

Why We Should Account for Inflation

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Although corporate executives show great dissatisfaction with the SEC's recent efforts to account for the effects of inflation on their companies, they are unenthusiastic about any of the several other methods of inflation accounting suggested by the Financial Accounting Standards Board and other bodies. The author examines some of the reasons for businessmen's negative attitude and, through an analysis of current approaches to inflation accounting, shows why use of one of the methods would benefit business by clarifying the effects of inflation in the public mind.

As most corporate executives know, in March 1976 the Securities and Exchange Commission issued an order for inclusion of replacement-cost data on inventories and fixed assets, and on the related cost of goods sold and depreciation expense in their 1976 annual financial reports. Businessmen have received this order with reactions ranging from mild disapproval to anguish, as the comments by filing companies show. Typical of the responses sent to the SEC was that of General Motors:

"Although the replacement-cost data herein disclosed has, in the Corporation's view, been estimated in a reasonable manner, it is the opinion of management that these data are of no value because of the subjectivity necessarily involved in making these estimates, and because the concept is based on an unrealistic premise, i.e., the total replacement of all productive capacity at one time.

"Accordingly, these data must be viewed as simply the result of the mathematical calculations based on the guidelines established by the SEC..."

In spite of the reporting companies' expressions of concern about, and dissatisfaction with, the reliability and usefulness of these data, the data do, in broad outline, represent the best information yet produced on the effects of inflation on the inventories and fixed assets of individual companies. Of course, inflation has an effect, sometimes a substantial and partially offsetting effect, on other assets and liabilities in the financial statements of companies.

Few businessmen today would dispute the importance of inflation's effects on our lives and on the economy. And few economists would dispute the need to measure inflation in some rational way if we are to understand and attempt to control this powerful economic force.

Over the years, economists have developed methods to measure the effects of inflation on various segments of the economy and on the total output of goods and services. Perhaps the most familiar of these methods are the cost-of-living indexes, which measure month-by-month changes in the impact of inflation on the average wage earner.

Accountants and, to a lesser extent, businessmen have been talking for some time now about the need to devise similarly useful methods for measuring the effects of inflation on individual enterprises and on business in general. In the past few years, hundreds of articles have been written and published, and many more hundreds of speeches made, on the subject of inflation accounting. Despite all this attention, however, relatively little has been accomplished.

At the heart of the problem is the fact that measuring the effects of inflation is not nearly so simple as it may seem. It is complex and extremely difficult, and it becomes even more so as attempts are made to improve the precision and theoretical correctness of the measurements. Economists faced an even larger task in their efforts to measure inflation than now confronts accountants. The results of those measurements look deceptively simple.

When we read, for example, that the Consumer Price Index went up by 0.6% in March 1977 for the country as a whole—compared with 6.4% for the last 12 months—there is a natural tendency to attribute great precision to those numbers. Such measurements are, however, merely approximations. And yet, whatever their deficiencies from a theoretical viewpoint, those imprecise and approximate numbers are in fact highly useful—indeed indispensable—tools for quantifying the degree of inflation experienced by the economy, or certain sectors of the economy, from one point in time to another.

In attempting to measure the effects of inflation on individual business enterprises, however, accountants have been unable to agree on the use of any one set of tools and have found themselves instead debating the virtues and limitations of one approach versus another. Much of the difficulty, I believe, derives from the fact that accountants are used to measuring the business and financial data with which they work with a much greater degree of precision than is generally true of economists. For the most part, the kinds of data with which economists deal are simply not available in a form comparable with those in which accountants deal. The available economic data are far more massive and heterogeneous and generally extremely difficult to quantify except on a sample or test basis. Thus economists have had to become quite proficient in handling the available data by statistical and other techniques to make reasonable and useful approximations.

Background of the Debate

Accountants and businessmen need to recognize that, if they are serious about wanting to measure the effects of inflation on financial statements, they too must look for reasonable and useful approximations. This is especially true in the early stages of implementing any new measurement system on a widespread scale. In Greek mythology, Athena sprang full grown and perfect from the head of Zeus. Except in our dreams, however, we cannot expect to have a perfect system of inflation accounting before we begin the actual work of measuring the effects of inflation on financial statements.

If we are ever to get started, we must be willing to accept less-than-perfect results—even, in some cases, rough approximations. And, since we will need feedback based on actual experience to improve those results and refine our measurement techniques, we should start with the simplest approach that will in fact produce reasonable results.

FASB method

Considering the practical difficulties involved, I believe the best way to get started with the job of measuring the effects of inflation on individual businesses is to use a simplified version of the method proposed in December 1974 by the Financial Accounting Standards Board (FASB). That method would convert the amounts appearing in companies' financial statements to equal units of current general purchasing power, so that current and prior-year financial statements would be comparable in terms of purchasing power. Such converted statements would be supplementary to the present financial statements

based on historical costs, which are shown in units of money of unequal purchasing power. The method proposed by the FASB can be simplified to make it less burdensome to business and modified to answer some of the legitimate objections of its critics.

Under this proposal, all items in the balance sheets and income statements of all business enterprises would be restated in terms of units of money of equal purchasing power, and such statements would be presented in addition to the traditional statements prepared in terms of historical costs of unequal purchasing power.

In applying this method of general-purchasing-power accounting (GPPA), the first step is to segregate all items in the current balance sheet into monetary items (such as cash, accounts receivable, accounts payable, and long-term debt) and nonmonetary items (such as inventories and fixed assets). Since by definition the monetary items are already stated in units of current purchasing power, no further adjustment is required. Of course, monetary items in prior-period balance sheets must be expressed in terms of their current purchasing power. For example, if cash in last year's balance sheet was stated at \$1,000 and the purchasing power of the dollar has declined by 10% under GPPA, cash in last year's balance sheet will now be carried at \$1,111.

Under GPPA, the nonmonetary items in the current balance sheet must be analyzed to ascertain when they were acquired. Thus a fixed asset that has a historical cost of \$1,000 in the current balance sheet, and which was acquired ten years earlier, when the purchasing power of the dollar was 75% higher, would be stated as \$1,750—or, in the new GPPA notation, “\$(76 1,750.”

Once the calculations are made in the first year of application for nonmonetary assets and liabilities acquired in prior years, the updating for subsequent years is relatively simple and straightforward under GPPA.

Alternative approaches

Even though the United States has been able to reduce its rate of inflation dramatically during the past year, the economy still gives evidence of recurring upward pressure, and few responsible observers of the business scene would argue that we don't need inflation accounting “because the problem's going away.”

Although a number of countries are very concerned with measuring the effects of inflation on individual businesses, much of the debate, in the past year or two especially, has centered on several alternative approaches proposed in the United Kingdom and the United States. Let's briefly review those approaches and how they came about.

Sandilands & Morpeth

In England, at about the same time that the FASB was developing its proposals, not only the accounting profession but also the government was concerned with the same problem; how to adjust or restate the financial statements of business enterprises so that the effects of inflation could be readily identified.

In October 1973 the British government appointed a commission of private citizens headed by Francis Sandilands to study the problem. Almost two years later, in September 1975, the Sandilands Commission issued its report recommending that British listed companies, large unlisted companies, and nationalized industries use current-cost accounting (CCA) in their financial reports. The main conclusions and recommendations of the report were endorsed by the British government shortly thereafter.

Because of the practical difficulties involved, the Sandilands recommendation for current-cost accounting was limited to those two items which, in the commission's opinion, were most profoundly affected by inflation—that is, fixed assets and inventories. At the recommendation of the commission, the supervision of the “necessary detailed work in preparation for the introduction of CCA” was assigned to a steering group under the aegis of the Institute of Chartered Accountants and other professional accounting societies.

In September 1976, this group, known as the Morpeth Committee, concluded in its preliminary report that not just fixed assets and inventories but *all* monetary assets and liabilities in prior-year balance sheets should be restated at least as supplementary information in pounds of end-year purchasing power by application of a general price index. The Morpeth Committee had some reservations about just how the resulting monetary gains or losses should be treated, and it is likely that, because of growing opposition to some of the committee's recommendations, it will be many months before a final report is released.

Securities & Exchange Commission

In late 1975, while the FASB was studying the many comments it had received on its GPPA proposal, the Securities and Exchange Commission, which had also been studying the problem of inflation accounting for some time, decided on an approach somewhat similar to that of the Sandilands Commission. Under the SEC approach, the larger companies under its jurisdiction were required to include in their 1976 annual financial reports to the SEC information, generally in the form of footnotes, on the replacement cost of their inventories and on the “equivalent capacity” of their fixed assets, together with the effect on cost of goods sold and on depreciation expense.

Perhaps the most important difference, in the view of many, between the various methods proposed by the accounting profession and by the government bodies in England and in the United States, is the failure of two of the approaches—the CCA method recommended by the Sandilands Commission and the SEC's replacement-cost method—to account for the effects of inflation on financial statement items other than fixed assets and inventories.

Professional accounting bodies in both the United States and the United Kingdom believe that *all* financial statement items affected by inflation should be accounted for. Of particular concern to these professional bodies is the failure of the Sandilands and SEC methods to account for the very significant effects of inflation on long-term debt.

Inflation & Long-Term Debt

By way of illustration, consider the case of a hypothetical company that built a new plant in late 1966 for \$10 million, of which \$7.5 million was funded from long-term debt. The plant has a 40-year life expectancy with no residual value. Its current cost, under the Sandilands method, is \$16 million, and its equivalent-capacity replacement cost, under the SEC approach, is \$14 million. The annual depreciation in 1976 (ten years after it was built) was \$250,000 on a historical-cost basis, and \$400,000–\$350,000 on a current-value–replacement-cost basis.

The difference of \$150,000 presumably reduces the historical net income of the company by the full amount, since, under present U.S. law, the additional depreciation would never become a tax deduction. If the effect of inflation on the company's long-term debt were taken into account, however, it would about offset the increase in the plant's value as measured by current-cost accounting.

The problem, of course, is to restate the original issue of debt in 1966, and each year thereafter, in terms of its current purchasing power. The original debt of \$7.5 million is an obligation expressed in dollars without regard to the purchasing power of the dollar either in 1966 or at the time of repayment. As the purchasing power of the debt expressed in dollars declines, an economic benefit accrues to the company. The index generally acknowledged to be the most useful for measuring such change—in this case, the decline in the general purchasing power of the dollar—is the Gross National Product Implicit Price Deflator (GNP deflator), derived by the federal government in its measurement of the total output of goods and services of the entire U.S. economy year by year in constant dollars—that is, in dollars that represent the same amount of purchasing power in all the years measured.

In the last quarter of 1966, the GNP deflator stood at 78% of the general price level in 1972, the base period. In the fourth quarter of 1976, the deflator stood at 136% of the 1972, price level, representing an increase of 75% over the ten intervening years. On this basis, the long-term debt that the hypothetical company incurred in 1966 should be stated as \$13.1 million in terms of current dollars to be equivalent to the purchasing power of \$7.5 million at the end of 1966.

Since the decrease of \$5.6 million in the equivalent current purchasing power of the debt accrues to the detriment of the lenders and to the benefit of the company, this gain must be added to stockholders' equity under any system which truly purports to account for the full effects of inflation. The amount of this gain (\$5.6 million) resulting from the effects of inflation on the company's long-term debt is almost equal to the increase (\$6 million) over the original cost in the current value of the plant it built in 1966.

If the gain resulting from the declining purchasing power of the company's debt were credited to income each year, the amount credited in 1976 would have been \$345,000—more than twice the additional depreciation charged to 1976 on the basis of current cost of the plant account. This gain of \$345,000 reflects an increase in the GNP deflator of only 4.6% in 1976—the smallest increase in the deflator in four years. (The GNP deflator for the last quarter of 1975 was 130% of 1972, dollars; the GNP deflator for the last quarter of 1976 was 136% of 1972, dollars.) The gain on the debt in 1974, when the GNP deflator increased 11.9%, would have been \$893,000—more than six times the annual additional depreciation of \$150,000 based on current cost of the plant account at the end of 1976.

Some people seem to feel that this inflationary gain on debt accruing to the stockholders is not real and, in any event, is not a gain out of which dividends can be paid. It is obvious that it is not a "cash gain," but it is clearly an offset to any charge in the income account for the additional replacement-cost depreciation. Interest expense usually includes a factor for inflation, particularly when debt is contracted for during periods of inflation or in anticipation of inflation. Last year, interest rates for many companies climbed to more than 10%, a substantial part of which was to compensate the lenders for the anticipated decline in the purchasing power of the dollar while the debt is outstanding. Gain on the debt accruing to a company as a result of the decline in the purchasing power of the dollar clearly is an offset to the higher interest expense in the same company's income statement.

Admittedly, the hypothetical company has a high ratio—75%—of debt to fixed assets. It can be said with confidence, however, that the debt ratios of many U.S. companies are sufficiently high that to ignore the effect of inflation on debt in any system designed to disclose the impact of inflation on financial statements is to ignore economic reality and, for these companies, to seriously misstate the facts.

Other Major Differences

The primary objective of the Sandilands Commission was to measure the effects of inflation on individual companies, and the commission believed that using specific current costs for inventories, fixed assets, and other nonmonetary assets was far superior to any general-purchasing-power adjustment. The Sandilands Commission wanted to measure the effect of inflation from the original date of acquisition of the fixed assets to their current valuation date—the date of the latest balance sheet of the company. The commission rejected the use of the term “replacement cost” because it did not wish to focus on the difficult and subjective problems, extending well into the future, relating to the actual replacement of fixed assets.

The commission was concerned, however, that this adjustment for inflation should not be a simplistic estimate of the “reproduction” cost of the original fixed asset. Computing the current reproduction cost of a DC-3, for example, would be a meaningless exercise: the advance of technology has significantly reduced the DC-3’s economic usefulness—as measured, for instance, by the cost of carrying X passengers Y miles within Z hours—and thus has greatly lessened its equivalent replacement cost as compared with its current reproduction cost.

The Sandilands Commission also rejected the idea that any useful purpose would be served by combining the current-cost method with the GPPA method. The commission arrived at this conclusion largely because of its focus on what it calls operating income. According to the Sandilands Commission, a current-cost operating profit for a company can be determined by adjusting historical-cost figures for depreciation and cost of sales “in order that the provisions for these items should reflect the ‘value to the business’ of assets (fixed and current) consumed during the year. As far as the profit and loss account is concerned, the committee believed that these two adjustments to the historical-cost accounts, and these two alone, would constitute a comprehensive system of accounting for inflation.”¹

In fairness to the Sandilands Commission it should be observed that its main concern was to arrive at an operating profit attributable to the business entity being measured. The commission wanted this profit to be computed after deducting the current value to the business of the inventories and the fixed assets. The effects of inflation on other financial statement items—the monetary items, including long-term debt, especially—were not dealt with.

As noted earlier, the Morpeth Committee, which is working out the technical details of implementing the Sandilands Commission’s recommendations, is still considering whether the effect of inflation on the monetary items in the financial statements should also be accounted for. We have already seen what can happen to financial statements in which the effect of inflation on long-term debt is ignored. Inflation can also have significant effects on other monetary items, such as cash and receivables.

Both the Sandilands Commission and Morpeth Committee have recommended that CCA statements should become the basic or primary financial statements of companies and thus should completely supplant historical financial statements. However, the Sandilands Commission did recommend that the “net book value of assets on a historical-cost basis and historical-cost depreciation should continue to be shown in notes to the accounts.”²

By contrast, the SEC in its replacement-cost approach did not attempt or purport to set forth a fully developed system of accounting for the effects of inflation on financial statements. The SEC’s objective was simply to furnish promptly to investors and others important information about the effects of inflation on the principal nonmonetary assets of U.S. companies. It was unwilling to wait until all the theoretical and practical problems of devising and implementing a fully integrated system of inflation accounting were resolved.

In a sense, the SEC was in agreement with the Sandilands Commission that the two really critical items to be measured for the effects of inflation are fixed assets and inventories. The SEC also seemed interested in establishing a basis for greater use of current-value accounting for other items in the balance sheet. It was implied in the SEC's proposal that information on the effects of inflation on the monetary items in the balance sheet was considerably less important.

The SEC appeared to be convinced that the use of current costs for inventories and of the replacement cost of equivalent productive capacity for the fixed assets of individual companies was greatly superior to the use of a general-purchasing-power index for measuring the effects of inflation on those items. Because of this conviction, the SEC moved promptly to require the larger companies under its jurisdiction to furnish such replacement-cost information for fiscal years ending on or after December 25, 1976.

Are the Approaches Compatible?

Generally, discussions of the CCA and GPPA approaches tend to treat them as two radically different and competing methods. Indeed, some commentators leave the impression that they are not only different but mutually exclusive accounting methods for measuring inflation.

This simply is not true. In fact, CCA and GPPA can be viewed as complementary methods, both of which are needed to measure the effects of inflation on individual companies with greater accuracy.

Inflation does not move evenly throughout the economy. The prices of specific goods and services often move upward at rates different from one another and from the movement of the general price level. To measure the effects of inflation on the nonmonetary assets, such as inventories and fixed assets, of a particular company, recognition of the specific price changes affecting those assets should provide a more accurate measure than simple use of an index of general-price-level (GPL) changes in the whole economy. For monetary assets such as cash, receivables, and payables, including long-term debt, the use of an index of changes in the GPL seems the most practical way to measure the effects of inflation for a given period of time.

While using the CCA method for inventories and fixed assets is not necessarily the same thing as adjusting those assets with appropriate indexes of specific price changes, it seems a reasonably useful surrogate. Thus for a given period of time, both methods—specific price changes and the GPL change—are needed to account more fully for the effects of inflation. In addition, it will also be necessary to adjust prior-year statements for the GPL change in order to state the amounts in units of comparable purchasing power.

Richard F. Vancil concluded that a combination of specific prices for nonmonetary assets such as fixed assets and of general-purchasing-power changes for monetary assets and liabilities is better than either the historical-cost, current-value, or general-purchasing-power method when any of those methods is used alone.³ Economist Solomon Fabricant of New York University and the National Bureau of Economic Research supports adjusting the financial statements for “all price changes, general and relative” in order to “be entirely compatible with one another” within a year and between years.⁴

Current costs

There is in theory considerable difference between the current cost of fixed assets under the method recommended in the Sandilands Commission report and the SEC's replacement cost of equivalent capacity of fixed assets. The Sandilands method deals with the fixed assets a company actually owns. In the great majority of cases, the current cost of these assets

will be their current purchase price or replacement cost. On the other hand, the SEC is concerned with the replacement cost of the *equivalent capacity* of the fixed assets. For many companies this means estimating the replacement costs of assets which they do not own and will probably never own.

I am in general agreement with the theory that using specific current prices comes closer to measuring the actual effects of inflation on specific nonmonetary assets of individual companies than using a general-purchasing-power index for such assets. But I feel that, more important, the determination of specific prices (or current costs) of fixed assets, and very much more so of the replacement cost of the equivalent capacity of such assets, is subject to great practical difficulties. The present state of the art makes such calculations highly subjective and very probably noncomparable among companies. Furthermore, in the case of the SEC's replacement cost of the equivalent capacity of fixed assets, the emphasis is shifted well away from a consideration of the fixed assets actually owned and used by a company to speculation about assets that it does not own and may never acquire.

Such estimates of equivalent capacity can be based on assumptions involving relocation of plants, rearrangement of resources, changes in the use and processing of materials and in the kind and amount of labor skills involved, and, of course, new technological changes and improvements in machinery and equipment required. A number of the companies that had to include replacement-cost data in their annual reports to the SEC this year did not estimate the potential reduction in their operating costs that might be expected to occur under the replacement-cost assumptions. Such costs are just too hypothetical and difficult to quantify with any assurance of reliability.

In practice, the difference between CCA and SEC replacement cost may be minimal for some companies and quite large for others. The SEC's method involves much more subjectivity and makes it difficult to know how the resulting data in individual companies might vary from the results under the CCA method of the Sandilands Commission.

Moreover, in my view, adjustment for the effects of inflation on nonmonetary items alone is simply not enough. Both Vancil and Fabricant point out that, to measure the overall effects of inflation, it would be necessary to take into account the general movement of all prices by using a stable measuring unit. The SEC also clearly recognizes that the replacement-cost information that it has requested does not constitute a comprehensive system for accounting for the effects of inflation.

In its ASR 190, requiring replacement-cost data, the SEC "recognizes that its rule is a limited one and does not deal either with all effects of inflation on financial position, or with the current value of all assets and liabilities." Also, the SEC does not view its proposal as "competitive with that of the FASB. In fact, in implementing the SEC's rule, some registrants may wish to use data regarding changes in the general price level as part of the analysis of reasons for changes in replacement costs. At the present time, however, the SEC does not propose to require the presentation of data restated for changes in the general purchasing power of the monetary unit." The SEC emphasized that its proposal "should be viewed as experimental."

Business & Replacement Costs

A review of the reports filed by the 100 largest U.S. companies with fiscal years ending December 31, as listed in the 1976 *Fortune* "500," indicates that the companies had a great deal to say about the unreliability and lack of usefulness of the replacement-cost data required by the SEC.

The 100 companies in the sample had the comments shown in Exhibit I. It is obvious from the tabulation that most of the companies did not limit their comments to just one of the phrases in the left-hand column.

Exhibit I Companies' opinions of SEC-mandated replacement-cost data	
Description of replacement-cost data	Percentage of companies with such comments
Hypothetical; assets will not all be replaced at the same time	91%
Imprecise; subjective; not comparable	90
Not to be used alone to adjust net income	75
Not truly representative of current values	74
A piecemeal approach	58
A one-sided approach, in that no consideration was given to a revenue effect	41
Of little or no use; meaningless	25

Exhibit I Companies' opinions of SEC-mandated replacement-cost data

Fixed assets & inventories

In preparing financial statements based on historical costs, businessmen and accountants have become accustomed to a very high degree of precision, despite the many estimates and assumptions on which even these statements depend. Although I have described these data as the best information yet produced, the reader should, of course, recognize that they have serious deficiencies as a measure of inflation and are at best only rough approximations on an overall basis. The data are likely to be less reliable for individual companies.

With that caveat, let us see what the replacement-cost data (on a book, not a tax, basis) for fixed assets show for the 100 companies in the sample (see Exhibit II). While no reliable figures are available to show the relation between (a) the current cost of fixed assets on an equivalent-replacement-cost basis and (b) their cost based on changes in the general purchasing power of the dollar, it seems likely that, in the aggregate, replacement cost will be less than their value based on current purchasing power. This should be so because technological improvements are not yet adequately reflected in the GNP deflator, which tends to be more heavily weighted for changes in the costs of labor and materials.

Exhibit II Replacement-cost data for fixed assets (dollar figures in billions)					
		Historical cost	Replacement cost	Dollar increase	Percentage increase
Productive capacity	Gross	\$ 278.5	\$ 572.3	\$ 293.8	105.5%
	Net	138.0	253.1	115.1	83.4
Depreciation		16.4	26.2	9.8	59.7

Exhibit II Replacement-cost data for fixed assets (dollar figures in billions)

Technological improvements tend to reduce the cost of replacing assets from what they would be in the absence of such changes. Such technological improvements also tend to make fixed assets more sophisticated and complicated and therefore more costly—but the additional asset cost is usually offset, or more than offset, by resulting reductions in labor, material, and/or space costs.

Somewhat less than one-third of the companies in the sample said they would probably experience significant reductions in operating costs as a result of technological and other improvements but, because of the practical difficulties involved, did not attempt to quantify them. Ford Motor Company was one of the few companies in the sample to furnish an estimate of what these reductions might amount to. Ford estimated that the reductions would total \$300 million, or approximately three-fourths of the additional \$419 million replacement-cost depreciation and amortization on its fixed assets, including special tools. Ford also estimated that its net monetary gains would total \$165 million.

Thus, in Ford's case, the estimated reduction in operating expenses, plus the net monetary gains, would more than offset the additional replacement-cost depreciation and the additional charge to cost of goods sold. This example is not representative of many of the companies in our sample, but it does indicate that information on associated reductions in operating costs, if available, might well have a significant effect for some companies on net income adjusted for replacement costs and on rates of return on stockholders' equity.

Viewing current replacement costs as a surrogate for measurements of the specific price effect of inflation on fixed assets, it can be said in regard to the tabulation in Exhibit II that the gross assets of the 100 companies in the sample have more than doubled (105.5% increase) and that the net assets have increased 83.4%, with an increase of 59.7% in related depreciation charges. It is understandable that the increase in the net assets (83.4%) would be less than the increase in gross assets (105.5%) because the older assets, which are more likely to represent a greater difference between historical costs and replacement costs, are more fully (or are fully) depreciated, and therefore represent a smaller part of the net depreciated assets. Conversely, the cost of more recently acquired assets is closer to their replacement cost and relatively less depreciated.

The increase (59.7%) in replacement-cost depreciation seems to be attributable to several factors. Fully depreciated assets obviously have no effect on the current depreciation, but perhaps a more important reason is that the SEC specified that the replacement-cost depreciation should be computed on a straight-line basis. Some of the companies, however, use accelerated methods of depreciation in computing historical-cost depreciation, thus making book depreciation relatively higher.

Thus far we have been concerned with the overall implications of the reported data on replacement cost of fixed assets. The degree to which the replacement costs exceed the historical costs of the fixed assets, and the related depreciation, varies widely among the 100 companies in the sample, as shown in the tabulation in Exhibit III.

Exhibit III Increase of replacement cost over historical cost for fixed assets (number of companies)			
Percentage increase	Productive capacity		Depreciation
	Gross	Net	
0-25%	5	4	11
26-50	5	9	19
51-75	14	34	24
76-100	29	24	23
101-125	19	14	10
126-150	15	11	10
151 and over	13	4	3
	100	100	100

Exhibit III Increase of replacement cost over historical cost for fixed assets (number of companies)

On the basis of the sample of 100 companies, the adjustment to replacement cost for the inventories and the related cost of goods sold had, in the aggregate, little effect (three tenths of one percent) on the cost of goods sold and, consequently, on net income. These adjustments are summarized in Exhibit IV.

Exhibit IV Effect on inventories and cost of goods sold (dollar figures in billions)				
	Historical cost	Replacement cost	Dollar increase	Percentage increase
Inventories	\$ 77.4	\$ 101.0	\$ 23.6	30.5%
Cost of goods sold (exclusive of depreciation)	406.3	407.5	1.2	0.3

Exhibit IV Effect on inventories and cost of goods sold (dollar figures in billions)

Since many companies are on the LIFO basis for all or part of their inventories, the replacement cost of these inventories represents a substantial part of the increase over their historical cost. This increase, totaling \$23.6 billion, has been added to the stockholders' equity in computing rates of return on a replacement-cost basis in the discussion that follows.

Net income & stockholders' equity

Virtually all of the companies in the sample warn the reader in their reports to the SEC that, because of the unreliability of the data, it should not be assumed that the additional replacement-cost depreciation can be used to reduce net income. However, if the end result of this massive data-gathering effort were *not* to use the data to adjust net income and stockholders' equity, and to develop rates of return on sales, net income, and equity, it would be a meaningless exercise and should be scrapped forthwith. Let us, therefore, see what effect the additional replacement-cost depreciation and the adjustment for inventory replacement costs had on the 1976 net income and stockholders' equity of the 100 companies sampled.

Two adjustments are involved. One consists of adding to the stockholders' equity the amount by which the net replacement cost of the inventories and fixed assets exceeds their historical cost. In the case of the additional replacement cost of the fixed assets, this amount will be depreciated in the future by charges to income over the remaining useful lives of the fixed assets. In the case of the additional replacement cost of the inventories, it will ordinarily be included in the cost of goods sold in the following year when the inventories are sold.

The second adjustment consists of reducing historical net income by the increase in replacement-cost depreciation over historical-cost depreciation, and by the increase in the replacement cost of goods sold. These adjustments, together with their effect on the rate of return on stockholders' equity, are set forth in Exhibit V on page 154.

Exhibit V Effect on stockholders' equity and net income (dollar figures in billions)				
	Historical cost	Replacement cost	Increase (decrease)	Percentage increase (decrease)
Stockholders' equity	\$ 208.1	\$ 346.8	\$ 138.7	66.7 %
Net income	\$ 30.9	\$ 20.0	\$ (10.9)	(35.3)%
Rate of return on stockholders' equity	14.9%	5.8%	(9.1)%	(61.1)%

Exhibit V Effect on stockholders' equity and net income (dollar figures in billions)

The data admittedly provide only a rough indication of some of the effects of inflation. No adjustment for inflation has been made for other nonmonetary items or for monetary items, particularly long-term debt. These adjustments can also significantly reduce or increase the net effect of inflation. Nevertheless, the magnitude of the adjustments for inventories and fixed assets is impressive. The fact that return on stockholders' equity dropped from 14.9% on a historical-cost basis to 5.8% adjusted for the replacement costs of inventories and fixed assets tends to confirm what many businessmen and economists have been saying for some time: business profits are low—too low. The government and the general public need to know and accept this. The depressed prices on our stock exchanges today give strong evidence that investors already know.

As might be expected, the increases in stockholders' equity adjusted for the replacement cost of inventories and fixed assets vary widely from one company to another among the 100 companies in the sample. The tabulation in Exhibit VI shows the percentage variation by company.

Exhibit VI Stockholders' equity adjusted for replacement cost of inventories and fixed assets	
Percentage increase over historical-cost basis	Number of companies
0-25%	11
26-50	30
51-75	30
76-100	14
101-125	6
126-150	3
151 and over	6
	100

Exhibit VI Stockholders' equity adjusted for replacement cost of inventories and fixed assets

The percentage decrease in net income and in the rate of return on stockholders' equity for the 100 companies in the sample, after adjustment for replacement cost of inventories and fixed assets, is shown in Exhibit VII.

Exhibit VII Decrease in net income and rate of return on stockholders' equity (number of companies)		
Percentage decrease in historical-cost basis	Net income	Rate of return
0-25%	31	7
26-50	34	22
51-75	17	46
76-100	5	11
101-125	2	6
126-150	2	2
151 and over	9	6
	100	100

Exhibit VII Decrease in net income and rate of return on stockholders' equity (number of companies)

Various other useful ratios are, of course, affected by the two adjustments for additional replacement costs, such as return on sales, ratio of stockholders' equity to debt, and earnings per share. All of these ratios would also be affected by the many other adjustments that would be required in any system that accounts for all of the effects of inflation on financial statements.

Two further considerations

In addition to the usual reasons advanced as to why the replacement-cost information requested by the SEC is too unreliable and subjective to be useful, there are two other considerations which would be difficult to quantify but which deserve to be taken into account.

The first has to do with the excess of the net replacement cost of the fixed assets over their net historical cost—which amount, as already noted, should be added to stockholders' equity. For the 100 companies this is quite a large figure—\$115.1 billion, or 55% of stockholders' equity on a historical-cost basis. But it represents something of even greater value to the companies: in time of inflation, the holders of productive assets are in a much better position to protect themselves against the ravages of inflation than most other segments of the economy. In the absence of price controls and other restraints by the government, the prices of their goods and services tend to move up with inflation.

As one businessman put it, the existing productive assets (assuming they are not obsolete) represent a tremendous value to most businesses over and above the estimated cost of their equivalent capacity. In inflationary times, businessmen are generally less willing to expand existing facilities or to build new facilities to enter new fields of business activity. Interest rates tend to shoot up, depending usually on the severity and the anticipated length of the inflationary period. Greater pressure is placed on current working capital, since more new dollars are required to do the work of fewer old dollars.

In those circumstances, the owners of existing productive facilities have a kind of protective "shield" over their businesses as the result of fewer new competitive productive facilities being built. Prices tend to move upward, not only to offset the effects of inflation but, in some cases, also to offset the additional taxes incurred on the higher income.

In an article by Robert N. Anthony, one of the major assumptions was that a company could and would adjust its prices in inflationary times to offset the inflationary effect.⁵ It should be noted that Anthony was observing the behavior of a steady-state company with one product under various pricing policies and accounting methods. However, the basic assumption

that prices adjust for the effects of inflation seems realistic. In practice, of course, significant restraints can be applied to business, and particularly to larger companies, through the efforts of government and the media to develop or encourage a strongly negative attitude on the part of the public toward *all* price increases.

The second consideration which may well have a significant effect on the depreciation of the “true” replacement costs of fixed assets has to do with their estimated useful or economic lives. American businessmen have generally tended to be very conservative in estimating the useful lives of their plant and equipment—an attitude that has been encouraged by tax considerations. Generally, the estimated useful lives of fixed assets are the same for both financial and tax purposes. Thus the shorter the useful life of a fixed asset, the larger the annual depreciation charge—and therefore the smaller the tax liability. With smaller tax payments, there will be a current cash saving for businesses under pressure for cash and for business capital, particularly in inflationary times.

This desire to save on taxes is strengthened by the knowledge that depreciation charges based on historical costs are less—often substantially less—than depreciation charges based on replacement costs. Thus a business could find itself paying taxes on profits that are needed simply to replace the assets that were consumed in earning those profits. To avoid finding themselves in this unpleasant situation, businessmen generally select the shorter end of any realistic range of useful lives over which to depreciate their fixed assets.

Consequently, to charge depreciation on a replacement-cost basis against financial profits without any change in the estimated useful lives of the assets involved may be to overstate the real effect on income of replacement-cost depreciation.

In England, businessmen are reexamining the economic lives of their fixed assets in anticipation of the probable adoption of current-value accounting. Some businessmen and accountants estimate that this examination may result in the lengthening of the economic lives of the fixed assets by upward of 25%, with a corresponding reduction in the charge to profit and loss for depreciation of those assets on a current-cost basis.

Here in the United States, businessmen and accountants have not yet turned their attention to the possible need for changing the useful lives of fixed assets if CCA or GPPA were adopted. But the use of methods of inflation accounting might cause some lengthening of the estimated useful lives of fixed assets, particularly if depreciation on these bases were allowed for tax purposes.

Where Next?

With the SEC’s requirement for replacement-cost data so distasteful to business leaders, and with their disapproval of the GPPA method proposed by the FASB, what is the next step in the search for a practical method of removing the effects of inflation from the financial statements of American business? Perhaps it would be well to describe what the American Institute of Certified Public Accountants (AICPA) and the FASB are now doing about the matter.

Both the AICPA and the FASB are deeply engaged in trying to develop a “Conceptual Framework of Accounting and Reporting” (CFAR). As part of this study, the AICPA has set up a task force to study and experiment with alternative approaches to the “measurement” issues in the FASB’s discussion memorandum on CFAR. Four accounting models have been developed from various alternative measurement methods that have been proposed.

The four models include a “simplified” general-price-level-adjusted historical-cost approach (Model A); a “modified” historical-cost approach requiring LIFO inventory valuation and indexed, current-cost depreciation (Model B); a hybrid current-cost–current-value approach (Model C); and a comprehensive current-value approach (Model D). In my opinion, Models A and D come closest to meeting the conceptual requirements of a comprehensive model for accounting for the effects of inflation. Accordingly, I will address myself briefly to only those two models.

Model A incorporates the concepts presented in the FASB’s exposure draft on GPPA, but it simplifies the methodology used and modifies the form of presentation of supplementary GPPA statements to meet some of the criticisms leveled against the exposure draft. One of the principal objections to the FASB’s exposure draft has centered on the time and expense required to apply the GPPA restatement procedures. Model A is based on the belief that neither the purpose of GPPA nor the inherent limitations on its precision justify the intricate restatement of every nonmonetary item. Accordingly, the model opts for the use of assumptions and shortcut techniques to avoid striving for unattainable precision.

Deferred income taxes and foreign currency items, both classified as nonmonetary by the FASB, are classified as monetary under Model A, thereby avoiding the practical problems involved in aging and restating these items in units of general purchasing power. Routine recurring prepayments and deferred items are also treated as monetary to avoid the extensive detail that would otherwise be required.

In response to objections to the general-purchasing-power gains on long-term debt, the model segregates such gains on long-term debt from other general-purchasing-power gains and losses and reports both separately from operating results. Finally, the model requires the presentation of a reconciliation between unit-of-money income and general-purchasing-power income to identify and highlight the net impact of the general-purchasing-power restatement on results for the year.

Model D fully incorporates the use of current values. Its objective is to present in the financial statements the current value of each separable economic resource and economic obligation. The model is based on the view that the particular method of valuation used for each resource and obligation depends on the nature of the business, management intent, and practicality of application. Accordingly, all of the principal approaches to current value—discounted cash flow, replacement cost, and net realizable value—can be used.

Model D emphasizes the recognition and measurement of resources and obligations rather than recognition and measurement of revenues and expenses. All changes during the years which affect shareholders’ equity appear in a single statement of changes showing separately operating results, value changes, and the impact on shareholders’ equity of the increase in the general price level during the year.

It is expected that some 25 to 30 companies will participate in the AICPA task force’s experimentation program by applying each of the four models to their own situation for their two most recent fiscal years. Participants’ responses are due by October 1, 1977 and will be considered by the FASB before it reaches a conclusion on the measurement issues.

Attitudes of Business

As we have seen from the reports filed with the SEC and the responses to the FASB’s exposure draft on GPPA, released in December 1974, American businessmen are strongly opposed to either of these two attempts (or, for that matter, to any other attempt yet proposed) to measure the effects of inflation on their businesses. Obviously, their general attitude is

heavily influenced by what they regard as sound and valid criticism of the methods proposed. Yet their opposition seems also to be based on an instinctive and deep distrust of any new method that would significantly affect their financial reporting system.

In this respect U.S. businessmen are somewhat like football players who have learned to do very well indeed under the existing rules. To change the dimensions of the playing field significantly would introduce uncertainty and make most players apprehensive of how they personally would fare on the radically new field. By and large, American businessmen have been satisfied with the financial system under which they have grown up. They do not wish to have newfangled ideas introduced unless they can clearly perceive the practical advantages of such changes.

They have also developed a good deal of hostility toward the stream of directives and requirements that emanates these days from the SEC, the FASB, and many other sources. They are being inundated with more and more requests for information, all of which add to their already considerable, expensive, and ultimately debilitating paperwork burden.

Businessmen are also less than enthusiastic about proposals for measuring the effects of inflation because in most cases such efforts could significantly reduce net income. Most businessmen work hard throughout their careers to improve sales or to make their operations more efficient in order to improve net income. Knocking down net income by a significant percentage is bound to be perceived as a serious setback—even though it is simply a matter of measuring the effects of the inflation that has actually occurred.

Corporate executives are, of course, also concerned that reduced net income might—and, in their view, probably would—be translated into a reduced price for their common stock. It is probable, however, that the market has already discounted a significant portion of the effects of inflation, and perhaps has overly discounted it in the current stock prices. On Wall Street, fear of the unknown is often worse in its effect on stock prices than actual knowledge. In any event, we all need better knowledge about how inflation is affecting business. To the extent that business net income, adjusted for inflation, is too low, this in itself should be of help in getting the government and society to remove some of the restraints that have contributed to depressed earnings.

While there is a good deal of justification for these feelings, they should by no means obscure the fact that inflation has and will continue to have a serious impact on business in our own country and around the world. In reporting much larger profits and greater rates of return on stockholders' equity than their companies have actually earned after adjustment for inflation, businessmen are in fact contributing to the hostile and misinformed attitude of Congress, of the communications media, and of the general public toward their businesses and their allegedly "unreasonable and swollen profits." Public policy decisions and the general attitude of the public are bound to be better when they are based on more factual, realistic, and straightforward information about business results.

Myths About Money by: Don Paarlberg

Baron Rothschild, the famous French financier, was once heard to say that he knew of only two men who really understood money—an obscure clerk in the Bank of France and one of the directors of the Bank of England. "Unfortunately," he added, "they disagree."

1. Christopher Morgan, *A Guide to the Sandilands Report on Inflation Accounting* (Croydon, England: Tolley Publishing Co., 1976), p. 9.
2. Ibid., p. 2.

That there should be widespread misunderstanding about money is not surprising. Despite its seeming simplicity, money is a very complicated subject. The institutional framework related to money has gradually been altered, particularly with the worldwide advent of central banking early in this century. As might be expected, public beliefs and attitudes have lagged behind these changes.

3. Richard F. Vancil, "Inflation Accounting—The Great Controversy," HBR March-April 1976, p. 58.

4. Solomon Fabricant, "Toward Rational Accounting in an Era of Unstable Money, 1936-1976," *National Bureau Report* 16 (New York: National Bureau of Economic Research, 1976), p. 4.


5. Robert N. Anthony, "A Case for Historical Costs," HBR

November-December 1976, p. 69.

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