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Identification and discussion of certain financial accounting and reporting issues concerning LIFO inventories; Issues paper (1984 November 30)

American Institute of Certified Public Accountants. Task Force on LIFO Inventory Problems

Issues Paper

Identification and Discussion of Certain Financial Accounting and Reporting Issues Concerning LIFO Inventories

November 30, 1984
File 3175

Prepared by Task Force on LIFO Inventory Problems
Accounting Standards Division

AICPA American Institute of Certified Public Accountants

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NOTE

Issues papers of the AICPA's accounting standards division are developed primarily to identify financial accounting and reporting issues the division believes need to be addressed or clarified by the Financial Accounting Standards Board. Issues papers present neutral discussions of the issues identified, including reviews of pertinent existing literature, current practice, and relevant research, as well as aruments on alternative solutions. Issues papers normally include advisory conclusions that represent the views of at least a majority of the Institute's Accounting Standards Executive Committee (AcSEC).

Issues papers do not establish standards of financial accounting enforceable under Rule 203 of the Institute's Code of Professional Ethics.

This issues paper, "Identification and Discussion of Certain Financial Accounting and Reporting Issues Concerning LIFO Inventories," was prepared by the Task Force on LIFO Inventory Problems and approved by AcSEC, which generally supports the task force's advisory conclusions, except as otherwise noted in the paper.

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Appendixes

Section One:
Introduction

Need for Project

1-1. The Accounting Standards Executive Committee's Task Force on LIFO Inventory Problems (task force) has developed this issues paper to identify and discuss certain financial accounting and reporting issues related to the last in, first out (LIFO) inventory method for which the authoritative accounting literature provides no definitive guidance.

1-2. Accounting Research Bulletin (ARB) No. 43, Chapter 4, paragraph 6 recognizes LIFO as an acceptable inventory method; but neither that pronouncement nor any other authoritative pronouncement provides implementation guidelines. In contrast, the Internal Revenue Code and regulations provide some specific LIFO implementation rules and include a basic requirement that companies using LIFO for income tax purposes must also use LIFO for financial reporting purposes. This is known as the LIFO conformity requirement and is discussed more fully in section seven of this paper. Because of the paucity of authoritative accounting literature and the relative specificity of the tax rules related to LIFO, the general approach to LIFO has been: "whatever is good for tax is good for financial reporting."

1-3. The task force believes portions of the Internal Revenue Code and regulations concerning LIFO have considerable merit and may be used for financial reporting purposes; other portions, however, may be inappropriate in certain circumstances for such purposes. In addition, maintaining two sets of LIFO records, one for financial reporting and one for tax reporting, would likely be burdensome and costly to most businesses. The task force therefore believes cost-benefit considerations should be weighed in applying financial accounting and reporting principles that do not embrace, to the extent practicable, income tax accounting requirements.

1-4. Evidence of the need for more specific authoritative accounting guidance includes the general lack of authoritative accounting guidance, the wide range of variations possible among acceptable ways to calculate LIFO, the Internal Revenue Service's (IRS) softening of its interpretation of the LIFO conformity requirement (discussed more fully in section seven of this paper) and an IRS regulation that simplifies LIFO application for income tax purposes (the focus of a separate issues paper prepared by the task force and sent to the Financial Accounting Standards Board on October 14, 1982). Further, on July 2, 1981, the Securities and Exchange

Commission (SEC) issued Accounting Series Release (ASR) No. 293, "The Last-In, First-Out Method of Accounting for Inventories," which provides examples of what the SEC considers inappropriate applications of LIFO and exhorts registrants and their accountants to ensure that the application of LIFO achieves the stated conceptual objective of properly matching most recently incurred costs with current revenues. ASR No. 293 was subsequently incorporated into Section 205 of Financial Reporting Release (FRR) No. 1, "Codification of Financial Reporting Policies."

Income Tax Considerations

1-5. This paper is not intended to provide tax guidance regarding LIFO. Some advisory conclusions in this paper may be viewed as contrary to IRS positions if used for tax purposes. Accordingly, those involved in applying financial accounting and reporting principles pertaining to LIFO should become reasonably familiar with the tax literature pertaining to LIFO, particularly the LIFO conformity requirement, because failure to comply with the tax requirements for LIFO could jeopardize a company's eligibility to use LIFO for tax purposes. The AICPA federal tax division has informed the task force that use for financial reporting purposes of the advisory conclusions in this paper, in its view, should not violate the LIFO conformity requirement. However, particular care may be necessary to maintain documentation consistent with published IRS positions to preclude IRS termination of LIFO for tax purposes because of inadequate books and records.

The LIFO Concept and Its Objective

1-6. ARB No. 43, Statement 2 states that "a major objective of accounting for inventories is the proper determination of income through the process of matching appropriate costs against revenues." Statement 4 of that Bulletin goes on to state that "cost for inventory purposes may be determined under any one of several assumptions as to the flow of cost factors, such as first in, first out (FIFO), average, and last in first out (LIFO); the major objective in selecting a method should be to choose the one which, under the circumstances, most clearly reflects periodic income."

1-7. The objective of LIFO is to match most recently incurred costs with current revenues by charging cost of goods sold with the costs of goods most recently acquired or produced. So, in periods of rising prices, a company's reported cost of goods sold under LIFO is generally greater than it would have been had the first in, first out (FIFO) method of inventory been used. Consequently, using LIFO in periods

of rising prices generally produces a reported net income smaller than that had FIFO been used. The following simplified illustration contrasts the effects of LIFO and FIFO.

		Number of Units		Unit Cost	Dollar Amount
Assume:					
Inventory	1/1/X1	1,000	@	$1.00	$ 1,000
Purchases	19X1	12,000	@	$1.20	14,400
Goods Available for Sale		13,000			$15,400
Sales	19X1	12,000			
Inventory	12/31/X1	1,000			
Results under FIFO:					
Cost of Goods Sold		(1,000	@	$1.00	$ 1,000
		(11,000	@	$1.20	13,200
		12,000			14,200
Ending Inventory		1,000	@	$1.20	1,200
Goods Available for Sale					$15,400
Results under LIFO:					
Cost of Goods Sold		12,000	@	$1.20	$14,400
Ending Inventory		1,000	@	$1.00	1,000
Goods Available for Sale					$15,400

1-8. LIFO is widely used and its use is growing. The 1983 edition of Accounting Trends & Techniques shows that in 1982, 407 of the 600 companies surveyed used LIFO for at least part of their inventories, compared with only 150 such companies a decade earlier. The principal business reasons for this growth apparently have been to maximize after tax cash flow from operations and to eliminate from reported income so called illusory inventory profits in periods of rising prices. Yet, some have challenged LIFO as conceptually unsound because they believe LIFO, among other things, violates the acquisition (historical) cost principle of accounting. Others have challenged LIFO because they believe LIFO enables a company to manipulate its income by entering into transactions, particularly near year end, whose primary purpose is to increase or decrease inventory levels. Despite those concerns, this paper does not challenge LIFO as an acceptable inventory method, because its acceptability is well established in the authoritative accounting literature (ARB No. 43) and in practice.

Approach of Issues Paper

1-9. This paper identifies and discusses many financial accounting and reporting issues relating to LIFO inventories, including those involving poolings (section four), liquidations (section five), and interim reporting (section eight). Some issues arise because the tax rules permit several alternatives and they are all followed in practice. Other issues arise because specific authoritative accounting or income tax guidance is lacking. For some issues, the task force's advisory conclusions recommend changes in current practice to narrow wide diversity, which the task force believes exists. Such changes generally would be permitted under the authoritative literature. For other issues, the task force's advisory conclusions are that current practice should be continued for financial reporting purposes and that additional accounting guidance is unnecessary. The task force believes identifying and discussing those types of issues are useful to preparers, independent accountants, and users of financial statements in understanding and resolving LIFO questions that arise in practice.

Definitions

1-10. Appendix VII to this paper presents a glossary of essential terms as they are generally used in practice.

Approaches to Applying LIFO

1-11. Two approaches to applying LIFO (specific goods and dollar value) and various computational techniques have developed in practice.

1-12. Specific Goods Approach. Under the specific goods approach, changes in the quantity of individual types of inventory are the bases for determining whether inventory levels have increased or whether a portion of the existing inventory has been liquidated.

1-13. Dollar Value Approach. Under the dollar value approach, inventory items are grouped by pools and are priced in terms of each pool's aggregate base year cost. The result is compared with each pool's aggregate base year cost as of the end of the prior year to determine whether the inventory level of each LIFO pool has increased or whether a portion of the inventory has been liquidated. Various computational techniques are used with the dollar value approach, including:

a) double extension, in which the current and base year costs of each item in inventory are multiplied, or extended, by the units on hand at the current year reporting date.

b) internal index, in which the base year cost of ending inventory is determined by applying an index (based on a sample of current year costs to base year costs of items in inventory) to the dollar value of the ending inventory at current year cost.

c) link chain, in which the base cost of ending inventory is determined by applying a cumulative index to the dollar value of the ending inventory. The cumulative index is the relationship of the current year prices to those of the prior year (based on either double extension or internal index) multiplied by the prior year's cumulative index, causing each year's index to be characterized as a link in a chain of indexes back to the base year.

d) external index, in which the dollar value of ending inventory at current year prices is restated to approximate the base year prices using an index determined by an outside source, such as the Bureau of Labor Statistics Index.

1-14. Appendix I to this paper illustrates the application of various computational techniques.

Specific Goods and Dollar Value Approaches

2-1. Background. The specific goods approach is generally considered the easiest LIFO costing approach to understand. Under that approach, each item or group of very similar items is, in effect, treated as a separate inventory pool. Inventory quantities are measured in terms of physical units (for example, tons, barrels, or bales) of individual items. For those reasons, using the specific goods approach generally is limited to inventories of only basic items or substantially similar items. In the year LIFO is adopted, a company determines the opening inventory cost of each item by dividing the total inventory cost for those items by the total number of units. To the extent the number of units has increased during the current year, the increment is priced at the cost of the incremental units acquired or produced. To the extent the number of units has decreased, the decrement is priced by the unit price of the opening inventory. The specific goods approach requires much detailed recordkeeping. Also, it may result in numerous inventory liquidations.

2-2. Many disadvantages associated with the specific goods approach are avoided by using the dollar value approach. Under that approach, inventory quantities are measured in terms of fixed dollar equivalents (base year costs) rather than quantities and prices of specific goods. Similar items of inventory are aggregated to form inventory pools, and increases or decreases in each pool are identified and measured in terms of the total base year cost of the inventory in the pool rather than the physical base year quantities of individual items. To determine whether the inventory has changed, a company states dollars of ending inventory in terms of a common base year (the year LIFO is adopted). Changes in the base year dollars are measured in one of several ways. Changes in quantities and product mix within a pool may occur without affecting the total dollar value of the pool.

2-3. Issue. May both the specific goods and dollar value approaches to LIFO be used for financial reporting purposes?

2-4. Discussion. Both the specific goods and dollar value approaches are considered compatible with the LIFO objective and both are widely used in practice. The choice of one approach over the other largely depends on practical considerations. The dollar value approach is generally the more practical approach in light of the pace of technical changes and is used more often in practice than the specific goods

approach. For example, companies with many different products or frequent technological changes in their product lines generally find it onerous and impractical to apply the specific goods approach, and, therefore, use the dollar value approach. In contrast, companies with relatively small and stable product lines can often apply the specific goods approach more easily.

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2-5. Advisory Conclusion. The task force believes (9 yes, 0 no) either the specific goods or dollar value approach to LIFO consistently applied is generally compatible with the LIFO objective and, accordingly, either may be used for financial reporting purposes.

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Disclosure of the LIFO Approach Used

2-6. Issue. Should the LIFO approach used (specific goods or dollar value) be disclosed?

2-7. Arguments. Some believe disclosure of the LIFO approach used is useful and meaningful, because an entity's reported income depends on, among other things, the way LIFO is calculated. They further believe this disclosure enhances comparability. Notwithstanding those arguments, some believe this disclosure is now required by APB Opinion 22, which requires disclosure of all significant accounting policies, that is, specific accounting principles and the methods of applying them.

2-8. Others believe that, unaccompanied by other information, disclosure of the LIFO approach used does not enable users to quantify the effects of the approach used. Indeed, some believe the benefits of providing the extensive other information necessary to allow users to quantify the effects of the LIFO approach used are rarely worth the costs involved. Further, some believe the authoritative accounting literature does not prescribe this disclosure for non-LIFO inventories (for example, the manner in which factory overhead is allocated), because such information generally has not been viewed as meaningful. Notwithstanding those arguments, some believe the way LIFO is calculated is not a significant accounting policy contemplated by APB Opinion 22, and such information is normally too complex for the average financial statement user to comprehend.

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2-9. Advisory Conclusion. The task force believes (7 yes, 2 no) the LIFO approach used need not be disclosed.

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Pricing Current Purchases

2-10. Background. The IRS literature permits three basic approaches to pricing LIFO inventory increments in determining current year purchases: (a) the order of acquisition price (first purchase price), (b) the most recent acquisition price (latest purchase price), and (c) the average purchase price. All three approaches are found in practice. The following illustrate the approaches:

			Units		Unit Cost	Dollar Amount
Assume:						
	Inventory	1/1/X1	200	@	$1.00	$200
	Purchases	Jan.	100	@	1.10	110
		Feb.	200	@	1.20	240
		Mar.	100	@	1.30	130
	Sales		(300)			
	Inventory	12/31/X1	300			
(a)	Pricing based on acquisition cost of an increment using the first purchase approach:					
	Increment - Inventory	12/31/X1	300			
	Inventory	1/1/X1	200			
			100			
	Pricing based on Jan. X1 purchase		100	@	$1.10 =	$110
(b)	Pricing based on acquisition cost of an increment using the latest purchase approach:					
	Increment as above		100	@	$1.30 =	$130
(c)	Pricing based on acquisition cost of an increment using the average purchase approach:					
	Purchases	Jan.	100	@	$1.10 =	$110
		Feb.	200	@	1.20 =	240
		Mar.	100	@	1.30 =	130
			400	@	1.20 =	$480
	Pricing based on average purchase price		100	@	$1.20 =	$120

2-11. Issue. May all those pricing approaches (the order of acquisition price, the most recent acquisition price, and the average acquisition price) be used for financial reporting purposes?

2-12. Arguments. Some believe all three pricing approaches may be used for financial reporting purposes because each approach consistently applied produces income

results compatible with the LIFO objective. Some also oppose restriction to one approach for practical considerations. They believe such restriction could produce benefits rarely worth the costs of the additional recordkeeping necessary for a company to change from the approach it now uses. Others believe seasonal businesses need to be able to choose the approach that best matches most recently incurred costs and current revenues and that use of the earliest acquisition price sometimes does not achieve that goal. Also, pricing increments is only one element of the LIFO calculation and the practical considerations of the application require some flexibility in calculation techniques and the issue is significant only if price changes are significant. Further, all the approaches are used in practice today with no perceived problems because of the diversity.

2-13. Others believe only one approach should be used for financial reporting purposes for comparability. They believe comparability justifies the additional costs of recordkeeping. Some contend that all those approaches can and often do produce significantly different amounts of reported income. Also, they point out that most businesses are not seasonal.

2-14. Among those who believe only one approach should be used for financial reporting purposes, views differ on which of the three approaches should be used. Some believe only the order of acquisition price approach should be used for financial reporting purposes because they believe it is conceptually more compatible with the LIFO objective than the other approaches because it causes latest acquisition costs to be charged to cost of sales. Others believe only the most recent acquisition price approach should be used for financial reporting purposes, because it is the easiest to determine. Still others believe average purchase price represents a viable compromise.

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2-15. Advisory Conclusion. The task force believes (9 yes, 0 no) the order of acquisition approach generally is most compatible with the LIFO objective but as a practical matter any of the three pricing approaches consistently applied may be used for financial reporting purposes.

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Quantity to Use to Determine Price

2-16. Issue. Should the price of the inventory increment be based on (a) the acquisition or production cost of the quantity or dollars of the increment or on (b) the acquisition or production cost of a quantity or dollars equal to the ending inventory?

2-17. The following illustrates the alternative approaches:

		Units		Unit Cost		Dollar Amount
Assume:	Increment	100				
	Ending Inventory	300				
	January Purchases	100	@	$1.10	=	$110
	February Purchases	200	@	1.20	=	240
		300	@	1.17		$350
Alternative 1 - Increment price based on quantity of increment (January purchases)		100	@	$1.10	=	$110
Alternative 2 - Increment price based on quantity of ending inventory (January and February purchases)		100	@	$1.17	=	$117

The above illustration is for specific goods approach. The dollar value approach would be developed similarly for total dollars in each pool.

2-18. Arguments. Some believe the purchase price should be based on the acquisition or production cost of the quantity of the increment, because the acquisition or production cost of the increment is the cost incurred by the enterprise and is the most relevant cost for this purpose. They believe pricing the increment at the acquisition or production cost equal to the increment is also most compatible with the "flow of costs" assumption that serves as the underlying conceptual basis for LIFO inventory accounting. Under the LIFO concept, the cost of acquiring quantities in excess of the amount of the increment is irrelevant. Moreover, it imposes an additional and unnecessary cost if companies are required to price the higher quantity of the full ending inventory. Also, this calculation creates a timing problem because it can only be completed after the full quantity of the ending inventory is known at year end.

2-19. The task force understands that in certain cases, the IRS has taken the position that for tax purposes purchase price should be based on the acquisition or production cost of a quantity equal to the ending inventory because that approach

provides a broader pricing base and tends to lessen the effect of abnormal costs that might be associated with using a smaller quantity for this purpose, and that the IRS has required some companies to use this method for tax purposes.

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2-20. Advisory Conclusion. The task force believes (8 yes, 1 no) the price used to determine the inventory increment should be based on the acquisition or production cost of the quantity or dollars at least approximating the increment.

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Disclosure of the Approach Used to Price Current Increments

2-21. Issue. Should the approach used to price current increments be disclosed?

2-22. Arguments. The arguments for and against disclosing the approach used to price current increments are essentially the same as the arguments for and against disclosing the LIFO approach used in paragraphs 2-7 and 2-8 of this paper.

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2-23. Advisory Conclusion. The task force believes (7 yes, 2 no) the approach used to price current increments need not be disclosed.

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Disclosure of LIFO Reserve or Replacement Cost

2-24. Background. For purposes of this paper, the term LIFO reserve means the difference between (a) inventory at the lower of LIFO cost or market and (b) inventory at replacement cost or at the lower of cost determined by some acceptable inventory accounting method (such as FIFO or average cost) or market. Also for purposes of this section, the term replacement cost means the current cost of replacing inventory or any reasonable approximation, which may be FIFO or average cost, at the lower of cost or market. Regulation S-X, Rule 5.02-6 (c) requires companies whose securities trade publicly to disclose replacement cost information.

2-25. Issue. Should either the LIFO reserve or replacement cost be disclosed?

2-26. Arguments. Some believe the LIFO reserve or replacement cost should be disclosed because they believe many users of financial statements find that information useful and meaningful, especially for analyzing the effects of price changes; for better understanding the financial position of the company; and for comparing such effects with those of other companies. Some also believe consistent use of LIFO over an extended period produces a balance sheet carrying amount for inventory substantially below current reproduction or replacement cost. Some note that the SEC

already requires companies whose securities trade publicly to disclose this information [Regulation S-X, Rule 5.02-6(c)] and that many nonpublic companies already disclose this information. Accordingly, they believe that information often is readily available and its disclosure requires little extra effort by the reporting entity. Supporters of disclosure believe any of the following disclosures on the face of the balance sheet or in the notes is acceptable:

- Disclosure of LIFO reserve.
- Disclosure of non-LIFO amount.
- Disclosure of non-LIFO amount with LIFO reserve reduction shown arriving at net inventory cost.

2-27. Others believe the LIFO reserve or replacement cost need not be disclosed because they believe the information is neither useful nor meaningful, and, in fact, could detract from LIFO as a proper measurement method. Others point out that non-LIFO companies currently are not required to disclose replacement cost for their inventories and that no company is required to disclose the current cost of other assets in its primary (historical cost) financial statements. Notwithstanding those arguments, some believe disclosures should be made only if they are useful, meaningful, and appropriate for all companies, not simply because they are easy to present or required by certain regulatory agencies. For example, enterprises using straight line depreciation in their primary statements are not required to disclose what the book value of property and equipment would have been had accelerated depreciation been used.

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2-28. Advisory Conclusion. The task force believes (9 yes, 0 no) either the LIFO reserve or replacement cost and its basis for determination should be disclosed.

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Section Three:
LIFO Used for Part of Inventory

Partial Adoption of LIFO

3-1. Background. As a result of making a change in accounting principle under APB Opinion 20, "Accounting Changes," some companies have adopted either in the current or in some previous year LIFO for some but not all their inventories. They may have adopted LIFO for specific groups of items or they may have adopted LIFO for only a portion of the cost components of a specific group of items (for example, adopting LIFO for the material content of inventory but not for labor and overhead portions or adopting LIFO for domestic inventories only).

3-2. Intercompany transactions can cause swings in LIFO inventories, particularly if a receiving subsidiary is not on LIFO. Transfers to non-LIFO subsidiaries could be used to liquidate LIFO inventories on an individual reporting unit basis though maintaining in the aggregate the inventory levels. Those examples raise the question of the advisability of an enterprise adopting LIFO piecemeal. The task force plans to consider separately the accounting implications of transfers of inventories between LIFO and non-LIFO pools or components of a consolidated group.

3-3. A search of the 1979/1980 NAARS file, the most recent completed file at the time of the search, revealed that a substantial number of companies, about 600, had adopted LIFO for some but not all inventories.

3-4. Issue. May a company that changes to LIFO for financial reporting purposes make the change for only part of its inventory?

3-5. Arguments. Some believe a company that changes to LIFO for financial reporting purposes may make the change for only part of its inventory, because they believe many businesses have valid reasons for not adopting LIFO for all their inventories, such as anticipating significant price changes to affect only one portion of the inventory, greatly fluctuating inventory levels, anticipated significant reductions in certain inventories, impracticality of total immediate adoption because of cost or manpower considerations, statutory financial reporting requirements for foreign subsidiaries, nonrecognition for tax purposes of LIFO in certain foreign countries or volatility of prices. Also, divisions of a business and components of its inventories may differ significantly, so some argue that different inventory

methods may be appropriate in different circumstances. Some also believe a company that changes to LIFO for financial reporting purposes may make the change for only part of its inventory, because they believe some matching of most currently incurred costs and current revenues is better than no matching at all. Some point out that the authoritative accounting literature generally does not prescribe that all assets in a given category be accounted for the same way. For example, the literature does not prescribe that all plant, property, and equipment be depreciated the same way. They also believe that because companies may adopt FIFO for parts of their inventory and average cost for other parts without justification, no justification is necessary for LIFO. Further, some believe companies involved in a business combination are not required to conform their inventory methods after the combination.

3-6. Others believe a company changing to LIFO for financial reporting purposes may not make the change for only part of its inventory, because they believe a company's main reason for only partially adopting LIFO is to avoid a large income statement effect in one year thus enabling a business to manipulate income by arbitrarily deciding when and to what extent to adopt LIFO. As a result, they believe that sacrifices consistency. Further, they contend that two or more inventory methods cannot all be appropriate for the same company. Accordingly, they believe all assets in a major category should be accounted for the same way even if the authoritative accounting literature has no requirement.

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3-7. Advisory Conclusion. The task force believes (7 yes, 2 no) there should be a presumption that if a company changes to LIFO, it should do so for all its inventories and that presumption can be overcome only if it has a valid business reason for not fully adopting LIFO, such as a valid business reason discussed in paragraph 3-5.

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Planned Gradual Adoption of LIFO

3-8. Background. An issue related to partial adoption of LIFO is that of planned gradual adoption of LIFO. Some view a planned gradual adoption of LIFO as partial adoption of LIFO over time.

3-9. Issue. Should planned gradual adoption of LIFO be permitted for financial reporting purposes?

3-10. Arguments. Because this issue is so related to the issue on whether a company may change to LIFO for only part of its inventory, the arguments are essentially the same for and against this issue.

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3-11. Advisory Conclusion. The task force believes (9 yes, 0 no) a company that has valid business reasons for a planned gradual adoption of LIFO may follow that course of action. However, a planned gradual adoption of LIFO solely to lessen the income statement effect in any one year is not, in the task force's view, a valid business reason.

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Justifying Preferability of a Change

3-12. Issue. If partial or planned gradual adoption of LIFO should be permitted for financial reporting purposes, should the preferability determination required under APB Opinion 20, "Accounting Changes," address (a) only the change to LIFO or (b) both the change to LIFO and the continued use of the old accounting method?

3-13. Arguments. Some believe that by its silence, APB Opinion 20 requires that only the change be justified as preferable.

3-14. Others believe APB Opinion 20 implies that a change in an accounting principle should apply to all transactions or items in a given class. They believe that presumption is overcome only if preferability is determined for both the changed and unchanged portions.

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3-15. Advisory Conclusion. AcSEC believes (7 yes, 6 no) a company partially or gradually adopting LIFO should justify as preferable in the year of change both the change to LIFO and the continued use of the non-LIFO method for the remaining inventories. The task force, in contrast, believes (8 yes, 1 no) such a company need only justify as preferable in the year of change the change to LIFO.

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Disclosure of the Extent to Which LIFO Is Used

3-16. Issue. Should the extent to which LIFO is used be disclosed by companies that have not fully adopted LIFO?

3-17. Arguments. Some believe the extent to which LIFO is used for companies that have not fully adopted LIFO should be disclosed because they believe this information is necessary to compare the financial statements with those of other companies. They

point out that the International Accounting Standards Committee supports this disclosure (IASC Statement 3, paragraph 39). Because various alternatives exist to measure the extent of LIFO in use, including the portion of total inventory on LIFO and the LIFO portion of reported cost of sales, some believe the most beneficial way to assess the effects of partial adoption of LIFO is to disclose the portion of cost of sales measured using the LIFO method. While accepting that view, they believe it is usually neither practical nor worth the cost to make this disclosure and that disclosure of the portion of ending inventory on LIFO to total ending inventory is a practical and cost effective surrogate of this disclosure.

3-18. Others believe the extent to which LIFO is used need not be disclosed by companies that have not fully adopted LIFO because they believe the authoritative accounting literature currently requires no disclosure of the extent of alternative accounting treatments used. For example, disclosure of the amount of equipment being depreciated under an accelerated, as opposed to straight line, method is not required. And, they believe such information is neither useful nor meaningful.

3-19. Other arguments for and against disclosing the extent to which LIFO is used by companies that have not fully adopted LIFO are essentially the same as the arguments for and against disclosing the LIFO approach used in paragraphs 2-7 and 2-8 of this paper.

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3-20. Advisory Conclusion. The task force believes (9 yes, 0 no) the extent to which LIFO is used should be disclosed by companies that have not fully adopted LIFO. Since various alternatives exist to measure the extent to which LIFO is used in the financial statements, the task force believes (8 yes, 1 no) that, conceptually, the portion of cost of sales resulting from the application of LIFO compared to reported cost of sales is the most indicative measure of the extent to which a company uses LIFO.

3-21. However, because it is often impractical to determine that amount, the task force believes disclosure of the portion of ending inventory priced on LIFO also indicates the extent to which LIFO is used in the financial statements (9 yes, 0 no), and companies should disclose the dollar amount of balance sheet inventories priced at LIFO and under other methods. Disclosure of those amounts are most meaningful when interrelated with disclosure of the LIFO reserve.

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Section Four:
Applying Basic LIFO Approaches

Establishing LIFO Pools

4-1. Background. Pooling is the term used to describe the grouping of inventory items under dollar value LIFO to determine increases or decreases in the aggregate base costs of that pool. In applying dollar value LIFO, companies have used various approaches and criteria for grouping inventory items into pools. Companies have generally used the approaches discussed in the income tax regulations, that is, natural business unit pooling and multiple pooling. The criteria for establishing pools under these approaches have varied widely. In practice, considerations for establishing pools have included:

1. Natural business divisions adopted for internal management purposes
2. Industry segments, as defined by FASB Statement No. 14
3. Economic activities
4. Separate and distinct production facilities
5. Separate accounting records for each business unit
6. Separate legal entities
7. Substantially similar products or inventory items
8. Major product lines
9. Types or classes of goods
10. Selected groupings of types or classes of goods

4-2. Concern has been expressed that companies may be creating new pools for new inventory items substantially similar to items in existing pools, resulting in pricing the items in the new pool higher than if they were considered to be replacing items removed from a pre-existing pool. Also, concern has been expressed that companies may have the opportunity to manipulate profits by creating many pools containing fewer items, thus increasing the opportunities for profit from liquidations due to recognition of income from decreases in one pool with offsetting increases in another pool because of a transfer of inventory between the pools. Further, the greater the number of pools, the greater the opportunities for liquidations.

4-3. Issue. Should financial reporting guidance be provided regarding the composition and establishment of LIFO pools?

4-4. Arguments. Some believe that to narrow the wide variations in practice that exist in pooling (even within the same industries), financial reporting guidance should be provided to promote comparability. Further, they believe that because pooling is an important step in the process of pricing inventory under dollar value LIFO, guidance is necessary to decrease the likelihood that income would be affected as a result of temporary, casual, or arbitrary shifting of inventory items from one pool to another. In addition, guidance is necessary because some companies use or wish to change to a different pooling approach for financial reporting purposes than for income tax purposes. They believe that generally accepted accounting principles for pooling should not solely depend on income tax regulations. They believe the guidance for pooling should permit flexibility and management judgment but should prohibit pooling approaches that could artificially distort income or may not reflect the economic activity of the enterprise. Further, those who believe guidance is necessary believe that, in general, a pool should reflect an economic activity or segment of business of an enterprise rather than an arbitrary grouping of inventory items. They believe that this pooling guidance is generally more consistent with the LIFO concept because, for each economic activity or segment of business of the enterprise, cost of goods sold would reflect the cost of goods most recently acquired or produced for that activity or segment. Variations of individual items within the activity or segment from year to year will offset and only the overall increase or decrease in that activity or segment will be reflected in income.

4-5. Others believe no widespread abuse exists in these areas, and therefore financial reporting guidance is unnecessary. Further, the authoritative accounting literature provides no guidance on grouping inventories for non-LIFO pools. For example, manufacturing overhead may be allocated among groups of plants, all products within a plant, or separate product lines, cost centers, or machine centers. They believe adopting pools appropriately depends on the organization or management structure of an entity. Companies in the same industry may have differing management styles, manufacturing systems, cost structures or distribution systems. They believe those factors require flexibility and preclude definitive guidance. They believe the longstanding income tax regulations have provided effective financial accounting and reporting guidance.

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4-6. Advisory Conclusion. The task force believes (9 yes, 0 no) the objective of LIFO inventory pooling is to group inventory items to match most recently incurred costs to current revenues, after considering the manner in which the company operates

its business. The task force further believes it is not feasible to formulate detailed financial accounting guidance for selecting pools that could apply to all enterprises. However, it believes there should be valid business reasons for establishing LIFO pools and establishing separate pools with the principal objective of facilitating inventory liquidations is unacceptable.

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4-7. Issue. Should the existence of a separate legal entity that has no economic substance be reason enough to justify separate LIFO pools?

4-8. Arguments. Some believe substantially similar items should not be included in different pools merely because of the legal structure of the enterprise. They believe that substance should govern over form and similar items that comprise a similar or identical product sold to unaffiliated customers should be included in the same pool because it represents the same economic activity of the enterprise. Further, they believe the concept of LIFO, to charge cost of goods sold with the cost of goods most recently acquired or produced, could be violated if one pool has an increment and another pool has a decrement, but in the aggregate there is an increment.

4-9. Others believe the legal structure of an enterprise is reason enough for establishing pools, and accordingly, substantially similar items may be included in different pools simply because it is a separate entity. They believe establishing pools appropriately depends on the legal form of the organization just as it appropriately depends on its economic substance.

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4-10. Advisory Conclusion. The task force believes (9 yes, 0 no) there should be reasons other than the existence of a separate legal entity to justify establishing separate LIFO pools.

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Disclosure of Pooling Arrangements

4-11. Issue. Should pooling arrangements be disclosed?

4-12. Arguments. The arguments for and against disclosing pooling arrangements are essentially the same as those for and against disclosing the LIFO approach used in paragraphs 2-7 and 2-8 of this paper.

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4-13. Advisory Conclusion. The task force believes (8 yes, 1 no) pooling arrangements need not be disclosed.

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Adding New Items to Inventory

4-14. Background. If dollar value LIFO is used and new items are added to inventory, the pricing index can become distorted if the current cost of the item is used as the base year cost. (That approach would, in effect, retroactively reduce the cumulative LIFO index for the pool, thus changing the current year's LIFO adjustment for the pool.) Under such circumstances how a new item is defined may be important. As indicated later, the task force believes reconstructed or estimated base year costs should be used for new items or the link chain technique should be used. That obviates the need for new items to be defined. However, the definition of new item becomes more important if the amounts involved are material and base year costs are not reconstructed or the link chain technique is not used. IRS regulations provide little guidance on the definition of either an item or a new item. The IRS generally has been flexible in permitting companies to adopt any reasonable method of defining new items, so long as it is consistently applied. In practice, judgment is required to determine what are new items, and it is likely that similar circumstances are handled differently by different companies.

4-15. In ASR No. 293, the SEC discusses enforcement actions related to new product designations in which items were designated new products, and recorded at current costs without reconstruction, because of "insignificant and sometimes arbitrary differences," such as slight differences in chemical composition; changes in manufacturing, production, and location; and differences in supply sources.

4-16. Problems associated with defining and accounting for new items are generally obviated when the link chain technique is used or base year cost is reconstructed. Paragraph 4-23 of this paper illustrates that.

4-17. Issue. Should new item be defined for financial reporting purposes?

4-18. Arguments. Some believe new item should be defined for financial reporting purposes because the decision whether an item is new could significantly affect both the calculation of the index and total base year costs unless reconstructed base year costs or the link chain technique is used. To illustrate: a manufacturer that produces a standard grade product begins producing a costlier higher grade product. If the higher grade product is not considered a new item, the index compares the current year's high grade (more costly) product to the prior or base year's standard grade (less costly) product.

4-19. Others believe judgment is always necessary in defining a new item, because the particular facts and circumstances vary. They also note that the broad, general IRS requirements have created no widespread abuses in practice. Therefore, they believe it is unnecessary for new item to be defined for financial reporting purposes. They further believe the accounting systems of companies vary in their abilities to distinguish between certain items that only differ slightly. For example, parts or components that differ in size or style but serve similar functions may be assigned different part numbers. Sorting through all such part numbers for similar items is impractical, if not impossible.

4-20. Still others believe that some type of financial reporting guidance should be provided so that some measure of consistency in the application of this aspect of the LIFO method of accounting can be obtained. Those holding this view accept the premise that judgment is necessary when assessing whether a new item is present, but they reject the notion that a new item should be defined to avoid significant variations in the LIFO cost calculations, notwithstanding the existence of such variations.

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4-21. Advisory Conclusion. The task force believes (9 yes, 0 no) that new item need not be defined for financial reporting purposes because the task force supports the use of the reconstructed cost method and the link chain technique (see paragraph 4-27). However, the task force believes (8 yes, 1 no) the following guidance is appropriate:

> A new item is a raw material, product, or cost component not previously present in significant quantities in the inventory. To be considered a new item, the material or product should not be commingled physically with other materials or products so that its identity is lost, and it should be accounted for separately. In addition, the material should have qualities (physical, chemical, or both) significantly different from those previously inventoried items. Items treated as fungible with items already in the pool ordinarily should not be considered new items. Changes in the market value of an item or merely purchasing a virtually identical item from a different supplier does not make the item a new item.

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Determining the Cost of New Items: Current Cost versus Reconstructed Cost

4-22. Issue. If new items (however defined) are added to inventory, should the items be added to the pool based on their current acquisition cost or should the LIFO cost be based on what the items would have cost had they been acquired in the base period ("reconstructed cost")?

4-23. The following illustrates the effects of applying the current cost and reconstructed base year cost approaches using the double extension and link chain techniques.

Double Extension Technique

Item	End. Invty. Quantity	Base Year Cost Unit	Base Year Cost Total	Current Year Cost Unit	Current Year Cost Total	Index		Base Year Cost	Index	LIFO Amount
December 31, 19X1										
A	2,000	$ 5.00	$ 10,000	$ 5.50	$ 11,000					
B	1,000	3.00	3,000	3.30	3,300		Jan. 1, 19X1 Base	$100,000	100.00	$100,000
C	5,000	4.00	20,000	4.40	22,000		19X1 Layer	17,000	110.00	18,700
D	3,000	12.00	36,000	13.20	39,600		Total	$117,000		118,700
E	6,000	8.00	48,000	8.80	52,800		Inventory at Current Cost			128,700
			$117,000		$128,700	110.00	LIFO Reserve			$ 10,000
December 31, 19X2										
A	2,200	$ 5.00	$ 11,000	$ 5.40	$ 11,880		Jan 1, 19X1 Base	$100,000	100.00	$100,000
B	800	3.00	2,400	3.50	2,800		19X1 Layer	17,000	110.00	18,700
C	5,500	4.00	22,000	4.75	26,125		19X2 Liquidation	(3,200)	110.00	(3,520)
D	3,200	12.00	38,400	14.00	44,800		Total	$113,800		115,180
E	5,000	8.00	40,000	9.00	45,000		Inventory at Current Cost			130,605
			$113,800		$130,605	114.767	LIFO Reserve			$ 15,425
Current Cost for New Items										
December 31, 19X3										
A	2,200	$ 5.00	$ 11,000	$ 5.60	$ 12,320		Jan. 1, 19X1 Base	$100,000	100.00	$100,000
B	800	3.00	2,400	3.55	2,840		19X1 Layer	13,800	110.00	15,180
C	5,500	4.00	22,000	5.25	28,875		19X3 Layer	57,750	116.1906	67,100
D	3,200	12.00	38,400	14.70	47,040		Total	$171,550		182,280
E	5,000	8.00	40,000	10.10	50,500		Inventory at Current Cost			199,325
AA	2,500	4.20	10,500	4.20	10,500		LIFO Reserve			$ 17,045
I	3,500	13.50	47,250	13.50	47,250					
			$171,550		$199,325	116.1906				
Reconstructed Base Year Cost for New Items										
December 31, 19X3										
A	2,200	$ 5.00	$ 11,000	$ 5.60	$ 12,320		Jan. 1, 19X1 Base	$100,000	100.00	$100,000
B	800	3.00	2,400	3.55	2,840		19X1 Layer	13,800	110.00	15,180
C	5,500	4.00	22,000	5.25	28,875		19X3 Layer	48,550	122.775	59,607
D	3,200	12.00	38,400	14.70	47,040		Total	$162,350		174,787
E	5,000	8.00	40,000	10.10	50,500		Inventory at Current Cost			199,325
AA	2,500	3.53	8,825	4.20	10,500		LIFO Reserve			$ 24,538
I	3,500	11.35	39,725	13.50	47,250					
			$162,350		$199,325	122.775				

Link Chain Technique

Item	End. Invty. Quantity	Beginning of Year Cost Unit	Beginning of Year Cost Total	Current Year Cost Unit	Current Year Cost Total	Index
December 31, 19X1						
A	2,000	$ 5.00	$ 10,000	$ 5.50	$ 11,000	
B	1,000	3.00	3,000	3.30	3,300	
C	5,000	4.00	20,000	4.40	22,000	
D	3,000	12.00	36,000	13.20	39,600	
E	6,000	8.00	48,000	8.80	52,800	
			$117,000		$128,700	110.00
December 31, 19X2						
A	2,200	$ 5.50	$ 12,100	$ 5.40	$ 11,880	
B	800	3.30	2,640	3.50	2,800	
C	5,500	4.40	24,200	4.75	26,125	
D	3,200	13.20	42,240	14.00	44,800	
E	5,000	8.80	44,000	9.00	45,000	
			$125,180		$130,605	104.3338
	Cumulative		110.00 x 104.3338% = 114.767			
			$130,605/114.767 = $113,800			
Current Cost New Items						
December 31, 19X3						
A	2,200	$ 5.40	$ 11,800	$ 5.60	$ 12,320	
B	800	3.50	2,800	3.55	2,840	
C	5,500	4.75	26,175	5.25	28,875	
D	3,200	14.00	44,800	14.70	47,040	
E	5,000	9.00	45,000	10.10	50,500	
AA	2,500	4.00	10,000(1)	4.20	10,500	
I	3,500	13.00	45,500(1)	13.50	47,250	
			$186,155		$199,325	107.0747
	Cumulative		114.767 x 107.0747% = 122.8864			
			$199,325/122.8864 = $162,202			

	Base Year Cost	Index	LIFO Amount
Jan. 1, 19X1 Base	$100,000	100.00	$100,000
19X1 Layer	17,000	110.00	18,700
Total	$117,000		118,700
Inventory at Current Cost			128,700
LIFO Reserve			$ 10,000
Jan 1, 19X1 Base	$100,000	100.00	$100,000
19X1 Layer	17,000	110.00	18,700
19X2 Liquidation	(3,200)	110.00	(3,520)
Total	$113,800		115,180
Inventory at Current Cost			130,605
LIFO Reserve			$ 15,425
Jan. 1, 19X1 Base	$100,000	100.00	$100,000
19X1 Layer	13,800	110.00	15,180
19X3 Layer	48,402	122.89	59,479
Total	$162,202		174,659
Inventory at Current Cost			199,325
LIFO Reserve			$ 24,666

(1) Beginning of year costs may be actual or reconstructed.

Summary of 19X3

	LIFO Inventory	LIFO Reserve	Charge to Cost of Goods Sold
Double Extension			
- Current Cost	$182,280	$17,045	$1,620
- Reconstructed	$174,787	$24,538	$9,113
Link Chain	$174,659	$24,666	$9,241

4-24. Thus, of $68,720 added current inventory costs in 19X3 ($57,750 new items plus $10,970 of price changes on existing items), the link chain and reconstructed cost techniques produce charges to cost of sales of about the same amount. Use of the most recently incurred costs of new items produces higher inventory amounts and smaller charges to cost of sales than the other techniques. The link chain or reconstructed cost technique usually produces a more conservative result.

4-25. Arguments. Some favor the current acquisition cost approach, because they believe that approach is more objective and is more compatible with the historical cost framework than the reconstructed cost approach.

4-26. Others favor the reconstructed cost approach because they believe that approach produces a more conservative result than the current acquisition cost approach by, among other things, eliminating what they believe would produce unsatisfactory results caused by dropping old costs and adding new costs of substantially similar items. They believe the reconstructed cost approach is consistent with the single pool concept and prevents potential manipulation of income, particularly if the link chain technique is used. Moreover, failure to reconstruct cost results, in effect, in a retroactive adjustment of the LIFO index. Further, they believe that approach is consistent with the LIFO objective because it facilitates retention of earliest costs in inventory.

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4-27. Advisory Conclusion. The task force believes (9 yes, 0 no) that if the double extension or an index technique is used, the objective of LIFO is achieved by reconstructing the base year cost of new items added to existing pools. The base year cost of the new item should be estimated if it is not otherwise objectively determinable. The task force observes that if the link chain technique is used, reconstruction of prior years' costs is unnecessary because that technique produces

approximately the same results as reconstruction. (Paragraphs 4-28 to 4-39 discuss the substitute base year technique, another alternative.)

Disclosure of How New Items Are Priced

4-28. Issue. Should the way new items are priced be disclosed?

4-29. Arguments. The arguments for and against disclosing the way new items are priced are essentially the same as the arguments for and against disclosing the LIFO approach used in paragraphs 2-7 and 2-8 of this paper.

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4-30. Advisory Conclusion. The task force believes (8 yes, 1 no) the way new items are priced need not be disclosed.

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Guidelines for Reconstructed Cost

4-31. Background. Companies may reconstruct costs even for new items that did not exist in inventory in the base year. The IRS requires companies to use reasonable means to determine what the cost of an item would have been had it been in inventory in the base year. Among the guidelines generally used for determining reconstructed costs are published vendor price lists, vendor quotes, and general industry indexes.

4-32. Issue. What should be the guidelines for determining reconstructed cost?

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4-33. Advisory Conclusion. The task force believes (9 yes, 0 no) reconstructed costs should be based on the most objectively determinable sources available, such as (in order of objectivity): published vendor price lists, vendor quotes, and general industry indexes.

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Substitute Base Years

4-34. Background. A long time LIFO user may sometimes find it impractical, if not impossible, to reconstruct base year costs of items previously reported on a non-LIFO basis that are used to determine change in dollar value LIFO pools for indexing. Situations include:

- extending LIFO throughout an entire single natural business unit pool for a manufacturer that previously used a multiple pooling, specific goods LIFO method for raw materials,
- entering into a nontaxable business combination accounted for by the pooling of interests method, and

- changing dramatically over the years the items constituting a particular pool, so that the cumulative LIFO index may no longer be representative of the price relationship between the items currently in the pool and those in the pool when LIFO was adopted.

In light of those situations, a technique has been developed in practice, commonly called substitute base year, in which the beginning of year's costs some year after the original base year (now referred to as the substitute or updated base year) are used instead of the original base year's costs to determine changes in dollar value LIFO pools. The procedure for establishing a new base year is not difficult. Older LIFO layers are retained, but the indexes are expressed as a percentage of the updated base year. For example, the LIFO index for an earlier year might be 72% of the updated base year. After updating the base year, a similar calculation would be made using costs as of the updated base year, and the lower indexes would be applied to preserve the older layers or to measure the amount of any decrements. In practice, the substitute base year technique has generally been applied, using the earliest base year alternative. That approach is predominant because the tax rules generally require its use. The IRS has been very restrictive in recent years in allowing companies to use the substitute base year alternative when LIFO accounting method changes are requested. Because of the strict tax conformity rules in effect prior to 1981 and the complexities of using different methods for book and tax purposes, the accounting treatment for books has followed the tax application. Appendix VI illustrates application of the substitute base year technique.

4-35. Issue. May companies use the substitute base year technique for financial reporting purposes?

4-36. Arguments. Some believe a company may use the substitute base year technique for financial reporting purposes because it represents a reasonable approach in situations in which it is impractical, if not impossible, to reconstruct base year costs. They believe it is consistent with the objective of LIFO. Others believe a company should not use the substitute base year technique for financial reporting purposes because they believe it is inconsistent with LIFO's objective and the expected results of using the substitute base year technique might differ from the results of reconstructing the base year costs. However, supporters feel the difference does not make the substitute base year technique inferior.

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4-37. Advisory Conclusion. The task force believes (9 yes, 0 no) a company may use the substitute base year technique for financial reporting purposes.

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Cost Component and Unit Cost LIFO

4-38. Background. If dollar value LIFO is used, the required index may be developed using the unit cost method or the cost component method. Under the unit cost method, changes in the index are measured by the weighted average increase or decrease in the unit costs of raw materials, work in process, and finished goods inventories. Under the cost component method, changes in the index are measured by the weighted average increase or decrease in the component costs of material, labor, and overhead that constitute ending inventory.

4-39. Application of the two methods may be demonstrated as follows. Assume an ending inventory comprising five finished products (raw materials and work in process omitted in the interest of simplification):

Product A	1,000	@	$ 2.00	= $ 2,000
Product B	10,000	@	5.00	= 50,000
Product C	2,000	@	10.00	= 20,000
Product D	8,000	@	1.00	= 8,000
Product E	5,000	@	4.00	= 20,000
				$100,000

Under the unit cost method, the index is determined by double extending the base year cost of all or a representative number of these products. The resulting index is then applied to the full dollar value of ending inventory to determine base year cost for the full inventory.

4-40. Under the cost component method, the inventory is disaggregated in terms of the underlying material, labor, and overhead content as follows:

Material A	30,000	@	$ 1.00	= $ 30,000
Material B	5,000	@	4.00	= 20,000
Material C	2,000	@	5.00	= 10,000
Material D	1,000	@	10.00	= 10,000
Labor	1,500	@	10.00	= 15,000
Overhead				15,000
				$100,000

The index is determined by relating the current year costs of inventory components with the base year or beginning of year costs of the same inventory components if

link chain is used. As under the unit cost method, the resulting index is then applied to the full dollar amount of ending inventory to determine base year or beginning of year cost for the entire inventory.

4-41. The cost component method is well suited for use by manufacturers under various circumstances including the following:

- Manufacturers that use a job order cost system to account for inventories but cannot determine a unit product cost for a comparable product, because products are manufactured to order, not for shelf sale.
- Manufacturers of products that contain the same or very similar material ingredients, but are heavily influenced by fashion trends, for example, manufacturers of women's clothes.
- Manufacturers whose product lines are based on the same or similar raw materials but constantly evolve to reflect technological changes of various types or changes in customers' requirements, for example, chemical manufacturers.
- Manufacturers that experience continuing evolution as to making versus buying the various material ingredients of their finished products.
- Manufacturers with substantial work in process inventories in which comparability of unit cost from year to year would be lacking.
- Manufacturers with significant swings in production volume from period to period.

4-42. The following illustrates the effect of using the components of cost as the item rather than the finished product:

A company has adopted dollar value LIFO as of January 1, 19X1, using the double extension technique. The company has one product and has established that, for LIFO computations, an item is a finished product. In the current year, inventory levels have increased and technological improvements have substantially reduced the total cost of the company's product, but the company has continued to use prior base year costs for the item without considering it a new item. As of December 31, 19X4, the company had 40,000 units in inventory at an average unit cost of $26.50 and a base year unit cost of $25.00. Double extension of the inventory produced the following results at December 31, 19X4:

Inventory at current year cost	
40,000 X $26.50	$1,060,000
Inventory at base year cost	
40,000 X $25.00	1,000,000

Index ($1,060,000/$1,000,000) 106.00%

The LIFO cost of the December 31, 19X4 inventory is computed as follows:

	At Base Year Cost	Index	At LIFO Cost
January 1, 19X1 base	$ 240,000	100.00	$ 240,000
19X1 increment	60,000	105.00	63,000
19X2 increment	80,000	107.00	85,600
19X3 increment	100,000	118.00	118,000
19X4 increment	520,000	106.00	551,200
	$1,000,000		$1,057,000

Details of the components of the cost are as follows:

Base Year Cost		
Raw Materials:		
Ingredient A	2 lbs. @ $4.00 a lb.	$ 8.00
Ingredient B	2 lbs. @ $1.50 a lb.	3.00
Processing Cost:		
2 hours @ $7.00 an hour		14.00
Total		$25.00
Current Year Cost		
Raw Materials:		
Ingredient A	1½ lbs. @ $6.00 a lb.	$ 9.00
Ingredient B	2 lbs. @ $2.00 a lb.	4.00
Processing Cost:		
1½ hour @ $9.00 an hour		13.50
Total		$26.50

4-43. The above indicates that product specifications were changed. In 19X4, the quantity of processing time was reduced from 2 hours to 1½ hours and less of Ingredient A was used. If the company used components of cost as the item rather than units of finished product, the double extension computation would have been as follows:

		Base Year		Current Year	
Item	Quantity	Unit Cost	Amount	Unit Cost	Amount
Ingredient A	60,000 lbs.	$4.00	$240,000	$6.00	$ 360,000
Ingredient B	80,000 lbs.	1.50	120,000	2.00	160,000
Processing cost	60,000 hrs.	7.00	420,000	9.00	540,000
			$780,000		$1,060,000

Current year's index = $1,060,000/$780,000 = 135.90%

The LIFO cost of the inventory using this approach at December 31, 19X4 would be:

	At Base Year Cost	Index	At LIFO Cost
January 1, 19X1 base	$240,000	100.00	$240,000
19X1 increment	60,000	105.00	63,000
19X2 increment	80,000	107.00	85,600
19X3 increment	100,000	118.00	118,000
19X4 increment	300,000	135.90	407,700
	$780,000		$914,300

	At Current Year Cost
LIFO cost using the finished product as the item	$1,057,800
LIFO cost using the components as the item	914,300
Difference in total LIFO cost	$ 143,500

4-44. Because of the frequency of technological and other changes in finished products (for example, using less materials), using components as the item rather than the finished product is more likely to achieve the objective of charging to income the most recently incurred costs. It also results in a lower LIFO cost for the inventory and, of course, greater tax benefits. In the above, the company might have contended that the items in the 19X4 inventory should be considered a new item entering the inventory for the first time because of the significant changes in its components. Under that view, the company would have been entitled to reconstruct a new base year cost as follows:

Base Year Cost	
Raw Materials:	
Ingredient A 1½ lbs. @ $4.00 a lb.	$ 6.00
Ingredient B 2 lbs. @ $1.50 a lb.	3.00
Processing cost:	
1½ hour @ $7.00 an hour	10.50
	$19.50
Current Year Cost (see above)	$26.50
Computation of current year's index	
Inventory current year cost 40,000 x $26.50	$1,060,000
Inventory at base year cost 40,000 x $19.50	780,000
Index ($1,060,000/$780,000)	135.90

4-45. Those calculations show the results would be the same whether the company used the components of the finished product or determined their costs individually. Appendix II to this paper presents another illustration of the cost component method.

4-46. Issue. May either cost component method or the unit cost method be used for calculating the change in the dollar value LIFO index?

4-47. Arguments Favoring the Cost Component Method. Arguments favoring the cost component method follow.

a. If the unit cost of finished product is not routinely developed as part of the cost accounting system, the cost component method is the only practical and reliable method to use to develop a LIFO cost index.

b. If styles constantly change, it is impossible to develop comparable base year costs. However, the comparable base year cost of the underlying material, labor, and overhead components will generally be readily determinable. Thus the resulting LIFO index will be much more representative and reliable than an index developed on the basis of theoretical base year costs.

c. The same rationale applies if the product line continually evolves, for example, with manufacturers of paints, plastics, and textile fiber yarns. For such manufacturers, makeups of finished products may have hundreds or even thousands of variations, but relatively few material ingredients, resulting in a greater degree of consistency and comparability in calculating the index if the cost component method is used.

d. Manufacturers that have significant changes in purchased, as opposed to produced, material ingredients can experience significant fluctuations in unit cost unrelated to the effects of inflation. Use of the unit cost method in such cases would cause meaningless index fluctuations.

e. The degree of utilization of manufacturing capacity can have a significant effect on the unit cost of finished products from period to period wholly apart from any change in underlying costs. Unit costs would generally decline when capacity utilization increases, and would generally increase when capacity utilization declines--even though the cost of material, labor, or overhead components remains unchanged. Use of the unit cost method under these conditions could produce a LIFO charge or a LIFO credit wholly unrelated to the effects of changing prices.

f. The cost component method is well suited to use with the link chain technique to avoid the problems encountered with identification of and accounting for "new products" or the reconstruction of base year cost for such products.

g. Proponents also believe the principles of LIFO accounting are not violated by the index determination and LIFO adjustment resulting from eliminating manufacturing efficiencies. They believe the goal of LIFO is to factor the effect of price changes out of inventories and this can be accomplished best by factoring it out of the underlying cost components rather than the unit cost of finished product, which is influenced by many other factors such as capacity utilization, technological changes, manufacturing efficiencies, product styles, and so forth.

h. Proponents also believe the cost component method is the only practical method to use if substantial work in process inventories exist. They cite the difficulties of double extending unit costs for in process inventories at various stages of completion.

4-48. Arguments Opposing the Cost Component Method. Arguments opposing the cost component method follow.

a. Some believe the cost component method should not be used because labor and overhead are intangible and do not represent physical components of the finished product inventory. Those who disagree point out that the same elements of labor and overhead are integral parts of the unit cost of finished product and that if they are valid inventoriable costs under the unit cost method, they are equally valid inventoriable costs under the cost component method.

b. Some believe the cost component method can cause ending inventory to be written down below its beginning of year cost as determined under the unit cost method.

c. Some criticize the cost component method because it can theoretically cause writing down the ending inventory below its base year cost as determined under the unit cost method when manufacturing efficiencies occur (fewer inputs of material, labor, or overhead required to produce same number of finished products). Proponents of the cost component method believe such situations are likely to be exceptional and to have an immaterial effect. Also they point out that there are likely to be offsetting inefficiencies resulting from environmental requirements, union work rule changes, and so forth, that would negate the effects of technological improvements.

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4-49. Advisory Conclusion. The task force believes (9 yes, 0 no) either the unit cost or cost component method may be used for financial reporting purposes but that in certain circumstances, such as those discussed in paragraph 4-47, the cost component method may be preferable to the unit cost method, unless base year costs are reconstructed.

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Section Five:
LIFO Inventory Liquidations

Background

5-1. A LIFO inventory liquidation occurs when the ending inventory in a LIFO pool (as measured in specific goods or base year costs) is less than its beginning of year level, causing prior year LIFO costs, rather than current year costs, to be charged to cost of sales. To illustrate: a company incurs a current cost of $1 a unit in 19X8. The latest LIFO layers were added in 19X4 at $.50 a unit and in 19X2 at $.25 a unit. If the LIFO inventory is reduced in 19X8 below the 19X4 level but not below the 19X2 level, some units will be charged to cost of sales at $.50 a unit. If the reduction eliminates the 19X4 layer and part of the 19X2 layer, some units will be charged to cost of sales at $.50 a unit and others at $.25 a unit.

5-2. If a LIFO inventory liquidation occurs, the LIFO method in part matches costs incurred in prior periods with current revenues. (In the above illustration, cost of sales includes some units at current cost, $1 a unit, some units at 19X4 costs, $.50 a unit, and some units at 19X2 cost of $.25 a unit.) The SEC staff (Staff Accounting Bulletin Topic 11, paragraph 7806) requires the effects on income of LIFO inventory liquidations to be disclosed, either in the notes or parenthetically on the face of the financial statements.

Whether the Effects on Income of LIFO Inventory Liquidations Should Be Disclosed

5-3. Issue. Should the effects on income of LIFO inventory liquidations be disclosed?

5-4. Arguments. Some believe the effects on income of LIFO inventory liquidations should be disclosed because such information is necessary for readers to evaluate earnings from operations, because they believe inventory liquidations are infrequent. In fact, some believe APB Opinion 30 requires disclosure of the effects on income of LIFO inventory liquidations as "infrequent in occurrence or unusual in nature, but not both." Also, they point out the SEC staff requirement of that disclosure (Staff Accounting Bulletin Topic 11F). In addition, they believe disclosure indicates the extent to which LIFO does not result in matching current costs with current revenues.

5-5. Others believe the effects on income of LIFO inventory liquidations need not be disclosed because such liquidations are the expected result of applying LIFO when inventory levels decline. They believe it is the proper flow of the latest inventory cost incurred, regardless of the period acquired.

5-6. Others also believe disclosing the effects on income of LIFO inventory liquidations is the same as disclosing inventory profits, because they both result from matching prior period costs with current revenues. Some believe, however, this argument is irrelevant because inventory profits differ from inventory liquidations. Inventory profits are inevitable when FIFO is used in periods of rising prices, while LIFO inventory liquidations may or may not occur depending on inventory levels. They believe the effects on income of LIFO inventory liquidations should only be disclosed if all companies were required to disclose the portion of their costs that are not current costs. Others also believe disclosure of the effects on income of LIFO inventory liquidations is unnecessary because many companies are already required by FASB Statement No. 33 to provide current cost information on a comparable basis for both LIFO and FIFO companies. However, some disagree because this information is not part of the primary financial statements, is not well understood by many users, and is not required of all companies.

5-7. Still others believe that any form of disclosure of the effects on income of LIFO inventory liquidations may be misleading because it implies that the "quality of income" is lower for LIFO companies that experience inventory liquidations than for comparable FIFO companies. This is not necessarily so. LIFO companies with inventory liquidations still may have higher costs of sales and lower earnings than comparable FIFO companies. For that reason, they believe the best measure of comparability for <u>all</u> companies is the current cost disclosure required by FASB Statement No. 33, and in light of that disclosure, separate disclosure of the effects on income of LIFO inventory liquidations may be misleading and should not be made.

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5-8. <u>Advisory Conclusion</u>. The task force believes (8 yes, 1 no) the effects on income of LIFO inventory liquidations should be disclosed.

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<u>How the Effects on Income of LIFO Inventory Liquidations Should Be Disclosed</u>

5-9. <u>Issue</u>. If the effects on income of LIFO inventory liquidations should be disclosed, should they be disclosed in the notes or should they receive special treatment in the income statement, such as (a) parenthetical disclosure on the cost

of sales line, (b) a separate line in the cost of sales section, or (c) a separate line in other income such as for items that are either "unusual in nature" or "infrequent in occurrence" under APB Opinion 30?

5-10. Arguments. Some believe disclosure in the notes is adequate to warn the reader that a portion of cost is unrelated to the current year. They further believe liquidations are not necessarily infrequent nor unusual but that for many companies liquidations in LIFO inventories are common. Others believe special treatment should be given to the effects on income of LIFO inventory liquidations on the face of the income statement to highlight what they believe are unusual events for LIFO users. Of those who believe special treatment should be given in the income statement to the effects on income of LIFO inventory liquidations, views differ on whether the effects should be reported as (a) special line items that are unusual in nature or infrequent in nature but not both or (b) as extraordinary items.

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5-11. Advisory Conclusion. The task force believes (9 yes, 0 no) disclosure in the notes of the effects on income of LIFO inventory liquidations is sufficient and that the effects should receive no special treatment in the income statement.

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Replacement Reserves

5-12. Issue. In certain circumstances, should a replacement reserve be provided if there is a LIFO inventory liquidation at year end?

5-13. Arguments. Many companies that have a LIFO inventory liquidation ultimately replace the liquidated inventory. Some believe a replacement reserve should be provided because a replacement reserve would cause current costs to be matched against current revenue even in years in which there is a LIFO inventory liquidation. That, they believe, is consistent with the LIFO objective. Further, they believe a replacement reserve would make income statements more comparative by eliminating extraneous credits to cost of sales and the related balance sheet credit would be shown on the right side of the balance sheet. Also, they view the income statement effects of LIFO to be far more important than its balance sheet effect. Some believe replacement reserves should be provided only if it is probable that the inventory will be replaced.

5-14. Others believe a replacement reserve should not be provided because that approach is an inappropriate attempt to integrate current cost accounting into

historical cost financial statements. LIFO is a matching of costs most recently incurred (not necessarily current year's costs) and current revenues and theoretically such a reserve would be conceptually inconsistent with LIFO's objective. Further, they believe a replacement reserve could violate the LIFO conformity requirement and could distort the carrying amount of the inventory on the balance sheet. They point out that theoretically a company that provides a replacement reserve could have a credit balance for inventory, if the reserve is to be offset against inventory.

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5-15. Advisory Conclusion. The task force believes (8 yes, 1 no) a replacement reserve should not be provided if there is a LIFO inventory liquidation at year end.

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Involuntary LIFO Inventory Liquidations

5-16. Background. A company will sometimes have involuntary LIFO liquidations because an accident destroys all or part of its inventory at year end, the company is unable to replace the inventory as it is sold because of a temporary supply problem (for example, increased demand has reduced the product currently available), or because of a delivery problem (for example, a truckers' strike).

5-17. Issue. Should the effects on income of involuntary LIFO inventory liquidations intended to be replaced be deferred at year end?

5-18. Arguments. Some believe the effects on income of such LIFO inventory liquidations should be deferred even if the effects of normal liquidations are reflected in income, because an involuntary liquidation results from temporary external circumstances and the enterprise intends to replace the liquidated layer as soon as practicable. They believe this effectively is a one time change from LIFO to FIFO and back again to LIFO. They believe a year end replacement reserve eliminates that disparity. Other arguments that support that treatment are essentially the same as the arguments developed in paragraphs 5-13 and 5-14 of this paper.

5-19. Others believe the effects on income of such LIFO inventory liquidations should not be deferred. Arguments against deferral are essentially the same as the arguments developed about replacement reserves in paragraphs 5-13 and 5-14 of this paper.

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5-20. Advisory Conclusion. The task force believes (8 yes, 1 no) the effects on income of involuntary LIFO inventory liquidations should not be deferred at year end.

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Measuring the Effects on Income of LIFO Inventory Liquidations

5-21. Background. The several ways to measure the effects on income of LIFO inventory liquidations generally fall into three categories: (a) the difference between actual cost of sales and what cost of sales would have been had the inventory been reinstated under the method used to cost increments, (b) the amount of the LIFO/current cost reserve at the beginning of the year for the inventory liquidated, which was credited to income (excluding the increase in the reserve due to current year price changes), and (c) the difference between actual cost of sales and what the cost of sales would have been based on the amount of the replacement cost at year end.

[Page 40 illustrates the alternatives using the specific goods approach. (The results would be similar if the dollar value approach was used.)]

19X1

	Units	FIFO	LIFO		LIFO Reserve
Inventory, 1/1	100 @ $5	$ 500	100 @ $5 (Base)	$ 500	
Purchases	350 @ $6	2,100	350 @ $6	2,100	
Shipments (Cost of Sales)	(300) (100 @ $5, 200 @ $6)	(1,700)	(300) @ $6	(1,800)	
Inventory, 12/31	150 @ $6	900	(100 @ $5 (Base), 50 @ $6 (19X1 Increment))	800	$100

19X2

Purchases	200 @ $7	1,400	200 @ $7	1,400	
Shipments (Cost of Sales)	(280) (150 @ $6, 130 @ $7)	(1,810)	(30 @ $5, 50 @ $6, 200 @ $7)	(1,850)	
Inventory, 12/31	70 @ $7	$490	70 @ $5	$350	$140

Inventory Liquidation:

a) Inventory Reinstatement - Normal Pricing Convention

50 units @ $7 - $6 = $ 50
30 units @ $7 - $5 = 60
$110

Since the liquidated units would have been stated at 19X2 cost of $7 if there had been an increment, the difference between $7 and the actual carrying amount charged to cost of sales represents the effect of liquidation. This result implies that the cost of all 280 units shipped should have been at $7 or $1,960, though only 200 units were acquired at that amount.

b) Beginning Reserve Reversal

50 units @ $6 - $6 = $ 0
30 units @ $6 - $5 = 30
$30

The reserve applicable to the units liquidated represents the layer liquidation. This method reflects the cost of sales reduction resulting from use of inventory at lower than the end of prior year costs.

c) Layer Reinstatement - At Year End Replacement Cost

50 units @ $7.20 - $6 = $ 60
30 units @ $7.20 - $5 = 66
$126

This method shows the result, assuming the end of 19X2 replacement cost of $7.20.

5-22. The method of disclosing the effects on income of LIFO liquidations was established by the IRS in 1976 (Revenue Procedure 76-7) and superseded in 1977 (Revenue Procedure 77-33). The IRS said the computation "must be made on the same basis employed by the taxpayer in actually valuing its LIFO increments" (method (a) in paragraph 5-21). In addition, the IRS prescribed the following acceptable footnote.

> During 19X1, inventory quantities were reduced. This reduction resulted in a liquidation of LIFO inventory quantities carried at lower costs prevailing in prior years as compared with the cost of 19X1 purchases, the effect of which decreased cost of goods sold by approximately $XXX and increased net income by approximately $XXX or $X per share.

Since then, because of the LIFO conformity rules, companies have been following the IRS guidelines. In 1981, the IRS relaxed its interpretation of the conformity requirements (see section seven of this paper). While the new rules did not specifically withdraw the Revenue Procedure, the task force understands that companies need not follow it. Accordingly, the method of determining the effects on income of LIFO inventory liquidations for financial reporting purposes could be reexamined.

5-23. Issue. How should the effects on income of LIFO inventory liquidations be measured?

5-24. Arguments. Some believe the effects on income of LIFO inventory liquidations should be based on inventory reinstatement using the company's normal pricing convention, because they believe that approach is objective and reasonable and matches most recently incurred costs and revenues. They point out that this approach was once required by the IRS and is widely used for financial reporting purposes.

5-25. Others believe the effects on income of LIFO inventory liquidations should be based on the amount of the beginning LIFO reserve credited to income, because the amount disclosed would represent the reversal of prior years' charges to income. They believe that approach is conceptually consistent with, and therefore analogous to, the disclosure requirements relating to other reversals of amounts previously charged to income (for example, warranty liabilities) under present historical cost accounting. Those who hold that view also point out that the disclosure relates to actual amounts recorded in the financial statements rather than a "what if" (pro forma) calculation. Opponents of that view believe the LIFO reserve is not analogous to a warranty obligation since, conceptually, a LIFO reserve represents the dif-

ference between the LIFO pricing method and one of many other inventory pricing methods. Accordingly, it is not, as the proponents suggest, a recorded or actual amount being reversed to income.

5-26. Still others believe the effects on income of LIFO inventory liquidations should be based on the amount of the replacement cost at year end, because that is the amount most representative of the costs to be incurred to replace the inventory. (This approach could produce approximately the same results as the first approach discussed if end of year costs were used.)

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5-27. Advisory Conclusion. 8 task force members support a reinstatement approach, while 1 member supports the reserve credited to income approach. If the reinstatement approach is used, 7 task force members believe the inventory should be reinstated using the company's normal pricing convention, while 2 task force members believe the layer should be reinstated at the replacement cost of ending inventory.

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Disclosure of Liquidations: Netting of Increments

5-28. Issue. If the effects on income of LIFO inventory liquidations should be disclosed, should the disclosure give effect to only pools with decrements or should the decrements be netted against increments in other pools?

5-29. Arguments. Some believe only pools with decrements should be given effect to, because a LIFO inventory liquidation in any pool causes prior costs to be charged against current revenues. They believe the liquidation effects of certain pools should be disclosed without netting increases and decreases. Further, they believe the effect disclosed should not be offset by the price change effect on that or any other pool.

5-30. Others believe decrements of pools should be netted against increments of other pools because an inventory liquidation is only one of several effects of LIFO. The netting effects are similar to the netting effects within a pool itself. They believe that since other disclosures ordinarily are based on consolidated amounts, so should disclosures of the effects of liquidations. Further, if the pools are similar, the same results could be obtained by combining these pools without having to disclose the effects. The following exhibit provides an illustration in which two separate pools, one with a liquidation, are combined into one pool resulting in about the same net LIFO provision but with no liquidation profit.

Effect on Liquidation Profit of Combining Separate Pools
Link Chain Technique

Item	End. Invty. Quantity	Beginning of Year Cost Unit	Beginning of Year Cost Total	Current Year Cost Unit	Current Year Cost Total	Index		Base Year Cost	Index	LIFO Amount
Pool 1										
December 31, 19X1										
A	300	$2.00	$ 600	$2.10	$ 630		Jan. 1, 19X1 Base	$3,000	100.00	$3,000
B	600	5.00	3,000	5.25	3,150		19X1 Layer	800	105.00	840
C	200	1.00	200	1.05	210		Total	$3,800		3,840
			$3,800		$3,990	105.00	Inventory at Current Cost			3,990
							LIFO Reserve			$ 150
December 31, 19X2										
A	350	$2.10	$ 735	2.25	$ 788		Jan. 1, 19X1 Base	$3,000	100.00	$3,000
B	700	5.25	3,675	5.62	3,934		19X1 Layer	800	105.00	840
C	275	1.05	289	1.12	308		19X2 Layer	675	112.39	759
			$4,699		$5,030	107.04	Total	$4,475		4,599
							Inventory at Current Cost			5,030
							LIFO Reserve			$ 431
	Cumulative	105.00 x 107.04 = 112.39								
		$5,030 / 112.39 = $4,475								
Pool 2										
December 31, 19X1										
D	450	9.00	$4,050	9.27	$4,172		Jan. 1, 19X1 Base	$4,000	100.00	$4,000
E	260	1.60	416	1.65	429		19X1 Layer	541	103.04	557
F	150	.50	75	.52	78		Total	$4,541		4,557
			$4,541		$4,679	103.04	Inventory at Current Cost			4,679
							LIFO Reserve			$ 122
December 31, 19X2										
D	400	9.27	$3,708	12.05	$4,820		Jan. 1, 19X1 Base	$4,000	100.00	$4,000
E	310	1.65	512	1.90	589		19X1 Layer	541	103.04	557
F	25	.52	13	.55	14		19X2 Liquidation	(433)	103.04	(446)
			$4,233		$5,423	128.11	Total	$4,108		4,111
							Inventory at Current Cost			5,423
							LIFO Reserve			$1,312
	Cumulative	103.04 x 128.11 = 132.00								
		$5,423 / 132.000 = $4,108								

19X1 Increment $433 x (132.00% - 103.04%) = $126 Liquidation Profit based on the reinstatement approach.

Effect on Liquidation Profit of Combining Separate Pools
Link Chain Technique

Item	End. Invty. Quantity	Beginning of Year Cost Unit	Beginning of Year Cost Total	Current Year Cost Unit	Current Year Cost Total	Index		Base Year Cost	Index	LIFO Amount
Combined										
December 31, 19X1										
A	300	$2.00	$ 600	$2.10	$ 630		Jan. 1, 19X1 Base	$7,000	100.00	$ 7,000
B	600	5.00	3,000	5.25	3,150		19X1 Layer	1,341	103.93	1,394
C	200	1.00	200	1.05	210		Total	$8,341		8,394
D	450	9.00	4,050	9.27	4,172		Inventory at Current Cost			8,669
E	260	1.60	416	1.65	429		LIFO Reserve			$ 275
F	150	.50	75	.52	78					
			$8,341		$8,669	103.93				
December 31, 19X2										
A	350	$2.10	$ 735	$2.25	$ 788		Jan 1, 19X1 Base	$7,000	100.00	$ 7,000
B	700	5.25	3,675	5.62	3,934		19X1 Layer	1,341	103.93	1,394
C	275	1.05	289	1.12	308		19X2 Layer	253	121.63	308
D	400	9.27	3,708	12.05	4,820		Total	$8,594		8,702
E	310	1.65	512	1.90	589		Inventory at Current Cost			10,453
F	25	.52	13	.55	14		LIFO Reserve			$ 1,751
			$8,932		$10,453	117.03				
	Cumulative	103.93 x 117.03 = 121.63								
		$10,453 / 121.63 = $8,594								

	Reserve	
	Separate Pools	Combined Pools
19X1 LIFO Provision	$ 272	$ 275
19X2 LIFO Provision	1,471	1,476
LIFO Reserve at December 31, 19X2	$1,743	$1,751
19X2 LIFO Provision Includes a Liquidation Profit of	$ 126	$ 0

	Inventory	
	Separate	Combined
#1	$4,599	
#2	4,111	
	$8,710	$8,702

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5-31. Advisory Conclusion. The task force believes (8 yes, 1 no) if the effects on income of LIFO inventory liquidations are disclosed, the disclosure should give effect to only pools with decrements.

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LIFO Inventory Liquidations Resulting from Business Discontinuances

5-32. Background. The discontinuance of an operation could trigger a LIFO inventory liquidation. That could happen whether a segment is discontinued or a portion of the business operation is sold.

5-33. Issue. Should the effects on income of such LIFO inventory liquidations be reported as part of the gain or loss on the disposal (not necessarily a discontinued segment of the business under APB Opinion 30)?

5-34. Arguments. Some believe the effects on income of such LIFO inventory liquidations should be reported as part of the gain or loss on disposal of a business, because they believe the effects on income of LIFO inventory liquidations arising from the sale of the segment are unrelated to normal business operations and therefore are not part of the cost of sales. Further, they believe the inventory stated at LIFO is the proper amount to be compared to the proceeds in computing gain or loss.

5-35. Others believe the effects on income of LIFO inventory liquidations, even if triggered by the disposal of a business, are still similar to other sales of inventory and, therefore, should be included in the cost of sales, whether the inventory is presented at LIFO or FIFO.

5-36. Still others believe, regardless of the circumstances and regardless of the inventory method used, the costs associated with inventory sold should be treated as part of the cost of sales.

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5-37. Advisory Conclusion. The task force believes (9 yes, 0 no) the effects on income of LIFO inventory liquidations resulting from business disposals should be reported as part of the gain or loss from disposal of the operations.

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Method of Computation

6-1. Background. ARB No. 43, Chapter 4, Statement 7 states:

> "Depending on the character and composition of the inventory, the rule of cost or market, whichever is lower, may properly be applied either directly to each item, or to the total of the inventory (or, in some cases, to the total of the components of each major category). The method should be that which most clearly reflects periodic income."

If a company uses dollar value LIFO for its inventories, determining the LIFO cost of an individual item may be difficult. And, the company might decide it is more appropriate to apply the lower of cost or market rule to the total amount of each pool. Companies, in practice, may also consider combining pools in certain instances depending on the nature of their businesses. The following discussion, for simplicity, deals with the issue of individual items in a single pool versus aggregating the total of that pool. Aggregating pools for determining the lower of cost or market is discussed in the next issue.

6-2. The following illustrates the application of the lower of cost or market rule to dollar value LIFO inventories: XYZ Company uses the double extension, dollar value approach to price its LIFO inventory with a single pool comprising the following elements at the end of the year.

		FIFO Cost		LIFO Base Year Cost		Market Value	
Item	Units	Unit	Total	Unit	Total	Unit	Total
A	25,000	$1.88	$ 47,000	$1.02	$ 25,500	$2.10	$ 52,500
B	10,000	4.30	43,000	3.70	37,000	3.75	37,500
C	15,000	2.00	30,000	2.50	37,500	2.00	30,000
D	25,000	1.20	30,000	1.00	25,000	1.00	25,000
	Total		$150,000		$125,000		$145,000
LIFO Reserve			20,000				
LIFO Cost			$130,000				

6-3. If the lower of cost or market rule is applied in the aggregate for all items within the LIFO pool, no market adjustment is required because the aggregate LIFO carrying amount ($130,000) is less than market ($145,000).

6-4. However, if the rule is applied item by item (or group of items), a market adjustment appears to be required. A basic question is how the amount for such an adjustment should be determined.

6-5. One allocation approach is to use a weighted average of the base year and total LIFO cost ($130,000/$125,000 = 104%) to determine LIFO cost by item. Assumed LIFO cost would be:

Item	Base Year Cost	Assumed LIFO Cost
A	$ 25,500	$ 26,500
B	37,000	38,500
C	37,500	39,000
D	25,000	26,000
	$125,000	$130,000

In this illustration, a market reserve is necessary for items B, C and D since their assumed cost is more than market value.

6-6. Another allocation approach is to use the ratio of total LIFO to FIFO cost to determine the LIFO cost by item. Under this approach, the LIFO cost of the four items would be determined by multiplying FIFO cost by 130/150.

Item	FIFO	Assumed LIFO Cost
A	$47,000	$ 40,700
B	43,000	37,300
C	30,000	26,000
D	30,000	26,000
		$130,000

A market reserve in this example is necessary for item D (but not B or C). This method could be used by a company that uses the link chain or cost component methods (whereas the first allocation method could not be) as well as any other LIFO method. While the market reserves differ under the two methods, this is expected since the allocation is by necessity arbitrary.

6-7. Another approach is to make the LIFO calculations with and without each of the individual items and to assume that the incremental differences represent the LIFO carrying amounts for each item to be compared with the market value for each item.

6-8. Issue. Should the aggregate or item by item approach be used in applying the lower of cost or market rule to a LIFO pool?

6-9. Arguments. Some believe the aggregate approach is the more practical approach, because determining the lower of cost or market item by item could be too

costly, could require too much detailed recordkeeping, and would require an arbitrary allocation to determine cost. Further, they believe dollar value LIFO is an overall approach, which is inconsistent with an item by item approach. They also point out that for most companies LIFO is substantially below current cost in the aggregate and, therefore, it is inappropriate to further reduce the LIFO carrying amount for specific items. Further, the income statement under LIFO reflects current costs and therefore no additional charges by individual items are necessary to properly report income. Thus, the balance sheet is stated conservatively and the income statement is at current cost as a result of using LIFO; therefore, recording market reserves for items within a pool is not meaningful. ARB No. 43 also permits aggregating when appropriate and doing this within a pool is consistent with the guidance set forth in the ARB. ARB No. 43's approach to the lower of cost or market rule was balance sheet oriented and may not be as relevant for measuring income when LIFO is used.

6-10. Others believe an item by item approach, while perhaps more costly, is more theoretically sound and more conservative than the aggregate approach. Also, some infer from paragraph 13 of ARB No. 43, Chapter 4 a preference by the Committee on Accounting Procedure for the item by item approach.

6-11. Others support the aggregate of the pool approach but point out that in certain circumstances writedowns of specific items within a specific pool might be appropriate. For example, if an item becomes obsolete or will be abandoned, a writedown should not be precluded because the company uses the aggregate approach. They note that ARB No. 43 permits an item by item approach. Further, some believe using the item by item approach should be mandatory in these circumstances.

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6-12. Advisory Conclusion. The task force believes (9 yes, 0 no) the most reasonable approach to applying the lower of cost or market provisions of ARB No. 43 to LIFO inventories is to base the determination on reasonable groupings of inventory items. Further, the task force believes that in general a pool constitutes a reasonable grouping. However, it believes the authoritative accounting literature permits the item by item approach, particularly for identified product obsolescence and product discontinuance. AcSEC agrees the authoritative accounting literature permits the item by item approach and further believes (12 yes, 1 no; task force: 1 yes, 8 no) the item by item approach should be used for identified product obsolescence and product discontinuance.

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6-13. Issue. May a company aggregate more than one pool to apply the lower of cost or market test?

6-14. Arguments. Some believe it is appropriate in some or all cases to aggregate all inventory pools in applying lower of cost or market test. They point out that ARB No. 43, Chapter 4, Statement 7 states, "Depending on the character and composition of the inventory, the rule of cost or market, whichever is lower may properly be applied to each item or to the total of the inventory (or, in some cases, to the total of the components of each category) [emphasis added]." Those who support full aggregation note that Statement 7 also states that, "The purpose of reducing inventory to market is to reflect fairly the income of the period." They believe that, under LIFO, income for the period is fairly determined by matching most recently incurred costs against current revenues. Thus the need for inventory writedowns (except for obsolete or discontinued products) is obviated. Those who take this view acknowledge that inventory writedowns are appropriate to the extent that total LIFO inventory cost exceeds market. They point out, however, that for many companies that have used LIFO for a long time during periods of significant price changes, total LIFO cost may be substantially below market. In such cases, inventory writedowns for portions of the inventory would, in their view, both distort income and understate reported inventory amounts.

6-15. Others believe that while there may be conceptual merit in that approach, it is also necessary or desirable to have either a vertical or horizontal product line linkage to support aggregation of LIFO pools for the lower of cost or market test. They believe that approach most nearly complies with the spirit and intent of ARB No. 43. Some who support partial aggregation also point out that companies using many relatively small product line LIFO pools could, if they wished, aggregate several of these pools into fewer natural business units. Therefore, unless aggregation of such pools was permitted in applying the lower of cost or market test, writedown results could vary depending on whether companies used many small pools, or a few large pools.

6-16. Still others, however, believe any aggregation of pools is inappropriate in applying the lower of cost or market test. They cite this approach as more conservative. Also, they point to the statement in ARB No. 43, Chapter 4, Statement 7 that, "the most common practice is to apply the lower of cost or market rule separately to each item of the inventory." (Those who disagree with the item by item

approach point out that when ARB No. 43 was written, FIFO and average cost were the predominant inventory accounting practices. Therefore, they do not view this statement as providing authoritative guidance under current circumstances.)

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6-17. Advisory Conclusion. For companies having more than one LIFO pool, the task force believes (8 yes, 1 no) that if pools are similar (such as those involving an integrated product relationship or similar product lines), aggregating may be appropriate in applying the lower of cost or market test.

6-18. If, however, the compositions of the pools are significantly dissimilar, the task force believes (7 yes, 2 no) aggregating is inappropriate.

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Expected Future Liquidation

6-19. Issue. If a liquidation is planned in the following year, how should lower of cost or market determinations be affected?

6-20. Discussion. Cost and market are generally compared in the aggregate for the item without regard to the cost of the individual increments. To illustrate:

		Cost		Market	
	Units	Unit	Total	Unit	Total
Base year	10,000	$1.00	$10,000		
Increments					
Year 1	4,000	1.20	4,800		
Year 2	6,000	1.50	9,000		
	20,000		$23,800	$1.25	$25,000

In this illustration, even though the market has declined at the end of the year below the cost of year 2 purchases, no market reserve appears to be necessary since the total market value of $25,000 is in excess of LIFO cost. An issue arises, however, if the company anticipates a liquidation in year 3. For example, if the company plans to reduce its quantity to 14,000 units, cost of sales will be charged $9,000 (using the most recent purchases) and a loss on the sale will be likely. The issue is whether the loss should be recognized by providing a market reserve (that is [$1.50 - $1.25] x 6,000 units = $1,500) at the end of year 2.

6-21. Arguments. Some believe recording a loss on only certain of the units of a product in the inventory is inappropriate. The accumulation of cost by layer is a mechanical by-product of LIFO and is not intended to be used in determining the need for market reserves. The cost by layer for many different items in a pool is ex-

tremely difficult to compute and the result will probably require arbitrary allocations. Further, even if a liquidation is currently planned, its effect depends on future events, which may turn out significantly different.

6-22. Others believe expected losses should be recorded when they are probable and the amount is reasonably estimable. The LIFO method requires costing out the expected liquidation at most recent costs and if such cost is more than market there is an impairment which should be recognized.

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6-23. Advisory Conclusion. The task force believes (7 yes, 2 no) lower of cost or market determinations under ARB No. 43 should be made for the total rather than by individual increments but if a company in its particular circumstances wished to provide a reserve by considering the cost of recent increments, it may do so.

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Reversing Valuation Reserves in the Future

6-24. Background. ARB No. 43, Chapter 4, footnote 2 states:

> In the case of goods which have been written down below cost at the close of a fiscal period, such reduced amount is to be considered the cost for subsequent accounting purposes.

One member of the Committee on Accounting Procedure objected to this footnote stating that "an exception should be made for goods costed on the LIFO basis."

6-25. Some have concluded that if the cost of LIFO inventories is reduced to market, ARB No. 43 indicates that the valuation reserve becomes part of the related LIFO layers (that is, not reversing until the layers are liquidated even after the related inventory giving rise to the reserve is sold). Others believe reserves should be reversed. Further, practice is inconsistent in this area.

6-26. Issue. Should previous writedowns to market value of the cost of LIFO inventories be reversed in subsequent years?

6-27. To illustrate the question of the accounting for market valuation reserves in subsequent years, the task force considered the following three situations (subissues). Each occurs in the year after a valuation reserve is provided:

a. Goods are sold at written down prices and not replaced. Other goods are acquired and therefore the total is not reduced.

b. Before the goods are sold, market value returns to its original level. The company sells the goods at the normal price and replaces the inventory.[1]

c. Goods are sold and market value does not return to previous level but the company replaces the inventory at the reduced market price.[1]

To illustrate: XYZ Company, Inc. sells several similar models of its basic product but maintains one LIFO pool. Quantity levels have remained constant since the base year. Because of changing consumer preference, sales of Model X decreased significantly and XYZ expects to sell its remaining inventories of Model X at well below cost. The following is the 19X1 LIFO calculation and relevant market value information:

Model	Quantity	FIFO Cost	Base Year Cost	LIFO Cost	Market Value	Extended Market Value
X	4,000	$100	$70	$280,000	$ 10	$ 40,000
All others	5,000	100	70	350,000	100	500,000
	9,000			$630,000		$540,000

The company records a market valuation reserve of $240,000 ($280,000 - $40,000) for product X. (The issue is easier to illustrate by using an individual product approach for determining the reserve rather than the aggregate of the pool approach and by assuming there have been no increments, that is, LIFO cost and base year cost are the same.) Thus, inventory at December 31, 19X1 is reported at $390,000 ($630,000-$240,000).

The following illustrates the three situations for 19X2:

6-28. Subissue (a): Goods are sold at written down price. In 19X2, XYZ sells all Model X inventory at $10 a unit and discontinues buying that model. The company maintains the same overall unit level of inventory and does not experience a liquidation. 19X2 cost remains at $100 a unit for all other models. The following illustrates XYZ's 19X2 results under two alternatives.

Sales:

Model	Quantity	Unit Price	X	Others	Total
X	4,000	$ 10.00	$ 40,000	$ - 0 -	$ 40,000
All others	15,000	200.00	- 0 -	3,000,000	3,000,000
			40,000	3,000,000	3,040,000

[1]Disposition of physical units is assumed on a FIFO basis.

Cost of Sales:

X	4,000	$100.00	400,000	- 0 -	400,000
All others	15,000	100.00	- 0 -	1,500,000	1,500,000
			400,000	1,500,000	1,900,000
Gross profit (loss) if reserve is not reversed -- first approach			(360,000)	1,500,000	1,140,000
Reversal of 19X1 valuation reserve			240,000	- 0 -	240,000
Gross profit (loss) if reserve is reversed -- second approach			($120,000)	$1,500,000	$1,380,000

6-29. Arguments. Supporters of reversing the reserve believe the market reserve should be associated with the physical units of inventory. They point out that if it is not reversed in 19X2, the loss is reported twice: once in 19X1 when the reserve is established, and again in 19X2, when the current cost of $400,000 is charged against sales of only $40,000. The total loss in 19X2 includes the previously recorded reserve of $240,000; in year two, if the reserve is not reversed, inventory will be reported at $390,000, which is neither cost nor market. Further, at the end of year 2, there is no reserve, because the cost of the inventory is less than market. In substance, after the units are sold, the reserve becomes a contingency reserve, which, under an FASB Statement No. 5 approach, should be reversed. Also, a valuation reserve differs from a writedown of the cost of the inventory.

6-30. The argument for not reversing the reserve is that the LIFO method is based on a flow of costs assumption and if there is no overall reduction in quantities, reversing the reserve contradicts that assumption and may be viewed as violating ARB No. 43. Supporters of reversing the reserve point out that ARB No. 43 was issued many years ago and might be viewed as balance sheet oriented. Current trends stress the income statement and, as the above illustrates, reversing the reserve in 19X2 provides more useful information for evaluating earnings.

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6-31. Advisory Conclusion. The task force believes (9 yes, 0 no) that after a company disposes of the physical units of the inventory for which reserves were provided, it should reverse the reserve. The reserve at the end of the year should be based on a new lower of cost or market computation. The task force believes its advisory conclusion is an appropriate application of ARB No. 43.

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6-32. Subissue (b): Market value returns to normal level in 19X2. In 19X2, the company in the illustration holds the 4,000 units of Model X; then the market value returns to a normal level; and Model X is then sold at its normal price. The following illustrates XYZ's results:

Sales:

Model	Quantity	Unit Price	X	Others	Total
X	6,000	$200.00	$1,200,000	$ - 0 -	$1,200,000
All others	15,000	200.00	- 0 -	3,000,000	3,000,000
			1,200,000	3,000,000	4,200,000
Cost of Sales:					
X	6,000	100.00	600,000	- 0 -	600,000
All others	15,000	100.00	- 0 -	1,500,000	1,500,000
			600,000	1,500,000	2,100,000
Gross profit if reserve is not reversed			600,000	1,500,000	2,100,000
Reversal of 19X1 valuation reserve			(240,000)	- 0 -	(240,000)
GROSS PROFIT if reserve is reversed			$ 840,000	$1,500,000	$2,340,000

6-33. Arguments. Supporters of reversing the reserve argue that the units have been sold and therefore a reserve for those units is no longer needed. Supporters of not reversing the reserve make the same arguments as in the previous illustration and also note that in this illustration, since the market recovered, gross profit is properly stated in 19X2.

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6-34. Advisory Conclusion. The task force believes (9 yes, 0 no) the disposition of units should result in reversing the reserve.

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6-35. Subissue (c): Goods are sold at reduced price in 19X2 but are replaced. The company sold the 4,000 units of Model X at $10 a unit, renegotiates its purchase contract with its supplier to $10 a unit; and replaces the units sold. Model X can now be sold for $15 a unit. The following illustrates XYZ's 1982 results:

Sales:

Model	Quantity	Unit Price	X	Others	Total
X	4,000	$ 10.00	$ 40,000	$ - 0 -	$ 40,000
X	2,000	15.00	30,000	- 0 -	30,000
All others	15,000	200.00	- 0 -	3,000,000	3,000,000
			70,000	3,000,000	3,070,000
Cost of Sales:					
X	6,000	10.00	60,000	- 0 -	60,000
All others	15,000	100.00	- 0 -	1,500,000	1,500,000
			60,000	1,500,000	1,560,000
Gross profit if reserve is not reversed			10,000	1,500,000	1,510,000
Reversal of 19X1 valuation reserve			240,000	- 0 -	240,000
GROSS PROFIT before considering need for a new reserve if reserve is reversed			$250,000	$1,500,000	$1,750,000

6-36. Arguments. Again, the argument for reversing the reserve is based on the 4,000 units being sold and therefore the reserve for these units is no longer necessary. That the company continues to buy Model X does not affect this view because the units were disposed of and therefore the reserve is no longer necessary. Supporters of not reversing the reserve point out, in addition to the previous arguments, that at December 31, 19X2, the LIFO cost would inappropriately exceed market value if the reserve is reversed. In this oversimplified illustration, 6000 units of Model X are again in the ending inventory with a LIFO cost of $70 a unit but a current cost of only $10 a unit. In contrast, supporters of reversing the reserve argue that a lower of cost and market valuation would be required to be made at December 31, 19X2 and a new reserve would be established based on current circumstances. They argue that this approach is practical, particularly in the usual situation of changing mix and quantities, and will result in a reasonable application of the lower of cost or market requirement.

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6-37. Advisory Conclusion. The task force believes (9 yes, 0 no) reversing the reserve based on the flow of units in all situations and making a new lower of cost or market determination at the end of each year is appropriate.

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Valuation Reserves at the Time of Adopting LIFO

6-38. Discussion and Arguments. For income tax purposes, LIFO inventories must be stated at cost. For tax purposes, lower of cost or market adjustments arising before adoption of LIFO must be restored to taxable income over three years beginning with the year of adoption. A question arises about the proper approach to handling the reversal of market valuation reserves for financial reporting purposes. The following discusses the possible approaches and the related arguments:

(a) Reverse the reserves to income in the year of adopting LIFO if affected inventory has been sold. The arguments for this position are essentially the same as those in the previous issue. Any reversal of the reserves will partially offset the effect on income of adopting LIFO and the decision as to whether reserves are necessary at the end of the year would be made separately. Reversing reserves would give rise to deferred taxes which would be amortized over three years.

(b) Use the prior year carrying amount (that is, market value) as the base year cost for financial reporting purposes. Until the base year inventory is liquidated, a difference between LIFO for financial reporting and income tax purposes would result. In addition to the arguments set forth in the previous issue, some believe the beginning FIFO inventory net of reserves represents the cost of the opening inventory in the year of change and, therefore, no reversal should be made.

(c) Amortize the difference to book income in a manner identical to that used for income tax purposes. There is no conceptual basis for this under GAAP.

6-39. Issue. How should the reversal of the lower of cost or market adjustment at the time of adopting LIFO be handled?

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6-40. Advisory Conclusion. The task force believes (9 yes, 0 no) a consistent position on market reserves for companies using LIFO is desirable and that the advisory conclusion in paragraph 6-31 equally applies in the year LIFO is adopted, that is, reverse the reserve based on flow of goods in the year LIFO is adopted, and make a new calculation at year end.

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Section Seven:
The LIFO Conformity Requirement and Supplemental Disclosures

Background

7-1. Since LIFO became an accepted method of pricing inventories for income tax purposes, the Internal Revenue Code has permitted a taxpayer to use the LIFO method for tax purposes only if the taxpayer also uses LIFO to determine income for financial reporting purposes. This "conformity requirement" applies both to the year LIFO is elected and to all subsequent years. IRS has interpreted it to also apply to disclosures made elsewhere, such as in notes, supplemental information within the annual report, and oral or written statements at stockholder meetings and meetings with securities analysts. Over the years, this interpretation of the conformity requirement had severely restricted a company's ability to make disclosures of the effects of using LIFO.

7-2. To minimize conflict in this area, the IRS released in January 1981, regulations that softened its interpretation of the LIFO conformity requirement by permitting certain supplemental disclosures of non-LIFO information and by providing certain other guidelines that would not violate the LIFO conformity requirement. Those regulations are complex and require careful analysis.

7-3. The final regulations continue to require that the "primary presentation" on the face of the income statement must be prepared using LIFO, but the notes to the financial statements and other supplemental information may disclose the "pro forma" effects of using FIFO or some other acceptable inventory method. Further, the difference between the reported amount and current replacement cost of LIFO inventories may be disclosed in the balance sheet (as required by the SEC for companies that file their statements with it), and market value can be used for financial reporting purposes if it is lower than LIFO cost. Obviously, companies on LIFO should strictly adhere to the IRS regulations.

Acceptability of Supplemental Disclosures

7-4. Background. The IRS's softened interpretation of the LIFO conformity requirement permits supplemental disclosures, including pro forma financial statements, about amounts that would have been presented using a historical cost method other than LIFO in the financial statements.

7-5. The SEC cautions companies in ASR No. 293 that supplemental LIFO disclosures must be considered carefully to avoid implying that FIFO earnings are the "real" earnings of a company on LIFO. The Commission believes FIFO-based supplemental disclosures by LIFO companies are not necessarily the best way to promote comparability of LIFO and FIFO companies but rather that the disclosures prescribed by FASB Statement No. 33 is a better approach. The Commission further believes risk of user misinterpretation is mitigated when such disclosures are made, if companies that file their financial statements with the SEC also

a. state clearly that LIFO results in a better matching of costs and revenues,
b. indicate why supplemental disclosures are being provided, and
c. present essential information about the supplemental income calculation to enable users to appreciate the quality of the information.

In addition, the SEC believes if companies make such disclosures they should make them in the notes to the financial statements or in management discussion and analysis and not in financial highlights, press releases, or president's letter, because such analytical information normally is not presented in those places.

7-6. Issue. May a company present supplemental non-LIFO disclosures within the historical cost framework? (This issue presupposes disclosures would recognize the effects of, for example, the lower of cost or market rule.)

7-7. Arguments. Some believe a company may present such supplemental non-LIFO disclosures, because they believe such disclosures are useful for investors to compare companies in the same or similar industries that use different inventory methods. They point out that FASB Statement No. 33 requires certain companies using FIFO to present as supplemental information earnings on a current cost basis. That is similar to presenting earnings on a LIFO basis as supplemental information.

7-8. Others believe a company should not present supplemental non-LIFO disclosures, because they believe that could detract from the information in the primary financial statements and could mislead users. They believe users could further be confused by allowing selected differential disclosures that are nonstandardized because of industry differences.

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7-9. Advisory Conclusion. The task force believes (9 yes, 0 no) a company may present non-LIFO supplemental disclosures within a historical cost framework.

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7-10. Issue. If a company presents supplemental non-LIFO disclosures within the historical cost framework, should computational guidelines be provided?

7-11. Arguments. Some believe computational guidelines should be provided to promote consistency and comparability. Others believe such guidelines should not be provided because supplemental information is not part of the basic financial statements and notes, which are the primary focus of generally accepted accounting principles. They also believe no computational guidelines should be provided for supplemental non-LIFO disclosures because no similar guidelines exist for other types of supplemental disclosures.

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7-12. Advisory Conclusion. The task force believes (8 yes, 1 no) computational guidelines should be provided for supplemental non-LIFO disclosures.

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7-13. Issue. If a company presents supplemental non-LIFO disclosures within the historical cost framework, what type of supplemental information should be disclosed?

7-14. Arguments. Views differ significantly on the type of supplemental information that should be disclosed (see paragraph 7-5(c) of this paper.) Some believe the disclosures required by FASB Statement No. 33 are adequate. As discussed earlier, the SEC, for one, supports FASB Statement No. 33 supplemental disclosures if certain other information is also disclosed.

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7-15. Advisory Conclusion. The task force believes (8 yes, 1 no) companies providing supplemental non-LIFO disclosures should at a minimum disclose the information discussed in paragraph 7-5 of this paper. However, AcSEC believes (10 yes, 3 no) companies providing Supplemental LIFO disclosures need not at a minimum disclose the information discussed in paragraph 7-5, but believes (8 yes, 5 no) companies that present supplemental non-LIFO disclosures should not imply that non-LIFO earnings are their "real" earnings.

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Measurement of Supplemental Disclosures

7-16. Background. The presentation of supplemental non-LIFO information within a historical cost framework raises several measurement issues discussed below.

7-17. Issue. Should a company give effect to nondiscretionary variable expenses (for example, profit sharing based on earnings) in determining the income statement

or balance sheet amounts similar to their consideration in presenting in the primary financial statements pro forma information regarding an accounting change?

ILLUSTRATION OF EFFECT OF NONDISCRETIONARY VARIABLE EXPENSES ON SUPPLEMENTAL DISCLOSURE

	Adjusted for the Effect of the Change	Not Adjusted for the Effect of the Change
Effect of change from LIFO to FIFO on inventory component of cost of goods sold - additional profit	$50,000	$50,000
Profit sharing cost is based on 10% of pretax accounting income	5,000	-
Net increase in earnings before taxes	$45,000	$50,000

7-18. Arguments. Some believe a company should give effect to nondiscretionary variable expenses because all nondiscretionary variable expenses that depend on measurements determined under generally accepted accounting principles should be adjusted for the change between LIFO and the non-LIFO method, which is required by APB Opinion 20, paragraph 19(d), for pro forma disclosures.

7-19. Others believe a company should not give effect to nondiscretionary variable expenses because they believe the primary emphasis should be on the difference between LIFO and the non-LIFO method, so only the inventory and cost of sales should be adjusted. They point out that the approach is similar to the selective adjustments to specified components of costs under FASB Statement No. 33. Further, they believe adjusting the amounts for all nondiscretionary variable expenses to reflect the change from LIFO to a non-LIFO method could confuse the reader. Further, comparisons between the LIFO and non-LIFO numbers would be meaningless since formulas ordinarily are changed if the measurements determined under generally accepted accounting principles are changed.

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7-20. Advisory Conclusion. The task force believes (9 yes, 0 no) if it is probable that nondiscretionary variable expenses would have been different based on the supplemental information, the company should give effect to the changes in such nondiscretionary variable expenses. The task force's conclusion reflects the presumption that nondiscretionary variable expenses are based on existing formulas, unless disclosure is made to the contrary.

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7-21. Issue. How should the income tax effect of a non-LIFO method be measured for supplemental income statement and balance sheet presentations? (An illustration is provided on page 62.)

MEASUREMENT OF TAX EFFECT OF CUMULATIVE LIFO/FIFO DIFFERENCE

	Base Year Cost	Index	LIFO Amount	End of 19X1 FIFO Amount	End of 19X1 LIFO/FIFO Difference	End of 19X2 FIFO Amount	End of 19X2 LIFO/FIFO Difference
Beginning of 19X1	$100,000	100.00	$100,000	$110,000	$10,000	$115,000	$15,000
19X1 Layer	100,000	110.00	110,000	110,000	-	115,000	5,000
End of 19X1	200,000		210,000	$220,000	$10,000		
19X2 Layer	100,000	115.00	115,000			115,000	-
End of 19X2	$300,000		$325,000			$345,000	$20,000

	Difference	Incremental Tax Rate	Tax Effect
Deferred taxes at end of 19X2 based on rate in effect when LIFO/FIFO diferences arose			
19X1 Increment	$10,000	50%	$5,000
19X2 Increment	10,000	46	4,600
			$9,600
Deferred taxes at end of 19X2 based on rate in effect at end of 19X2	$20,000	46	$9,200

7-22. Arguments. Some believe the current statutory tax rate should be used for simplicity, because they believe supplementary information normally would not include a complete separate set of financial statements. In addition, because the emphasis is on the current difference between LIFO and the non-LIFO method, the current rate is the most meaningful.

7-23. Others believe that, for comparability, essentially the same method should be used as that required by generally accepted accounting principles in the primary financial statements.

7-24. Still others believe no adjustment in income taxes should be made in supplemental disclosures because no adjustment is required under FASB Statement No. 33.

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7-25. Advisory Conclusion. The task force believes (9 yes, 0 no) the same type of tax effect required by generally accepted accounting principles in the primary financial statements should be used in determining supplemental disclosures of the after tax effects on pro forma net income and financial position.

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7-26. Issue. Should the supplemental presentation reflect additional interest costs (or loss of interest income) as if deferral of taxes using LIFO had not been realized?

7-27. Arguments. Some believe the supplemental presentation should reflect additional interest costs as if deferral of taxes using LIFO had not been realized, because that is a primary result of using LIFO for tax purposes and its effect should be quantified.

7-28. Others believe the supplemental presentation should not reflect the additional interest costs as if deferral of taxes had not been realized, because to do so implies that tax deferral is the main reason for using LIFO. Also, since deferred taxes are not discounted, that which is, in essence, a timing difference should also ignore the time value of money (interest). Further, calculating additional interest costs would be arbitrary and hypothetical, because of the many subjective assumptions that would have to be made, such as the appropriate interest rate to use, the method and application of the interest rate, the timing of cash flows, alternate uses of funds, and so forth. Yet, others believe that though the assumptions may be hypothetical and arbitrary, they are based on the best information available and failure to make the calculation is more misleading than making none. They believe the burden is

on those wishing to make supplemental disclosures to provide information that is neither misleading nor incomplete.

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7-29. Advisory Conclusion. The task force believes (8 yes, 1 no) the supplemental presentation should not reflect additional interest costs from the loss of deferred taxes had LIFO not been used and believes disclosure of that fact need not be made.

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7-30. Issue. How should the tax effects of the non-LIFO method be classified in the supplemental balance sheet (classified similar to deferred taxes, or as an inventory valuation account, or be considered a part of equity)?

7-31. Arguments. Some believe that for a non-LIFO method in which all components of expense have been adjusted, the income tax effect on the non-LIFO method should be classified as a separate component of equity, because it represents inventory holding gains deferred to future years.

7-32. Others believe that for a non-LIFO method, in which only inventory, cost of sales, and income taxes have been adjusted, the income tax effect should be treated as a timing difference because that is how the difference would be treated if a non-LIFO method were used for financial reporting and LIFO were used for tax purposes.

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7-33. Advisory Conclusion. The task force believes (9 yes, 0 no) the difference is a timing difference and the effect should be classified in a manner similar to that required by generally accepted accounting principles in the primary financial statements.

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Use of LIFO Applications for Financial Reporting Purposes Different from Those Used for Income Tax Purposes

7-34. Background. The IRS regulations relating to the LIFO conformity requirement, issued in January 1981, among other things, permit the use of LIFO applications for financial reporting purposes different from those used for income tax purposes. However, the applications must be consistent with the IRS's LIFO inventory regulations. In addition, before issuance of the regulations, the IRS permitted financial reporting and income tax LIFO inventory amounts to differ including those relating to the cost restoration of subnormal goods and the allocation of purchase price to inventory acquired in business combinations.

7-35. While the IRS's relaxed interpretation of the LIFO conformity requirement permits alternatives in the LIFO used for financial reporting purposes, the method used must be in conformity with GAAP and consistently applied. Changes in inventory principles applied (whether initial adoption of LIFO or a change to a different LIFO method for financial reporting purposes) must be justified as preferable through the application of APB Opinion 20.

7-36. APB Opinion 20, among other things, requires an enterprise to justify as preferable use of the accounting principle. Examples of the major differences between financial reporting and income tax in LIFO applications now permitted by the IRS are:

- the way costs includible in the computation of inventory cost under the full absorption inventory method are determined.
- the way pools under the dollar value LIFO inventory approach are established.
- the way dollar value LIFO is computed, for example, by such techniques as double extension, index, and link chain.
- the way a price index to be used with the index on link chain techniques of stating inventory pools under the dollar value LIFO inventory approach is determined.
- the way current year cost of ending inventory in using the dollar value LIFO inventory approach is determined.
- the way cost of goods that exceed inventory at the beginning of the year in using a LIFO approach other than dollar value LIFO is determined.
- the time at which purchases and sales should be recorded.
- use of an accounting period other than the period used for federal income tax purposes. (See separate section relating to this issue.)
- use of cost estimates.
- the way intercompany sales and purchases are accounted for.

7-37. Other permissible differences are discussed in the IRS's January 1981 regulations. Use of any of the other permitted methods normally results in pretax income for financial reporting purposes different from that for income tax purposes.

7-38. Issue. May a company use for financial reporting LIFO applications different from those it uses for income tax purposes?

7-39. Arguments. Some believe a company should use for financial reporting the same LIFO applications it uses for income tax purposes. There is so little authoritative

accounting literature on LIFO that the only way of determining an application's acceptability for financial reporting purposes is its acceptability for income tax purposes. Since any LIFO application is primarily an income tax method, there is no valid reason to use a different application for financial reporting purposes.

7-40. Others believe a company may use for financial reporting LIFO applications different from those it uses for income tax purposes because that would often produce more sound financial reporting. They point to the SEC's statement in ASR No. 293 that "for too long, LIFO financial accounting has been unduly influenced by tax rules..." In that release, the SEC encouraged companies to examine the practices they used to apply LIFO for financial reporting purposes and not necessarily follow the same practices used for tax purposes. In addition, some others believe that under the IRS regulations the LIFO applications a company uses for financial reporting must be acceptable for income tax purposes (though the company may use a different method on its own income tax return), so the argument against permitting different methods has no merit.

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7-41. Advisory Conclusion. The task force believes (9 yes, 0 no) a company may use for financial reporting LIFO applications different from those it uses for income tax purposes. The task force further believes (9 yes, 0 no) accounting for income taxes applicable to the difference in pretax income resulting from the use of different LIFO applications for financial reporting and income tax purposes should be in conformity with generally accepted accounting principles for timing differences. Further, these differences should be accounted for as timing differences except for differences resulting from the allocation of cost to inventory in business combinations under APB Opinion 16.

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Disclosure of Differing LIFO Applications

7-42. Issue. Should differences between LIFO applications used for financial reporting and those used for income tax purposes be disclosed?

7-43. Arguments. Some believe differences between LIFO applications used for financial reporting and those used for income tax purposes should be disclosed because they believe that while that information normally is disclosed in the deferred income tax note, it may be overshadowed by other information in that note. And, they believe that information in the deferred income tax note may be insufficient in detail for users to fully understand the differences.

7-44. Others believe separate disclosure of differences between LIFO applications used for financial reporting and those used for income tax purposes should not be required, because they believe the information normally is disclosed in the income tax note, if material.

7-45. Other arguments for and against disclosing differences between LIFO applications used for financial reporting and those used for income tax purposes are essentially the same as the arguments for and against disclosing the LIFO approach used in paragraphs 2-7 and 2-8 of this paper.

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7-46. Advisory Conclusion. The task force believes (9 yes, 0 no) differences between LIFO applications used for financial reporting and those used for income tax purposes need not be disclosed beyond the requirements of APB Opinion 11.

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Section Eight:
LIFO and Interim Financial Reporting

Background

8-1. Using LIFO for interim reporting often leads to many of the same problems described above for annual reporting. In addition, interim application of LIFO leads to other problems because LIFO is designed for annual determinations. In addition to the problems in annual reporting, LIFO for interim reporting requires the preparer to estimate the effect of LIFO and to determine the appropriate balance sheet presentation of the provision to offset the effect of an interim temporary LIFO inventory liquidation.

Estimate of LIFO Interim Effect

8-2. Background. The implementation of LIFO for interim reporting is difficult because LIFO is, by tax law definition, an annual calculation. Nevertheless, an estimate for the interim cost of sales is required. Several approaches to making this estimate are widely used in practice:

- approach (a) — specific quarterly calculation of the LIFO effect based on year to date amounts. Some do this by reviewing quarterly price changes; others review price changes and inventory level considerations;
- approach (b) — project the expected annual LIFO cost and allocate that projection to the quarters equally or in relation to certain operating criteria. Typically, those projections are updated quarterly in the same way quarterly estimated tax provisions are calculated;
- approach (c) — make a complete quarterly LIFO determination—that is, determining an appropriate LIFO index at the end of each quarter, applying that price change to specifically determined inventories at the end of each quarter and using that information to make discrete quarterly computations, including determination of quarterly increments and decrements. Few if any companies are believed to use approach (c). Complete LIFO determinations quarterly would entail substantial effort for most multiproduct companies. Physical inventories would sometimes have to be taken quarterly to determine the mix of inventory and establish the base for index determination. Actual prices would be required at the beginning and end of each quarter. For most companies that would be a severe hardship. That is time consuming and would likely delay the issuance of interim earnings reports.

8-3. Issue. Should the estimate of the LIFO interim effect be based on (a) interim year to date LIFO calculations (except for liquidations expected to be reinstated or

increments expected to be reversed by year end, which are discussed later in this paper), (b) an allocation of the projected year end LIFO calculation, or (c) separate discrete interim LIFO calculations? This issue does not cover timing of recognizing permanent inventory liquidations that have not occurred. Paragraphs 8-19 through 8-25 discuss that. (Appendix IV to this paper illustrates approaches (a) and (b).)

8-4. Arguments. Some favor approach (a) because they believe neither income nor expense should be recorded before it is realized or incurred. Prorating the effect of changing prices results in a failure to match most recently incurred costs to current revenues. They believe approach (a) is more consistent with the objective of LIFO, which they believe is valid for interim as well as annual reporting. They also believe financial reporting, even interim financial reporting, should account for the results of transactions and other events that have occurred, not that might occur. If approach (a) is used, paragraph 14 of APB Opinion 28 requires that interim earnings not reflect the effects of a liquidation expected to be reinstated by year end. Some would modify approach (a) slightly for temporary increments. (Appendix IV to this paper illustrates the application.)

8-5. Others favor approach (b) because they believe LIFO is intended to measure the effects of price changes over a year and, so, the effects should be spread over the year. They further believe that since interim LIFO calculations are costly and time consuming, approach (b) is more practical than approach (a). Further, estimating the effect of changing prices on inventories in process more frequently than yearly would be impractical, if not impossible. Use of approach (b) avoids the problem of accounting for LIFO inventory liquidations or increments expected to be reversed by year end. They believe approach (b) is supported by paragraph 14(b) of APB Opinion 28, which states that "companies that use the LIFO method may encounter a liquidation of base period inventories at an interim date that is expected to be replaced by the end of the annual period. In such cases, the inventory at the interim reporting date should not give effect to the LIFO liquidation, and cost of sales for the interim report period should include the expected cost of replacement of the liquidated LIFO base." Measurement of rates of inflation for periods shorter than a year may be subject to unrepresentative fluctuations. They believe the estimated effective rate of inflation, like the estimated effective rate of taxation, should be spread ratably over the full year. And, they believe other inventory methods, such as FIFO, standard cost, and average cost, do not require separate interim computations for overhead and standards.

8-6. Few, if any, support approach (c) for the reasons described in the background section of this issue.

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8-7. Advisory Conclusion. The task force believes (9 yes, 0 no) only approaches (a) and (b) are acceptable as long as the application results in a reasonable matching of most recently incurred costs with revenues, considering such things as the effects of significant changes in prices, operating levels and mix.

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Liquidation Expected to Be Reinstated by Year End

8-8. Background. If an enterprise experiences a LIFO inventory liquidation during the year, but expects to reinstate that inventory by year end, APB Opinion 28, paragraph 14, requires that interim earnings not reflect this type of liquidation. The authoritative literature, however, does not state how the adjustment should be treated in the balance sheet. That question affects interim financial reporting only since the authoritative literature does not require a similar deferral for this type of LIFO inventory liquidations at year end.

8-9. Issue. How should the adjustment be treated for interim balance sheet purposes? Possible treatments include:

(X) Record as a deferred credit in the current liabilities section of the balance sheet the pretax income effect of the LIFO inventory liquidation, with inventory reflecting the liquidation.

(Y) Record as a liability (perhaps included in accounts payable) an amount sufficient to reinstate the inventory balance to the amount before liquidation plus the amount necessary to offset the income statement liquidation effect.

(Z) Record as a credit to inventory (in rare circumstances the credit could be greater than the inventory balance), the effect of which in some cases is to do nothing.

8-10. The following illustrates the above possibilities:

Inventory at FIFO	$1,000
Less: LIFO reserve	400
Inventory at LIFO	$ 600

The entire inventory is sold in a quarter but is expected to be replaced by year end. The company charged cost of sales with FIFO cost ($1,000) and credits inventory with the same amount so the balance sheet now reflects a $400 credit in the inventory count. The options for adjusting the balance sheet accounts are:

		Dr	Cr
(X)	Inventory	$ 400	
	Deferred credit		$ 400
(Y)	Inventory	$1,000	
	Liability		$1,000

(Z) Do nothing. Allow the $400 credit balance to remain in the LIFO reserve account.

8-11. Arguments. Some favor the liability treatment, and some of them favor recording as a liability the net amount required to measure pretax income as if no liquidation had occurred. They believe it is, in effect, a deferral of the credit generated by the liquidation pending a determination at year end of whether it is temporary. They further believe it more properly reflects the inventory account balance, because there has actually been a reduction in inventory.

8-12. Others who favor the liability treatment favor recording as a liability the cost to replace the liquidated inventory, by charging income with the net amount and increasing the carrying amount of the inventory by the historical LIFO cost of the liquidated inventory, because they believe there is a liability to replace inventory. They further believe the liability treatment should be used because the transaction does not relate to the balance sheet carrying amount of inventory but rather to determining the appropriate charge to cost of sales. As a practical matter, they believe the liability treatment will be better understood by financial statement users who might otherwise conclude that a permanent LIFO inventory liquidation had occurred.

8-13. Others favor the inventory treatment because they believe the reserve should be viewed as a valuation account and offset against the inventory. They believe the "reserve" does not meet the definition of a liability under FASB Concepts Statement No. 3. They believe it is an adjustment of the overall LIFO concept and therefore should be reflected as part of inventory. They believe the arguments presented in paragraph 8-5 of this paper also support the inventory approach. Further, those using the projected annual LIFO cost approach (approach (b) discussed in paragraph 8-2) would not isolate the effects of temporary liquidations but would automatically reflect them in the inventory presentation.

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8-14. Advisory Conclusion. While 7 task force members favor treatment (x) and 2 favor treatment (z), the task force believes (6 yes, 3 no) that, for practical considerations, either treatment (x) or treatment (z) is acceptable.

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Increments Expected to Be Liquidated by Year End

8-15. Background. Paragraphs 8-4 and 8-5 of this paper argue that inventory increments expected to be reversed by year end should have no effect on interim LIFO computations. That was in the context of companies using dollar value LIFO. Companies using specific goods LIFO may experience a different kind of computational problem with temporary interim increments as illustrated in Appendix V. That illustrates that a company using specific goods LIFO with the first purchase price approach to pricing increments could have a charge to cost of sales that exceeded any per unit costs actually incurred if a temporary increment occurs in an interim period.

8-16. Issue. If companies using specific goods LIFO encounter inventory increments expected to be reversed by year end, should such increments affect interim LIFO computations?

8-17. Arguments. Arguments for and against recognition of inventory increments expected to be liqidated by year end under circumstances described in paragraph 8-15 are essentially the same as those discussed in paragraphs 8-4 and 8-5, except that a different approach would be needed to negate the recognition of such increments for companies using specific goods LIFO.

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8-18. Advisory Conclusion. The task force believes (8 yes, 1 no) companies using specific goods LIFO should adjust interim costs if temporary interim inventory increments occur, to produce a reasonable matching of most recently incurred costs with current revenues.

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Liquidation Not Expected to Be Reinstated by Year End

8-19. Background. If an enterprise experiences a LIFO inventory liquidation during the year and does not expect to reinstate that inventory by year end, the interim statements can reflect the effect of the liquidation; however, the authoritative accounting literature does not specify interim measurement techniques.

8-20. Issue. Should the effect of an interim LIFO inventory liquidation not expected to be reinstated by year end be measured based on the liquidation to date or on the proration of the expected liquidation for the year?

8-21. Arguments. Most of the arguments are essentially the same as those developed for the issue on LIFO and interim financial reporting in paragraphs 8-4 and 8-5 of this paper. However, additional considerations are involved in this issue. Many aspects of interim reporting relating to allocation of costs are not specifically covered by existing accounting principles. As a result, the task force believes practice in this area is diverse. For example, companies using specific goods LIFO are generally able to determine when a liquidation occurs and recognize the effect at that time. Conversely, companies using dollar value LIFO and following approach (b) in paragraph 8-2 of this paper may include the anticipated effect of liquidations in their overall LIFO calculation and not attempt to identify during the year when liquidations take place. Some of these companies view the annual LIFO adjustment as the same as other types of annual charges that are allocated over interim periods on a rational and logical basis. For example, an effective annual income tax rate (including the effect of projected investment tax credits) is used in all interim periods; depreciation charges are often allocated ratably throughout the year; and, factory overhead rates are often applied on an annual basis. These companies believe it is appropriate to treat the effect of the anticipated liquidation as an integral part of the annual LIFO adjustment. Others believe spreading the effect of the liquidation on this basis is acceptable because the cost of attempting to identify the timing of when liquidations occur do not justify the benefits to be derived.

* * * * * *

8-22. Advisory Conclusion. The task force believes (9 yes, 0 no) that to the extent it can be reasonably determined considering cost-benefit factors involved, a company should recognize the effect of an interim LIFO inventory liquidation not expected to be reinstated by year end in the period in which it occurs. However, the task force also believes (7 yes, 2 no) a company using dollar value LIFO and approach (b) described in paragraph 8-2 may spread the expected effect of the LIFO inventory liquidation using an approach similar to the one it uses for allocating the LIFO adjustment (normally a charge).

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Section Nine:
Miscellaneous Topics

Different Financial and Income Tax Years

9-1. Background. Problems are encountered if a company using LIFO for income tax purposes has a year end for financial reporting purposes different from that for income tax reporting purposes. The other LIFO problems identified in this paper are magnified when year ends differ, for instance, a LIFO inventory liquidation as of the income tax year end that is reinstated by the financial reporting year end. The situation is similar to problems in interim financial reporting when LIFO is used, as described below.

9-2. Issue. May a company whose financial reporting year end differs from its tax year end use for financial reporting purposes the LIFO calculation it uses for income tax purposes?

9-3. Arguments. Some believe the LIFO calculation a company uses for income tax purposes is also valid for financial reporting purposes and that a separate LIFO calculation for financial reporting purposes is unnecessary. (The LIFO charge for any given year for financial reporting purposes would consist of a proration of the LIFO charge used for income tax purposes for the tax year ending within the financial reporting year end and a proration of the estimated LIFO charge for the ensuing tax year.) Following are arguments in support of this position:

- The primary reason for adopting LIFO is to obtain the related income tax benefits. The tax LIFO calculation should therefore be considered acceptable for financial reporting purposes as well.
- Though short run LIFO results could vary if year ends for financial reporting and income tax purposes differed, over the long run the results tend to be about the same.
- Wide variations are possible among various acceptable methods of calculating LIFO. Since no approach has been proven superior, using for financial reporting purposes the LIFO approach used for tax purposes should be acceptable.
- Business judgment may dictate increasing inventory levels at certain times to avoid the adverse tax effect that would otherwise result from inventory liquidations not expected to be reinstated by year end. Using tax LIFO for financial reporting purposes would obviate the need to take similar action

(which may involve additional cost) at some other time during the year to avoid reporting the higher earnings that would otherwise be the effect of temporary inventory liquidations.

- For most companies to maintain two separate LIFO accounting systems would be prohibitively expensive. This added cost cannot be justified though some may believe a separate book calculation would be theoretically superior. For a growing company the LIFO calculation used for financial reporting purposes could typically approximate the LIFO calculation used for income tax purposes.

9-4. Others believe if a company's year end for financial reporting purposes differs from its tax year end, there should be separate LIFO calculations, for the following reasons:

- The concept of a discrete fiscal year for financial reporting purposes is of overriding concern. The LIFO calculation for financial reporting purposes should be based on the inventory amount at the beginning and end of the financial reporting year.
- The LIFO calculations for financial reporting purposes could differ significantly from the LIFO calculations for tax purposes if inventory quantities varied substantially between the two year ends or if the trends of inventory costs changed considerably. Using for financial reporting purposes the LIFO calculations used for income tax purposes might produce unsatisfactory results under such circumstances.
- Financial and income tax accounting differ in many areas. This would be but one more.

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9-5. Advisory Conclusion. The task force believes (8 yes, 1 no) a company whose financial reporting year end differs from its tax year end should make a separate LIFO calculation for financial reporting purposes using its financial reporting year as a discrete period for that purpose.

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Business Combinations Accounted for by the Purchase Method

9-6. Background. APB Opinion 16 (paragraphs 67 and 88 c) requires that inventory acquired in a business combination accounted for by the purchase method should be recorded at its fair value as of the date of the combination; however, the acquired company may be able to carryover its prior LIFO basis for income tax purposes. APB Opinion 16 (paragraph 89) also provides that in valuing assets acquired in a business

combination accounted for by the purchase method, the estimated future tax effects of differences between the tax bases and amounts otherwise appropriate to assign to an asset or a liability are one of the variables in estimating fair value. If it is estimated that the inventory will not be reduced below its level at the acquisition date (no liquidation), a question arises about whether the fair value should be adjusted for the tax basis differential. Some argue that the tax consequences of the difference have been deferred indefinitely, if not permanently; therefore, the differences on a discounted basis equal zero (APB Opinion 16 permits the consideration of timing of tax consequences in determining fair value adjustments). Others believe the probability of future liquidation of the acquired inventory should be the basis for determining if any tax consequences should be considered. A subsequent liquidation that has been tax effected may lead to complex problems in determining the appropriate allocation of the tax consequences between the liquidated portion and the remaining portion.

9-7. Issue. If a company on LIFO is acquired in a business combination accounted for by the purchase method, in which the tax and book bases of the LIFO inventory differ, should the fair value of the inventory be adjusted for the income tax effects of the basis differential if inventory is not expected to be reduced below its acquisition level?

9-8. Arguments. Some believe the fair value of inventory should be adjusted, because providing for a difference in income tax bases in the inventory valuation is consistent with the requirements for valuing other assets acquired in a business combination accounted for by the purchase method. In fact, they point out that if bases differ and the inventory is worth less, the inventory should be presented at the lower amount. They further believe expectations of future events are inherently too uncertain to determine the appropriate basis for stating the inventories. Indeed, they believe demonstrating with reasonable assurance that inventory levels will be maintained or increased in the future is difficult if not impossible.

9-9. Others believe the fair value of inventory should not be adjusted, because APB Opinion 16, which requires consideration of estimated future income tax effects in determining fair value, apparently also allows consideration of all the facts in a given situation, including the extent and timing of liquidations. They believe that since APB Opinion 16 permits discounting, companies can discount the income tax effects to virtually zero if no liquidations are expected in the near future.

Moreover, they believe there should be no accounting requirement to provide for the effects of events not expected to happen.

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9-10. Advisory Conclusion. The task force believes (9 yes, 0 no) an adjustment should be made for the difference in the tax and book bases of LIFO inventory reasonably estimated to be liquidated. However, if near term a liquidation is not probable, such an adjustment is unnecessary because the discounted income tax effects are minimal. APB Opinion 16 provides for those considerations.

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9-11. Issue. If the LIFO method is adopted for the inventory of a company acquired in a business combination accounted for by the purchase method, should the acquired inventory be considered opening inventory or part of purchases for the year in determining the LIFO layers?

9-12. Arguments. Some believe the acquired inventory should be considered opening inventory, because they believe inventory acquired in a business combination is different, in substance, from goods acquired in the normal course of business.

9-13. Others believe the acquired inventory should be considered part of purchases, because they believe inventory acquired in a business combination is substantially similar to other items purchased for an existing pool and, accordingly, should be similarly treated.

9-14. Still others believe the controlling factor should be whether the acquired inventory is to be treated as a new pool or whether the items are similar to and will be combined with an existing pool. If the acquired inventory is to be combined with an existing pool, some believe that it is substantially the same as purchases of existing items for that pool. But, for a new pool, they believe the acquisition should represent the starting point for that pool.

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9-15. Advisory Conclusion. The task force believes (8 yes, 1 no) if inventory of an entity acquired in a business combination accounted for by the purchase method is treated as a separate business unit or a separate LIFO pool, the acquired inventory should be considered the LIFO base inventory. If, however, the acquired inventory is combined into an existing pool, the task force believes (9 yes, 0 no) the acquired inventory should be considered as part of current year's purchases.

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Changes in LIFO Applications

9-16. Background. In adopting LIFO, a company adopts a specified approach (specific goods or dollar value) and a certain computational technique (for example, link chain) and determines the number and content of the pools it will use. Sometimes a company changes the manner in which it applies LIFO. A change from one generally accepted inventory method to another is a change in accounting principle under APB Opinion 20, "Accounting Changes." As to changes in applying each method, APB Opinion 20 states:

> .07 A change in accounting principle results from adoption of a generally accepted accounting principle different from the one used previously for reporting purposes. The term accounting principle includes "not only accounting principles and practices but also the methods of applying them." (emphasis added)
>
> .08 A characteristic of a change in accounting principle is that it concerns a choice from among two or more generally accepted accounting principles. However, neither (a) initial adoption of an accounting principle in recognition of events or transactions occurring for the first time or that previously were immaterial in their effect nor (b) adoption or modification of an accounting principle necessitated by transactions or events that are clearly different in substance from those previously occurring is a change in accounting principle. (emphasis added)

9-17. Examples of changes in LIFO applications include

a change in	specific example
overall LIFO approach	dollar value to specific goods
computational technique under dollar value LIFO	double extension to link chain
approach to accounting for new items	current acquisition cost to reconstructed cost
approach to determining inventory pools	multiple pools to a single pool
approach to calculating change in dollar value index	unit cost to cost component

9-18. Issue. If a company on LIFO changes any of its LIFO applications (approach, computational technique, or the numbers or content of its pools), is such a change a change in an accounting principle under APB Opinion 20?

9-19. Arguments. Some believe a change in a LIFO application is a change in an accounting principle under paragraph 7 of APB Opinion 20. Others believe the criteria

in paragraph 8 of that Opinion are broad enough to preclude a change in a LIFO application from being considered a change in accounting principle. Still others believe the facts and circumstances surrounding the change in a LIFO application should be looked at to determine whether the change in a LIFO application was necessitated by transactions or events substantially different from those previously occurring.

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9-20. Advisory Conclusion. The task force believes (8 yes, 1 no) a change in a LIFO application is a change in an accounting principle under APB Opinion 20 requiring disclosure of the effects of the change on current income unless the change in LIFO application is necessitated by transactions or events substantially different from those previously occurring.

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9-21. Issue. If a change in a LIFO application should be considered a change in an accounting principle, how should the change be recognized?

9-22. Background. APB Opinion 20, paragraph 18, provides that a change in an accounting principle should generally be recognized by including in net income the cumulative effect, based on retroactive computation, of changing to the new principle. APB Opinion 20 discusses several exceptions to the general rule; for instance, paragraph 27 of the Opinion holds that certain changes in accounting principles are such that the advantages of retroactive treatment in prior periods outweigh the disadvantages and, so, all prior periods should be restated. It cites a change from the LIFO method of inventory pricing to another acceptable method.

9-23. Further, paragraph 26 of APB Opinion 20 states that computing the cumulative effect of a change in an accounting principle may in rare situations be impossible. In those cases, the effect of the change on current period results of operations is disclosed only and an explanation for omitting the cumulative effect is given.

9-24. Arguments. Some believe that if a change in a LIFO application should be considered a change in an accounting principle, the change should generally be recognized by including in net income the cumulative effect, based on retroactive computation, of changing to the new principle.

9-25. Others believe that if a change in a LIFO application should be considered a change in an accounting principle, the advantages of retroactive treatment in prior periods outweigh the disadvantages and, therefore, all prior periods from initial adopting of LIFO should be restated.

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9-26. Advisory Conclusion. The task force believes (9 yes, 0 no) if a change in a LIFO application is a change in an accounting principle, generally the effect of the change should be recognized in current net income because the cumulative effect, based on retroactive computation, of changing to the new principle generally would be undeterminable. However, if determinable, the cumulative effect from the time of adopting LIFO may be recognized in current net income as a cumulative catch up adjustment. The effect of the change should be disclosed in accordance with APB Opinion 20.

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Using the LIFO Inventory Cost Flow Assumption in the Income Statement While Using Some Other Generally Accepted Inventory Cost Flow Assumption

9-27. Background. The present LIFO conformity requirement may be interpreted to permit using LIFO to measure cost of sales and another acceptable non-LIFO cost flow assumption for balance sheet presentation of inventories.

9-28. This is a conceptual issue with many ramifications and is beyond the scope of this paper. However, the Task Force on LIFO Inventory Problems plans to develop a separate issues paper that will explore this issue.

APPENDIXES

Link Chain Technique

Item	End. Invty. Quantity	Beginning of Year Unit	Beginning of Year Total	End of Year Cost Unit	End of Year Cost Total	Index
December 31, 19X1						
A	2,000	$ 5.00	$ 10,000	$ 5.50	$ 11,000	
B	1,000	3.00	3,000	3.30	3,300	
C	5,000	4.00	20,000	4.40	22,000	
D	3,000	12.00	36,000	13.20	39,600	
E	6,000	8.00	48,000	8.80	52,800	
F	1,000	8.00	8,000	8.80	8,800	
G	2,000	11.00	22,000	12.10	24,200	
H	10,000	2.00	20,000	2.20	22,000	
			$167,000		$183,700	110.00%
December 31, 19X2						
A	2,200	$ 5.50	$ 12,100	$ 5.40	$ 11,880	
B	800	3.30	2,640	3.50	2,800	
C	5,500	4.40	24,200	4.75	26,125	
D	3,200	13.20	42,240	14.00	44,800	
E	5,000	8.80	40,000	9.00	45,000	
F	1,000	8.80	8,800	8.50	8,500	
G	2,100	12.10	23,100	12.50	26,250	
H	11,000	2.20	24,200	2.50	27,500	
			$183,590		$192,855	105.05%
Cumulative				110.00% x 105.05% =		115.55%
Base year inventory				$192,855/115.55% =		$166,900
December 31, 19X3						
B	1,100	$ 3.50	$ 3,850	$ 3.55	$ 3,905	
C	5,400	4.75	25,650	5.25	28,350	
E	6,200	9.00	55,800	10.10	62,620	
F	1,200	8.50	10,200	8.65	10,380	
G	2,200	12.50	27,500	13.00	28,600	
H	10,500	2.50	26,250	3.00	31,500	
AA	2,500	4.00	10,000	4.20	10,500	
I	3,500	13.00	45,500	13.50	47,250	
			$204,750		$223,105	108.96%
Cumulative				115.55% x 108.96% =		125.91%
Base year inventory				$223,105/125.91% =		$177,195

Base	Beginning of Year Cost	Index	LIFO Amount
Jan. 1, 19X1 Base	$150,000	100.00%	$150,000
19X1 Layer	17,000	110.00%	18,700
Total	$167,000		168,700
Inventory at current cost			183,700
LIFO Reserve			$ 15,000
Jan. 1, 19X1 Base	$150,000	100.00%	$150,000
19X1 Layer	17,000	110.00%	18,700
19X2 Liquidation	(100)	110.00%	(110)
Total	$166,900		168,590
Inventory at current cost			192,855
LIFO Reserve			$ 24,265
Jan. 1, 19X1 Base	$150,000	100.00%	$150,000
19X1 Layer	16,900	110.00%	18,590
19X3 Layer	10,295	125.91%	12,962
Total	$177,195		181,552
Inventory at current cost			223,105
LIFO Reserve			$ 41,553

Double Extension Technique

Item	End. Invty. Quantity	Base Year Cost Unit	Base Year Cost Total	Current Year Cost Unit	Current Year Cost Total	Index	Base	Base Year Cost	Index	LIFO Amount
December 31, 19X1										
A	2,000	$ 5.00	$ 10,000	$ 5.50	$ 11,000					
B	1,000	3.00	3,000	3.30	3,300					
C	5,000	4.00	20,000	4.40	22,000		Jan. 1, 19X1 Base	$150,000	100.00%	$150,000
D	3,000	12.00	36,000	13.20	39,600		19X1 Layer	17,000	110.00%	18,700
E	6,000	8.00	48,000	8.80	52,800		Total	$167,000		168,700
F	1,000	8.00	8,000	8.80	8,800		Inventory at current cost			183,700
G	2,000	11.00	22,000	12.10	24,200					
H	10,000	2.00	20,000	2.20	22,000					$ 15,000
			$167,000		$183,700	110.00%	LIFO Reserve			
December 31, 19X2										
A	2,200	$ 5.00	$ 11,000	$ 5.40	$ 11,880					
B	800	3.00	2,400	3.50	2,800					
C	5,500	4.00	22,000	4.75	26,125		Jan. 1, 19X1 Base	$150,000	100.00%	$150,000
D	3,200	12.00	38,400	14.00	44,800		19X1 Layer	17,000	110.00%	18,700
E	5,000	8.00	40,000	9.00	45,000		19X2 Liquidation	(100)	110.00%	(110)
F	1,000	8.00	8,000	8.50	8,500		Total	$166,900		168,590
G	2,100	11.00	23,100	12.50	26,250		Inventory at current cost			192,855
H	11,000	2.00	22,000	2.50	27,500					
			$166,900		$192,855	115.55%	LIFO Reserve			$ 24,265
December 31, 19X3										
B	1,100	$ 3.00	$ 3,300	$ 3.55	$ 3,905					
C	5,400	4.00	21,600	5.25	28,350		Jan. 1, 19X1 Base	$150,000	100.00%	$150,000
E	6,200	4.00	49,600	10.10	62,620		19X1 Layer	16,900	110.00%	18,590
F	1,200	8.00	9,600	8.65	10,380		19X3 Layer	11,000	125.41%	13,795
G	2,200	11.00	24,200	13.00	28,600		Total	$177,900		182,385
H	10,500	2.00	21,000	3.00	31,500		Inventory at current cost			223,105
AA	2,500	3.54	8,850(1)	4.20	10,500					
I	3,500	11.36	39,750(1)	13.50	47,250		LIFO Reserve			$ 40,720
			$177,900		$223,105	125.41%				

(1) Reconstructed cost

Internal Method

Item	End. Invty. Quantity	Base Year Cost Unit	Base Year Cost Total	Current Year Cost Unit	Current Year Cost Total	Index	LIFO Amount
December 31, 19X3 (Sample of inventory items)							
C	5,400	$ 4.00	$21,600	$ 5.25	$ 28,350		
E	6,200	8.00	49,600	10.10	62,620		
G	2,200	11.00	24,000	13.00	28,600		
H	10,500	2.00	21,000	3.00	31,500		
I	3,500	13.00	45,500	13.50	47,250		
			$161,900		$198,320	122.50%	
	Inventory at current cost				$223,105		
	Index				122.50%		
	Base year cost				$182,126		
	January 1, 19X1 base				$150,000	100.00%	$150,000
	19X1 layer				16,900	110.00%	18,590
	19X3 layer				15,226	122.50%	18,652
	Total				$182,126		187,242
	Inventory at current cost						223,105
	LIFO reserve						$ 35,863

EXTERNAL INDEX METHOD

Year 19X3 ending inventory at current cost	$223,105
Index obtained from source external to company (for instance, under the retail LIFO method, the index may be based on the Bureau of Labor Statistics Department Store indexes by product code. If this were retail LIFO there would also be an adjustment to convert from retail value to cost).	122.50%
Inventory at base year cost	$182,126

	Base year Cost	Applicable external index factor	LIFO Amount
January 1, 19X1 base	$150,000	100.00%	$150,000
19X1 layer	16,900	110.00%	18,590
19X3 layer	15,226	122.50%	18,652
	$182,126		187,242
Inventory at current cost			223,105
LIFO reserve			$ 35,863

COST COMPONENT METHOD

	December 31, 19X5 at current cost	Index	Base year cost
Raw materials	$4,000,000	120%	$3,333,000
Work-in-process and finished goods:			
Material content	2,000,000	120	1,667,000
Direct labor	1,000,000	110	909,000
Overhead	1,500,000	115	1,304,000
	$8,500,000		7,213,000
Composite index		118%	
Base year inventory			6,000,000
Increment at base cost			$1,213,000
Increment at LIFO value ($1,213,000 x 118%)			$1,431,000
Base year inventory			6,000,000
Total LIFO inventory			7,431,000
Inventory at current cost			8,500,000
LIFO reserve			$1,069,000

Overhead index

Indirect labor	$ 900,000	110%	$ 818,000
Fringe benefits	150,000	115	130,000
Utilities	200,000	125	160,000
Packaging material	150,000	130	115,000
Other	100,000	123	81,000
	$1,500,000		$1,304,000
Composite index		115%	

EXAMPLES OF EFFECTS OF PRODUCTIVITY INCREASES AND DECREASES

Schedules A and B compare the effect on inventory pricing under FIFO, cost component LIFO, and double extension LIFO of increases and decreases in productivity.

The examples deal only with labor hours. In FIFO and double extension-product LIFO, the labor hours would be included in the total cost of the product. The effects, however, would be as shown.

The examples demonstrate that in the presence of an increase or a decrease in productivity, the difference between the FIFO inventory value and the cost component technique is the effect of inflation.

The double extension technique offsets the decreases in labor hours (productivity increase) against the increase in cost due to inflation.

In the presence of a productivity decrease (an increase in labor hours), the effect of double extension is to ignore the increase in labor hours.

The difference between the FIFO inventory amount and the double extension inventory amount consists of the inflation increase of $105 plus the increase caused by the increase in labor hours of $50. (Schedule B)

EXAMPLE OF EFFECT OF PRODUCTIVITY INCREASES — SCHEDULE A

	Labor Hours	hourly Rate	FIFO	Cost Component	Double Extension Product Cost
Base period inventory	100	$10.00	$1,000	$1,0000	$1,000
Increase in productivity (Reduction in hours)	(3)	0	(30)	(30)	(30)
	97	$10.00	$ 970	$ 970	$ 970
Labor-rate increase--10%	0	1.00	97	97	97
FIFO inventory amounts	97	$11.00	$1,067	$1,067	$1,067
LIFO index computation				11 / 10 = 110%	$1,067 / $1,000 = 106.7%
LIFO computation				$1,067 / 110%	$1,067 / 106.7%
LIFO amounts				$ 970	$1,000
Reported amount of inventory			$1,067	$ 970	$1,000

EXAMPLE OF EFFECT OF PRODUCTIVITY DECREASES — SCHEDULE B

	Labor Hours	hourly Rate	FIFO	Cost Component	Double Extension Product Cost
Base period inventory	100	$10.00	$1,000	$1,000	$1,000
Productivity decreases (Increases in hours)	5	0	50	50	50
	105	10.00	$1,050	$1,050	$1,050
Labor-rate increase	0	1.00	105	105	105
	105	$11.00	$1,155	$1,155	$1,155
LIFO index				11 / 10 = 110%	$1,155 / $1,000 = 115.5%
LIFO computation				$1,155 / 110%	$1,155 / 115.5% = $1,000
Inventory at base year dollars				$1,050	$1,000
Base period inventory				$1,000	$1,000
Increment				50	-0-
Index				110%	115.5%
				$ 55	$ -0-
Base period inventory				1,000	1,000
Reported amount of inventory			$1,155	$1,055	$1,000

APPLICATION OF LIFO DURING INTERIM PERIODS

The following illustrates the application of different LIFO approaches at interim dates as discussed in section eight. The major assumptions are as follows:

1. The Company maintains its internal accounting records on FIFO makes an "off-line" LIFO conversion. The LIFO inventory is in a single dollar value pool.

2. The actual versus projected rates of price changes experienced by the Company resulted in the following cumulative indexes (or changes in the cost of inventory):

End of	Actual	Projected (annualized)
First quarter	1.00	1.03
Second quarter	1.03	1.06
Third quarter	1.05	1.06
Fourth quarter	1.09	1.09

3. For simplicity it is assumed that actual sales levels were equivalent to projected sales levels by quarter.

4. Increments are based on the earliest acquisition method, which cost is assumed to be that experienced in the first quarter.

5. This is the first year that this company is on LIFO.

The cumulative FIFO inventory activity and results of operations are as follows:

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Beginning inventory	$1,100	$1,100	$1,100	$1,100
Purchases	880	2,300	3,960	5,200
Goods available for sales	$1,980	$3,400	$5,060	$6,300
Ending inventory	1,000	1,300	1,700	1,400
Cost of goods sold	$ 980	$2,100	$3,360	$4,900
Sales	1,400	3,000	4,800	7,000
Gross profit	$ 420	$ 900	$1,440	$2,100
Gross profit %	30%	30%	30%	30%

Projected quarterly and year end calculations of LIFO using actual quarter-end inventories and projected annual inflation (index) are as follows:

	At end of each quarter			
	1	2	3	4
1. Ending FIFO inventory	$1000	$1300	$1700	$1400
2. Index (projected)	1.03	1.06	1.06	1.09
3. Ending inventory at base cost (line 1 divided by line 2)	971	1226	1604	1284
4. Increment or decrement (line 3 minus beginning inventory of $1,100)	(129)	126	504	184
5. Price of increment or discrement (line 4 multiplied by 1.00*)	(129)	126	504	184
6. Ending LIFO inventory ($1,100 plus line 5)	971	1226	1604	1284
7. Cumulative LIFO adjustment (line 1 minus line 6)	$ 29	$ 74	$ 96	$ 116

The fundamental question is how to project and allocate the LIFO adjustment of $116. Some sort of pro rata allocation of annual (or projected annual) LIFO adjustments could be used (method b) or a separate quarterly calculation could be developed (method a). The following is a summary of results under these alternatives. For simplicity in the illustration above and the illustration of method a, it has been assumed that allocation of the annual results to the four quarters is performed after-the-fact or that information is known on a timely basis. As a practical matter such calculations are performed on a prospective basis, without benefit of hindsight. Methods b1, b2, b3, and b4 would require projecting the annual inflation rate and annual activity levels, which may be subject to greater estimation error.

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* Based on earliest acquisition price.

Approach a

The quarterly allocation of the annual LIFO adjustment in this approach is based on year to date computations similar to those performed on an annual basis. The results are computed as follows:

	At the end of each quarter			
	1	2	3	4
1. Ending FIFO inventory	$1,000	$1,300	$1,700	$1,400
2. Index at end of period (actual)	1.00	1.03	1.05	1.09
3. Ending inventory at base cost (line 1 divided by line 2)	1,000	1,262	1,619	1,284
4. Increment or decrement (line 3 minus beginning inventory of $1100)	(100)	162	519	184
5. Price of increment (line 4 multiplied by 1.00*)	-0-	162	519	184
6. Ending LIFO inventory ($1100 plus line 5)	1,100(A)	1,262	1,619	1,284
7. Cumulative LIFO adjustment (line 1 minus line 6)	$ 3(A)	$ 38	$ 81	$ 116

(A) Note that in the first quarter a temporary LIFO liquidation was encountered and it was estimated that the $100 decrement would be replaced for $103 later in the year. (If the liquidation had been assumed to be permanent, the income effect would have "flowed through" in the first quarter under this method. Another alternative considered by the task force would have been to prorate the benefit from the liquidation over the remaining three quarters.)

Therefore, under method a, the LIFO adjustment would be allocated among the periods as follows:

Quarter	Amount	
1	$ 3	
2	35	(38-3)
3	43	(81-35)
4	35	(116-81)
	$116	

* Based on earliest acquisition price.

Under this method, current costs are matched with current revenues in the same manner as that used for annual reporting purposes. However, it should be noted that the use of the earliest acquisition method for costing increments results in subsequent incremental increases in costs incurred later in the year being charged to cost of sales at date of purchase. In this particular example there is an inventory build-up in the third quarter (for sales to be made in the fourth quarter) which build-up results in a charge to income in the third quarter. Such an impact would not have been obtained under the latest acquisition cost method of costing increments.

Approach b

Four ways to apply approach b are illustrated below. The estimate of the annual LIFO adjustment is calculated in a manner similar to the illustration on page 91, except that projected year end inventory of $1400 is used instead of quarter end inventories. The LIFO adjustment is allocated to quarters based on different weighing techniques.

Method b1

Allocate the adjustment (or prospectively, the estimated adjustment) equally among the four quarters. This results in an adjustment in each quarter as follows.

Quarter	Cumulative Weight	Estimate of Annual LIFO Adjustment	Allocation of LIFO Adjustment
1	25%	$41	$ 10
2	50%	79	30
3	75%	79	20
4	100%	116	56
			$116

Method b2

Allocate the adjustment based on projected sales volume. The results in this illustration are:

Quarter	Sales	Cumulative Weight	Allocation of LIFO Adjustment
1	$1,400	20%	$ 8
2	1,600	43	26
3	1,800	69	21
4	2,200	100	61
	$7,000		$116

Method b3

Allocate the adjustment based on FIFO cost of goods sold. The results are:

Quarter	FIFO Cost of Goods Sold	Cumulative Weight	Allocation of LIFO Adjustment
1	$ 980	20%	$ 8
2	1,120	43	26
3	1,260	69	21
4	1,540	100	61
	$4,900		$116

Method b4

Allocate the estimated year-end LIFO adjustment based on projected sales and projected annualized inflation rates by quarter.

	Projected Sales %		Year-to-Date Actual Divided by Projected Inflation for Entire Year	Cumulative Inflation Weighted by Sales (II x III)	Estimate of Annual LIFO Adjustment
Quarter	Qtr. I	Cum. II	III	IV	V
1	20%	20%	0%/3% = 0%	0%	$41
2	23	43	3%/6% = 50%	22	79
3	26	69	5%/6% = 83%	57	79
4	31	100	9%/9% =100	100	116
	100%				

Quarter	Allocation of LIFO Adjustment Cumulative (IV x V)	Quarter
1	0	$ 0
2	17	17
3	45	28
4	116	71
		$116

A comparison of the results derived from following the above-described methods is recapped below:

	Allocation of LIFO Adjustment by Approach				
Quarter	a	b1	b2	b3 (1)	b4
1	$ 3	$ 10	$ 8	$ 8	$ 0
2	35	30	26	26	17
3	43	20	21	21	28
4	35	56	61	61	71
	$116	$116	$116	$116	$116

(1) Method b3 produces the same results as method b2 only because a constant rate of gross profit, in this case 30%, is assumed for simplicity.

LIFO ACCOUNTING - INTERIM RESULTS
Specific Goods Application

Assume:
- Product priced to earn $3/unit (gross margin).
- Purchases of 100 units each quarter.
- Units purchased and sold equal for full year, but unequal within year due to seasonal sales pattern.
- Opening inventory at January 1 of 100 units at $5.00 each unit, or $500 total.
- Increase of $2/unit in purchase and selling prices on April 1.
- LIFO inventory method, with first purchase price approach to pricing increments, and temporary inventory increments calculated as if permanent.

	Units Sold	Revenue Each Unit	Revenue Total	Cost of Sales (See Below)	Gross Margin
1Q	100	$ 8	$ 800	$ 500	$ 300
2Q	100	10	1,000	700	300
3Q	50	10	500	350	150
4Q	150	10	1,500	1050	450
Year	400		$3,800	$2,600	$1,200

	Quarter 1st	2nd	3rd	4th
Beginning inventory	$ 500	$ 500	$ 500	$ 500
Cumulative Purchases	500	1,200	1,900	2,600
Goods available for sales	1,000	1,700	2,400	3,100
Ending inventory	500	500	850*	500
Cumulative cost of goods sold	$ 500	$1,200	$1,550	$2,600
Cost of goods sold for quarter	$ 500	$ 700	$ 350	$1,050

* 100 units @ $5 = $500
50 units @ 7 = 350 (Not priced at $5, earliest acquisition price, since increment is considered temporary)
$850

VARIATION OF DOUBLE EXTENSION METHOD
USE OF SUBSTITUTE BASE YEAR

Item	Ending Inventory Quantity	Base Year Cost Unit	Base Year Cost Total	Current Year Cost Unit	Current Year Cost Total	Index	Base	Base Year Cost	Index	LIFO Amount
December 31, 19X1										
A	2,000	$ 5.00	$ 10,000	$ 5.50	$ 11,000					
B	1,000	3.00	3,000	3.30	3,300					
C	5,000	4.00	20,000	4.40	22,000		January 1, 19X1 base	$150,000	100.00%	$150,000
D	3,000	12.00	36,000	13.20	39,600		19X1	17,000	110.00%	18,700
E	6,000	8.00	48,000	8.80	52,800					
F	1,000	8.00	8,000	8.80	8,800		Total	$167,000		168,700
G	2,000	11.00	22,000	12.10	24,200					
H	10,000	2.00	20,000	2.20	22,000		Inventory at current cost			183,700
			$167,000		$183,700	110.00%	LIFO reserve			$ 15,000

CONVERSION TO JANUARY 1, 19X2 COSTS
AS SUBSTITUTE BASE YEAR

	(1) Old Base Year Cost	(2) % of Total	12/31/X1 FIFO Cost	(4) LIFO Cost	(5) Revised Index
January 1, 19X1 base	$150,000	89.82%	$165,000	$150,000	90.91%
19X1 increment	17,000	10.18%	18,700	18,700	100.00%
Total	$167,000	100.00%	$183,700	$168,700	

(3) Represents new base year cost of layers.
(4) LIFO cost of layers must remain the same.
(5) Represents new indexes associated with prior year layers determined by dividing LIFO cost by new base year cost.

	Revised Summary of Layers		
	New Base Year Cost	Index	LIFO Cost
January 1, 19X1 base	$165,000	90.91%	$150,000
19X1 increment	18,700	100.00%	18,700
Total	$183,700		$168,700

VARIATION OF DOUBLE EXTENSION METHOD
USE OF SUBSTITUTE BASE YEAR

Item	Quantity	New Base Year Unit Cost (1)	New Base Year Extension	Current Year Unit Cost	Current Year Extension	Index
December 31, 19X2						
A	2,200	$ 5.50	$ 12,100	$ 5.40	$ 11,880	
B	800	3.30	2,640	3.50	2,800	
C	5,500	4.40	24,200	4.75	26,125	
D	3,200	13.20	42,240	14.00	44,800	
E	5,000	8.80	44,000	9.00	45,000	
F	1,000	8.80	8,800	8.50	8,500	
G	2,100	12.10	25,410	12.50	26,250	
H	11,000	2.20	24,200	2.50	27,500	
			$183,590		$192,855	105.05%
December 31, 19X3						
B	1,100	$ 3.30	$ 3,630	$ 3.55	$ 3,905	
C	5,400	4.40	23,760	5.25	28,350	
E	6,200	8.80	54,560	10.10	62,620	
F	1,200	8.80	10,560	8.65	10,380	
G	2,200	12.10	26,620	13.00	28,600	
H	10,500	2.20	23,100	3.00	31,500	
AA	2,500	3.90	9,750	4.20	10,500	
I	3,500	12.50	43,750	13.50	47,250	
			$195,730		$223,105	113.99%

Base	Base Year Cost	Index	LIFO Amount
January 1, 19X1 base	$165,000	90.91%	$150,000
19X1 increment	18,700	100.00%	18,700
19X2 liquidation	(110)	100.00%	(110)
Total	$183,590		168,590
Inventory at current cost			192,855
LIFO reserve			$ 24,265(2)
January 1, 19X1 base	$165,000	90.91%	$150,000
19X1 increment	18,590	100.00%	18,590
19X3 increment	12,140	113.99%	13,838
Total	$195,730		182,428
Inventory at current cost			223,105
LIFO reserve			$ 40,677(3)

(1) Represents 12/31/X1 costs.

(2) Note that answer is same as normal double extension (Appendix) and that there is a liquidation immediately after change to new base year.

(3) The LIFO reserve is similar to the normal double extension answer but still less than link chain answer for 19X3. Reason: new items AA and I are inserted in all computations at reinstated cost to be substituted, base year 19X2. The substitute base year calculation and the link chain calculation to a greater degree eliminates the potential income distortions caused by using current year cost for base year cost in the double extension calculation.

GLOSSARY

The following are the essential terms related to LIFO as they are generally defined in practice and used in this paper.

Base Year Cost - the amount of current year's inventory converted to its cost in the year LIFO was adopted.

Conformity Requirement - an Internal Revenue Service code that requires a company that uses LIFO for income tax purposes to use LIFO for financial reporting purposes.

Cost Component Method - a method of applying dollar value LIFO in which changes in the LIFO index are measured by the weighted average increase or decrease in the component costs of material, labor, and overhead that constitute ending inventory.

Dollar Value - an approach to applying LIFO in which inventory items are grouped by pools and are priced in terms of each pool's aggregate base year cost. The result is compared with each pools' aggregate base year cost as of the end of the prior year to determine whether the inventory levels in each pool have increased or decreased.

Double Extension - a technique used in applying dollar value LIFO in which the current and base year costs of each item in inventory are extended, or multiplied, by the units on hand at the current year valuation date.

External Index - a technique used in applying dollar value LIFO in which the dollar value of ending inventory at current year prices is restated to approximate the base year prices using an index determined by an outside source, such as the Bureau of Labor Statistics Index.

Increment - an increase in inventory units (or total base year costs in a pool if dollar value LIFO is used) at the end of a year compared to those at the beginning of the year.

Internal Index - a technique used in applying dollar value LIFO in which the base year cost of ending inventory is determined by applying an index (based on a sample of current year costs to base year costs of items in inventory) to the dollar value of the ending inventory at current year cost.

Inventory Profits - unrealized increases in the amount of inventory held during periods of rising prices when the FIFO method is used.

Last In, First Out (LIFO) - an inventory method whose objective is commonly viewed as charging cost of goods sold with the costs of goods most recently acquired or produced.

LIFO Reserve - the difference between (a) inventory at the lower of LIFO cost or market and (b) inventory at replacement cost or at the lower of some acceptable inventory accounting method (such as FIFO or average cost), or market.

Link Chain - a technique used in applying dollar value LIFO in which the base year cost of ending inventory is determined by applying a cumulative index to the dollar

value of the ending inventory. The cumulative index is the relationship of the current year prices to those of the prior year (based on either double extension or internal index) multiplied by the prior year's cumulative index, causing each year's index to be characterized as a link in a chain of indexes back to the base year.

Liquidation (sometimes called a decrement) - a decrease in inventory units (or total base year costs in a pool if dollar value LIFO is used) at the end of a year compared to those at the beginning of the year.

Natural Business Unit - a LIFO pool, used under dollar value LIFO generally comprising the entire production capacity of the enterprise integrated vertically within one product line, or two or more related product lines, including any material procurement, processing of materials, and selling the produced goods.

Pool - a group of substantially similar inventory items.

Reconstructed Cost - the amount at which items in inventory would have been priced if they had been acquired in the base year.

Replacement Cost - the current cost of replacing inventory or any reasonable approximation, which may be FIFO or average cost, at the lower of cost or market.

Specific Goods - an approach to applying LIFO in which changes in the quantity of individual types of inventory are the bases for determining whether inventory levels have increased or whether a portion of the existing inventory has been liquidated.

Substitute Base Year - a technique in which beginning of year costs in the year of change are used instead of the base year's costs to determine changes in dollar value LIFO pools.

Unit Cost Method - a method of applying dollar value LIFO in which changes in the LIFO index are measured by the weighted average increase or decrease in the unit cost of raw materials, work in process, and finished good inventories.

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