

**TAX ACCOUNTING FOR INVENTORIES AND THE
PHARMACEUTICAL DISTRIBUTION INDUSTRY**

Prepared for

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EXECUTIVE SUMMARY

Background

Healthcare distributors maintain large inventories for a variety of reasons, including: (1) to minimize lags between the time an order is placed and the time it is fulfilled, (2) to create a buffer against uncertainties in supply and demand, and (3) to obtain the best price from suppliers by purchasing in bulk.

In the pharmaceutical distribution industry, where delivery lags can literally be a matter of life and death, inventories play a critical role in ensuring the timely delivery of vital medications to hospitals, pharmacies and other healthcare providers throughout the United States. To assure timely delivery, HDMA member companies maintain 166 strategically located distribution centers throughout the United States.

Accounting for Inventories

For both financial and tax accounting purposes, businesses must distinguish the cost of goods sold during the year from the value of merchandise remaining at the end of the year. When companies purchase and sell high volumes of similar merchandise, it often is impractical to identify specifically the items that have been sold from those remaining in inventory. In such cases, the first-in first out (FIFO) and last-in first-out (LIFO) inventory accounting methods are common cost flow assumptions used for both financial and tax accounting.

Under the LIFO method, it is assumed that the last items produced or acquired are the first items sold, so that cost of goods sold reflects current prices and ending inventory is valued at earlier purchase prices. By comparison, FIFO accounting assumes that the earliest items produced or acquired are the first items sold, so that cost of goods sold reflects earlier purchase prices and ending inventory is valued at current prices.

Based on SEC form 10-K filings compiled by Compustat®, companies that use LIFO accounted for 10 percent of total inventories and 22 percent of total net sales of all public U.S. companies in 2006. LIFO accounting is particularly prevalent in the pharmaceutical distribution industry, with companies using LIFO accounting for 96 percent of inventories and net sales in 2006.

Federal Tax Law

Where specific identification is impractical, federal tax law mandates the use of FIFO inventory accounting unless the taxpayer elects to use LIFO. Taxpayers making the LIFO election must use it consistently, must value inventories at cost (rather than the lower of cost or market), and must not use a method other than LIFO for external reporting (i.e., the "book-tax conformity rule").

Accurate Measurement of Income

During periods of pharmaceutical price inflation, FIFO accounting can result in a mismatching of costs and revenues because prices used to measure costs of good sold are less than replacement cost. By determining revenues at current prices and costs at prior prices, FIFO accounting overstates real income and in effect imposes tax on inflationary gains. By contrast, under LIFO, taxpayers defer recognition of

inflationary gains until inventory is drawn down. For this reason, the U.S. Treasury Department opposes measures that would eliminate the ability of taxpayers to elect the LIFO method of accounting:¹

"Repeal of the LIFO method would include inflationary gains in the value of inventories in the tax base, which is inconsistent with proper income measurement and, more importantly, would disadvantage investment in inventories relative to other forms of investment."

Proposals Affecting LIFO Accounting

In October 2007, House Ways and Means Committee Chairman Charles Rangel introduced H.R. 3970, the "Tax Reduction and Reform Act of 2007." Among other things, the bill would repeal the LIFO election for tax years beginning after the date of enactment. The tax LIFO reserve (i.e., the excess of FIFO cost over LIFO cost) would be required to be included ratably in income (i.e., "recaptured") over an eight-year period starting with the first taxable year beginning after the date of enactment. Thus, the bill would increase taxable income of companies with LIFO inventories in two ways:

1. **Recapture Tax.** Retroactive increase in taxable income due to recapture of historic LIFO reserves; and
2. **Ongoing Tax.** Annual increase in taxable income due to lower cost of goods sold deduction under FIFO as compared to LIFO (during periods of cost inflation).

Separate and apart from the Rangel bill, the Securities and Exchange Commission (SEC) and the Financial Accounting Standards Board (FASB) have taken initial steps toward a likely transition to International Financial Reporting Standards (IFRS) from generally accepted accounting principles (GAAP). IFRS has a balance sheet focus and thus does not permit the use of LIFO to measure the cost of inventories. Consequently, adoption of IFRS would have the effect of repealing the LIFO election for tax purposes because present law limits the LIFO election to companies that use LIFO for financial reporting.

Impact of LIFO repeal on the Pharmaceutical Distribution Industry

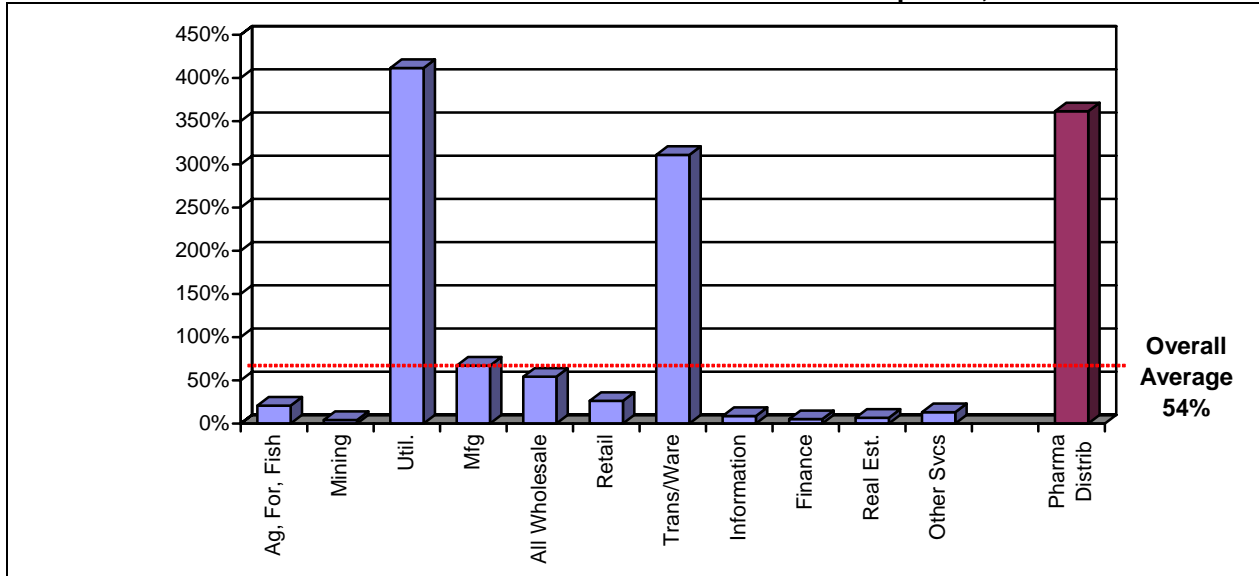
If the LIFO election were repealed legislatively or made unavailable as a result of a transition to international financial reporting standards, the tax impact would vary by company and industry based on the rate of inflation, the age of the company, the importance of inventories as a share of assets, and other characteristics.

Recapture Tax. For all public companies using LIFO, the one-time recapture tax triggered by conversion from LIFO to FIFO is estimated to be 54 percent of reported current federal income tax liability at 2006 levels. However, within the pharmaceutical distribution industry, the recapture tax is estimated to be 361 percent of reported current federal income tax liability at 2006 levels (see Table E-1). Thus, the recapture tax imposed by LIFO repeal would amount to **3.6 years of normal corporate tax payments** within the pharmaceutical distribution industry, as compared to an average of one-half year for all industries.

Ongoing Tax. For all public companies, the ongoing annual tax increase resulting from use of FIFO rather than LIFO accounting is estimated to be 4.9 percent of reported current federal income tax liability at 2006 levels. However, within the distribution industry, the annual increase in tax liability is estimated to be 58 percent (see Table E-2). Thus, repeal of the LIFO election would increase annual federal income liability within the pharmaceutical distribution industry by **12 times** more than the average industry.

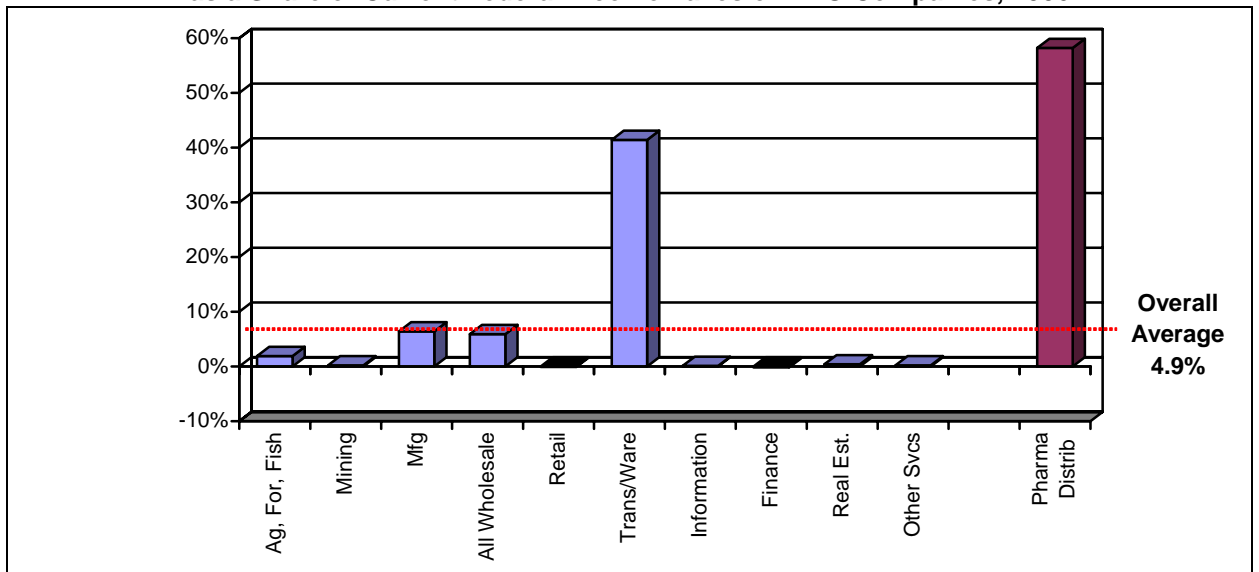
¹ U.S. Department of the Treasury, *Approaches to Improve the Competitiveness of the U.S. Business Tax System for the 21st Century* (December 20, 2007) p. 47 (footnote 63).

Figure E-1. Recapture Tax Attributable to LIFO Repeal as a Share of Current Federal Income Tax of LIFO Companies, 2006



Note: Based on estimated tax LIFO reserves for pharmaceutical distribution industry and book LIFO reserves for other industries. Sources: PricewaterhouseCoopers calculations, Compustat®, and pharmaceutical distribution company financial reports.

Figure E-2. Ongoing Tax Increase Attributable to LIFO Repeal as a Share of Current Federal Income Taxes of LIFO Companies, 2006



Note: Based on estimated tax LIFO reserves for pharmaceutical distribution industry and book LIFO reserves for other industries. Sources: PricewaterhouseCoopers calculations, Compustat®, and pharmaceutical distribution company financial reports.

Conclusion

Repeal of the LIFO election, either as a result of legislation or through adoption of international financial reporting standards, would have a grossly disproportionate impact on the pharmaceutical distribution industry, imposing a retroactive recapture tax estimated to be 3.6 years of normal tax liability as well as an ongoing 58 percent annual tax increase. Such a large tax increase would adversely affect the industry's ability to finance its inventory and to attract capital necessary to serve growing market needs. The impact of LIFO repeal would be exacerbated by the prevalence of multi-year fixed price contracts in the pharmaceutical distribution industry that do not permit adjustment for tax increases.

I. INTRODUCTION

Based on SEC Form 10-K data, companies in the pharmaceutical distribution industry that use the last-in first-out (LIFO) method of accounting represent 96 percent of industry inventories and sales. The industry's heavy reliance on the LIFO method of accounting makes it particularly vulnerable to recent developments that threaten the continued use of this widely accepted inventory accounting method.

Notably, House Ways and Means Committee Chairman Charles Rangel has introduced legislation that would repeal the LIFO election for tax years beginning after the date of enactment. Separately, the Securities and Exchange Commission (SEC) and the Financial Accounting Standards Board (FASB) have taken first steps toward a likely transition to International Financial Reporting Standards (IFRS) from generally accepted accounting principles (GAAP). IFRS does not permit the use of LIFO to measure the cost of inventories. Thus, adoption of IFRS would have the effect of repealing LIFO for tax purposes because present tax law limits election of LIFO to companies that use LIFO for financial reporting. The SEC has announced a roadmap to consider the adoption of IFRS by 2014.

In view of potential restrictions on the use of LIFO accounting, the Healthcare Distribution Management Association commissioned PricewaterhouseCoopers LLP to prepare a study on tax accounting for inventories and its importance to the pharmaceutical distribution industry.

Section II of this report summarizes the tax and financial rules that apply to accounting for inventories. Section III contains financial and operational information about the pharmaceutical distribution industry. Section IV analyzes policy issues raised by repeal of the LIFO election generally as well as the specific effects of the tax on pharmaceutical distributors.

II. INVENTORY ACCOUNTING RULES

A. Background

1. Inventory Accounting

For financial statement purposes, the measurement of gross profit on sales earned during the year is determined by subtracting the cost of goods sold during the year from the total sales for the year. The merchandise that is available for sale during the year, but not sold during that year, is an asset (i.e., ending inventory), which remains on the balance sheet. Likewise, for tax purposes, gross income for a taxpayer that engages in manufacturing, merchandising, or a mining business is equal to total sales less the cost of goods sold.² Thus, for both financial statement and tax purposes, businesses must distinguish the cost of goods that are sold during the year from those that remain on hand at the end of the year.

The process of measuring the cost and value of a company's beginning and ending inventory and the cost of goods that have been sold during the year is broadly referred to as inventory accounting. The relationship between beginning inventory, purchases, cost of goods sold, and ending inventory is given by the following formula:

$$\text{Beginning Inventory} + \text{Purchases} - \text{Ending Inventory} = \text{Cost of Goods Sold.}$$

A company's beginning inventory is a known quantity because it is equal to the prior period's ending inventory. Similarly, the cost of purchases made during the year is generally known. Thus, the key step to determine a business' cost of goods sold is determining ending inventory.

Where companies purchase and sell high volumes of similar merchandise, it often is not practical to identify specifically the items that have been sold from those that remain in ending inventory. This is particularly true in the pharmaceutical distribution industry given the large volumes and the lack of individually serialized units in inventory. In such cases, to establish the dollar amount of the cost of merchandise remaining in ending inventory and the cost of goods that have been sold, inventory accounting generally uses cost flow assumptions that do not reflect the actual physical flow of goods and costs. The first-in first-out (FIFO) and last-in first-out (LIFO) inventory methods are common cost flow assumptions used by businesses for both financial statement and tax purposes.

2. LIFO Accounting

Under the LIFO method, it is assumed that the last items produced or acquired are the first items sold. Thus, the cost of the goods sold during the year is determined by reference to the items produced or purchased most recently and the ending inventory is valued at the earliest purchase prices. For that reason, the LIFO method allows a taxpayer to match its current revenues against its current costs (i.e., the cost of its most recently purchased or produced goods).

3. FIFO Accounting

In comparison to LIFO accounting, FIFO accounting assumes that each item removed from inventory is the earliest item placed into inventory and that the value of that item is the cost incurred at the earlier time. Accordingly, the ending inventory under the FIFO method is valued at the most recent prices. As a result, with rising prices, FIFO has the effect of realizing inflationary inventory profits that must be reported as taxable income. In other words, the FIFO method does not match current revenues with current costs. Instead, the historical cost of the inventory item is matched to current revenues.

² See Treasury Regulation section 1.61-3.

4. LIFO vs. FIFO Accounting

Given rising prices, the LIFO method will result in a higher cost of goods sold and hence lower net income than the FIFO method. As a result, when a taxpayer using the LIFO inventory method experiences rising prices to produce or acquire its inventory, the higher priced inventory is included in cost of good sold and the inflationary gain associated with the goods contained in the beginning inventory is not reflected in taxable income. Instead, the inflationary gain is deferred in ending inventory until a future period when those goods are deemed to be sold.

Consequently, the LIFO method, as compared to the FIFO method, better matches a business' current costs against current receipts. Thus, it has been recognized that the LIFO inventory method may be the "most accurate measure of income during periods of inflation."³ In fact, Congress recognized this in 1984 when it enacted section 474. At that time, Congress considered LIFO "the current method of accounting for inventory that most effectively mitigates the effect of inflation on business" and concluded that LIFO should be simplified and "made more available to all taxpayers."⁴

Likewise, because LIFO has the effect of matching current costs against current receipts; it also tends to reduce losses during periods of declining prices. As a result, the LIFO inventory method levels out the hills and valleys in earnings due to changes in prices of inventory so that the results from current operations reflect as nearly as possible current market conditions.⁵

As indicated above, by matching current costs against current sales, the LIFO method defers the gains "associated with inventory profits" (i.e., profits that arise solely due to items in beginning inventory having a low historical cost as compared to the current replacement cost of the item). In turn, the deferral of the inventory profit better enables a taxpayer to reinvest the inventory profit into replacement inventory.

5. Example

The following example illustrates how a business' cost flow assumption (i.e., LIFO or FIFO) will affect the determination of ending inventory and hence cost of goods sold.

Assume that a taxpayer has 200 units of merchandise in beginning inventory at a cost of \$1.00 per unit (i.e., beginning inventory is \$200). During the year, the taxpayer purchases 150 units with a per unit price of \$1.07 (the 7 percent increase in price is attributable to inflation) and sells 100 units for \$1.10 each.

Under FIFO, the taxpayer's cost of goods sold will be \$1.00 per unit or \$100 in total, based on the acquisition price of units in beginning inventory. By contrast, under LIFO, the taxpayer's cost of goods sold will be \$1.07 per unit or \$107 in total, based on the acquisition price of units purchased during the current year (see **Table II.1**, below). As a result, the taxpayer would have \$10 of profit under FIFO (\$110 of receipts less \$100 of costs of goods sold) and \$3 of profit under LIFO (\$110 less \$107). In effect, use of FIFO for tax purposes results in the current imposition of tax on the 7-percent inflation in the cost of purchasing units for resale, while use of LIFO defers taxation of this gain.

³ "Giving Life to LIFO: Adoption of the LIFO Method of Inventory Valuation by the Income Tax Code," 60 *TaxL* 781 (Spring 2007) citing Staff of J. Comm on Taxation, 100th Cong., *Description of Possible Options to Increase Revenues*, Prepared for the Committee on Ways and Means, JCS-17-87.

⁴ Staff of Joint Committee on Taxation, 100th Cong., *General Explanation of the Tax Reform Act of 1986* JCS-10-87-482 (1987).

⁵ Giving Life to LIFO, *supra*; Arundel Cotter, "Inventories, Oil Industry Considers 'Last in, First Out' System to Level Out Earnings," *Wall Street Journal* Mar. 19, 1935 at 6.

Table II.1—Example of FIFO and LIFO Inventory Accounting

Item	Units	Unit price	Value
Beginning-of-year inventory	200	\$1.00	\$200.00
Transactions during year:			
Purchases	150	\$1.07	\$160.50
Sales	100	\$1.10	\$110.00
End-of-year inventory:			
LIFO	<u>250</u>		<u>\$253.50</u>
Layer 1	200	\$1.00	\$200.00
Layer 2	50	\$1.07	\$53.50
FIFO	<u>250</u>		<u>\$260.50</u>
Layer 1	100	\$1.00	\$100.00
Layer 2	150	\$1.07	\$160.50
Cost of goods sold¹			
LIFO	100	\$1.07	\$107.00
FIFO	100	\$1.00	\$100.00
Profits²			
LIFO			\$3.00
FIFO			\$10.00
Memorandum:			
LIFO Reserve ³			\$7.00

¹ Beginning-of-year inventory plus purchases less end-of-year inventory.

² Sales less cost of goods sold.

³ FIFO less LIFO ending inventory

Under Generally Accepted Accounting Principles (GAAP), companies using LIFO inventory accounting are required to report the difference in the value of inventory using LIFO and FIFO, or the "LIFO reserve." In the example above, the LIFO reserve equals \$7.00 (\$260.50 - \$253.50).

B. Generally Accepted Accounting Principles (GAAP)

The acceptability of the LIFO inventory method is well established in the authoritative accounting literature. According to Accounting Research Bulletin 43 (ARB 43) "a major objective of accounting for inventories is the proper determination of income through the process of matching appropriate costs against revenue."⁶ ARB 43 also states "[c]ost 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 and last-in first-out); the major objective in selecting a method should be to choose the one which, under the circumstances, most clearly reflects periodic income."⁷

ARB 43 recognizes that matching the precise cost of the item sold against the revenue from the sale (i.e., specific identification) may not produce the most useful financial information, particularly in those instances where the materials purchased in various lots are identical and interchangeable. As indicated above, in such cases, the specific identification of cost related to an item that is sold is impractical since the identity of the goods is most likely lost between the time of acquisition and the time of sale.

⁶ See Accounting Research Bulletin (ARB) No. 43, Chapter 4, Statement 2.

⁷ See ARB No. 43, Chapter 4, Statement 4.

C. International Financial Reporting Standards (IFRS)

International Accounting Standard (IAS) number 2 generally provides that "inventories shall be assigned by using FIFO or a weighted average cost formula."⁸ The preface indicates that the standard "does not permit the use of LIFO to measure the cost of inventories."⁹ The objective of the international standard is to properly state "the amount of cost to be recognized as an asset and carried forward until the related revenues are recognized." In other words, the objective is focused on presenting the balance sheet, rather than deriving a measure of current income. Although a balance sheet focus may be appropriate or even preferable for financial reporting purposes, it is not necessarily appropriate for tax purposes.

The increasing worldwide acceptance of IFRS and U.S. investors' increasing ownership of securities issued by foreign companies that report using IFRS led the SEC on August 27, 2008, to vote to publish for public comment a proposed "Roadmap" that could lead to the use of IFRS by U.S. issuers starting in 2014, depending on whether specific milestones are achieved. The SEC has further indicated that it will make a decision in 2011 on whether adoption of IFRS is in the public interest and would benefit investors.

The goal of *tax* accounting methods, as compared to financial accounting, is to compute taxable income for the taxable period, i.e., to match properly current revenues with current costs to determine current taxable income.¹⁰ The LIFO inventory method does this by matching current revenues against current costs. The Supreme Court has recognized that the underlying goals and functions of accounting as it relates to computing Federal income taxes may diverge from accounting for financial reporting purposes.¹¹

D. Federal Income Taxation Principles

Generally, a taxpayer is required to account for inventories at the beginning and end of each taxable year in every case in which the production, purchase, or sale of merchandise is an income-producing factor.¹² Where specific identification is impractical, federal tax law mandates the use of FIFO inventory accounting unless the taxpayer elects to use the LIFO method. Taxpayers making the LIFO election must use it consistently, must value inventories at cost (rather than the lower of cost or market), and must not use a method other than LIFO for external reporting.

As a result of the book-tax LIFO conformity rule, adoption of IFRS would have the effect of repealing the LIFO election for tax purposes.

E. Utilization of Inventory Accounting Methods: Recent U.S. Experience

While only 387 of the more than 9000 public companies listed in the Compustat® database reported using LIFO for some portion of their inventory in 2006, these companies accounted for 10 percent of total inventories and 22 percent of net sales (see **Table II.2**).

The industries where LIFO is prevalent include manufacturing, trade, and agriculture. Within the manufacturing and trade sectors, companies using LIFO account for 31 percent of inventories and 36 percent of net sales. In the pharmaceutical distribution industry, companies using LIFO represent 96 percent of inventory and net sales.

⁸ See IAS 2.25. IAS 2 also provides that the cost of inventories of items that are not ordinarily interchangeable and goods or services produced and segregated for specific projects must be assigned by using specific identification of their individual costs.

⁹ See IAS 2, IN 13.

¹⁰ See *INDOPCO, Inc. v. Commissioner*, 503 U.S. 79 (1992); *Knight-Ridder Newspapers, Inc. v. U.S.*, 743 F.2d 781 (11th Cir. 1984),

¹¹ See *Thor Power Tool Co. v. Commissioner*, 439 U.S. 522, 542-543 (1979).

¹² See section 1.471-1.

Table II.2—Utilization of LIFO by Public Companies, 2006

NAICS Code	Industry	Companies with LIFO Reserves		
		Count	Share of Total Inventories	Share of Industry Net Sales
11	Agriculture, Forestry, Fishing and Hunting	2	51%	44%
21	Mining	5	7%	9%
22	Utilities	1	1%	1%
23	Construction	0	0%	0%
31-33	Manufacturing	299	32%	38%
42	Wholesale Trade	28	44%	47%
	424210--Drugs and Druggists' Sundries			
	Merchant Wholesalers	3	96%	96%
44-45	Retail Trade	34	22%	22%
48-49	Transportation and Warehousing	2	1%	1%
51	Information	7	1%	1%
52	Finance and Insurance	1	0%	0%
53	Real Estate and Rental and Leasing	2	1%	3%
54	Professional, Scientific, and Technical Services	1	0%	0%
56	Administrative and Support and Waste Management and Remediation Services	0	0%	0%
61	Education Services	0	0%	0%
62	Health Care and Social Assistance	0	0%	0%
71	Arts, Entertainment, and Recreation	0	0%	0%
72	Accommodation and Food Services	0	0%	0%
81	Other Services (except Public Administration)	0	0%	0%
99	Other	5	61%	66%
Totals				
	All industries	387	10%	22%
	Manufacturing and trade	361	31%	36%

Source: PricewaterhouseCoopers tabulations of financial statement information compiled in Compustat®.

Manufacturing and trade includes industries in the manufacturing, wholesale trade, and retail trade industries (NAICS codes 31 through 45).

III. PHARMACEUTICAL DISTRIBUTION INDUSTRY

U.S. healthcare distributors deliver prescription medicines and other products to medical providers. HDMA members alone ensure that 13 million prescription medicines and healthcare products are delivered to more than 144,000 pharmacies, hospitals, and other healthcare providers across the United States on a daily basis. The primary objectives of pharmaceutical distributors are to:

- Ensure the accurate, timely, and safe delivery of products needed to diagnose, prevent, and treat illnesses; and
- Distribute products as efficiently and economically as possible.

By providing daily delivery, high service levels, and business efficiencies in a sophisticated and highly valuable supply chain, Booz Allen Hamilton estimates that pharmaceutical distributors save the nation's healthcare system \$34 billion per year.¹³

In 2006, total U.S. pharmaceutical sales were more than \$275 billion, of which sales by pharmaceutical distributors were approximately \$223 billion (80 percent).¹⁴ HDMA members include approximately 40 local, regional, and national distributors with 166 strategically located distribution centers.¹⁵

Chain and independent drug stores account for 60 percent of the pharmaceutical distribution industry's sales; hospitals, HMOs, clinics, and nursing homes account for an additional 26 percent; and the remaining 14 percent is sold to government providers, to mail order fulfillment centers, and other customers (see **Table III.1**).

Table III.1 Pharmaceutical Distribution Industry, Customers by Category, 2004-6

	2004		2005		2006	
	(\$billion)	Percent of Total	(\$billion)	Percent of Total	(\$billion)	Percent of Total
Chain Sales	\$63.5	34.3%	\$78.5	38.9%	\$91.2	40.9%
Independent drug stores	29.1	15.7%	37.8	18.7%	41.9	18.8%
Hospitals and HMOs	39.8	21.5%	34.3	17.0%	35.0	15.7%
Clinics and nursing homes	26.4	14.3%	20.7	10.2%	23.2	10.4%
Mail Order/PBMs	10.7	5.8%	12.6	6.2%	16.3	7.3%
Government sales	6.2	3.4%	8.4	4.2%	8.7	3.9%
Other customers	9.4	5.1%	9.4	4.7%	6.7	3.0%
Total Sales	\$185.1	100.0%	\$201.7	100.0%	\$223.0	100.0%

Source: HDMA Foundation, *2006-2007 HDMA Factbook: Industry Overview*, and information from HDMA website.

The pharmaceutical distribution industry provides various types of sales contracts to meet specific needs of different customers. These include annual contracts and long-term (3-5 year) national contracts. None of these contracts permit the pass-through of income tax changes. As a result, pharmaceutical distributors generally will be required to absorb any new taxes during the contract term.

¹³ Booz Allen Hamilton, *The Role of Distributors in the U.S. Healthcare Industry*, study prepared for HDMA, 2007.

¹⁴ HDMA website, accessed June 2008.

¹⁵ HDMA, *The Vital Link in Healthcare: The Value of Distribution*, 2008.

The pharmaceutical distribution industry is a high volume, high value industry with exceptionally low profit margins. In 2006, the industry's sales were approximately \$223 billion, and the after-tax profit margin in the industry for these sales was only 1.1 percent.¹⁶ Industry profits are primarily derived from three primary sources: (1) buying revenue (e.g., gain on distributors' inventories during periods of rising prices); (2) selling revenue; and (3) fee-for-services revenue, which is a relatively new fee often received from manufacturers for handling the distribution of their product. The pharmaceutical distribution industry's buying revenue has greatly diminished over the last few years, while fee-for-services revenue has become more prevalent, primarily on the branded side of the business, not the generic side.

A. Competitive Environment/Industry Consolidation

1. Internal Competition

Intense competitive pressure and the need for increased economies of scale has led to the number of primary full-service distributor members decreasing by more than 50 percent, from approximately 100 distributors in the early 1990s to approximately 40 distributors in 2007. Most prescription medicine sales are to nationwide chains (as shown in Table III.1), meaning that distributors must compete with each other in a national marketplace. As such, the increased importance of nationwide chains and the decreased number of distributors demonstrates how competition among the pharmaceutical distributors has intensified.

2. External Competition

Approximately 20 percent of prescription medicines are shipped directly by manufacturers to customers. Pharmaceutical distributors provide expedited access to medicines by maintaining centralized storage facilities throughout the United States. These facilities help ensure that patients are able to obtain their prescriptions in a timely manner.

B. Government Regulation

The pharmaceutical distribution industry is heavily regulated at both the federal and state levels. At the federal level, the industry is regulated by various agencies, including the Food and Drug Administration and the Drug Enforcement Administration. The industry also must comply with rules and licensing requirements promulgated in the states prior to conducting distribution activities. Although these federal and state agencies are focused on protecting consumers, they often add significant additional administrative requirements on pharmaceutical distributors.

¹⁶ HDMA Foundation, *2007-2008 Factbook*.

IV. POLICY ISSUES

A. Accurate Measurement of Income

Distributors maintain inventories for a variety of reasons, including: (1) to minimize lags between the time an order is placed and the time it is fulfilled, (2) to create a buffer against uncertainties in supply and demand, and (3) to obtain the best price from suppliers by purchasing in bulk.

In the pharmaceutical distribution industry, inventories play a critical role in ensuring the timely delivery of vital medications to hospitals and pharmacies throughout the United States. In the case of pharmaceuticals, delivery lags can literally be a matter of life and death. To assure timely delivery, HDMA member companies maintain 166 strategically located distribution centers throughout the United States.

Federal tax law does not permit distributors to deduct the cost of inventory when purchased from suppliers; instead, taxpayers must use an inventory method of accounting. The purpose of inventory accounting is to match the recognition of costs to revenues in order to obtain an appropriate periodic measure of income. Where specific identification is impractical, federal tax law mandates the use of FIFO inventory accounting unless the taxpayer elects to use LIFO.

During periods of inflation, which in recent decades has been common in the pharmaceutical industry, FIFO accounting can result in a mismatching of costs and revenues because prices used to measure costs of good sold are less than replacement cost. By determining revenues at current prices and costs at prior prices, FIFO accounting overstates real income and in effect imposes tax on inflationary gains.

Considering the example in Section II.A, the taxpayer sells 100 units for \$110 and under FIFO accounting values those goods at \$100. The taxpayer will pay tax on the \$7 of gain attributable to inflation and the \$3 in income attributable to value added. By contrast, LIFO accounting will result in \$3 of income (\$110 less \$107) which corresponds to real, net of inflation income. Note that a taxpayer using LIFO accounting ultimately will be taxed on inflationary gains when the units purchased for \$1.00 each are deemed sold (due to a drawdown of inventory). Consequently, LIFO defers, but does *not* eliminate taxation of inflationary gains.

In the case of certain other non-inventory assets, Congress has adopted special rules that are intended to defer taxation of inflationary gains. For example, under Code section 1031, no gain is recognized on the exchange of property held for productive use in a trade or business or for investment if exchanged solely for property of like kind and like use. This defers gain recognition much like LIFO accounting for inventoried assets.

As another example, Code section 168 permits taxpayers to depreciate equipment using accelerated methods of cost recovery. Accelerated methods of depreciation compensate for the fact that depreciation deductions are not adjusted for inflation and thus lose value during inflationary periods. Similarly, LIFO accounting compensates for the impact of inflation on tax liability by deferring recognition of gain until LIFO inventories are liquidated.

In summary, repeal of the LIFO method of accounting would eliminate the ability of taxpayers to defer taxation of inflationary gains attributable to their inventoried assets and would result in higher tax burdens on investments in inventory as compared to equipment (for which accelerated depreciation is allowed). For these reasons, the Treasury Department supports retention of the LIFO method of accounting.¹⁷

¹⁷ U.S. Department of the Treasury, *Approaches to Improve the Competitiveness of the U.S. Business Tax System for the 21st Century* (December 20, 2007) p. 47 (footnote 63).

"Repeal of the LIFO method would include inflationary gains in the value of inventories in the tax base, which is inconsistent with proper income measurement and, more importantly, would disadvantage investment in inventories relative to other forms of investment."

B. Inter-Industry Comparison

In October 2007, House Ways and Means Committee Chairman Charles Rangel introduced H.R. 3970, the "Tax Reduction and Reform Act of 2007." Among other things, the bill would repeal the individual alternative minimum tax and increase the standard deduction financed on a revenue neutral basis with an increase in the income tax rates applicable to high-income individuals. With respect to corporations, the bill would broaden the corporate tax base by repealing the LIFO election and the domestic manufacturing deduction among other things and use the revenue to reduce the top corporate tax rate to 30.5 percent.

The Rangel bill would repeal the LIFO election for tax years beginning after the date of enactment. The tax LIFO reserve (i.e., the excess of FIFO cost over LIFO cost) would be required to be included ratably in income over an eight-year period starting with the first taxable year beginning after the date of enactment. Thus, the bill would increase taxable income of taxpayers with LIFO inventories in two ways:

1. **Recapture effect.** Transitional increase in taxable income due to recapture of historic LIFO reserves; and
2. **Ongoing effect.** Annual increase in taxable income due to reduction in cost of goods sold deduction computed under FIFO as compared to LIFO accounting method.

The tax burden imposed by LIFO's repeal would vary by company and industry based on industry-specific inflation, the importance of inventories as a share of assets, inventory holding patterns, and other characteristics.

1. **Book LIFO Reserves**

Companies relying on LIFO to value a portion of their inventories report the LIFO reserve in their financial statements. To assess the importance of LIFO across industries, we have tabulated data from financial statements on companies that use LIFO (see Table **IV.B.1**). As described in the first section of the report, 387 public companies reported LIFO reserves on their balance sheets in 2006. Public companies in the manufacturing sector reported LIFO reserves of over \$72.3 billion in 2006; in the wholesale sector, \$2.7 billion; and in the retail sector, \$3.1 billion. The figures in **Table IV.B.1** understate the use of LIFO because they do not include values for private companies including many distributors, such as car dealerships, that typically are not publicly traded.

The importance of LIFO reserves to company balance sheets varied across industries in 2006. Overall, LIFO reserves represented 18.6 percent of total inventories of companies that used LIFO for some portion of inventories. In other words, the elimination of LIFO would cause the inventory valuations of companies using LIFO to increase by 18.6 percent.

Table IV.B.1 LIFO Reserves on Financial Statements of Public Companies, 2006

NAICS Code	Industry	LIFO Reserve	
		Value (\$ millions)	Percent of Total Inventory
11	Agriculture, Forestry, Fishing and Hunting	\$97	5.0%
21	Mining	\$225	8.2%
22	Utilities	\$76	18.8%
23	Construction	\$0	NA
31-33	Manufacturing	\$72,310	22.8%
42	Wholesale Trade	\$2,704	9.1%
44-45	Retail Trade	\$3,120	7.0%
48-49	Transportation and Warehousing	\$117	86.7%
51	Information	\$128	28.5%
52	Finance and Insurance	\$156	61.8%
53	Real Estate and Rental and Leasing	\$18	23.4%
54	Professional, Scientific, and Technical Services	*	4.2%
56	Administrative and Support and Waste Management and Remediation Services	\$0	NA
61	Education Services	\$0	NA
62	Health Care and Social Assistance	\$0	NA
71	Arts, Entertainment, and Recreation	\$0	NA
72	Accommodation and Food Services	\$0	NA
81	Other Services (except Public Administration)	\$0	NA
99	Other	\$1,893	5.1%
Totals			
	All industries	\$80,845	18.6%
	Manufacturing and trade	\$78,134	19.9%

* Less than \$0.5 million.

Source: PricewaterhouseCoopers tabulations of financial information compiled in Compustat ®.

Manufacturing and trade includes industries in the manufacturing, wholesale trade, and retail trade industries (NAICS codes 31 through 45).

The change in LIFO reserves for a year represents the excess of costs of goods sold determined under the LIFO versus the FIFO method for the year and thus the difference in book incomes caused by the use of FIFO instead of LIFO.

Since 2000, LIFO reserves have grown at an average annual rate of 10 percent across all industries. **Table IV.B.2** shows the average change in LIFO reserves over the 2000-2006 period at 2006 levels. Based on the historic growth rate of LIFO reserves, costs of goods sold in 2006 would have been \$8 billion less for public companies if FIFO rather than LIFO had been used in 2006, resulting in an increase in pre-tax income of 1.7 percent for companies using LIFO. Wholesale trade, transportation and warehousing, and manufacturing would have seen the largest percentage changes in pretax book income as a result of switching from LIFO to FIFO.

Table IV.B.2. Average Change in LIFO Reserves at 2006 Levels, by Industry

NAICS Code	Industry	LIFO Reserve, 2006 (\$millions)	Average Change in LIFO Reserves at 2006 Levels	
			Amount ^a (\$millions)	Share of Pretax Income
11	Agriculture, Forestry, Fishing and Hunting	\$97	\$9	0.9%
21	Mining	225	10	0.1%
22	Utilities	76	NA	NA
23	Construction	0	NA	NA
31-33	Manufacturing	72,310	6,950	2.1%
42	Wholesale Trade	2,704	293	3.4%
44-45	Retail Trade	3,120	-17	-0.1%
48-49	Transportation and Warehousing	117	16	5.3%
51	Information	128	1	0.1%
52	Finance and Insurance	156	-7	-0.2%
53	Real Estate and Rental and Leasing	18	1	0.3%
54	Professional, Scientific, and Technical Services	*	*	0.1%
56	Administrative and Support and Waste Management and Remediation Services	0	NA	NA
61	Education Services	0	NA	NA
62	Health Care and Social Assistance	0	NA	NA
71	Arts, Entertainment, and Recreation	0	NA	NA
72	Accommodation and Food Services	0	NA	NA
81	Other Services (except Public Administration)	0	NA	NA
99	Other	1,893	23	0.0%
Totals				
	All industries	\$80,845	\$7,279	1.7%
	Manufacturing and trade	78,134	7,227	2.0%

* Less than \$500,000 or 0.05 percent.

^a Average percentage change in LIFO reserves over 2000-2006 period times 2006 LIFO reserve.

Source: Compustat® and PricewaterhouseCoopers calculations. **Manufacturing and trade** includes industries in the manufacturing, wholesale trade, and retail trade industries (NAICS codes 31 through 45).

2. *Effect of LIFO Repeal on Tax Liability, All Industries*

The tax effect of LIFO repeal can be estimated for public companies using SEC 10-K information under the assumption that book and tax LIFO reserves are equal. Differences in tax and book LIFO reserves may occur for a variety of reasons including recognition for book (but not tax) of inventory gain in corporate acquisitions, and use of the Inventory Price Index Computation (IPIC) method for calculating LIFO reserves for tax (but not book) purposes. Typically tax LIFO reserves will be greater than book LIFO reserves for these reasons.

In cases where there is a material difference in the value of inventories for book and tax purposes, the associated deferred tax liability is specifically identified in the company's deferred tax account and its public filings; if not material, this information is not identified in its public filings such as SEC form 10-Ks. Consequently, use of SEC data to estimate the tax impact of LIFO election repeal understates the actual increase in tax liability.

If the LIFO election had been repealed effective for fiscal year 2006, we estimate that the recapture tax on public companies would have amounted to \$28.3 billion based on book LIFO reserves and a 35-percent corporate tax rate. The recapture tax amounts to 54 percent of total 2006 federal income tax liability reported by public companies. The ongoing tax increase associated with LIFO repeal is estimated to be \$2.5 billion each year at 2006 levels, increasing federal income tax liability by 4.9 percent (see **Table IV.B.3**).

Within the manufacturing and trade sector, repeal of the LIFO election in 2006 would have imposed a recapture tax of \$27.3 billion, representing 63 percent of 2006 book tax liability, and an ongoing annual tax increase of \$2.5 billion at 2006 levels, representing a 5.8 percent increase in book tax liability.

Table IV.B.3 Effect of LIFO Repeal on Tax Liability at 2006 Levels by Industry
[Based on book LIFO reserves and tax liability]

NAICS Code	Industry	Transition effect (recapture tax)			Ongoing effect	
		Amount (\$ millions)	Share of Pretax book Income	% of federal income tax ^a	Amount (\$ millions)	% of federal income tax ^a
11	Agriculture, Forestry, Fishing and Hunting	\$34	3.5%	21%	\$3	1.9%
21	Mining	\$79	0.6%	4%	\$3	0.2%
22	Utilities	\$27	2.0%	411%	NA	NA
23	Construction	\$0	NA	NA	NA	NA
31-33	Manufacturing	\$25,309	7.5%	67%	\$2,433	6.4%
42	Wholesale Trade	\$946	10.9%	54%	\$103	5.9%
44-45	Retail Trade	\$1,092	6.9%	26%	-6	-0.1%
48-49	Transportation and Warehousing	\$41	13.9%	311%	5	41.4%
51	Information	\$45	3.8%	9%	0	0.1%
52	Finance and Insurance	\$55	1.2%	5%	-2	-0.2%
53	Real Estate and Rental and Leasing	\$6	2.2%	7%	0	0.4%
54	Professional, Scientific, and Technical Services	0	-0.6%	-5%	0	0.2%
56	Administrative and Support and Waste Management and Remediation Services	0	NA	NA	NA	NA
61	Education Services	0	NA	NA	NA	NA
62	Health Care and Social Assistance	0	NA	NA	NA	NA
71	Arts, Entertainment, and Recreation	0	NA	NA	NA	NA
72	Accommodation and Food Services	0	NA	NA	NA	NA
81	Other Services (except Public Administration)	0	NA	NA	NA	NA
99	Other	\$662	1.3%	13%	\$8	0.2%
Totals						
	All industries	\$28,296	6.5%	54%	\$2,548	4.9%
	Manufacturing and trade	\$27,347	7.5%	63%	\$2,529	5.8%

^a Based on current provision for federal income tax per financial statement.

Note: Calculations assume a 35-percent tax rate and are based on book LIFO reserves. **Manufacturing and trade** includes industries in the manufacturing, wholesale trade, and retail trade industries (NAICS codes 31 through 45).

Source: Compustat® and PricewaterhouseCoopers calculations.

3. Effect of LIFO Repeal on Tax Liability of the Pharmaceutical Distribution Industry

As discussed above, differences between tax and financial accounting rules can cause book and tax LIFO reserves to differ, and where material, such differences are identified in the deferred tax account. Within the pharmaceutical distribution industry, companies that use LIFO report the effect of book-tax differences on deferred tax liabilities. This deferred tax information can be used to estimate more accurately the tax effect of LIFO repeal within the pharmaceutical distribution industry as compared with other industries.

For public healthcare distributors that report use of LIFO accounting, the tax LIFO reserve is estimated as the book LIFO reserve plus the deferred tax liability attributable to inventories grossed up at the company's effective tax rate as indicated in the tax footnote to the financial statement.

The recapture tax attributable to LIFO repeal is calculated by multiplying the estimated tax LIFO reserve at 2006 levels by the effective tax rate. For public pharmaceutical distributors that use LIFO accounting, the recapture tax attributable to LIFO repeal is estimated to be \$2.4 billion at 2006 levels, or over three times reported current federal income tax liability (361 percent). See **Table IV.B.4**. The recapture tax would represent 61.6 percent of pretax income.

The ongoing annual tax increase attributable to LIFO repeal is calculated by multiplying the average annual increase in the tax LIFO reserve at 2006 levels times the effective tax rate. For public pharmaceutical distributors that use LIFO accounting, the permanent annual tax increase attributable to LIFO repeal is estimated to be \$384 million at 2006 levels, or a 58.2 percent increase in reported current federal income tax liability. The tax increase would represent 9.9 percent of pretax income.

Table IV.B.4 Estimated Effect of LIFO Repeal on Tax Liability of Pharmaceutical Distributors 2006

Item	Amount (\$ millions)	% of federal income tax ^a	% of pretax income
Financial Statement Information:			
LIFO Reserve, Book	\$271		
Deferred Tax Liability Attributable to Inventories	\$2,288		
Deferred Tax Liability Grossed up by Effective Tax Rate	\$6,471		
Estimated LIFO Reserve, Tax ^b	\$6,742		
Average Annual % Increase in Tax LIFO Reserve, 2004-6	16%		
Average Annual Increase in Tax LIFO Reserve at 2006 levels	\$1,085		
Transition Effect (Recapture Tax) at 2006 Levels^c	\$2,386	361.4%	61.6%
Ongoing Annual Effect at 2006 Levels^c	\$384	58.2%	9.9%

^a Current provision for federal income tax per annual report.

^b LIFO reserve plus deferred tax liability attributable to inventories grossed up by effective tax rate.

^c Based on reported effective tax rates in 2006 annual reports.

Source: 2006 Annual Reports of pharmaceutical wholesalers using LIFO inventories, and PricewaterhouseCoopers calculations.

The transitional recapture tax does not affect the marginal cost of production so it is unlikely it would be passed through to customers. The ongoing effect, however, most likely would be passed through. As a

result, consumers would expect to see increases in drug prices of \$384 million, or approximately 0.2 percent of current spending.

V. CONCLUSION

The LIFO method of valuing inventory is a long-standing accounting approach to aligning cost of goods sold and sales revenues. The use of LIFO assigns values to sold inventory using current prices, i.e., the prices at which current sales are made and current inventory is replaced. During periods of inflation, LIFO results in a more accurate measurement of current income. Eliminating LIFO as an accepted method would artificially inflate reported income and taxes paid on income.

Pharmaceutical distributors would be especially affected by a repeal of the LIFO accounting method. The price of pharmaceutical products has increased rapidly in recent years and the industry has high volume, undifferentiated inventories that make it difficult to identify specific items sold.

Low profit margins and fierce competition within the pharmaceutical distribution industry make it difficult for the industry to absorb increased tax burdens; consequently, restricting use of LIFO would lead to increased prices to healthcare providers and ultimately to patients.