

INVENTORY VALUATION--FIFO AND LIFO  
WITH SPECIAL EMPHASIS ON THE LIFO METHOD

by

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## INTRODUCTION

There are numerous ways of determining the value to be assigned to a business' inventory. Generally speaking, a business will adopt a method that will reflect most accurately its net income and financial position for a given period. At the present time, there is no set method that must be used as long as the method which is selected is acceptable for reporting purposes. Where one firm feels that one method reflects its operating and financial position more accurately, another firm will choose a completely different method for the same reason. Different factors such as pricing policies, sales volume, purchasing policies, and operating costs will affect the financial position of businesses carrying on operations of a similar nature.

Some of the more common methods of pricing inventories are first-in, first-out (FIFO), last-in, first-out (LIFO), weighted average, specific identification, net realizable value, standard costs, last invoice price, simple average, moving average, gross profit, and percentage of completion. There are also some very unusual methods such as next-in, first-out (NIFO), base stock, and highest-in, first-out (HIFO). These methods, along with some of the others just mentioned, are not generally accepted because of the uncertainty resulting from their use. For instance, under the NIFO method during periods of stable prices (a truly unreal situation), this pricing task may not be too difficult. It may be assumed with a fair degree of certainty,

that the next units to be purchased will cost the same as the last units purchased. But during a period of fluctuating prices (a more realistic situation), the assumed "next-in" price estimate is nothing more than a mere guess. The costs that will be incurred during the coming period should have no effect on current operations. If the use of a method such as this were permitted, the general concept of accounting would be less uniform than it is now.

Regardless of the inventory pricing method used, consistency is the key factor to be considered. In order for financial statements to have meaning, a specific set of generally accepted accounting principles (including an acceptable method of pricing inventories) should be adopted and adhered to from year to year.

It is not the intention of the writer to discuss all the methods which were previously mentioned; only the first-in, first-out and last-in, first-out methods (which will hereinafter be referred to as FIFO and LIFO) will be pursued further.

The amount at which inventories are valued affects a business' net income through the determination of the cost of goods sold. The higher the value of the ending inventory, the lower will be the cost of goods sold charged against operations; thus a larger net income or smaller net loss will be reported for the period.

At times it is not an easy task to assign a value to an inventory. Frequently, an organization's inventories will be so intermingled that it is impossible to identify and match specific

items with specific invoice prices. When this problem arises, some arbitrary but acceptable method must be applied. The method which is adopted by the organization during periods of highly fluctuating prices should receive even greater consideration. Even though there are several equally acceptable methods that can be used, any one of them is capable of materially affecting the ending inventory balance and operating income for a given period. This will be illustrated in the section, "Inventory Effects on Income Determination".

The traditional approach was to assume that merchandise was sold (or consumed in manufacturing) in approximately the same order in which it was acquired, or stated another way, inventories would generally be valued at price levels prevailing at or near the time when the accounts were closed.<sup>1</sup> This traditional approach reflects the results of the FIFO pricing method. However, during the past two and one-half decades, there has been a marked change from the traditional FIFO method to the more "modern" LIFO method. Some of the factors that have prompted the change from FIFO to LIFO are income tax benefits, a gradually increasing price level structure, and the acceptance of the method by regulatory agencies, namely the Internal Revenue Service and the Treasury Department. These factors will be discussed later on.

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<sup>1</sup>J. K. Butters, Effects of Taxation--Inventory Accounting and Policies, page 2.



This paper is composed of six sections plus a summary and conclusion. The first section, the introduction, presents information pertaining to inventories in general. The terms LIFO and FIFO are defined, along with a brief history of the methods.

The second section lists the highlights of the 1939 Revenue Act as it relates to LIFO. Some of the problems are also presented that have turned up as a result of LIFO's use by various taxpayers.

The third section summarizes the attitudes of the American Institute of Certified Public Accountants, the American Accounting Association, and the Internal Revenue Service towards LIFO.

The fourth section discusses and illustrates how the application of LIFO and FIFO can alter a business firm's income during periods of rising and falling prices and for that matter, how operating results of a business for a given period can be altered by using different inventory pricing methods.

The fifth section stresses the importance of having a near normal inventory stock on hand at the time LIFO is adopted. There is also an illustration showing the importance of maintaining the normal or base stock of goods at all times, especially when perpetual inventory records are kept.

In the sixth section some of the early arguments for LIFO are compared with some of the more current arguments. Some of the arguments presented, opposing the LIFO method have materialized since LIFO first gained acceptance in 1939. For the most part the opposing arguments have turned up as a result of

the LIFO method being put into practical use. Many of the shortcomings that were previously unknown or ignored created some fairly serious problems for management as well as accountants.

#### Definition of LIFO

The LIFO method of valuing inventories is a method in which it is assumed that the most recent goods received will be the first ones sold. However in a more practical sense, the LIFO method refers to the flow of costs rather than the actual physical flow of goods. The reasoning behind this is that it is sometimes impossible to distinguish between units or goods. For instance, when a service station owner pumps a load of gasoline into a storage tank already containing gasoline, it cannot be determined by any means whether the gasoline subsequently sold will come from the more recent load or from a load of an earlier date. McAnly explains the method as follows.

"The last-in, first-out (LIFO) method results in the inventory being valued at the beginning of the period inventory cost levels, to the extent that the ending quantity equals the beginning quantity, and prices only the increase in ending quantity over the beginning quantity at current cost levels."<sup>2</sup>

An example of the LIFO pricing method is presented on the following page.

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<sup>2</sup>H. T. McAnly, Selected Writings on Accounting and Related Subjects, 1964, page 87.

Inventory Schedule

|                                | <u>Quantity</u> | <u>Cost/Unit</u> | <u>Total</u> |
|--------------------------------|-----------------|------------------|--------------|
| Inventory at beginning of year | 900 units       | \$2.00           | \$1,800      |
| Purchases Jan. 15              | 200 "           | 2.25             | 450          |
| " Apr. 15                      | 100 "           | 2.50             | 250          |
| " July 15                      | 700 "           | 2.60             | 1,820        |
| " Oct. 15                      | 250 "           | 3.00             | 750          |

Assume that in the ending inventory there are 1110 units.

The ending inventory is priced as follows.

|                                   | <u>Quantity</u> | <u>Cost/Unit</u> | <u>Total</u>   |
|-----------------------------------|-----------------|------------------|----------------|
| Inventory at Beginning of Year    | 900 units       | \$2.00           | \$1,800        |
| Purchases Jan. 15                 | 200 "           | 2.25             | 450            |
| Part of April 15 purchase         | 10 "            | 2.50             | 25             |
| Value of inventory at end of year | <u>1,110</u>    |                  | <u>\$2,275</u> |

Since it is assumed that the cost of the units received most recently are the first ones to be charged to operations, the ending inventory is made up of the cost of the beginning inventory plus the cost of the units from the next two purchases made during the first part of the year.

#### Definition of FIFO

The FIFO method of pricing inventories is related more closely to the traditional flow of goods. The goods most recently purchased are the ones making up the ending inventory, therefore the goods on hand at the beginning of the year would have been the first ones sold. Referring back to the figures used in the LIFO illustration, the ending inventory will be valued as follows.



| <u>Inventory Schedule</u>         |                    |                  |                |
|-----------------------------------|--------------------|------------------|----------------|
|                                   | <u>Quantity</u>    | <u>Cost/Unit</u> | <u>Total</u>   |
| Purchases Oct. 15                 | 250 units          | \$3.00           | \$ 750         |
| " July 15                         | 700 "              | 2.60             | 1,820          |
| " Apr. 15                         | 100 "              | 2.50             | 250            |
| Part of Jan. 15 purchase          | 60 "               | 2.25             | 135            |
| Value of inventory at end of year | <u>1,110 units</u> |                  | <u>\$2,955</u> |

The FIFO priced inventory is determined in the exact inverse order to the LIFO priced inventory. The last units purchased are the first ones included in making up the total for the ending inventory.

### History

The FIFO method of pricing inventories has always been considered to be a generally accepted accounting principle. The assumption that the older stock is usually the first to be disposed of is generally in accordance with good merchandising policy.<sup>3</sup>

In order to receive the highest price for a good, it will generally have to be sold before it becomes obsolete, shop worn, spoiled, broken, or unsaleable by any other means. The fact that FIFO was (and still is) acceptable in the eyes of the Internal Revenue Service is probably one of the most influential reasons for its widespread use during the earlier decades of the century. However, since LIFO has become a generally acceptable method, it is gradually forcing the FIFO method into second

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<sup>3</sup> Finney and Miller, Principles of Accounting, Intermediate, Fifth Edition, page 236.

place.<sup>4</sup> The reasons that have prompted this trend towards LIFO will be discussed later.

The base stock method of valuing inventories is considered to be the forerunner of the LIFO method.<sup>5</sup> The base stock method follows the assumption that a business must normally have a specific number of units of merchandise on hand in order to ensure uninterrupted operations.

..."no increase in the market replacement cost of this base stock should be regarded as realized income because, like fixed assets, the base stock cannot be disposed of if the business is to continue operations. To avoid the taking of any profit on such "unrealized" market increase, the base stock quantities should be priced for inventory purposes at not more than the lowest cost experienced. It should be noted that the base quantity is the minimum quantity a given business needs to carry on normal operations, not an average inventory quantity."<sup>6</sup>

Any units sold are priced out at the most recent acquisition cost. This procedure is similar to but not exactly like the LIFO pricing method. Units disposed of under the base stock method are priced out at the current acquisition cost, regardless of their actual cost. Under the LIFO method the most recent costs are matched against revenues applied on a per unit basis.

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<sup>4</sup>Accounting and Reporting Problems of the Accounting Profession, Arthur Andersen & Company, Second Edition, Oct. 1962, page 85.

<sup>5</sup>Maurice E. Peloubet, "Last-in, First-out Once More", Journal of Accountancy, June, 1940, 69:446.

<sup>6</sup>Finney and Miller, op. cit., p. 287.

It is easy to see why the base stock method never gained general acceptance and why the LIFO method subsequently developed. The following example will emphasize the point. The beginning inventory (under the base stock method) consists of ten units which cost three dollars per unit. During the year the company purchased 100 units at a cost of seven dollars per unit; 105 of the units on hand were sold and priced out at the current acquisition cost of seven dollars per unit. The ending inventory would have a credit balance of five dollars. This is definitely illogical from all points of view. The company, in this case, would be recognizing a greater expense than was actually incurred. Assuming the units that remained on hand are the same as those sold, they surely have some value so they should be recorded at their actual cost.

Assuming the same facts under the LIFO method, the ending inventory can never be priced lower than three dollars per unit (unless of course, the entire inventory is liquidated and then replaced with lower costing merchandise). To summarize the difference between LIFO and the base stock method, the following can be said: with the base stock method, the emphasis is on the minimum amount of inventory required to carry on the business' operations; whereas in the LIFO method, the emphasis is on matching current costs with current revenues.

## INTERNAL REVENUE SERVICE PROVISIONS AFFECTING LIFO

As early as the 1920's and early 1930's some accountants and business leaders felt that the LIFO method had merit in that it would help reflect more accurately the operating results and financial position of certain types of businesses. The actual use of the LIFO pricing method was practically non-existent during this period because, prior to 1938 the Internal Revenue Service would not accept the LIFO method for income tax purposes. However, in the Revenue Act of 1938 Congress authorized the use of LIFO for pricing specific types of raw materials used by tanners and the producers and processors of certain non-ferrous metals.<sup>7</sup> There were two reasons for permitting the use of LIFO by these particular industries. These industries had previously used the base stock method for financial statement reporting purposes. There was also the problem that prior to 1938, representatives of these industries had been unsuccessful in their efforts in developing with the Bureau of Internal Revenue a satisfactory procedure for recognizing sales commitments for future delivery as being in the nature of hedges against fluctuations in the market value of inventories.<sup>8</sup>

It soon became apparent that many other industries were also in need of special considerations from the standpoint of

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<sup>7</sup>Raymond A. Hoffman, Inventories--A Guide to Their Control, Costing, and Effect Upon Income and Taxes, 1964, page 152.

<sup>8</sup>Ibid., p. 153.



determining income for federal income tax purposes. It was finally decided that there was no equitable way to add specific industries to the list, so in 1939, Congress passed more liberal legislation which permitted any taxpayer to adopt LIFO for valuing his inventory for income tax purposes. The 1939 Act is still in force today. However, some of the provisions have been more broadly defined during the past few years than they were in the beginning. The 1939 Act was interpreted to mean that the use of LIFO was limited to only those taxpayers having relatively simple inventories. This narrow interpretation was adhered to for nearly ten years. "As a consequence, relatively few taxpayers adopted LIFO at that time in the face of these adverse interpretations."<sup>9</sup> Finally, the interpretation was altered.

"On March 4, 1948, Treasury decision 5605 was issued permitting retailers to use the method, and retroactively so. Stores that had elected LIFO and had been denied its use by the Bureau of Internal Revenue and had paid deficiencies, obtained refunds covering the years back through 1941 which had been kept open taxwise by waiver of the statute of limitations."<sup>10</sup>

The major points of the 1939 Revenue Act as they relate to the LIFO pricing method are presented in the following paragraphs. The general requirements for the adoption of LIFO is summarized first. The second part of the discussion presents the steps involved at the time LIFO was first adopted and the

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<sup>9</sup>McAnly, op. cit., p. 120.

<sup>10</sup>Ibid., p. 136.



manner of making the election. The third and final part of the discussion explains the requirements that must be followed by a taxpayer when he changes from LIFO to some other method of pricing his business' inventory.

In order for a taxpayer to adopt the LIFO method he must adhere to the following requirements:<sup>11</sup>

1. The taxpayer must file an application with the tax commissioner and specify the goods to be valued at LIFO.
2. The inventory must then be taken at cost regardless of market values.
3. Like goods in the beginning inventory must be priced at an average cost regardless of their specific cost.
4. Any excess goods on hand at the end of the year may be priced as follows:
  - a. By reference to the actual cost of goods most recently purchased,
  - b. By reference to the actual cost of goods purchased or manufactured in the order of their acquisition.
  - c. By computing an average cost by dividing the total cost of similar goods by the number of units purchased during the period.
  - d. By using any other method that the commissioner feels will clearly reflect income.

It doesn't make any difference whether (a), (b), (c), or (d) is used. However, the taxpayer must use the chosen method in all subsequent years.

5. Interim statements (for credit purposes, reports to stockholders, etc.) need not reflect LIFO. Market values may be used in annual statements.

6. LIFO, once adopted and approved by the commissioner, must be adhered to in all subsequent periods unless the commissioner approves of a change or requires that a change be made.

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<sup>11</sup>Code of Federal Regulations--Title 26--Internal Revenue, Part 1 (Sec. 1.401 to 1.860), (Revised as of Jan. 1, 1961), page 115.

7. The taxpayer must maintain records which will be available in the event the district director desires to review the computations.

8. In the event the taxpayer is engaged in more than one trade or business, the commissioner can require him to use LIFO pricing for all similar goods in the different businesses.

The following procedures must be observed at the time of making the election for LIFO:<sup>12</sup>

1. The LIFO method may be adopted and used only if the taxpayer files with his income tax return for the taxable year at the close of which the method is first to be used in triplicate on form 970 (see attached copy) a statement of his election to use such inventory method. This statement must be accompanied by an analysis of all inventory as of the beginning and end of the year for which LIFO has been initially used.

2. The taxpayer must submit additional information with respect to his business if so desired by the commissioner.

3. The commissioner may compel the taxpayer to use LIFO in pricing types of goods other than those specified in the taxpayer's statements.

4. The commissioner must accept the taxpayer's application before LIFO can be used. The commissioner can reject the use of LIFO at any time if there is sufficient cause.

The following requirements must be met by a taxpayer changing from LIFO to some other method.<sup>13</sup>

1. If a taxpayer is granted permission or is required to discontinue use of the LIFO method, the inventory shall be priced in conformity with the method used prior to the adoption of LIFO.

2. If LIFO was adopted by a new business at the start of operations, the method to be subsequently used can be any method which is desired by the taxpayer providing the commissioner has no objections to it.

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<sup>12</sup>Ibid., p. 116

<sup>13</sup>Ibid., pp. 117-18.

FORM 970  
(REV. MAR. 1952)

U.S. TREASURY DEPARTMENT—INTERNAL REVENUE SERVICE

APPLICATION FOR THE ADOPTION AND USE OF THE ELECTIVE  
INVENTORY METHOD PROVIDED BY SECTION 472 OF THE  
INTERNAL REVENUE CODE

TO BE EXECUTED  
AND FILED  
IN TRIPPLICATE.

SEE INSTRUCTIONS  
ON REVERSE.

NAME OF TAXPAYER

ADDRESS (Number, street, city or town, postal zone, State)

hereby makes application to adopt and use the elective inventory method provided by section 472 of the Internal Revenue Code and to have such method first applied as of the close of the taxpayer's taxable year ending \_\_\_\_\_ with respect to the following specified goods which are subject to inventory (use additional sheets if necessary):

The taxpayer hereby agrees to such adjustments incident to the change to the elective method, or to the use of such method, or to any later change from such method, in the inventories of prior taxable years or otherwise, as the District Director of Internal Revenue upon the examination of the taxpayer's returns for the years involved may deem necessary in order that the true income of the taxpayer will be clearly reflected, and, in support of this application, represents as follows:

1. Nature of business \_\_\_\_\_
2. Inventory method heretofore used \_\_\_\_\_
3. Were any of the foregoing specified goods which were on hand at the beginning of the taxable year taken into the closing inventory of the preceding taxable year at values other than cost? ☐ YES ☐ NO
4. Goods subject to inventory not to be inventoried pursuant to elective method (use additional sheets if necessary): \_\_\_\_\_

5. (a) Did the taxpayer issue credit statements, or reports to shareholders, partners, or other proprietors, or to beneficiaries, covering the first taxable year to which this application refers? ☐ YES ☐ NO

(b) If "yes," to whom, and on what dates \_\_\_\_\_

(c) Inventory method used in ascertaining income, profit, or loss for the purpose of such statements. \_\_\_\_\_

6. Method the taxpayer uses to determine the cost of the goods in the closing inventory in excess of those in the opening inventory. (See Section 1.472-2(d), Income Tax Regulations.) \_\_\_\_\_

7. Method used in valuing LIFO inventories—Unit method ( ); Dollar-value method ( ).

The following information must be furnished:

a. If pools are used, list and describe contents of each pool (use additional sheets if necessary): \_\_\_\_\_

b. Describe briefly the cost system used (use additional sheets if necessary): \_\_\_\_\_

c. Method used in computing LIFO value of dollar-value pools—Double extension method ( ); Other method ( ). (If other, describe and justify—see last sentence of instruction 5.) \_\_\_\_\_

DECLARATION

I declare under penalties of perjury that I have examined this application (including accompanying statements) and to the best of my knowledge and belief it is true, correct, and complete.

Corporate  
Seal

(Date)

(Signature of taxpayer)

(Date)

(Signature of officer)

(Title)

The requirements summarized above are not all inclusive. The ones that have been listed appear to represent the main provisions of the 1939 Internal Revenue Act.

Another problem followed shortly after LIFO became officially accepted by the Internal Revenue Service. Shortly after the outbreak of World War II inventory shortages began to develop. This forced many industries to liquidate their inventory stocks, which were carried at relatively low prices. (The low prices were the results of adopting the LIFO pricing method in 1938 and 1939.) This meant that these industries had to charge operations with these relatively low base costs when revenue receipts were extremely high. To add insult to injury, these high profits were subject to normal taxes, surtaxes, and excess profits taxes. To compensate for this problem, Congress passed an amendment in the 1942 Revenue Act called the "Involuntary Liquidation and Replacement Section".<sup>14</sup> This amendment permitted the taxpayer to replace the depleted inventory stock at a later date providing it was the wartime conditions that forced the depletion of the stock. If the cost of replacement exceeded the cost of the quantities which were liquidated, the taxpayer was entitled to receive a tax refund for the year the liquidation occurred. On the other hand, if the replacement cost was less than the cost of the liquidated inventory, the taxpayer was assessed for the additional tax for the year the

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<sup>14</sup>Hoffman, op. cit., p. 154.



liquidation occurred.

The amendment in the 1942 Act further stated that the liquidation of the inventory had to occur before the war was terminated (as stated by the President of the United States) and that the inventory must be replaced within three years after that date. Congress later changed the law to read that the liquidation had to occur prior to January 1, 1948 and the replacement must have been made before January 1, 1953.

When the Korean Conflict broke out in 1950, Congress passed an amendment exactly like the one that was used after World War II. In this case, the involuntary liquidation had to occur between June 30, 1950 and December 31, 1954. Replacements had to be made by January 1, 1956.<sup>15</sup>

#### OPINIONS OF THE LIFO PRICING METHOD

The opinions of the American Institute of Certified Public Accountants, the Internal Revenue Service, and the American Accounting Association are presented in this section. It will become apparent to the reader that each group is concerned with different factors. The main concern of the AICPA is for merchandise costs to be properly accounted for in the financial statements. The major concern of the IRS is not with the type of pricing method to be used by the taxpayer, but with the fact that the method is consistently adhered to from year to year.

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<sup>15</sup>Ibid., p. 156.



The AAA prefers a pricing method that matches the flow of costs with the actual flow of goods, so as not to be artificial in nature. Each of these factors will be discussed in more detail in the following paragraphs.

The AICPA, in the Accounting Research Bulletin 43, stated its opinion on inventory pricing in fairly general terms. Statement two in the chapter on inventory pricing is worded in such a way that it could apply to several pricing methods. "A major objective of accounting for inventory is the proper determination of income through the process of matching appropriate costs against revenues."<sup>16</sup> At first glance, one would assume that the AICPA is implying LIFO is its preference for accomplishing this objective. However, the word "appropriate" qualifies the entire statement and makes it more subjective in nature. It is up to each individual to determine what costs can be "appropriately" charged to operations without affecting their overall fairness. It appears, that in order to match costs and revenues (in the strictest sense of the word), LIFO would produce the most accurate cost of goods sold figure and ending inventory.

Statement three is also worded in such a way that it refers to any one of a number of methods.

"The primary basis of accounting for inventory is cost, which has been defined as being the price paid or consideration given to acquire an asset. As applied to inventory, cost means in principle the sum of the applicable

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<sup>16</sup>Accounting Research and Terminology Bulletins, American Institute of Certified Public Accountants, Final Edition, 1961, page 28.

expenditures and charges directly or indirectly incurred in bringing an article to its existing condition and location."<sup>17</sup>

The main factor that the American Institute is concerned with in this case is the total cost of an article. It makes no difference whether the cost is charged to operations during the current period, the coming period, or carried on the books for some period of time. For instance, a business could charge revenues with a cost of goods sold figure that was composed of: (1) the most current purchases (LIFO), (2) the beginning inventory plus purchases made during the earliest months of the year (FIFO), or (3) an average unit cost figure computed by adding the beginning inventory to the total cost of purchases made during the current period, and dividing the total dollar amount by the total number of units (simple average). To state it another way, statement four will be presented.

"Cost for inventory purposes may be determined under any one of several assumptions as to the flow of cost factors (such as FIFO, average, and LIFO); the major objective in selecting a method should be to choose the one which, under the circumstances, most clearly reflects periodic income."<sup>18</sup>

Even though the AICPA states that the primary basis of accounting for inventories is cost, it recognizes the fact that it is sometimes necessary to value inventory on hand at some amount less than cost. The value of the inventory may be depressed because of physical deterioration, obsolescence, or a

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<sup>17</sup>Loc. cit.

<sup>18</sup>Ibid., p. 29.

general decline in the market. When this occurs, the inventory will be valued at some amount less than cost, generally referred to as market.

The Committee on Accounting Concepts and Statements of the American Accounting Association in Statement Number six on "Inventory Pricing and Changes in Price Levels" characterized the Last-in, First-out pricing method as "artificial".<sup>19</sup> This Committee felt that there were very few cases when the LIFO method corresponded to the actual flow of goods, therefore it tended to be misleading.

However, the Committee believed that "artificial LIFO" could be useful providing the application of the method was adequately disclosed. It is evident that the Committee felt that LIFO could be used as a tool to compensate for price level changes in that LIFO would help to keep inflated dollars out of the balance sheet, and also match inflated costs with inflated revenues. But in the event some generally accepted method of compensating for the impact of price level changes is adopted, LIFO should be replaced by some pricing method which has a more realistic flow concept.

In its 1957 report, the AAA Committee stated the following:

"In the majority of companies, the most important category of expense is the cost of goods sold. Ideally, the measurement of this expense should accomplish three related objectives:

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<sup>19</sup>Arthur Andersen and Company, op. cit., p. 86.

1. report in current terms the cost of products and services transferred to customers during the period;
2. report in current terms the cost present in inventories at the end of the period;
3. identify the gains and losses resulting from price changes.

The methods of inventory pricing in common use achieve these objectives in varying degrees. For example, LIFO usually reflects cost of goods sold in relatively current terms, but fails to do the same for inventories, and does not disclose the results of price changes. FIFO and average cost methods are reasonably satisfactory in many cases with respect to the pricing of inventories. They also reflect the effects of price changes but bury this information in the cost of goods sold figure, thereby failing to distinguish between trading profit or loss and the gains or losses from price movements."<sup>20</sup>

In other words, the AAA Committee is hopefully looking for a FIFO method with a built-in feature that will adjust the inventory account for price level movements.

The major concern of the Internal Revenue Service regarding the pricing of inventories is that the inventory pricing method must conform as nearly as possible to the best accounting practice for that particular trade or business, and it must clearly reflect income.<sup>21</sup> In order to clearly reflect income, the inventory practice of a taxpayer should be consistent from year to year, and greater weight is to be given to consistency than to any particular method of inventorying or basis of valuation so long as the method or basis used is substantially in accord with

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<sup>20</sup>Ibid., p. 87.

<sup>21</sup>Hoffman, op. cit., p. 318.



current internal revenue regulations.<sup>22</sup>

Evidently the principle of consistency is the main support behind many of the Internal Revenue Service's decisions. The lower of cost or market feature can't be used with the LIFO pricing method. Once LIFO has been adopted by a taxpayer, he can't switch to a different method without the specific consent of the tax commissioner. These two restrictions alone do away with several alternatives that could otherwise be used.

#### INVENTORY EFFECTS ON INCOME DETERMINATION

Any business that sells merchandise which is not held on a consignment basis will generally have an inventory on hand at the end of the accounting period. This inventory must be assigned a value for balance sheet purposes in order to show that it is in fact an asset of the company. It must be assigned a value so that income for the period can be determined (by deducting the ending inventory from the total cost of goods available for sale). If the ending inventory is overstated, the balance sheet will be overstated by the same amount. The net income for the period will also be overstated. The overstatement of net income is a result of deducting an unusually small cost of goods sold figure from sales. If the ending inventory is understated the opposite will be true. It is easy to see the importance of following a consistent and well devised method

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<sup>22</sup>Loc. cit.



of inventory pricing.

This is where the major problem enters the picture. What method should be used in pricing a business' ending inventory for a given period?

Until a few years ago the FIFO method coupled with the lower of cost or market feature was considered to be the usual method of pricing inventories. FIFO cost was always used unless the current market was below cost; then market was used. In this way unrealized losses were recognized but unrealized profits were ignored to the extent that goods were not priced at market when market exceeded cost. This procedure followed the theory of conservatism--"Anticipate no profit and provide for all possible losses."<sup>23</sup>

During the past few years however, LIFO has come into use more and more, but this is beside the point. Regardless of the pricing method used, it is necessary for a business to be consistent in applying the same method from year to year. This will make their financial statements more factual and consequently more useful. The current year's statements can be compared with prior year's statements to determine whether the business' financial position and results of operations is better, worse, or unchanged. Increasing prices as well as decreasing prices will materially affect a firm's financial position both in real terms and monetary terms. The following illustrations

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<sup>23</sup>Finney and Miller, Principles of Accounting, Introductory, Fifth Edition, page 358.

will help to make this point more apparent.

### Partial Income Statements

| <u>Year 1</u>                            | <u>FIFO</u> | <u>LIFO</u> |
|--|-------------|-------------|
| Sales 10,000 units @ \$5.00              | \$50,000    | \$50,000    |
| Beginning inventory 2,500 units @ \$2.25 | 5,625       | 5,625       |
| Purchases 10,000 units @ \$2.50          | 25,000      | 25,000      |
| Cost of goods available for sale         | \$30,625    | \$30,625    |
| Ending inventory 2,500 units             | 6,250       | 5,625       |
| Cost of goods sold                       | \$24,375    | \$25,000    |
| Gross Profit                             | \$25,625    | \$25,000    |

| <u>Year 2</u>                    | <u>FIFO</u> | <u>LIFO</u> |
|----------------------------------|-------------|-------------|
| Sales 10,000 units @ \$5.00      | \$50,000    | \$50,000    |
| Beginning inventory 2,500 units  | 6,250       | 5,625       |
| Purchases 10,000 units @ \$3.00  | 30,000      | 30,000      |
| Cost of goods available for sale | \$36,250    | \$35,625    |
| Ending inventory 2,500 units     | 7,500       | 5,625       |
| Cost of goods sold               | \$28,750    | \$30,000    |
| Gross Profit                     | \$21,250    | \$20,000    |

| <u>Year 3</u>                    | <u>FIFO</u> | <u>LIFO</u> |
|----------------------------------|-------------|-------------|
| Sales 10,000 units @ \$5.00      | \$50,000    | \$50,000    |
| Beginning inventory 2,500 units  | 7,500       | 5,625       |
| Purchases 10,000 units @ \$2.00  | 20,000      | 20,000      |
| Cost of goods available for sale | \$27,500    | \$25,625    |
| Ending inventory 2,500 units     | 5,000       | 5,625       |
| Cost of goods sold               | \$22,500    | \$20,000    |
| Gross Profit                     | \$27,500    | \$30,000    |

The illustrations above show how income is affected when merchandise costs increase or decrease. During a period of rising costs when the LIFO method of inventory pricing is used a lower profit figure is reported. This is the result of matching current (high) costs with current revenues and pricing the inventory at a low, historic cost figure. The application of FIFO has the opposite effect. The illustrations of year one and year two emphasize this fact.

On the other hand during a period of declining prices LIFO

reports the higher profits of the two methods and FIFO produces the more conservative figure. LIFO profits are higher than FIFO profits because current costs are below historic costs. The low current costs are being charged against operations under the LIFO method which makes the cost of goods sold figure smaller, thus reflecting a somewhat higher gross profit figure. (See years two and three in the above illustrations.)

Federal regulatory agencies, namely the Internal Revenue Service and the Treasury Department prevent businesses from switching at will, from one inventory pricing method to another. If certain measures were not enforced by these agencies, some business' financial statements would be of little or no value. For instance, in the preceding illustrations, if the company had been permitted to change from one method to the other, profit for the three years would have been altered by a fairly sizable amount. If less profits were desired for some specific reason, the business would have adopted the LIFO basis for pricing the ending inventory for the first two years and the FIFO basis for the third year. By adopting the FIFO method for the third year, profits would have been reduced from \$30,000 to \$29,375. But on the other hand if the company wanted to exhibit maximum profits for the three year period, it would have adopted FIFO for the first two years and LIFO for the third year. The adoption of LIFO in the third year would have increased profits by \$2,500 (from \$27,500 to \$30,000) because the ending inventory would have been increased by this amount

(from \$5,000 to \$7,500).

While FIFO and LIFO were consistently followed from year to year, the combined profits for the three year period were \$74,375 and \$75,000 respectively. If reported low profits were the objective of the company (still assuming there are no restrictions), the use of LIFO for the first two years and FIFO for the third year would show only \$74,375, but if high profits were desired, FIFO would have been used for the first two years and LIFO for the third year. The total profits would have reached a maximum of \$76,875. After studying the preceding illustrations, it is apparent that profits of one specific firm or of two identical firms could differ by \$2,500 (\$76,875 — \$74,375), and yet they would still be in the same position financially (assuming neither business paid out more taxes, dividends or other profit-sharing compensation than the other).

During the past twenty-five years, the price level trend has been upward, therefore many businesses have adopted the LIFO method for the income tax savings benefits that are available. The previous illustrations will be continued to show how each pricing method affects a business' net income and income tax liability during rising and falling price trends. The assumption that the business can switch from FIFO to LIFO at will, will be dropped.

| <u>Year 1</u>                             | <u>FIFO</u>        | <u>LIFO</u>     |
|---|--------------------|-----------------|
| Gross Profit                              | \$25,625           | \$25,000        |
| Less: Selling and Administrative expenses | 10,000             | 10,000          |
| Profit before taxes                       | \$15,625           | \$15,000        |
| Estimated taxes (50%)                     | 7,812.50           | 7,500           |
| Net income                                | <u>\$ 7,812.50</u> | <u>\$ 7,500</u> |

| <u>Year 2</u>                             | <u>FIFO</u>     | <u>LIFO</u>     |
|---|-----------------|-----------------|
| Gross Profit                              | \$21,250        | \$20,000        |
| Less: Selling and Administrative expenses | 10,000          | 10,000          |
| Profit before taxes                       | \$11,250        | \$10,000        |
| Estimated taxes (50%)                     | 5,625           | 5,000           |
| Net income                                | <u>\$ 5,625</u> | <u>\$ 5,000</u> |

| <u>Year 3</u>                             | <u>FIFO</u>     | <u>LIFO</u>     |
|---|-----------------|-----------------|
| Gross Profit                              | \$27,500        | \$30,000        |
| Less: Selling and Administrative expenses | 10,000          | 10,000          |
| Profit before taxes                       | \$17,500        | \$20,000        |
| Estimated taxes (50%)                     | 8,750           | 10,000          |
| Net income                                | <u>\$ 8,750</u> | <u>\$10,000</u> |

It will be recalled that years one and two were years of rising prices. During these periods the FIFO basis reflected the higher profits, therefore income taxes were also higher than they would have been had LIFO been used. But during the period of falling prices (from year two to year three) the opposite was true. The LIFO method had the affect of producing greater profits than FIFO.

During year two profits differed by \$625 under the two pricing methods. This difference can be analyzed as follows. Under the FIFO method, from the beginning of year two to the end, a fixed quantity of goods was assigned a greater value by \$1,250. Under the LIFO method, the same quantity was assigned the same value at the beginning and end of the year. Since the ending FIFO inventory was valued \$1,250 higher, cost of goods



sold was charged with \$1,250 less. Consequently the \$1,250 appeared as added profits in the FIFO statement which was taxed at 50% or \$625, thus leaving a higher net income figure of \$625.

During the period of falling prices, the opposite will be true providing prices fall below the level at which the LIFO inventory is priced. The FIFO ending inventory will then be priced lower than the LIFO method, thus showing a higher cost of goods sold figure which will in turn reflect lower profits than the LIFO method.

Reviewing the net income figures for the three years, another problem is brought to mind. Many LIFO advocates support their position by saying that the LIFO method tends to smooth income during periods of highly fluctuating prices. (They feel that it is of major importance to minimize profit fluctuations during business cycles. This point can't be denied; a business that can exhibit stable earnings will generally be in a better position than a business with highly fluctuating earnings. The stockholders will be better satisfied as will prospective investors.) LIFO may or may not be beneficial in this respect. In the illustration just presented the fluctuations were greater under the LIFO method. However, in this illustration, sales prices were maintained at a constant level and the fluctuations appeared in the cost of goods purchased. This may appear to be a highly unreal assumption, but it does happen. The agricultural industry where price supports are present is a good example. It makes no difference what it costs to produce a

bushel of wheat; the farmer will receive only the support price for it.

Another case can be cited in which LIFO does, in fact, provide a smoothing effect. A portion of the illustration which is presented in Finney and Miller's Intermediate Text will be cited.<sup>24</sup> Assume that a business sells one unit per year. One unit is purchased for one dollar and before it is sold another unit is purchased for \$1.05 and so on from year to year. It is further assumed that a minimum of fifty cents is needed to cover expenses and to provide the desired profit. The gross profit is computed as follows.

| <u>Year</u> | <u>Pur.</u> | <u>Sales</u> | <u>Gross Profit</u> |             |
|-------------|-------------|--------------|---------------------|-------------|
|             |             |              | <u>FIFO</u>         | <u>LIFO</u> |
| 1           | A 1.00      |              |                     |             |
| 1           | B 1.05      | 1.55         | A .55               | B .50       |
| 2           | C 1.15      | 1.65         | B .60               | C .50       |
| 3           | D 1.30      | 1.80         | C .65               | D .50       |
| 4           | E 1.50      | 2.00         | D .70               | E .50       |
| 5           | F 1.30      | 1.80         | E .30               | F .50       |
| 6           | G 1.15      | 1.65         | F .35               | G .50       |
| 7           | H 1.05      | 1.55         | G .40               | H .50       |
| 8           | I 1.00      | 1.50         | H .45               | I .50       |

In this illustration the LIFO basis certainly does have a smoothing effect on reported profits. Each year the LIFO basis reported fifty cents profit whereas the FIFO profits ranged from a high of seventy cents to a low of thirty cents. The reason there was a smoothing effect was because the sales price was determined by adding the desired markup to the cost of the current purchase price.

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<sup>24</sup>Finney and Miller, Intermediate, op. cit., p. 268.

# QUANTITY CONSIDERATIONS

If a business is going to adopt LIFO, it should be done at a time when the inventory stock on hand is near normal (the quantity that must be carried at all times in order to maintain normal operations). There are two reasons why LIFO should be adopted at this time.

If LIFO is adopted when inventory stocks are low, this will mean that items subsequently added must be priced at current (highly inflated) costs indefinitely. It must be remembered that when LIFO is used, inventory costs can't be written down to market in the event prices decline substantially. The following illustration will emphasize this point.

LIFO was adopted in 1961 when 10,000 tons were on hand. 40,000 tons was normal quantity. The cost of the initial 10,000 tons was three dollars per ton. During the next two years the quantity was brought up to normal which was a period of rising prices.<sup>25</sup>

|                 | <u>Inventory Record</u> |                  |                  |
|-----------------|-------------------------|------------------|------------------|
|                 | <u>Tons</u>             | <u>Unit Cost</u> | <u>LIFO Cost</u> |
| 1961 base       | 10,000                  | \$3.00           | \$30,000         |
| 1962 increment  | 25,000                  | 5.00             | 125,000          |
| 1963       "    | 5,000                   | 6.00             | 30,000           |
| Total inventory | <u>40,000</u>           |                  | <u>\$185,000</u> |

Average LIFO cost   \$4.625

Even though LIFO was adopted when prices were low, the increments which were added in 1962 and 1963 raised the total

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<sup>25</sup>Hoffman, op. cit., p. 180.

average cost to a relatively high level of \$4.625 per ton. A subsequent decline in cost to \$4.00 per ton would wipe out all the potential advantages of LIFO because the replacement cost under the FIFO method would be \$160,000 (40,000 tons X \$4.00 per ton) which is significantly less than the LIFO cost. The business would have to carry the LIFO priced inventory on their books in excess of current market value. From this illustration it is apparent that the advantages of LIFO will materialize only if the inventory stock is near normal at the time when LIFO is adopted, assuming the price level is not declining.

If LIFO is adopted when inventory stocks are above normal, the business may find it necessary to liquidate the excess inventory at a time when prices are high. This will mean that low costs will be charged against high revenues, thus leaving increased profits to pay taxes on. The increased tax payments may deplete the business' cash reserves by a substantial amount, thus impairing its working capital position.

There is another way to look at this same problem. A business will surely not be jeopardized as a result of adopting LIFO when the quantity of goods on hand is in excess of normal (assuming tax rates remain constant). Low cost goods may be sold for relatively high prices. The business is merely realizing and paying taxes on income which was previously deferred. Should the business completely liquidate the LIFO base, it would be no worse off than if it had never adopted the LIFO method to begin with.

In this case the advantage of adopting LIFO is that a business may be able to defer reported income thus deferring income tax payments. There is nothing to gain by shying away from LIFO (assuming tax rates remain constant). The most that can happen is that the business may liquidate the LIFO base some time in the future. The deferred income will have to be realized at this point and taxes will also have to be paid on the additional income. (This has a similar effect on income as using an accelerated method of depreciating an asset i.e., taxable income is deferred to a later date, and as a consequence, there is more working capital available now.) It would have made no difference whether FIFO or LIFO had been used. There is a set maximum amount of income to be realized and income taxes to be paid. The only difference is that LIFO may defer a portion of it for a few years.

If the LIFO method is used, inventory quantities may demand fairly close supervision, depending upon whether perpetual or periodic inventory records are kept. This is especially true if inventories are accounted for on a perpetual basis. A business that uses the perpetual method must keep more than their normal stock of merchandise on hand during the year in order to guard against liquidating part of the low-priced LIFO base. If the periodic method of inventory taking is used, quantity fluctuations during the year won't matter so long as the quantity is built up to normal by year end statement date. An example will be presented to illustrate the point. Only one type of merchan-



dise will be used for the sake of simplicity.

Perpetual Inventory Records--LIFO Priced

| Date     | Quantity  |      |         | Dollars |         |         |
|----------|-----------|------|---------|---------|---------|---------|
|          | Purchased | Sold | Balance | Debit   | Credit  | Balance |
| 1- 1-64  |           |      | 100     |         |         | \$ 400  |
| 1-15-64  | 200       |      | 300     | \$ 900  |         | 1,300   |
| 2-27-64  |           | 225  | 75      |         | \$1,000 | 300     |
| 3-18-64  | 300       |      | 375     | 1,425   |         | 1,725   |
| 4-20-64  |           | 350  | 25      |         | 1,625   | 100     |
| 4-22-64  | 400       |      | 425     | 2,000   |         | 2,100   |
| 6-10-64  |           | 300  | 125     |         | 1,500   | 600     |
| 7- 1-64  | 100       |      | 225     | 525     |         | 1,125   |
| 8- 5-64  |           | 220  | 5       |         | 1,105   | 20      |
| 8- 7-64  | 320       |      | 325     | 1,920   |         | 1,940   |
| 9-20-64  |           | 200  | 125     |         | 1,200   | 740     |
| 11-20-64 | 100       |      | 225     | 625     |         | 1,365   |
| 12-29-64 |           | 125  | 100     |         | 775     | 590     |

Periodic Inventory Records--LIFO Priced

Beginning inventory (physical count).....100 units @ \$4 = \$400  
 Ending inventory (physical count).....100 units @ \$4 = \$400

Check:

Beginning inventory 100 units

Purchases:

|       |     |   |       |     |       |
|-------|-----|---|-------|-----|-------|
| 1-15  | 200 | " | 2-27  | 225 | units |
| 3-18  | 300 | " | 4-20  | 350 | "     |
| 4-22  | 400 | " | 6-10  | 300 | "     |
| 7- 1  | 100 | " | 8- 5  | 220 | "     |
| 8- 7  | 320 | " | 9-20  | 200 | "     |
| 11-20 | 100 | " | 12-29 | 125 | "     |

Total                      1,520 units                      —                      1,420 units = 100 units

The significance of LIFO for all practical purposes is lost (as can be determined from the illustrations) when perpetual records are maintained and the basic quantity isn't. The inventory account balance is only a few dollars less than it would have been had FIFO been used. Not only is the inventory stated at a relatively high dollar amount, but also a write-down will not be permitted in the event the market price subsequently

drops. The only possible way to compensate for the market decline would be to temporarily liquidate the inventory stock and then build it up again as quickly as possible so as not to interrupt operations.

There is considerably more leeway with the periodic method providing there is a near normal quantity on hand at the end of the accounting period. This is because a physical count is made at the end of the period, compared with the beginning inventory balance, and priced accordingly. If the ending inventory is less than the beginning inventory, the dollar amount will have to be scaled down; if the ending inventory is greater than the beginning inventory, the excess quantity will be assigned current costs on a LIFO- or average-cost basis. Balances at other times during the accounting period are of no consequence because no running balances are kept. If sales periodically dip into the base or normal stock, it makes no difference so long as the stock is replaced before the periodic count is made.

#### LIFO ARGUMENTS--PRO AND CON

During the mid and late 1930's, prior to the acceptance of LIFO by the Internal Revenue Service, there were many arguments presented in support of the LIFO method. It is interesting to note that several of the arguments used then are still being used by the proponents of LIFO today. Evidently, the LIFO method was thoroughly studied in the early stages and the LIFO advocates were able to foresee the potential advantages of LIFO if adopted

at that time. There were two factors that must have had a great deal of influence on their thinking. Surely they suspected that the economy was beginning an upward trend of a fairly long duration. Along with the upward trend there would be a certain amount of inflation which would exaggerate the apparent growth of the economy.

The next few pages present some of the early arguments for LIFO as well as some of the present-day arguments. The arguments will be compared to see if the reasoning supporting them has changed over the past twenty to twenty-five years. The first part of this section will present the early arguments, the second part the more recent ones, and the third part some of the arguments against the LIFO pricing method.

First and foremost, LIFO enthusiasts emphasized the point that LIFO tended to match current costs with current revenues much more closely than did FIFO or similar methods. An illustration of this fact is presented on page 23. This statement as such was never denied. However, it was quite evident that this point was not fully explained. The nature of one of the comments makes this very clear. It seems that in the beginning, many individuals thought that LIFO described the flow of goods as well as the flow of costs. In other words, if LIFO was adopted the flow of goods as well as the flow of costs would have to be changed. For many businesses, there was an instantaneous rejection of LIFO because it was perfectly clear to them that they could not possibly sell their most recent purchases first be-

cause the merchandise from previous purchases would spoil, deteriorate, become obsolete, or in some other way become unsaleable.

The use of LIFO as compared with FIFO tends to reduce the fluctuations from period to period in reported net income, and the advocates of LIFO make much of this fact.<sup>26</sup> Let us consider the following assumptions.

During the first year of operations a business purchased 500 units of merchandise, in 100 unit batches. The first 100 units cost \$1.00 per unit and the price increased twenty-five cents per unit during each subsequent purchase. The business sold 400 units, thus leaving 100 units on hand at the end of the year. The ending inventory would be \$200 under the FIFO method and \$100 under the LIFO method; income would be \$100 higher under the FIFO method. It is further assumed that the first 100 units purchased during the second year cost \$2.00 per unit and each subsequent 100 units cost twenty-five cents less. The ending inventory under the two methods would be the same, \$100, but income under the FIFO method would be \$100 less than that reported under the LIFO method. The end result was that both methods reported the same total profits, but FIFO presented a total fluctuation of \$200 more than that which was presented when LIFO was in use.

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<sup>26</sup>William A. Paton, "Last-in, First-out", The Journal of Accountancy, May, 1940, 69:356.

Since LIFO tends to reduce the amplitude of earnings fluctuations (see graph B on the following page) the same can be said for the income tax to be paid on such earnings. For instance, a non-LIFO firm may show a profit of \$50,000 for one year and then experience a loss of \$20,000 in the next year. The income tax is not based on a profit of \$30,000 for the two year period. Instead the firm must pay tax on the \$50,000. It is not entitled to a tax refund during the second year (although there is a loss carryover). Had the LIFO method been used, earnings may have amounted to \$20,000 for the first year and \$10,000 during the second year or vice versa.

During the late 1930's the income statement was beginning to receive much more attention than it had in the past and as a consequence, the balance sheet was being forced into second place.<sup>27</sup> Since the income statement was increasing in importance, naturally there was more attention focused on the accuracy of its presentation. At that time it was a customary procedure to value inventories at the lower of cost or market,<sup>28</sup> but it was pointed out that this method left something to be desired because the end results could differ significantly. The lower of cost or

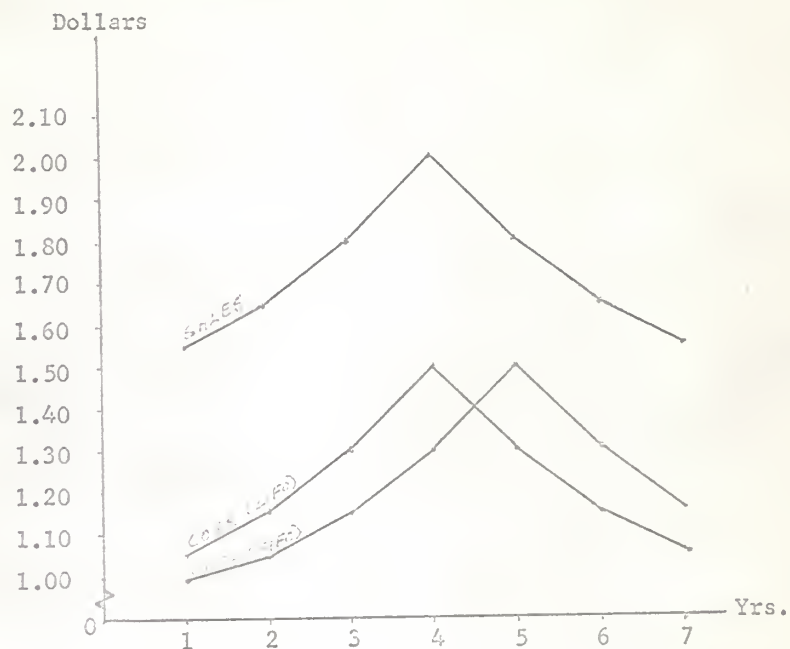
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<sup>27</sup> John L. Harvey, "Some Observations on Accounting Practice with Special Reference to Inventory Valuation", The Journal of Accountancy, Dec., 1937, 64:444.

<sup>28</sup> American Institute of Accountants, Special Committee on Inventories, "Valuation of Inventories", The Journal of Accountancy, Aug., 1936, 62:125.

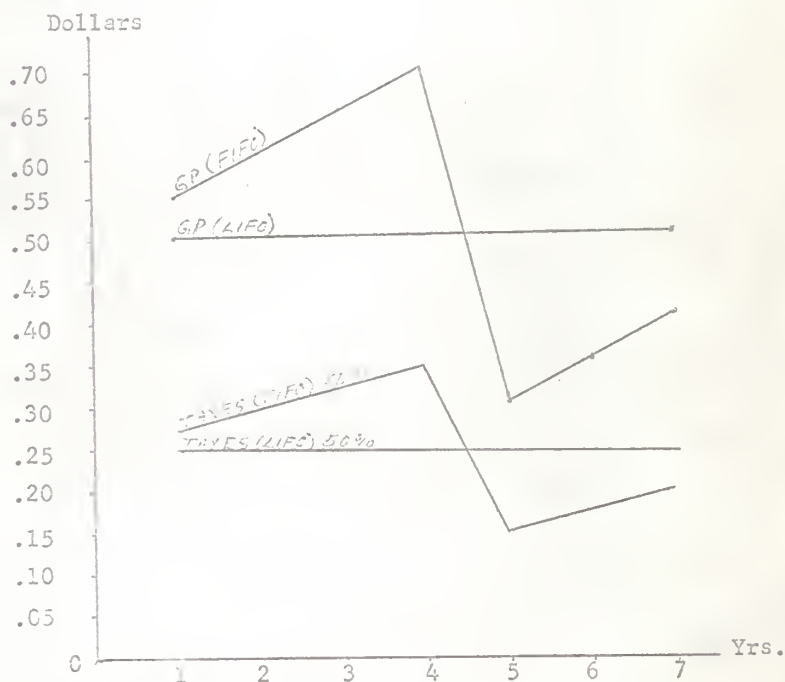


Selling price  
or cost price  
per unit.



Graph A

Gross profit  
per unit.  
Est. taxes 50%



Graph B

(See the illustration on page 28.)

market could be applied on a per item basis, to each class of items, or to the inventory as a whole. The total value of the ending inventory could vary by a fairly significant amount.

If the inventory was valued at "market", how was market to be determined? For different people the term market had many different meanings. The term market could be interpreted in any one of the following ways and still be correct. ... "market means the current bid price prevailing at the date of the inventory for the particular merchandise in the volume in which usually purchased by the taxpayer."<sup>29</sup> For goods that were produced by the business, market was defined as being the total market price for materials, prevailing labor rates, and current overhead.<sup>30</sup> However, in determining market there were certain limits that must be adhered to.

- (1) "Market should not exceed the net realizable value (i.e., estimated selling price in the ordinary course of business less reasonably predictable costs of completion and disposal); and
- (2) Market should not be less than net realizable value reduced by an allowance for an approximately normal profit margin."<sup>31</sup>

The second limitation immediately prompts further uncertainty. What is meant by "normal profit margin" and who will determine it? It seems that the further one explores the situation, the more problems that turn up. One serious omission

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<sup>29</sup>Finney and Miller, Intermediate, op. cit., p. 244.

<sup>30</sup>Ibid., p. 245.

<sup>31</sup>Loc. cit.

that causes a major part of the trouble is that no explanation as to how market is determined is included in the financial statements.

Had LIFO been used in the beginning, none of these problems would have turned up. It would not have been necessary to determine the lower of cost or market because market could not have been used with LIFO.

Many of the influential members of the oil industry felt that the LIFO method would do away with many of the uncertainties that existed with the "lower of cost or market" providing a strict adherence to "LIFO cost" was maintained. They supported their reasoning in this manner.

"The recommendation of the committee on uniform methods of oil accounting contained in the paragraph captioned "cost or market" that "inventory prices should not be reduced to market prices, where lower than the regular inventory value," it is to be understood, is based on the assumption that the inventory valuation adopted upon the inauguration of the "last-in, first-out" method is such a "constructive or reasonable figure"; that the price level thus reflected in the inventory is one--comparable to the "normal valuation" of the "basic" method--which will be lower than that which ordinary market fluctuations within the span of the economic cycle may be expected to reach; and that those occasions when market prices do fall below those represented in the inventory are expectantly only temporary phenomena evidencing unusual conditions, from which, expectantly, a prompt recovery is to be looked for. It is because of the expectantly short duration of such market decline, as well as of its presumed rarity of occurrence that the committee on uniform methods of oil accounting has recommended to its member companies that the inventory be not reduced to market in such instances, but that the difference be disclosed "in parentheses or as a footnote".<sup>32</sup>

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<sup>32</sup>AIA, Special Committee on Inventories, op. cit., pp. 129-30.

There were other reasons why the American Petroleum Institute favored the LIFO pricing method. For the petroleum industry, the selling prices of refined products were very closely governed by the cost of the related raw materials. Since there was such a close relationship between costs and selling prices and the general price level trend was experiencing an upward movement, it was considered to be a necessary practice to base current selling prices on current costs. As stated by the AIA Special Committee on Inventories,

"The principal purpose of the LIFO principle, according to the American Petroleum Institute is to bring about, in the determination of profits in the financial accounts a substantial correlation between sales prices and those raw material prices which have been directly causative of such sales prices."<sup>33</sup>

In the event that a subsequent price decline occurred, a loss would not be incurred as a result of charging high priced raw materials against relatively lower revenues.

Consider the following assumptions. A business started the year with ten barrels of crude oil on hand which cost \$100. It was company policy to sell the oil at a ten percent markup based on current costs. During the year one additional purchase was made, ten barrels at a cost of \$90. There were ten barrels sold during the year for \$99, ten percent above the current cost of \$90. Had FIFO been used for inventory valuation purposes, the business would have reported a loss of one dollar.

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<sup>33</sup>Ibid., p. 128.

On the other hand, if the ending inventory had been priced on the LIFO basis, there would have been reported income totalling nine dollars, the amount of the markup. From this simple illustration, it is easy to see why the LIFO method was preferred over the FIFO method by the oil industry.

This next argument for LIFO will be presented in the form of an argument against the FIFO method. Some proponents of LIFO felt that the use of the FIFO method resulted in the recognition of unrealized profit which was caused by inventory markups. In other words, during a period of rising prices, a business may have had the same type and quantity of goods on hand at the beginning and end of a period, but the inventory was valued \$5,000 higher at the end of the period than it was at the beginning. The LIFO advocates contended that since the quantity and composition of goods had not changed, the book or carrying value of the inventory should not have changed either.

Paton disagreed with this line of reasoning.<sup>34</sup> He did not deny the fact that the inventory absorbed an increased number of dollars during the period when prices were rising. He did not feel that it was wrong to say that unrealized profits had been recognized. If goods were sold oldest stock first (which was for the most part a customary practice), then a business had a right to price the ending inventory at the higher figure even though the quantity and composition of the inventory was the

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<sup>34</sup>Paton, Last-in, First-out, op. cit., p. 357.



same, because the higher figure was the actual cost. There was absolutely no question that the goods on hand at the end of the period had cost \$5,000 more than those in stock at the beginning of the period, hence it was perfectly reasonable to carry the ending inventory at the higher figure.

Considering the same circumstances as above (namely the cost of goods rising during the period) except using LIFO rather than FIFO, there could have been no recognition of unrealized profits because the more recent costs would have been charged against current revenues. This meant that the beginning of year costs were still carried on the books as the cost of the ending inventory. Since current (high) costs would have been charged against current revenues, the ending inventory would have been priced the same as the beginning inventory. The higher cost of goods sold figure charged against revenues would prevent the recognition of unrealized profit.

Is the normal stock of inventory items similar to a fixed asset? (Normal is defined as the minimum quantity needed to ensure uninterrupted operations.) If so, should this normal stock be priced at the original cost indefinitely? Some LIFO enthusiasts said yes to both questions, Paton on the other hand said no.<sup>35</sup>

Some LIFO enthusiasts contended that since a specific quantity of goods had to be on hand at all times in order to ensure

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<sup>35</sup>Ibid., pp. 358-59.

uninterrupted operations and the composition of this inventory stock remained identical from period to period, it had the appearance of a fixed asset and consequently it should have been carried at the same cost price indefinitely.

Paton did not associate the two types of assets as being similar in nature. Generally speaking, the older inventory stock would have been sold and the more recent purchases would have been placed in stock to be sold next. This would prevent obsolescence, deterioration, or spoilage from occurring. In other words any item classified as a fixed asset would have physically remained in the possession of the business for a relatively long time whereas an inventory item would generally have been sold shortly after it had been acquired.

To illustrate his point against carrying the normal quantity of inventory at the original cost indefinitely, Paton applied the procedure to a portion of a business' equipment, in this case a fleet of trucks.<sup>36</sup> The business required a minimum of 100 trucks to operate efficiently. The cost of the trucks was \$2,000 each. Three years later the trucks were replaced with 100 new trucks at a cost of \$1,500 each. Following the LIFO method, as defined above, the 100 new trucks would have been priced at \$2,000 each, the cost of the original purchase. The \$2,000 per unit cost would have remained on the books regardless of the cost involved.

It was easy to see the fallacy of this argument. The cost

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<sup>36</sup>Ibid., p. 359.

of the second fleet of trucks was \$150,000, not \$200,000, the cost of the original fleet. Therefore it was only logical to carry the second fleet at its actual cost of \$150,000 because there was not relationship between the first and second purchases. To quote Paton, "The requirement that the records shall show the cost of the existing layout of facilities, rather than the cost of an earlier generation of assets, is almost axiomatic."<sup>37</sup>

Another argument for LIFO was that both the taxpayer and the taxing entity benefitted from the effects prompted by LIFO. The taxpayer benefitted in that taxable income was brought into line with economic income.<sup>38</sup> This was accomplished by stating the ending inventory at the same dollar amount as the beginning inventory (assuming the quantity and composition of the inventory remained the same during the period). The accounting and economic income would have been nearly the same because the reported income would have been the excess of the amount needed to maintain the business' inventory worth in real terms.

The taxing entity was benefitted when the taxpayer used LIFO in that a steadier and more predictable flow of revenue was produced. Any time that revenues could be stabilized over a period of time without reducing the total amount to be collected, the entity which received the revenue would surely be in a

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<sup>37</sup> Loc. cit.

<sup>38</sup> AIA Committee on Federal Taxation, "The Last-in, First-out Inventory Method", Journal of Accountancy, Nov., 1938, 66:313.

better position because it could prepare more accurate budgets. Graph B on page 37 illustrates the stability involved.

"What data are there that the present method (FIFO) works badly and the new method (LIFO) would work better?"<sup>39</sup> This was one of the questions that was answered by the AIA Committee on Federal Taxation. One of the reasons that helped persuade the Internal Revenue Service to accept the LIFO inventory pricing method was the belief that it would help to stabilize the inflow of tax revenues for the government. The following is an excerpt from an article written by the AIA committee.

"One of the principal difficulties with an income tax as a means of producing revenue is the fluctuation in the annual collections therefrom. Any method which tends to minimize this fluctuation without affecting materially over a period the amount of tax collected would appear to be desirable. It does not require any extended statistical research or any elaborate compilation of figures to show that the last-in-first-out method which confines income to the actual operations of a period and which eliminates arbitrary profits and losses, will produce a steadier stream of income and therefore, a steadier flow of taxes than the first-in-first-out method which exaggerates both earnings and losses. Over even a comparatively short period of years, there should be no appreciable difference in the total revenue, and the difference becomes negligible as the period becomes longer.

The last-in-first-out method is advocated not with a view to avoiding taxes, but as a more appropriate rule of convenience than first-in-first-out for determining cost of goods sold in certain industries. Its value to the taxpayer lies in bringing taxable income in line with economic income; its value to the Treasury lies in producing a steadier and more predictable flow of revenue."<sup>40</sup>

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<sup>39</sup> Loc. cit.

<sup>40</sup> Loc. cit.



A statistical study conducted by the American Mining Congress showed that the effect on revenues collected when LIFO was being used as compared to FIFO was immaterial when spread over a few years.<sup>41</sup>

In the beginning the petroleum industry was the major supporter of LIFO. They contributed greatly to its initial acceptance by the Internal Revenue Service. However, since the initial acceptance, practically all industries have come to recognize the advantages of LIFO and as a consequence many other businesses have adopted LIFO.

Several industries are currently banding together, trying to promote the passing of more liberal legislation concerning LIFO, namely the use of the lower cost or market provision.

This current argument for LIFO is the same as one of those mentioned earlier, however the reasons supporting it are somewhat different. The argument was that LIFO tended to match current costs with current revenues, but this was about as far as the argument was carried during the 1930's when LIFO was receiving so much attention. It was believed that operations for a given period would be more correctly stated if current costs were matched against current revenues. The present-day proponents of LIFO have added more support to this argument. They feel that not only are operations more correctly stated for a given period when LIFO is used, but the adherence to LIFO

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<sup>41</sup>Loc. cit.



provides greater comparability of operating results among years.<sup>42</sup> If inventories are maintained at a fairly constant level, the same historical costs will appear in the financial statements from year to year which in turn will make comparative analysis more accurate and meaningful. The results presented in the income statement will also be more conservative because the income figure will not be inflated as a result of costing out low-priced merchandise and carrying in the inventory high-priced merchandise of an identical nature.

There is one additional point that is now stressed that was overlooked in the beginning. Last-in, first-out involves the flow of costs and not necessarily the flow of goods. Had this clarification been made in the beginning, more individuals would have had a better understanding of the method, and as a consequence, LIFO probably would have received greater acceptance. An illustration will help to clarify the discussion. Consider the following assumptions for a hypothetical business.

Sales 3,000 units @ \$10 per unit.  
 Beginning inventory 1,000 units @ \$5 per unit.  
 Purchases during the period 3,000 units @ \$7 per unit.  
 Ending inventory 1,000 units  
 No other costs will be considered at this time.

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<sup>42</sup>Allan R. Drebin, "Price Level Adjustments and Inventory Flow Assumptions", The Accounting Review, Jan., 1965, 40:155.

Partial Income Statement

|                                     | <u>FIFO</u>     | <u>LIFO</u>     |
|-------------------------------------|-----------------|-----------------|
| Sales (3,000 units @ \$10 per unit) | \$30,000        | \$30,000        |
| Less: Cost of goods sold:           |                 |                 |
| 3,000 units @ \$7 per unit          |                 | 21,000          |
| 1,000 units @ \$5 per unit          | 19,000          |                 |
| 2,000 units @ \$7 per unit          |                 |                 |
| Gross profit on sales               | <u>\$11,000</u> | <u>\$ 9,000</u> |

In this illustration current revenues totaled \$30,000. The total amount spent for inventory totaled \$21,000 (3,000 units X \$7 per unit). Under the LIFO method, these current costs were charged against current revenues. Under the FIFO method, all historic costs plus a portion of current costs were charged against current revenues. From this simple illustration, it is apparent that LIFO does in fact permit a more accurate matching of revenues and costs.

The decline in the value of the dollar has helped to promote the usage of the LIFO pricing method over the past few years. It is a known fact that 1965 dollars are worth substantially less than 1940 dollars. It is possible for a business to deplete its capital resources by reducing sales prices or through extravagant dividend policies. LIFO will help to guard against this danger by matching inflated costs with inflated sales prices,<sup>43</sup> and to a certain extent (the amount of the original base) the inventory account is maintained at a constant amount both in real terms and in dollars. Individuals who have used LIFO during the past few years feel that LIFO has prevented the

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<sup>43</sup>McAnly, op. cit., p. 62.

recognition of "paper" profits and also prevented them from paying "unjustified" income taxes. The paper profits referred to are the profits that occur as a result of recording higher priced merchandise on the books rather than including this inflated cost in the cost of goods sold figure. This is illustrated below.

Balance Sheet  
(Beginning of year)

|                          |                 |                   |                 |
|--------------------------|-----------------|-------------------|-----------------|
| Cash                     | \$10,000        | Liabilities       | \$5,000         |
| Inventory (1000 u @ \$5) | 5,000           | Capital Account   | 20,000          |
| Other Assets             | <u>15,000</u>   | Retained Earnings | <u>5,000</u>    |
|                          | <u>\$30,000</u> |                   | <u>\$30,000</u> |

Condensed Income Statement  
(See page 48 for details)

|  | <u>FIFO</u>     | <u>LIFO</u>     |
|--|-----------------|-----------------|
| Sales                                    | \$30,000        | \$30,000        |
| Less cost of goods sold                  | <u>10,000</u>   | <u>21,000</u>   |
| Gross profit on sales                    | \$11,000        | \$ 9,000        |
| Operating expenses                       | <u>5,000</u>    | <u>5,000</u>    |
| Income before taxes                      | \$ 6,000        | \$ 4,000        |
| Estimated taxes (50%)                    | <u>3,000</u>    | <u>2,000</u>    |
| Net income (to be paid out in dividends) | <u>\$ 3,000</u> | <u>\$ 2,000</u> |

A business can impair its financial position by paying out too much in the form of dividends. The illustration will be continued to emphasize the point.

Cash Flow Statement

|                                 | <u>FIFO</u>       | <u>LIFO</u>   |
|---------------------------------|-------------------|---------------|
| Cash receipts from sales        | \$30,000          | \$30,000      |
| Cash disbursements:             |                   |               |
| Inventory purchases             | \$21,000          | \$21,000      |
| Operating expenses              | 5,000             | 5,000         |
| Taxes                           | 3,000             | 2,000         |
| Dividends                       | 3,000             | 2,000         |
|                                 | <u>32,000</u>     | <u>30,000</u> |
| Net increase (decrease) in cash | <u>(\$ 2,000)</u> | <u>-0-</u>    |

Balance Sheet  
(End of year FIFO)

|                          |                 |                   |                 |
|--------------------------|-----------------|-------------------|-----------------|
| Cash                     | \$ 8,000        | Liabilities       | \$ 5,000        |
| Inventory (1000 u @ \$7) | 7,000           | Capital Account   | 20,000          |
| Other Assets             | <u>15,000</u>   | Retained Earnings | <u>5,000</u>    |
|                          | <u>\$30,000</u> |                   | <u>\$30,000</u> |

Balance Sheet  
(End of year LIFO)

|                          |                 |                   |                 |
|--------------------------|-----------------|-------------------|-----------------|
| Cash                     | \$10,000        | Liabilities       | \$ 5,000        |
| Inventory (1000 u @ \$5) | 5,000           | Capital Account   | 20,000          |
| Other Assets             | <u>15,000</u>   | Retained Earnings | <u>5,000</u>    |
|                          | <u>\$30,000</u> |                   | <u>\$30,000</u> |

After the current years operations, a quick glance at the year end balance sheets reveals no significant differences. This assumption is definitely false. The financial position of the business as a result of applying the FIFO method of valuing inventory is somewhat weaker (in real terms) than it would be if the ending inventory was valued under the LIFO method. The inventory in both statements is worth exactly the same amount even though it is stated in different dollar amounts, because there is an identical number of units on hand at balance sheet date. The difference to be concerned with appears in the cash balance. The FIFO statement has a balance of \$2,000 less than the LIFO statement. This difference can be accounted for by analyzing

the cash disbursements that took place during the year. In the FIFO statement the company reported income before taxes in the amount of \$2,000 more than in the LIFO income statement. This required the company to pay an extra \$1,000 in income taxes and also permitted them to pay \$1,000 more out in dividends.

Cash decreased by \$2,000 in the FIFO illustration but it appears that the inventory increase compensates for the difference. In a dollar measurement this is true, but in terms of units of merchandise it is false. The company has exactly the same inventory on hand regarding composition, number of units, and marketability. All other assets remained the same.

In an economic sense, the company is actually \$2,000 worse off at the end of the year in terms of purchasing power than it was at the beginning of the year. "Economists regard the opening volume of inventories as one's capital and define income as the gain after allowing for maintaining that volume intact."<sup>44</sup> This to a certain extent is the same objective that is accomplished by LIFO users. On the other hand, FIFO advocates handle the situation in a somewhat different manner. The book cost of inventories is matched with gross revenue and the resultant profit is the residual amount after maintaining intact the opening money capital. Thus, it can be stated that the conventional accounting concept maintains assets in monetary terms, and the economic concept maintains assets in real terms. The

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<sup>44</sup>K. Lacey, "How the Last-in, First-out Principle Encourages Economic Stability", The Journal of Accountancy, March, 1949, 87:202.



LIFO principle appears to be a hybrid because it reflects both economic and accounting traits. Perhaps this is a good thing because accountants and economists have been trying for years to strike a happy medium that would be acceptable to both professions.

Before the 1939 legislation was passed which made LIFO an acceptable inventory pricing method (for income tax purposes), nearly all the arguments pertaining to LIFO were expressed in its behalf. Since 1939 the LIFO method has been used by many businesses, hence many of the shortcomings of LIFO have become apparent. This has encouraged the writing of several articles emphasizing the disadvantages of LIFO.

One of the major disadvantages of LIFO that has received much discussion is that of involuntary liquidation. If temporary liquidation occurs, profit and loss for the period receives full impact of all previously unrecognized price gains or losses relating to the inventory reduction. This may be extremely misleading as far as current operations are concerned. This problem was remedied during World War II and the Korean Conflict which has already been pointed out in an earlier section of this paper. However, there has been no such legislation since the Korean War that has permitted the replacing of involuntary liquidated inventories nor has there been any special tax relief granted.<sup>45</sup>

Had the FIFO method been used, no such problem would have

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<sup>45</sup>James M. Fremgen, "Involuntary Liquidation of LIFO Inventories", The Journal of Accountancy, Dec., 1962, 114:51.

arisen because no low-priced stock would have been on hand. The net effect for the two methods would be the same after the liquidation occurred except that with the FIFO method the realization of the additional profits and the related increased tax liability came about bit by bit and with the LIFO method it occurred all in one period. Since the net effect is the same over a period of time there appears to be no good reason why the LIFO users should receive special treatment for temporary liquidations. The FIFO users have no method of deferring income and taxes, so why should the LIFO users be permitted to defer these items?

It has been stated that LIFO has the effect of leveling the peaks and valleys of reported earnings when used throughout a business cycle or a series of price fluctuations. Some individuals believe this is wrong because it helps to give the appearance of fairly stabilized earnings for the business over a number of years. If the FIFO pricing method had been used during the same period, the business' earnings would have reflected extreme fluctuations. The major problem that could result from this stabilizing process, according to McAnly,<sup>46</sup> is that investors could be deceived into thinking the business is a relatively solid organization (as far as earnings are concerned), whereas in reality it might be a fairly risky venture. Investors generally look for a firm that exhibits (and actually has) fairly

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<sup>46</sup>McAnly, op. cit., p. 32.

stable earnings year after year. This brings up another problem area so it will not be pursued further.

During a period of rising prices a business may be experiencing financial difficulties or it may desire to exhibit a more impressive financial position for the purpose of attracting new investors. In these cases the business will more than likely steer clear of the LIFO method so that reported income will be maximized. The business may have some form of debt outstanding with a covenant that requires a specific amount of income to be earned each year. If the predetermined amount is not earned a default may result which will make the entire debt issue due and payable immediately. On the other hand, the business may be in the process of floating a new stock or bond issue. When this is the case they will want their financial statements to reflect the best possible results. The income statement should show as high profits as possible. This can be accomplished by charging against operations the lowest cost of goods sold figure which will be the total amount of the beginning inventory plus the costs of current purchases necessary to account for all items sold. It is a well-known fact that high profits are one of the favorable requirements for attracting new investors. Financial ratios such as the current ratio and acid test ratio will also be more impressive if the inventory account is made up of high-priced items which makes total current assets higher.

Another reason (as mentioned earlier) why LIFO is not more readily adopted is that it is strictly a cost method whereas

with FIFO, the lower of cost or market can be applied from year to year, depending on the existing market conditions. Some individuals feel that it is unconservative to price inventories in excess of their current market values. This is exactly what happens when LIFO is used and current costs subsequently fall below the original costs.

However, there is one way to compensate for the market price decline. The LIFO user can set up a reserve account to take into account the price decline. The amount can't be used as a tax deduction, but it at least restricts that amount from being paid out in dividends or profit-sharing compensation. Regardless of whether or not a reserve account is permitted, non-LIFO users are still reluctant to adopt LIFO now because of the current high price level. They are waiting for the general price level to drop to a lower point (i.e., lower than the current level). If they adopted LIFO when prices were high and then the price level subsequently dropped below the floor at the time LIFO was first adopted, they would be in the same position as the FIFO user during an inflationary period, that is, recognizing inventory profits that would not materialize in dollars. Others feel that the principle of consistency is being violated if market is used for one year and then cost for the next. However, this is not the case. As it is stated in the method, the lower of cost or market is being applied from year to year. One year cost may be the lower of the two and the next year market may be lower.

LIFO appears to be a counter-cyclical device.<sup>47</sup> During periods of rising prices and general prosperity, the government is supposed to eliminate deficits from the books and accumulate surpluses which can then be used during recessionary periods to make additional expenditures to boost the economy. LIFO works in the opposite direction. During periods of rising prices, taxable income is reduced and then during deflationary periods, taxable income is increased. At first glance one may feel that LIFO minimizes government revenues when they are needed least and maximizes revenues when they are needed most. However, there is one factor that must not be overlooked. Generally the time lag is too great between the period when the money is needed to spur on the economy and the time when it actually becomes due and payable to the government in the form of taxes. If the recessionary period is relatively short in duration, it can hit the economy and then be gone before the government can collect the money and then spend it to help to cushion the economic slump.

Those who believe the balance sheet is of primary importance and the income statement secondary feel that the FIFO method reflects the outcome of operations more accurately. The inventory account balance is made up of the most recent purchases and historic costs that made up the beginning inventory

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<sup>47</sup>Charles E. Johnson, "Inventory Valuation: The Accountant's Achilles Heel", Financial Accounting Theory, Zeff & Koller, 1964, page 97.



have been charged against operations. On the other hand, there are those who believe the income statement is more important than the balance sheet, therefore current price level changes should appear in the income statement rather than in the balance sheet. In order to accomplish this task these individuals feel that the LIFO method of pricing inventories must be used in order to charge operations with current costs.

Moonitz disagrees with their philosophy; he believes that LIFO does not adjust for price level changes. LIFO is inconsistent in that it provides "inflated" costs in the income statement and correspondingly "deflated" asset values in the balance sheet--a paradox which should cause concern to the CPA who is requested to give as his opinion that his client's balance sheet presents fairly the client's financial position.<sup>48</sup>

Moonitz presents another argument in support of his theory that LIFO doesn't adjust for price level changes in the income statement; LIFO merely reflects in the cost of goods sold figure the latest costs paid for the "specific" commodity dealt in.<sup>49</sup> The latest costs may differ substantially from current replacement costs, especially if the product dealt in is seasonal in nature. In this case LIFO eliminates only a part of the effects of specific price fluctuations.

In other words, Dr. Moonitz is stating that the general

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<sup>48</sup>Maurice Moonitz, "The Case Against LIFO as an Inventory-Pricing Formula", Financial Accounting Theory, Zeff & Keller, page 125.

<sup>49</sup>Loc. cit.

price level and the specific price level vary in degree. The general price level index may have risen ten points in the past ten years whereas the specific price level on an item such as steel or uranium may have risen twenty points during the same period. In order for a business to correct its financial statements for price level changes, it appears that it should adjust the accounts by a specific price level index number rather than applying a general index number or relying on the matching of current costs and current revenues. These "corrected" statements will then have only limited use. They can be used for management purposes, not for reporting purposes. If they are placed in the hands of laymen, these individuals are likely to draw false conclusions about the business in question.

#### SUMMARY AND CONCLUSION

The question of whether a business should or should not adopt the LIFO pricing method still cannot be answered with certainty. It appears that for nearly every argument that can be presented in LIFO's behalf, another argument of equal weight can be presented in opposition to LIFO. Each and every business that is considering the change must carefully analyze all the possibilities of what can be gained and what can be lost before LIFO is actually adopted.

If a particular business is "income statement conscious" and feels that it is of major importance to match current costs and current revenues as closely as possible, it should consider

using LIFO to accomplish this objective. But before the final decision is made, there are other factors that should receive some consideration. What is management's feelings regarding the possibility that prices may subsequently fall below those existing at the time LIFO was adopted? If such price declines do occur, is management willing to accept and use overstated amounts in the balance sheet? It must be emphasized that writedowns are not permitted when LIFO is used. This one drawback, probably the greatest one, would be eliminated if Congress would pass legislation permitting the use of the lower of cost or market principle with LIFO. Whether or not they will, remains to be seen.

It would make little or no difference whether or not LIFO with the lower of cost or market feature was permitted if there were better odds that a price level decline would not materialize within the next few years. Throughout our nation's history it has been a normal occurrence for the economy to experience an economic downturn, generally speaking, every twenty to twenty-five years. Some of these downturns have been much more severe than others and have lasted a great deal longer.

The factor that makes the odds so great is that the economy is several years overdue as far as the periodic downturn is concerned. Perhaps the economy has experienced its last deflationary period. There is a possibility that man has learned how to prevent business cycles from occurring, however, there is no way to be assured of this.

There are two other closely related factors that should receive serious consideration from management. Does the busi-

ness make it a policy to keep a relatively stable inventory on hand at all times or does it fluctuate frequently? What are the possibilities that the suppliers may not be able to fill orders promptly? It will be recalled that during World War II and the Korean War, LIFO users were granted special treatment regarding the replacement of temporarily liquidated inventories. This in turn relieved them of the additional tax burden ( a result of selling historically low-priced goods at high prices).

Until a few years ago, the inventory liquidation problem was for the most part ignored because during two previous events when help was needed, help was given. Then in 1962, the steel industry after their 115 day strike experienced the detrimental effects that a temporary liquidation can have on businesses. Much of the steel which was sold was costed out at extremely low prices (those that existed when the LIFO method was first adopted), thus skyrocketing profits upward. The businesses that were using the LIFO method had to pay income taxes on those increased profits. This made a large number of potential LIFO users take a second glance before switching from FIFO or some other method.

Should businesses adopt LIFO, FIFO, average, or some other inventory pricing method? For this question there is no clear-cut answer. Each and every businessman must consider all existing possibilities and then make a decision. Only the future will reveal whether or not the right alternative was selected.

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## BIBLIOGRAPHY

- American Institute of Accountants Committee on Federal Taxation, "The Last-in, First-out Inventory Method", The Journal of Accountancy, Nov., 1932, 66:310-314.
- American Institute of Accountants Special Committee on Inventories, "Valuation of Inventories", The Journal of Accountancy, Aug., 1936, 62:122-132.
- American Institute of Certified Public Accountants, Accounting Research and Terminology Bulletins, Final Edition, 1962, pages 27-35.
- Arthur Andersen & Co., Accounting and Reporting Problems of the Accounting Profession, Second Edition, October, 1962, pages 85-89.
- Barron, J.F., "Tax Effects on Inventory Methods", The Journal of Accountancy, Aug., 1961, 112:34-40.
- Broad, Samuel J., "The Impact of Rising Prices Upon Accounting Procedures", The Journal of Accountancy, July, 1948, 86:10-14.
- Broad, Samuel J., "Valuation of Inventories", The Journal of Accountancy, July 1950, 90:227-235.
- Butters, J.K., Effects of Taxation--Inventory Accounting and Policies, pages 1-14. The Riverside Press, Cambridge, Mass., 1949.
- Code of Federal Regulations Title 26, Internal Revenue, Part 1, (SS 1.401 to 1.860), revised as of Jan. 1, 1961, pages 114-126.
- Committee on Concepts and Standards Underlying Corporate Financial Statements, "Inventory Pricing and Changes in Price Levels--Supplementary Statement # 6", The Accounting Review, April, 1954, 29:188-193.
- Coughlan, John W., "The Guises of Replacement Cost", The Accounting Review, July, 1957, 32:434-447.
- Devine, Carl Thomas, Inventory Valuation and Periodic Income, pages 30, 50-60, 98-100, 106, 114, 140-150. The Ronald Press Co., New York, 1942.
- Drebin, Allan R., "Price Level Adjustments and Inventory Flow Assumptions", The Accounting Review, January, 1965, 40:154-156.
- Finney and Miller, Principles of Accounting, Introductory, Fifth Edition, page 358. Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1957.

Finney and Miller, Principles of Accounting, Intermediate, Fifth Edition, pages 236-237, 267-277. Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1961.

Fremgen, James M., "Involuntary Liquidation of LIFO Inventories", The Journal of Accountancy, December, 1962, 114:49-56.

Harvey, John L., "Some Observations on Accounting Practice with Special Reference of Inventory Valuation", The Journal of Accountancy, Dec., 1937, 64:440-451.

Hoffman, Raymond A., Inventories--A Guide to Their Control, Costing, and Effect Upon Income and Taxes, pages 131-290, 317-335. The Ronald Press Co., New York, 1962.

Holdren, George C., "LIFO and Ratio Analysis", The Accounting Review, Jan., 1964, 39:70-85.

Husband, George R., "Another Look at Cost or Market Whichever is Lower", The Accounting Review, April, 1946, 21:115-120.

Husband, George R., "The First-in, Last-out Method of Inventory Valuation", Financial Accounting Theory, Zeff & Keller, pages 102-108. McGraw-Hill Book Co., New York, 1964.

Johnson, Charles E., "Inventory Valuation: The Accountant's Achilles Heel", Financial Accounting Theory, Zeff & Keller, pages 89-101. McGraw-Hill Book Co., New York, 1964.

King, Robert W., "Effect of Inventory Valuation Methods of Profits", The Accounting Review, Jan., 1947, 22:45-53.

Kracke, Edward A., "Inventory and Taxes", The Journal of Accountancy, Dec., 1939, 63:369-376.

Libbey, K., "How the Last-in, First-out Principle Encourages Economic Stability", The Journal of Accountancy, March 1949, 87:200-205.

Moody, H.T., Selected Criticisms of Accounting and Related Subjects, 1964, pages 30-39, 60-68, 87-101, 125-127, 180-187.

Moonitz, Maurice, "The Case Against LIFO as an Inventory-Pricing Formula", Financial Accounting Theory, Zeff & Keller, pages 117-128. McGraw-Hill Book Co., New York, 1964.

National Association of Cost Accountants, The Control and Valuation of Inventories, pages 150-4; 254-62. J. J. Little & Ives Co., New York, 1941.

Paton, W. A., Advanced Accounting, pages 143-151, The Macmillan Co., New York, 1941.

Paton, W. A., "Last-in, First-out", The Journal of Accountancy, May, 1940, 69:354-360.

Peloubet, Maurice E., "Last-in, First-out Once More", The Journal of Accountancy, June, 1940, 69:446-450.

Prentice Hall, Federal Tax Course, Paragraph 2606, pages 2605-2608, Prentice-Hall Inc., Englewood Cliffs, New Jersey, 1961.

Simon, Sidney I., "Cost of Market Before the Bar", The Accounting Review, Oct., 1956, 31:621, 624.

Wilcox, Edward B., "The Rise and Fall of LIFO", The Journal of Accountancy, Feb., 1943, 85:93-103.

INVENTORY VALUATION--FIFO AND LIFO  
WITH SPECIAL EMPHASIS ON THE LIFO METHOD

by

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Businessmen today have many alternative methods available for pricing merchandise inventories. However, it should be emphasized that one of the most popular inventory pricing methods has come into being within the past few years. The method referred to is the LIFO method. Prior to 1938, the LIFO method, for all practical purposes, was virtually non-existent. Probably the main factor that curbed LIFO's use was the fact that the Internal Revenue Service would not accept the method for income tax reporting purposes.

Shortly thereafter, the Internal Revenue Service permitted a few selected industries to use the LIFO method. (Evidently the IRS felt that the LIFO method was the lesser of two evils, i.e., LIFO was more acceptable than the base stock method for financial statement purposes.) The following year the LIFO pricing method could be used by any taxpayer if he so desired.

Generally speaking, the use of LIFO has paid off for those businesses that have adopted it rather than some other method. It is a known fact that our economy as a whole has experienced an upward trend ever since the LIFO method was first accepted by the Internal Revenue Service. The use of LIFO coupled with the advancing price level trend has permitted many taxpayers to defer a portion of their income taxes. The deferment is a result of charging current (high) merchandise costs against current revenues and leaving historic low priced merchandise on the books indefinitely rather than charging the low prior period costs against revenues and carrying current high costs on the



books. When charges against revenues increase, profits and taxes decrease. The extent of the tax deferment is governed by the price level existing at the time LIFO was first adopted as compared to the current price level. The earlier LIFO was adopted, the greater the tax deferment.

The main problem concerning many businesses today is whether or not to adopt the LIFO method. Many business managers are somewhat skeptical about adopting LIFO for fear that the price level will decline in the near future. The problems to be concerned with are twofold. The LIFO user may lose all that he has gained (and then some) if the future price level drops far enough. To begin with the taxpayer may lose all previous tax benefits by making the deferred taxes due and payable. If prices continue to decline, the taxpayer may find that the cost of the merchandise carried on the books is in excess of current costs. Since LIFO users are not permitted to write down inventory values to market, the balance sheet might be misstated by a fairly substantial amount.

There are no set rules for the prospective LIFO user to follow in deciding whether or not to adopt LIFO or some other method for pricing his inventory. He will have to consider all possibilities and then select the method that will work best for him. Only the future will tell whether or not he made the right choice.