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**CONSIDERATIONS IN
CHANGING TO THE
LIFO INVENTORY METHOD**

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The following discussion outlines the advantages and disadvantages of the LIFO inventory method and some of the major tax considerations involved in changing to LIFO.

ADVANTAGES

The advantage of LIFO is the deferral of federal and state income tax. In a growing company this could actually become a permanent tax deferral.

There are a number of good reasons for changing to LIFO this year. In the first place, rapidly increasing prices will maximize the tax deferral in 1974. Secondly, this tax deferral, combined with the current high interest rates, makes any current tax reduction especially beneficial. For a large publicly held company the opportunity to change to LIFO is very favorable at this time.

The fact that several large companies have decided to change to LIFO has increased the discussion of LIFO in financial circles and financial publications. As a result of this publicity the public has been educated to realize that reduced earnings per share may not be detrimental when the change to LIFO results in a large tax deferral. In fact, some commentators have said that the adoption of LIFO is an indication of prudent management regardless of LIFO's effect on reported earnings. The fact that most stock prices are at depressed levels may help to insulate the company electing LIFO against the effects of an unexpected drop in its stock price. For these reasons, 1974 is a favorable time for a change to LIFO for many companies.

DISADVANTAGES

To be weighed against the current tax deferral in the adoption of LIFO are the negative aspects of the election. The following disadvantages must be carefully studied before LIFO is adopted:

1. As a condition of adopting LIFO, the Internal Revenue Service requires that LIFO be used in reports to shareholders and creditors that cover the full year.

A footnote to the financial statements describing the effect of LIFO on the balance sheet is allowed. Except in the year of change, the effect on income of using LIFO cannot be disclosed in the financial statements.

A violation of this conformity requirement permits the Internal Revenue Service to invalidate the LIFO election. For tax purposes, the requirement applies only to those financial statements covering the whole year. Under generally accepted accounting principles, however, LIFO will have to be used on quarterly reports to shareholders.

The Internal Revenue Service has generally relaxed its strict conformity requirements when the accounting profession requires additional disclosure. In Revenue Procedure 73-37 the IRS stated that, when Accounting Principles Board Opinion No. 20 requires a footnote to the financial statement describing the nature and justification for a change in accounting principle and its effect on income, such disclosure will not violate the financial-statement conformity requirement. Therefore, when APB Opinion No. 20 requires that the effect on earnings be disclosed in the financial statements for the year of change to LIFO, such disclosure will be allowed by the IRS.¹

Other revenue procedures and rulings have been released under which the conformity requirement is relaxed in specific instances. These are rare and generally apply to only a very few companies.

2. Once a company adopts LIFO inventories, it must continue using the LIFO pricing method until the IRS grants permission to discontinue it. Generally a good business reason is necessary before permission will be granted.
3. As a condition of adopting LIFO, the taxpayer consents to adjustments in the opening inventory by the IRS. Therefore, before LIFO is adopted it is important to ascertain that the company is complying with the full-absorption inventory regulations released by the IRS in 1973.

1. In 1975 the Internal Revenue Service has issued additional rulings clarifying the conformity requirements. Revenue Procedure 75-10 expands the disclosure permitted by Revenue Procedure 73-37, holding that a LIFO election will not be revoked by the IRS because a taxpayer discloses information consistent with the requirements of APB Opinions Nos. 20 and 28, FASB Interpretation No. 3, ASR No. 159, Rule 3-07 of Regulation S-X and Release No. 11079 of the Securities Exchange Act of 1934.

A recent revenue procedure applies to all manufacturers electing to use dollar-value LIFO for tax years ending on or after September 19, 1973. The limitations on manufacturers and processors in phasing in the full-absorption costing rules generally require a company to restate prior-year inventories in accordance with the full-absorption regulations and reflect the differences as income over a ten-year period. A taxpayer who elects to change to the LIFO method for a year ending after September 19, 1973 may employ only the "transition method" when changing to full absorption. The "cutoff method" is available only to taxpayers who elected LIFO for years ending before that date. These methods are defined in Rev. Proc. 74-21.

4. Once on LIFO, a company cannot write down inventory to the lower of cost or market.

5. Because LIFO will initially decrease net income, it may be desirable to amend any profit-sharing plan, bonus computation and the like that is based on net income so as to reflect the wishes of the company properly.

Loan agreements should also be reviewed to be certain that a change to LIFO will not violate any of the covenants. Because of lower earnings and reduced assets on the balance sheet, it may be more difficult for a company electing LIFO to obtain financing.

6. There will be initial costs in the year of change to LIFO, and there could be substantial additional recordkeeping costs in the future. However, these will be more than offset by the tax benefits.

7. A net liquidation of inventory in a subsequent year could trigger a large tax.

This tax could come at a time when economic conditions are slow or when the company may have a difficult time paying the tax on accumulated inventory profits.

The local situation must also be taken into account in the decision to adopt LIFO. For example, LIFO is not an acceptable method of determining the fair market value of the inventory for purposes of the California personal property tax. Generally, the company will be required to add its LIFO reserve to the inventory stated on its balance sheet. For companies doing business in more than one state, not all of which accept a LIFO inventory for their apportionment formulas, some complex recordkeeping may be necessary to facilitate the preparation of state income tax returns.

ADOPTING LIFO

Once the company has decided to adopt LIFO for at least a portion of its inventories, the mechanics of the adoption must be considered.

A company that has never used LIFO before need only file Form 970 with the timely filed income tax return for the year of change. A return filed under an approved extension is still considered timely filed. No advance permission is needed. While theoretically a company can decide to use LIFO several months after its year end, the financial-statement conformity requirement dictates that the decision be made before the yearly earnings statement is released.

CHOICE OF INVENTORIES FOR LIFO TREATMENT

The selection of the inventories to be changed to LIFO is extremely important. If a price increase for an inventory item is expected to reverse itself shortly or if prices are expected to decline generally, LIFO should probably not be elected for those inventories. However, once a company decides that inflation will continue to increase the cost of an inventory item or group of items and that a LIFO election is desirable, the decision must be made as to which inventories are to be valued under the new method.

The tax regulations give a company a great deal of latitude in choosing the inventories to be changed to LIFO. However, if a company elects LIFO for only some of its inventories, the IRS has the authority to require that LIFO be used for other inventories if it deems this necessary to reflect income clearly.

Unless the company is a manufacturer or processor, LIFO must apply to all of the cost components of each item. Thus a wholesaler must include in the cost of a LIFO-valued item the labor and overhead properly chargeable to that item. While manufacturers and processors can also include these cost components in a LIFO election, they have the option of using the "raw-materials-content method." With this method, the LIFO election applies only to raw materials, but it includes those raw materials that are a part of goods in process and of finished goods. A manufacturer may apply this method to any raw material, even if two or more raw materials enter into the composition of the finished product.

The LIFO election may be applied selectively to inventories in almost any number of ways. It may be advantageous to change some inventories to LIFO in the current year and defer a decision on others. Such an approach may achieve a significant tax deferral and will also permit management to get a

good idea of the work involved and to evaluate the cost of additional recordkeeping for LIFO before making a total commitment.

While the costs of labor and overhead are rising at a fairly rapid rate, it is generally more advantageous for manufacturers and processors to include all cost components in the LIFO election rather than to use the raw-materials-content method. However, the availability of information (i.e., the refinement of a company's costing system) and the size of the investment in raw materials may make the raw-materials-content method viable under these conditions. If most of the price increases are isolated in a relatively small number of large-volume raw materials, the raw-materials-content method may be easy to apply and a significant deferral may be achieved.

Supplies inventories generally cannot be part of a LIFO election, as technically supplies are not considered to be an inventoriable "item." If special circumstances indicate the desirability of a LIFO election for supplies inventories, an advance ruling should be obtained from the IRS.

TYPES OF LIFO

Once it has been decided that some inventories will be changed to LIFO, it is necessary to consider alternative methods of computing the value of the LIFO inventory. Two general methods are permitted for computing the cost of the LIFO inventory: the specific-goods method and dollar-value LIFO.

- **Specific-Goods Method.** In the specific-goods method inventory quantities are measured in terms of physical units of individual items. Items of like kind can be combined and pooled together, but generally a separate LIFO computation is made for each item. The specific-goods method is often used in connection with the raw-materials-content method, as each raw material is considered separately.

The computations used in the specific-goods method generally follow the form presented in basic accounting texts. The purchases for each product are listed by earliest acquisition date, quantity purchased and unit cost. The inventory at year end is then computed by using the most recent purchases or production, the earliest purchases or production, or an average cost of purchases or production.

Aside from the numerous computations necessary, there is a fundamental disadvantage in the specific-goods method. Assume that a company decides to change its entire inventory of several thousand items to LIFO. In the aggregate, the total inventories of the company increased by 25 percent this

year as a result of increased quantities and prices. However, because certain inventory items are dropped each year or because certain raw materials were not available due to shortages, it is likely that some individual inventory items will show quantity decreases each year. Using the specific-goods method, these items that decrease in quantity will adversely affect the company even though total inventories are higher. Because of having to go into old inventory layers to price these items, additional taxable income will be generated each time an inventory item shows a quantity decrease. The total investment in inventories is irrelevant when using the specific-goods method. For this reason, and because of the numerous computations generally involved, the specific-goods method is used only in isolated circumstances.

- **Dollar-Value Method.** This is the method used today by most companies adopting LIFO. Under the dollar-value method similar inventory items are grouped into "pools." Each pool is then measured in terms of equivalent dollars at a fixed price level. Unlike the specific-goods method, dollar-value LIFO is concerned only with the total dollars of inventory in the pool. Assume that the entire inventory of a company is changed to LIFO and can be placed into one inventory pool. So long as the total dollars of all the items increase because of quantity increases, there will be a net addition to the inventory layer. If physical quantities of some items in the pool decrease but overall quantities increase, there is no detrimental effect. This is the primary advantage of dollar-value LIFO. The computational aspects are also considerably less complex than for the specific-goods method.

POOLING

It can be seen that the concept of pooling is extremely important in dollar-value LIFO. Since each pool is subject to a separate computation, it is obviously advantageous to have the company's inventories grouped into as few pools as possible.

For wholesalers, retailers, jobbers and distributors, the tax regulations are comparatively restrictive as to the establishment of pools. These taxpayers must generally pool by major lines, types or classes of goods. Manufacturers and processors have the benefit of much more liberal rules, since they are allowed to pool by natural business units. If a company is composed of only one natural business unit, only one pool is used for all of its inventories, including raw materials, goods in process and finished goods. If a company is

composed of more than one natural business unit, more than one pool is required.

Where similar types of goods are inventoried in two or more natural-business-unit pools, the IRS has the authority to apportion or allocate the goods among the natural business units if it is determined that such apportionment or allocation is necessary to reflect income clearly. If a manufacturer or processor is also engaged in the wholesaling or retailing of goods purchased from others, such operations will not be considered a part of any manufacturing or processing unit.

A natural-business-unit pool is defined on the basis of all the circumstances. The tax regulations state, "The natural business divisions adopted by the taxpayer for internal management purposes, the existence of separate and distinct production facilities and processes, and the maintenance of separate profit and loss records with respect to separate operations are important considerations in determining what is a business unit, unless such divisions, facilities, or accounting records are set up merely because of differences in geographical location." A natural business unit is generally conceived of as the entire productive activity of the enterprise within one product line or within two or more related product lines, including the purchasing of materials, the processing of materials and the selling of the manufactured or processed goods.

A taxpayer may elect to establish multiple pools for inventory items that do not fall within an established natural-business-unit pool. Each multiple group ordinarily consists of similar inventory items. Again, in determining whether inventory items are similar, consideration is given to all the facts and circumstances. Important questions to be answered are:

- Is there substantial similarity in the types of raw materials used or in the processing operations applied?
- Are the raw materials used readily interchangeable?
- Is there similarity in the use of the products?
- Are the groupings consistently followed for purposes of internal accounting and management?
- Do the groupings follow customary business practice in the taxpayer's industry?

The raw-materials-content method can be used only with the specific-goods method or with multiple pools. Labor and overhead must be included

EXHIBIT 1

Double-Extension Method, First Year

| Item | Base-year Inventories (1/1/74) | | | Ending Inventory (12/31/74) at Base-year Prices | | | Ending Inventory (12/31/74) at Current Prices | | |
|---|-----------------------------------|--------------|----------------|---|--------------|----------------|---|--------------|----------------|
| | Quantity | Unit Cost | Extension | Quantity | Unit Cost | Extension | Quantity | Unit Cost | Extension |
| A | 100 | \$10 | \$1,000 | 200 | \$10 | \$2,000 | 200 | \$12 | \$2,400 |
| B | 200 | 8 | 1,600 | 200 | 8 | 1,600 | 200 | 7 | 1,400 |
| C | 300 | 6 | 1,800 | 600 | 6 | 3,600 | 600 | 7 | 4,200 |
| D | 400 | 4 | 1,600 | 200 | 4 | 800 | 200 | 6 | 1,200 |
| | | | <u>\$6,000</u> | | | <u>\$8,000</u> | | | <u>\$9,200</u> |
| Ending inventory at base-year prices | | | \$8,000 | 1973 base-year inventory | | \$6,000 | Index | | LIFO Value |
| Beginning inventory at base-year prices | | | <u>6,000</u> | 1974 layer | | 2,000 | 115.000* | | \$6,000 |
| Increment (1974 layer) | | | <u>\$2,000</u> | | | <u>\$8,000</u> | | | 2,300 |
| | | | | | | | | | <u>\$8,300</u> |

*Index = (ending inventory at current prices)/(ending inventory at base-year prices)
= \$9,200/\$8,000 = 1.15 = 115%

if natural-business-unit pools are used. As in most other areas, the IRS has the authority to determine the appropriateness of pooling upon audit of the company's income tax returns.

DOUBLE-EXTENSION METHOD

The tax regulations allow all taxpayers to use the double-extension method in application of the dollar-value LIFO method. This method is briefly explained in the following paragraphs, together with some additional tax considerations. In the example it is assumed that the company's entire inventory is included in a single pool (see Exhibits).

- **Base-Year Prices.** Base-year inventories are shown at the left of Exhibit 1. The quantity would be the physical inventory of each item at the end of the year before LIFO is adopted.

The dollar extension used must be the actual cost determined pursuant to the inventory method employed by the taxpayer in the past, except that restoration must be made with respect to any writedown to market values resulting from the pricing of former inventories. In other words, the opening inventory is valued at actual cost, the only adjustment being that any inventory writedown is restored. If there was such a writedown, an amended tax return will have to be filed, which will result in additional tax and interest payments. The unit cost is computed by dividing the quantity into the actual cost as adjusted for any writedowns.

The next step is to extend the ending inventory at base-year prices. By comparing the total dollars in the inventory at year end with the beginning inventory, both at base-year prices, the quantity increase is measured in terms of equivalent dollars. In this example the inventory quantities increased by \$2,000.

- **Averaging Conventions.** Finally, the ending quantities are priced at a unit cost established during the current year. This cost can be determined in one of four ways: (1) by reference to the actual cost of the goods most recently purchased or produced, (2) by reference to the actual cost of the goods purchased or produced during the taxable year in order of acquisition, (3) by application of an average unit cost for the year or (4) by any other method that in the opinion of the IRS reflects income clearly.

Assuming that prices rise constantly throughout the year, the earliest acquisition cost will give the lowest inventory valuation and, consequently, the highest cost of goods sold. While this method is most consistent with the

EXHIBIT 2

Double-Extension Method, Second Year

| Item | Beginning Inventory (1/1/75) at Base-year Prices | | | Ending Inventory (12/31/75) at Base-year Prices | | | Ending Inventory (12/31/75) at Current Prices | | |
|------|--|--------------|----------------|---|--------------|-----------------|---|--------------|-----------------|
| | Quantity | Unit Cost | Extension | Quantity | Unit Cost | Extension | Quantity | Unit Cost | Extension |
| A | 200 | \$10 | \$2,000 | 400 | \$10 | \$4,000 | 400 | \$20 | \$8,000 |
| B | 200 | 8 | 1,600 | 500 | 8 | 4,000 | 500 | 12 | 6,000 |
| C | 600 | 6 | 3,600 | 400 | 6 | 2,400 | 400 | 4 | 1,600 |
| D | 200 | 4 | 800 | 400 | 4 | 1,600 | 400 | 6 | 2,400 |
| | | | <u>\$8,000</u> | | | <u>\$12,000</u> | | | <u>\$18,000</u> |

| | Base Cost | Index | LIFO Value |
|---|-----------------|----------|-----------------|
| Ending inventory at base-year prices | \$ 6,000 | 100.000 | \$ 6,000 |
| Beginning inventory at base-year prices | 2,000 | 115.000 | 2,300 |
| Increment (1975 layer) | <u>4,000</u> | 150.000* | <u>6,000</u> |
| | <u>\$12,000</u> | | <u>\$14,300</u> |

*\$18,000/\$12,000 = 150%

LIFO principle, it may be difficult to apply in practice; many companies may have to do a great amount of work to develop a unit cost in this way. Depending upon the inventory turnover rate, it may or may not be worth the additional effort. If inventory turnaround time is rapid, differences in the three methods may not be significant. Once a method is selected it cannot be changed in a subsequent year without permission from the IRS.

After the extension of inventory items is completed, a ratio of price increases is calculated by holding the year-end quantities constant and comparing the change in unit cost with the base year. This ratio is then applied to the quantity increase expressed in dollars in order to determine the LIFO value. In this example the company's ending inventory is \$8,300.

Exhibit 2 shows the LIFO computation in the second year. When the physical units increase from year to year (increase in ending inventory at base-year prices over beginning inventory at base-year prices), each year's layer must be accounted for separately.

Exhibit 3 shows the LIFO computation in the third year. In this exhibit there is a liquidation (a decrease in ending inventory at base-year prices as compared with the beginning inventory at base-year prices). When a liquidation occurs, beginning with the most recent layer and working back toward the base-year inventory, the base costs are eliminated so that the total base cost equals the ending inventory at base-year prices. Each base-cost liquidation is then extended by the applicable yearly index previously computed to arrive at the ending LIFO inventory. Note that in this exhibit, since there is no layer to be valued, it is not necessary to create an index.

OTHER DOLLAR-VALUE METHODS

The other valuation methods for dollar-value LIFO are the index method, the link-chain method and the retail method. The last of these has no application to the present audience and will not be discussed here.

- **Index Method.** If the company can demonstrate to the IRS that the double-extension method is impractical because of technological changes, the extensive variety of items or extreme fluctuations in the variety of items in a dollar-value pool, an index method may be used by double-extending a representative sample of the inventory. The only guideline given in the tax regulations is that the representative sample should be selected "by use of sound and consistent statistical methods." Some commentators have suggested that generally such a sample should include about 70 percent of the

EXHIBIT 3

Double-Extension Method, Third Year

| Item | Beginning Inventory (1/1/76) at Base-year Prices | | | Ending Inventory (12/31/76) at Base-year Prices | | | Ending Inventory (12/31/76) at Current Prices | | |
|---|--|--------------|-------------------|---|--------------|-----------------|---|--------------|-----------------|
| | Quantity | Unit Cost | Extension | Quantity | Unit Cost | Extension | Quantity | Unit Cost | Extension |
| A | 400 | \$10 | \$4,000 | 100 | \$10 | \$1,000 | 100 | \$14 | \$1,400 |
| B | 500 | 8 | 4,000 | 100 | 8 | 800 | 100 | 13 | 1,300 |
| C | 400 | 6 | 2,400 | 600 | 6 | 3,600 | 600 | 3 | 1,800 |
| D | 400 | 4 | 1,600 | 400 | 4 | 1,600 | 400 | 2 | 800 |
| | | | <u>\$12,000</u> | | | <u>\$7,000</u> | | | <u>\$5,300</u> |
| Ending inventory at base-year prices | | | \$ 7,000 | 1973 base-year inventory | | \$ 6,000 | Index | | LIFO Value |
| Beginning inventory at base-year prices | | | <u>(12,000)</u> | 1974 layer | | 2,000 | 100,000 | | \$ 6,000 |
| Liquidation | | | <u>\$ (5,000)</u> | 1976 liquidation (\$1,000) | | (1,000) | 115,000 | | 2,300 |
| | | | | 1975 layer | | 4,000 | 115,000 | | (1,150) |
| | | | | 1976 liquidation (\$4,000) | | (4,000) | 150,000 | | 6,000 |
| | | | | | | <u>(4,000)</u> | 150,000 | | <u>(6,000)</u> |
| | | | | | | <u>\$ 7,000</u> | | | <u>\$ 7,150</u> |

total value of the ending inventory. The company must demonstrate to the IRS the appropriateness of the method used to compute the index.

Haskins & Sells has developed an estimation sampling routine as a part of Auditape that can be used to estimate the index for LIFO inventories. Use of this program can substantially reduce the work necessary in creating an index. The IRS is expected to issue a revenue procedure in 1975 that will establish specific guidelines acceptable to the IRS for a company using statistical sampling.

- **Link-Chain Method.** The use of the link-chain method will be approved by the IRS only in cases where the taxpayer can demonstrate to the satisfaction of the district director that both an index method and the double-extension method would be impractical or unsuitable in view of the nature of the pool.

The link-chain method is advantageous if the company has large numbers of new items entering its inventories each year. Under the double-extension method, a base-year unit cost must be ascertained for each item entering a pool for the first time subsequent to the beginning of the base year. The base-year cost of the new item is the current cost of that item unless the taxpayer is able to reconstruct or otherwise establish a different cost. For instance, if the double-extension example above were continued and a new item E were introduced into the inventory in 1979, it would be necessary to establish a base-year price for that item as of January 1, 1974.

With the link-chain method it is necessary only to determine the price of any new item entering the inventory as of the beginning of the current year. Instead of carrying base-year prices forward, the link-chain method carries forward the prior year's inventory price. Instead of creating a one-year index of price change, a cumulative index is computed from the base year.

CONCLUSION

A number of other problems are involved in the use of LIFO, such as in combining or dividing pools, changing pricing conventions, changing from one dollar-value LIFO method to another and the like. These problems are beyond the scope of this discussion, but such changes generally require advance approval by the IRS.

While the dollar-value inventory regulations were mostly written in the early 1960s, comparatively few taxpayers elected to change to LIFO until recently, and there were very few rulings and court cases to clarify the

numerous questions that arise when the decision to change is made. The IRS has recently issued a series of revenue rulings and procedures explaining its interpretation of the law and regulations in regard to some specific questions. It is hoped that additional IRS rulings on the subject of LIFO will be forthcoming in the near future so that taxpayers will have additional guidance when deciding whether to adopt LIFO. ●