their inventory under LIFO. Since inventory is valued at the oldest costs, it is

¹Financial Accounting Standards Board, *Financial Reporting in Units of General Purchasing Power* (Exposure Draft), 1974.

necessary to determine from what year these costs originated. The result of this restatement will greatly increase the valuation of the inventory. It should be pointed out, however, that this inventory valuation is not necessarily the same as its current market value, as a current market value is based upon past changes in a *specific* price index, while the price-level adjusted cost is based on changes in a *general* price index. Caution should be used when statements are prepared in this manner when LIFO is used for Federal income tax purposes.

Within the fixed asset category, it is necessary to restate both the asset account and the related accumulated depreciation account. While it necessarily follows that the asset account be adjusted first, the exact procedures to be followed depend upon the accounting system maintained by the entity.

Regardless of the system, however, the basic goal is to list the composition of the dollar balance of the asset account by year of acquisition. If a company has relatively few fixed assets and has a separate card (indicating date of acquisition) for each asset, a mere arranging of these cards by acquisition date is the only work necessary to obtain this listing. If, on the other hand, a company has a large number of fixed assets and it is impossible to list all of them individually by year of acquisition, various approximation techniques may be used. For example, one means of estimating this aging is through an analysis of the activity in the individual property accounts, assuming that the asset acquisition followed a first-in, first-out flow of costs. In this instance, an approximation of the yearly acquisitions could be made by totaling the gross additions in the current year, the first previous year, the second previous year, etc., until the sum of the yearly acquisitions equals the balance in the asset account.

It should be noted that this procedure will lead to an understatement of property on a restated basis, as some of the older acquisitions (which are restated into a larger amount of current dollars) are excluded in favor of more recent additions. To compensate for this, net additions might be substituted for gross additions. This would spread the acquisitions over a larger number of years, which might in turn provide a better approximation of the restated balance of this account. Exhibit one illustrates the procedure for restating the dollar amount after this aging has been completed.

Once this restated asset balance has been determined, the next logical step is to restate the accumulated depreciation. It should be emphasized here that the same percentage relationship between the accumulated depreciation balance and the asset balance will not necessarily exist for both the historical cost and the restated cost. Therefore, it is necessary to determine the depreciation taken to date on each year's asset acquisitions. Once this is calculated, the accumulated depreciation balance can be restated using the same restatement factors used previously. Exhibit two shows this procedure for the fixed assets illustrated previously.

If it is not practical to determine the initial allocation of the accumulated depreciation balance by the above method, some approximation techniques are necessary. If all assets have relatively uniform lives, one method might involve using a weighted average based on the dollar amount of assets acquired in a particular year and the number of years' depreciation which has been taken on these assets. If, on the other hand, the assets have widely differing lives, it would probably be necessary to apply this weighting technique to sub-classifications of assets having

similar lives. Regardless which approximation technique is used, however, it should be recognized that the initial restated balance is merely an estimate. However, as the annual depreciation expense and the accumulated depreciation on retirements can be restated with slightly more accuracy, subsequent years' restated accumulated depreciation balances need not again be computed by years of acquisition. Instead, the next year's balance can be obtained by adding the restated depreciation expense and subtracting the restated accumulated depreciation on assets retired from the beginning balance (after that balance has been rolled forward into dollars of the next year's purchasing power).

Controversy has existed concerning the classification of the third major area, the liability for deferred taxes. Presently this area has been interpreted by the FASB as being a non-monetary liability, which means that the accountant must allocate the balances in this account by the years of origin. This can be a costly and time-consuming process, especially if records do not permit easy identification of the years of origin. An alternative to this process is an aging by the yearly increments, after which annual restatement factors will be applied. If this balance is continually increasing for a company, this alternative will overstate the restated liability for deferred taxes, as none of the older increments will have been removed from the books through amortization. However, if a large portion of the balance in this account has been added in the most recent years, the resultant overstatement should be minimal.

Finally, it should be remembered that stockholders' equity is merely a balancing figure; no attempt is made to divide this classification into its contributed

[Continued on page 10]

PREPARING PRICE-LEVEL ADJUSTED FINANCIAL STATEMENTS [Continued]

capital and retained earnings components. Thus, for the first balance sheet prepared, no additional work need be done on this section. For all subsequent years, however, it is necessary to reconcile the change from beginning to ending stockholders' equity by restating changes due to such factors as the sale of additional stock, net income and dividends.

Of these factors, by far the most important is the restated net income. While this can (and often is) obtained as a balancing figure, it is also supported by the restated income statement. Consequently, the next step in the entire restatement process is the restatement of the income statement. One important rule must be remembered at this time. Each financial statement is restated into dollars having purchasing power equal to those on the balance sheet date. Therefore, as the income statement consists of dollars received (or spent) throughout the year, it is necessary to convert these historical cost dollars to those of year-end purchasing power. Two procedures illustrated in Exhibit three show how this is done.

If a company's revenues or expenses (excluding depreciation and other amortizations of prior period expenditures) accrue relatively evenly throughout the year, conversion can be facilitated by using the average price level for the year (Exhibit 3a). However, if a business is seasonal and there was a significant change in the general price level during the year, it often becomes necessary to allocate the revenues or expenses to the quarters of the year to which they apply (Exhibit 3b). Whichever procedure is used, the restatement will result in an increase in both the revenues and expenses during

a time of rising prices.

One of the other problems on the income statement that the accountant must face is that of restating the depreciation expense. Since the restated cost of a fixed asset is often significantly larger than under traditional accounting, it follows that the restated annual depreciation expense must also be larger. Appendix E of the Exposure Draft describes in detail the computation of this expense. However, a much easier method is available to the accountant, and it should provide approximately the same result.

It must be remembered that depreciation expense is merely a percentage of the cost of an asset. This is true for both the traditional accounting and for price-level accounting. In addition, as illustrated in Exhibit four, it can be shown that the same overall percentage will apply to each. Therefore, the procedures for restating depreciation expense can be simplified by using the alternative method. This alternative will produce a reliable estimate even if the differing depreciation rates are used within a fixed asset classification. However, care must be taken to include as a part of the cost of the assets only those assets actually being depreciated; any fully depreciated assets remaining on the books must be excluded. Failure to make this distinction will cause the restated depreciation to be overstated.

Accounting for the sale or retirement of fixed assets also presents an interesting situation. Under conventional accounting procedures, this sale or retirement of those assets not fully depreciated normally results in either a gain or loss, depending on the relationship between the book value at the date of disposition and the amount of cash received. The same philosophy also holds true under price-level accounting; however, the book value used in the calculations must be restated into

dollars of common purchasing power. Since, in periods of rising prices, the restated book value will always exceed the book value under conventional accounting, there is a high probability that any gain under traditional accounting procedures will be shown as a loss under price-level accounting, while a small loss will be magnified.

A final problem concerning the Income Statement restatement involves the provision for a monetary gain or loss. Conceptually, a monetary gain represents the gain that will accrue to a company when it repays its fixed liabilities in dollars of lesser purchasing power than those which were initially borrowed during a period of rising prices. Likewise, a monetary loss measures a loss in purchasing power when a company holds its monetary assets (generally cash and receivables) during a period of rising prices.

While the FASB illustrates an involved procedure for computing this gain or loss, it is doubtful that this procedure can be followed successfully to account for all changes in the monetary accounts. Instead, since the final net income figure can be forced as a balancing figure in the change in Stockholders' Equity between two years and since all other revenue and expense items on the income statement can be more easily restated, it seems practical to compute this gain or loss merely by forcing this figure on the Income Statement. It should also be noted that the monetary gain or loss figure computed here will also be used on the restated Statement of Changes in Financial Position, a monetary gain being a reduction from restated net income and a monetary loss being an increase in restated net income.

Another question commonly asked concerns the effect of the price-level adjusted financial statements on the net income. While the effects do differ for individual companies, it seems apparent that

EXHIBIT ONE

**COMPUTATION OF THE RESTATED FIXED ASSET BALANCE
FOR THE HYPO THEITICAL COMPANY, DECEMBER 31, 1974**

<u>Year of Acquisition</u>	<u>Historical Cost</u>	<u>Restatement Factor*</u>	<u>Cost Restated to 12/31/74 Dollars</u>
1970	\$ 5,000	1.317	\$ 6,585
1971	8,000	1.259	10,072
1972	3,000	1.218	3,654
1973	6,000	1.154	6,924
1974	8,000	1.046	8,368
	<u>\$30,000</u>		<u>\$35,603</u>

*Assuming all assets were acquired uniformly during the year. This factor is computed by dividing the GNP implicit price deflator at December 31, 1974 (178.0) by the average deflator for the year. For 1974, for example, the average annual deflator was 170.2; thus, the restatement factor was $178.0 \div 170.2$, or 1.046.

EXHIBIT TWO

**COMPUTATION OF THE RESTATED ACCUMULATED DEPRECIATION BALANCES
FOR THE HYPO THEITICAL COMPANY, DECEMBER 31, 1974**

<u>Year of Acquisition of Asset</u>	<u>Accumulated Depreciation Through 12/31/74*</u>	<u>Restatement Factor</u>	<u>Accumulated Depreciation Restated to 12/31/74 Dollars</u>
1970	\$ 2,500	1.317	\$ 3,292
1971	3,200	1.259	4,029
1972	900	1.218	1,096
1973	1,200	1.154	1,385
1974	800	1.046	837
	<u>\$ 8,600</u>		<u>\$10,639</u>

*Straight line depreciation is assumed, with all assets having a 10-year life and no salvage value. A full year's depreciation is taken in the year of acquisition.

EXHIBIT THREE

**COMPUTATION OF RESTATED REVENUES FOR THE
HYPO THEITICAL COMPANY, 1974**

a. Assuming that revenues are earned uniformly during the year.

<u>Year</u>	<u>Historical Cost</u>	<u>Restatement Factor*</u>	<u>Historical Cost Restated to 12/31/74 Dollars</u>
1974	<u>\$100,000</u>	1.046	<u>\$104,600</u>

*Computed by dividing fourth quarter, 1974 deflator (178.0) by average annual deflator for 1974 (170.2).

b. Assuming that revenues are earned primarily in first and second quarters of the year.

<u>Quarter</u>	<u>Historical Cost</u>	<u>Restatement Factor**</u>	<u>Historical Cost Restated to 12/31/74 Dollars</u>
1	\$ 50,000	1.088	\$ 54,400
2	35,000	1.064	37,240
3	10,000	1.034	10,340
4	5,000	1.000	5,000
Total	<u>\$100,000</u>		<u>\$106,980</u>

**Computed by dividing the fourth quarter of 1974 deflator (178.0) by the appropriate quarter's deflator of 1974 (for the first quarter, this was 163.6).

EXHIBIT FOUR

**COMPUTATION OF RESTATED DEPRECIATION EXPENSE FOR
THE HYPO THEITICAL COMPANY, 1974
HISTORICAL COST**

FASB Method

<u>Year of Acquisition</u>	<u>Historical Cost</u>	<u>Depreciation Expense</u>	<u>Restatement Factor</u>	<u>Depreciation Expense in 12/31/74 Dollars</u>
1970	\$ 5,000	\$ 500	1.317	\$ 659
1971	8,000	800	1.259	1,007
1972	3,000	300	1.218	365
1973	6,000	600	1.154	692
1974	8,000	800	1.046	837
	<u>\$30,000</u>	<u>\$3,000</u>		<u>\$3,560</u>

Alternative Method

Historical Cost

(a) Depreciation Expense.....	<u>\$3,000</u>
(b) Cost of Assets Subject to Depreciation.....	<u>\$30,000</u>
(c) Ratio of Depreciation Expense to Cost of Assets Subject to Depreciation [(a) ÷ (b)].....	<u>10%</u>

Restated Cost

(d) Cost of Assets Subject to Depreciation (from Exhibit 1).....	<u>\$35,603</u>
(e) Depreciation Expense [(d) x (c)].....	<u>\$ 3,560</u>

the two key variables in answering that question are the monetary gain or loss and the restated depreciation expense.

Two extremes can be cited. At one extreme, public utilities, being heavily debt-financed, will continually show large monetary gains during periods of inflation. These gains will be much larger than the increase in depreciation expenses on the restated income statement; consequently, these companies would normally experience large increases in net income.

At the other extreme, any companies which are primarily equity-financed and have significant amounts of fixed assets, cash, and receivables would probably face large decreased in net income. The fixed assets would, of course, again lead to increased depreciation expenses, while the concentration of cash and receivables would probably indicate a significant monetary loss. As a result of this interaction between monetary items and depreciation, a small amount of net income reported for these companies under traditional accounting might become a net loss under price-level accounting.

Thus, it can be seen that the preparation of price-level adjusted statements is indeed both practical and informative. Short-cut techniques exist to aid in restating certain items, and they can be used to obtain reasonable approximations in situations where an actual determination is impractical. In addition, the use of price-level adjusted financial statements can lead to more meaningful financial statements by formally introducing the effects of inflation into the accounting framework. Modifications may be necessary with regard to selected classifications within the suggested price-level restatement process framework. However, the overall use of these statements can lead to a more realistic portrayal of the financial condition of an economic entity.

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