



Internal Revenue Service

DEPARTMENT OF THE TREASURY

LB&I Concept Unit

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Book	Inventory LIFO
Chapter	Dollar Value Method

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Table of Contents

(View this PowerPoint in “Presentation View” to click on the links below)

[General Overview](#)

[Detailed Explanation of the Concept](#)

[Examples of the Concept](#)

[Index of Referenced Resources](#)

[Training and Additional Resources](#)

[Glossary of Terms and Acronyms](#)

[Index of Related Practice Units](#)

General Overview

Introduction to Dollar Value LIFO

Any taxpayer may elect to determine the cost of Last In-First Out (LIFO) inventories under the “dollar-value” LIFO method, provided the taxpayer uses the method consistently and it clearly reflects income in accordance with the rules of Treas. Reg. 1.472–8 *Dollar-value method of pricing LIFO inventories*.

The dollar-value method of valuing LIFO inventories is a method of determining cost by using “base-year” costs expressed in total dollars rather than the quantity and price of specific goods as the unit of measurement. Under this method, the taxpayer groups goods contained in the inventory into a pool(s). The method groups related inventory and uses an overall price index, under one of three approaches, to approximate changes in inventory cost. Rather than tracking individual units, taxpayers measure value based on the total value of the pool.

The term “base-year cost” is the aggregate of the cost of all items in a pool determined as of the base date. The base date is the beginning of the taxable year for which the taxpayer first adopts the LIFO method. The taxable year for which the taxpayer first adopts the LIFO method for any item in the pool is the “base year” for that pool.

Liquidations (decrements) and increments of items contained in the pool are reflected only in terms of a net liquidation or net increment for the pool. Fluctuations may occur in quantities of various items within the pool, new items that properly fall within the pool may be added, and old items may disappear from the pool, all without necessarily changing the dollar value of the pool.

An increment in the LIFO inventory occurs when the end of the year inventory for any pool expressed in terms of base-year cost is more than the beginning of the year inventory for that pool expressed in terms of base-year cost. Pool liquidation occurs when the year’s ending inventory is less than beginning inventory after correcting for inflation. Because liquidations and increments are reflected only on a net basis, the dollar-value LIFO method minimizes liquidation in most cases.

In determining the inventory value for a pool, the taxpayer adjusts the increment, if any, for changing unit costs or values by reference to a percentage, relative to base-year-cost, determined for the pool.

Detailed Explanation of the Concept

Introduction to Dollar Value LIFO

Analysis	Resources
<p>IRC 472(b)(2) states that if the taxpayer uses the LIFO inventory method, it must value the inventory at cost regardless of market value. Lower of cost or market write-downs are not allowed.</p> <p>Treas. Reg. 1.472-8 covers the dollar-value method of pricing LIFO Inventories. This method measures inventory based on dollars and not particular units. The taxpayer groups the inventory into a pool or pools.</p> <p>There are various methods the taxpayer can choose for computing the LIFO value:</p> <ul style="list-style-type: none">▪ Double-extension Method▪ Link-chain Method▪ Inventory Price Index Computation (IPIC)▪ Retail Inventory Method (RIM) <p>The following two sections first describe various LIFO methods then provide examples.</p>	<ul style="list-style-type: none">▪ IRC 472(b)(2)▪ Treas. Reg. 1.472-8(b)

Detailed Explanation of the Concept (cont'd)

Introduction to Dollar Value LIFO	
Analysis	Resources
<p data-bbox="84 382 451 415"><u>Double-extension Method</u></p> <p data-bbox="84 458 1379 529">The Double-extension method is described in Treas. Reg. 1.472-8(e)(2) and is the preferred method per the regulations.</p> <ul data-bbox="84 572 1411 829" style="list-style-type: none"> ▪ Used in industries where the composition of pools does not change much. ▪ Measures cumulative inflation in one step, from the base year (first LIFO year) to the current year. ▪ Extends quantity of each pool item at both base-year unit cost and current-year unit cost, then totals the respective extensions at the two costs. ▪ Compares items in ending inventory at current-year cost to the same items at base-year cost to derive an inflation index (LIFO Index). <p data-bbox="84 872 764 905">The cumulative inflation is calculated as follows:</p> $\frac{\text{End of Year Quantity} * \text{Current-Year Cost}}{\text{End of Year Quantity} * \text{Base-Year Cost}} \quad (\text{See description in "General Overview"})$ <p data-bbox="84 1053 1125 1086">The total current-year cost of items making up a pool may be determined:</p> <ol data-bbox="84 1108 1369 1329" style="list-style-type: none"> 1. by reference to the actual cost of the goods most recently purchased or produced using the earliest acquisition method, or 2. by the average unit cost, equal to the aggregate cost of all of the goods purchased or produced throughout the taxable year divided by the total number of units purchased or produced, or 3. any other method which, in the opinion of the Commissioner, clearly reflects income. 	<ul data-bbox="1425 386 1850 454" style="list-style-type: none"> ▪ Treas. Reg. 1.472-8(e)(2) ▪ Treas. Reg. 1.472-8(e)(2)(ii)

Detailed Explanation of the Concept (cont'd)

Introduction to Dollar Value LIFO	
Analysis	Resources
<p><u>Link-chain Method</u></p> <p>The Link-chain method is described in Treas. Reg. 1.472-8(e)(1) & Treas. Reg. 1.472-8(e)(3)(iii)(D)(iii).</p> <ul style="list-style-type: none"> ▪ The taxpayer can use this method if the taxpayer can demonstrate the Double-extension method is impractical or unsuitable. ▪ Measures the cumulative inflation in two steps: <ul style="list-style-type: none"> - For the period between the current year and the year immediately prior to the current year (current-year index), - From the base year (LIFO year #1) to the year prior to the current year (prior-year cumulative index). ▪ To find the current-year index, compare items in ending inventory at current-year unit cost to the same items at prior-year unit cost. ▪ The annual inflation is calculated as follows: <ul style="list-style-type: none"> - [End of year quantity multiplied by (current-year cost divided by end of year quantity)] then multiplied by prior-year cost. ▪ Multiply the current-year index by the prior-year cumulative index to calculate the current-year cumulative index. ▪ Divide the current-year cost by the current-year cumulative index to calculate the base-year cost (See “General Overview”). 	<ul style="list-style-type: none"> ▪ Treas. Reg. 1.472-8(e)(1) ▪ Treas. Reg. 1.472-8(e)(3)(iii)(D)(iii)

Detailed Explanation of the Concept (cont'd)

Introduction to Dollar Value LIFO	
Analysis	Resources
<p><u>Inventory Price Index Computation (IPIC) Method</u></p> <p>The IPIC method is described in Treas. Reg. 1.472-8(e)(3).</p> <p>The IPIC method values inventories under LIFO. This method uses an external index found in the Bureau of Labor Statistics (BLS). The index is used to value the items in inventory. The taxpayer must assign every item to the most detailed BLS category for the selected BLS table that contains that item.</p> <p>When using the IPIC method, the taxpayer may compute the inflationary index using either:</p> <ul style="list-style-type: none">▪ Double-extension method, or▪ Link-chain method <p>Under the IPIC method the taxpayer may use:</p> <ul style="list-style-type: none">▪ IPIC method pooling▪ Regular LIFO pooling <p>When using the IPIC method pooling:</p> <ul style="list-style-type: none">▪ Manufacturers pool items by the Producer Price Index (PPI) 2-digit commodity code (Treas. Reg. 1.472-8(b)(4)).▪ Retailers/Wholesalers pool by the PPI 2-digit commodity code. Retailers only may pool by Consumer Price Index (CPI) major groups (Treas. Reg. 1.472-8(c)(2)).	<ul style="list-style-type: none">▪ Treas. Reg. 1.472-8(e)(3)▪ Treas. Reg. 1.472-8(b)(4)▪ Treas. Reg. 1.472-8(c)(2)

Detailed Explanation of the Concept (cont'd)

Introduction to Dollar Value LIFO	
Analysis	Resources
<p><u>Inventory Price Index Computation (IPIC) Method (cont'd)</u></p> <p>5% Rules with IPIC Method Pooling (Treas. Reg. 1.472-8(b)(4) and (c)(2)): If a major category of inventory (an IPIC Pool) is less than 5% of the total current-year costs, then the taxpayer may combine the less than 5% category with the largest major category of inventory (an IPIC Pool). This eliminates small pools and increases the size of the largest pool.</p> <p>To use this method a taxpayer:</p> <ul style="list-style-type: none">▪ Must make an election to use the 5% Rule.▪ Must sort inventory into BLS categories.▪ May combine major categories with less than 5% of total current-year costs into a single miscellaneous IPIC pool.▪ May combine the miscellaneous pool with largest IPIC pool when a miscellaneous IPIC pool is less than 5%.▪ Must retest the pools every three years (high non-compliance area) <p><u>Other IPIC Method Pooling Audit Issues</u></p> <ul style="list-style-type: none">▪ Taxpayers may value some items in a single major category on First In-First Out (FIFO) and value other items on LIFO.▪ Major categories with less than 5% may grow beyond 5% and taxpayers may not be retesting them every three years.	<ul style="list-style-type: none">▪ Treas. Reg. 1.472-8(b)(4)▪ Treas. Reg. 1.472-8(c)(2)

Detailed Explanation of the Concept (cont'd)

Introduction to Dollar Value LIFO	
Analysis	Resources
<p><u>Retail LIFO Method</u></p> <p>The Retail LIFO method is described in Treas. Regs. 1.472-1(k) and 1.472-8.</p> <p>The Retail LIFO method is a dollar-value LIFO method which uses retail sales values to calculate increments and decrements to the LIFO layers.</p> <p>The taxpayer converts the retail value of the closing inventory to cost by applying a cost complement. The cost complement reflects the relationship of the retail values to the cost. Compute the cost complement as follows, per Treas. Reg. 1.471-8:</p> <ul style="list-style-type: none">▪ The numerator is the value of beginning inventory plus the cost of goods purchased during the taxable year.▪ The denominator is the retail selling prices of beginning inventory plus the retail selling prices of goods purchased during the year adjusted for all permanent markups and markdowns, including markup and markdown cancellations and corrections. The denominator is not adjusted for temporary markups or markdowns. <p>A retailer may determine its annual-inflation index under a traditional dollar-value technique (Double-extension or Link-chain) or by using indexes the government publishes.</p>	<ul style="list-style-type: none">▪ Treas. Reg. 1.471-8▪ Treas. Reg. 1.472-1(k)▪ Treas. Reg. 1.472-8

Examples of the Concept

Introduction to Dollar Value LIFO

Examples

Double-extension Method

Establish the extended base-year cost (BYC) for the first year when LIFO was elected by multiplying the quantities on hand at the beginning of the base year by the unit costs for each item on hand at the beginning of the base year.

BYC 1/1/2014			BYC
<u>Item</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
A	10,000	1.00	10,000
B	12,000	1.20	14,400
C	14,000	1.40	<u>19,600</u>
Total BYC			<u>\$44,000</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Double-extension Method (cont'd)

Calculate current-year costs (CYC) for the first tax year. Calculate the end of year (EOY) extended cost for each item by multiplying the end of year (EOY) quantity for each item on hand by the end of year unit cost for each item. The sum of the EOY extended costs is the total current-year cost (CYC).

EOY 12/31/2014

<u>Item</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>EOY Extended Cost</u>
A	8,000	1.10	8,800
B	13,000	1.35	17,550
C	16,000	1.38	<u>22,080</u>
Total EOY Cost			<u>\$48,430</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Double-extension Method (cont'd)

Compute the current year Inflation index for the base year by (1) multiplying the end of year quantities (EOYQ) by end of year (EOY) unit costs to determine EOY extended cost, then (2). multiply base-year (BYC) unit cost by EOY quantity to determine BYC extended cost, then, (3) divide the EOY extended cost by BYC extended cost.

12/31/2014 Index Calculation Double Extension

<u>Item</u>	<u>EOY Quantity</u>	<u>EOY Unit Cost</u>	<u>EOY Extended Cost</u>	<u>BYC Unit Cost</u>	<u>BYC Extended Cost</u>
A	8,000	1.10	8,800	1.00	8,000
B	13,000	1.35	17,550	1.20	15,600
C	16,000	1.38	<u>22,080</u>	1.40	<u>22,400</u>
		Total	<u>\$48,430</u>		<u>\$46,000</u>

2014 CY Index 1.053

$(EOYQ * EOY Cost) / (EOYQ * BYC Cost) = CY Index$

$48,430 / 46,000 = 1.053$

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Double-extension Method (cont'd)

Deflate the current-year cost to base-year cost by dividing current-year cost by the current-year index. When the ending inventory is deflated to base-year cost, determine if a new base year layer is created. If a new base year layer is created, the layer is inflated to current cost to create a new LIFO layer. Add the LIFO layers together to calculate the LIFO inventory value. Calculate the LIFO reserve by subtracting the LIFO inventory from the FIFO inventory value. The FIFO inventory value is the EOY Extended Cost for all items at the end of the most recent year.

Reserve Calculation

<u>Years</u>	<u>CY Layers</u>	<u>Base Cost</u>	<u>Index</u>	<u>LIFO Layers</u>
Base	44,000	44,000	1.000	44,000
201412	<u>2,000</u>	<u>2,000</u>	1.053	<u>2,106</u>
Total	<u>\$46,000</u>	<u>\$46,000</u>		<u>\$46,106</u>
		FIFO Inventory Value		48,430
		LIFO Reserve		<u>(2,324)</u>
		LIFO Inventory Value		<u>\$46,106</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Double-extension Method (cont'd)

Calculate current-year cost (CYC) for the second tax year. Calculate the end of year (EOY) extended cost for each item by multiplying the end of year (EOY) quantity for each item on hand by the end of year unit cost for each item. The sum of the EOY extended costs is the total current-year cost (CYC).

EOY 12/31/2015			
<u>Item</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>EOY Extended Cost</u>
A	10,000	1.15	11,500
B	13,000	1.40	18,200
C	16,000	1.45	23,200
D (new)	5,000	1.10	<u>5,500</u>
Total EOY Cost			<u>\$58,400</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Double-extension Method (cont'd)

Calculate current year index

12/31/2015 Index Calculation Double Extension

<u>Item</u>	<u>EOY Quantity</u>	<u>EOY Unit Cost</u>	<u>EOY Extended Cost</u>	<u>BYC Unit Cost</u>	<u>BYC Extended Cost</u>
A	10,000	1.15	11,500	1.00	10,000
B	13,000	1.40	18,200	1.20	15,600
C	16,000	1.45	23,200	1.40	22,400
D (new)	5,000	1.10	<u>5,500</u>	1.10	<u>5,500</u>
		Total	<u>\$58,400</u>		<u>\$53,500</u>

$$\begin{aligned}
 & \text{2015 CY Index} && 1.092 \\
 & (\text{EOYQ} * \text{EOY Cost}) / (\text{EOYQ} * \text{BYC Cost}) = \text{CY Index} \\
 & 58,400 / 53,500 = && 1.092
 \end{aligned}$$

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Double-extension Method (cont'd)

Determine if a new base year layer is created. If so, then calculate the current year LIFO layer. Calculate the LIFO inventory value and LIFO reserve.

Reserve Calculation

<u>CY Years</u>	<u>Base Layers</u>	<u>Cost</u>	<u>LIFO Index</u>	<u>Layers</u>
Base	44,000	44,000	1.000	44,000
201412	2,000	2,000	1.053	2,106
201512	<u>7,500</u>	<u>7,500</u>	1.092	<u>8,187</u>
Total	\$53,500	\$53,500		\$54,293
		FIFO Inventory Value		58,400
		LIFO Reserve		<u>(4,107)</u>
		LIFO Inventory Value		<u>\$54,293</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Double-extension Method (cont'd)

Calculate current-year cost (CYC)

EOY 12/31/2016

<u>Item</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>EOY Extended Cost</u>
A	5,000	1.12	5,600
B	12,000	1.40	16,800
C	15,000	1.45	21,750
D	4,000	1.20	<u>4,800</u>
Total EOY Cost			<u>\$48,950</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Double-extension Method (cont'd)

Determine if a new base year layer is created. If not, then reduce the layers and re-calculate LIFO for the remaining base layers. Calculate the LIFO inventory value and LIFO reserve.

Reserve Calculation

<u>Years</u>	<u>CY Layers</u>	<u>Base Cost</u>	<u>Index</u>	<u>LIFO Layers</u>
Base	44,000	44,000	1.000	44,000
201412	2,000	800	1.053	842
201512	7,500	-	1.092	-
201612	<u>(8,700)</u>	<u>-</u>	1.093	<u>-</u>
Total	<u>\$44,800</u>	<u>\$44,800</u>		<u>\$44,842</u>
		FIFO Inventory Value		48,950
		LIFO Reserve		<u>(4,108)</u>
		LIFO Inventory Value		<u>\$44,842</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Double-extension Method (cont'd)

Calculate current-year cost (CYC)

EOY 12/31/2017

<u>Item</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>EOY Extended Cost</u>
A	-	1.12	-
B	-	1.40	-
C	5,000	1.50	7,500
D	15,000	1.35	20,250
E (new)	50,000	2.00	<u>100,000</u>
	Total EOY Cost		<u>\$127,750</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Double-extension Method (cont'd)

Calculate current year index

12/31/2017 Index Calculation Double Extension

<u>Item</u>	<u>EOY Quantity</u>	<u>EOY Unit Cost</u>	<u>EOY Extended Cost</u>	<u>BYC Unit Cost</u>	<u>BYC Extended Cost</u>
A	-	1.12	-	1.00	-
B	-	1.40	-	1.20	-
C	5,000	1.50	7,500	1.40	7,000
D	15,000	1.35	20,250	1.10	16,500
E (new)	50,000	2.00	<u>100,000</u>	2.00	<u>100,000</u>
		Total	<u>\$127,750</u>		<u>\$123,500</u>

2017 CY Index 1.034

$(EOYQ * EOY Cost) / (EOYQ * BYC Cost) = CY Index$

$127,750 / 123,500 = 1.034$

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Double-extension Method (cont'd)

Calculate the LIFO inventory value and LIFO reserve as previously described

Reserve Calculation

<u>Years</u>	<u>CY Layers</u>	<u>Base Cost</u>	<u>Index</u>	<u>LIFO Layers</u>
Base	44,000	44,000	1.000	44,000
201412	2,000	800	1.053	842
201512	7,500	-	1.092	-
201612	(8,700)	-	1.093	-
201712	<u>78,700</u>	<u>78,700</u>	1.034	<u>81,408</u>
Total	\$123,500	\$123,500		\$126,251
		FIFO Inventory Value		127,750
		LIFO Reserve		<u>(1,499)</u>
		LIFO Inventory Value		<u>\$126,251</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Link-chain Method

Calculate current-year cost (CYC)

BYC 1/1/2014

<u>Item</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
A	10,000	1.000	10,000
B	12,000	1.200	14,400
C	14,000	1.400	<u>19,600</u>
		Total BYC	<u>\$44,000</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Link-chain Method (cont'd)

Establish base-year cost (BYC) when LIFO is elected.

EOY 12/31/2014

<u>Item</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>EOY Extended Cost</u>
A	8,000	1.100	8,800
B	13,000	1.350	17,550
C	16,000	1.380	<u>22,080</u>
Total EOY Cost			<u>\$48,430</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Link-chain Method (cont'd)

Compute the current year index by multiplying the end of year quantities (EOYQ) by end of year (EOY) costs and divide that amount by the end of year quantities by beginning of year costs. Then compute the current year cumulative index by multiplying the current year's index by the base-year cost index of 1.000 in the year of election.

12/31/2014 Index Calculation Link Chain

<u>Item</u>	<u>EOY Quantity</u>	<u>EOY Unit Cost</u>	<u>EOY Extended Cost</u>	<u>BOY Unit Cost</u>	<u>BOY Extended Cost</u>
A	8,000	1.100	8,800	1.000	8,000
B	13,000	1.350	17,550	1.200	15,600
C	16,000	1.380	<u>22,080</u>	1.400	<u>22,400</u>
		Total	<u>\$48,430</u>		<u>\$46,000</u>
			2014 CY Index		1.053
			BYC Index		<u>1.000</u>
			CY Cumulative Index		1.053
			CY Cost / CY Cum Index = Base Year Cost		
			\$48,430 / 1.053 = \$46,000		

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Link-chain Method (cont'd)

Deflate the current-year cost to base-year cost by dividing the current-year cost by the current year's cumulative index. When the ending inventory is deflated to base-year cost, determine if a new base year layer is created. If a new base year layer is created, the layer is inflated to current cost to create a new LIFO layer. Add the LIFO layers together and calculate the LIFO inventory value. Calculate the LIFO reserve by subtracting the LIFO inventory from the current costs (FIFO) inventory cost.

Reserve Calculation

<u>Years</u>	<u>CY Layers</u>	<u>Base Cost</u>	<u>Index</u>	<u>LIFO Layers</u>
Base	44,000	44,000	1.000	44,000
201412	<u>2,000</u>	<u>2,000</u>	1.053	<u>2,106</u>
Total	<u>\$46,000</u>	<u>\$46,000</u>		<u>\$46,106</u>
		FIFO Inventory Value		48,430
		LIFO Reserve		<u>(2,324)</u>
		LIFO Inventory Value		<u>\$46,106</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Link-chain Method (cont'd)

Calculate current-year cost (CYC)

EOY 12/31/2015

<u>Item</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>EOY Extended Cost</u>
A	10,000	1.150	11,500
B	13,000	1.400	18,200
C	16,000	1.450	23,200
D (new)	5,000	1.100	<u>5,500</u>
Total EOY Cost			<u>\$58,400</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Link-chain Method (cont'd)

Calculate the current year's index. Calculate the current year cumulative index by multiplying the current year index by the prior year's cumulative index.

12/31/2015 Index Calculation Link Chain

<u>Item</u>	<u>EOY Quantity</u>	<u>EOY Unit Cost</u>	<u>EOY Extended Cost</u>	<u>BOY Unit Cost</u>	<u>BOY Extended Cost</u>
A	10,000	1.150	11,500	1.100	11,000
B	13,000	1.400	18,200	1.350	17,550
C	16,000	1.450	23,200	1.380	22,080
D (new)	5,000	1.100	<u>5,500</u>	1.100	<u>5,500</u>
		Total	<u>\$58,400</u>		<u>\$56,130</u>

2015 CY Index 1.040

PY Cumulative Index 1.053

CY Cumulative Index 1.095

CY Cost / CY Cum Index = Base Year Cost

58400 / 1.095 = \$53,314

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Link-chain Method (cont'd)

Deflate the current-year cost to base-year cost and determine if a new base year layer is created. If a new base year layer is created, the layer is inflated to current cost to create a new LIFO layer. Add the LIFO layers and calculate the LIFO inventory value. Calculate the LIFO reserve by subtracting the LIFO inventory from the current costs (FIFO) inventory cost.

Reserve Calculation

<u>Years</u>	<u>CY Layers</u>	<u>Base Cost</u>	<u>Index</u>	<u>LIFO Layers</u>
Base	44,000	44,000	1.000	44,000
201412	2,000	2,000	1.053	2,106
201512	<u>7,314</u>	<u>7,314</u>	1.095	<u>8,012</u>
Total	<u>\$53,314</u>	<u>\$53,314</u>		<u>\$54,117</u>
		FIFO Inventory Value		58,400
		LIFO Reserve		<u>(4,283)</u>
		LIFO Inventory Value		<u>\$54,117</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Link-chain Method (cont'd)

Calculate current-year cost (CYC)

EOY 12/31/2016

<u>Item</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>EOY Extended Cost</u>
A	5,000	1.120	5,600
B	12,000	1.400	16,800
C	15,000	1.450	21,750
D	4,000	1.200	<u>4,800</u>
Total EOY Cost			<u>\$48,950</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Link-chain Method (cont'd)

Calculate the current year's index. Calculate the current year cumulative index by multiplying the current year index by the prior year's cumulative index.

12/31/2016 Index Calculation Link Chain

<u>Item</u>	<u>EOY Quantity</u>	<u>EOY Unit Cost</u>	<u>EOY Extended Cost</u>	<u>BOY Unit Cost</u>	<u>BOY Extended Cost</u>
A	5,000	1.120	5,600	1.150	5,750
B	12,000	1.400	16,800	1.400	16,800
C	15,000	1.450	21,750	1.450	21,750
D	4,000	1.200	<u>4,800</u>	1.100	<u>4,400</u>
		Total	<u>\$48,950</u>		<u>\$48,700</u>

2016 CY Index 1.005

PY Cumulative Index 1.095

CY Cumulative Index 1.101

CY Cost / CY Cum Index = Base Year Cost

48,950 / 1.101 = \$44,458

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Link-chain Method (cont'd)

Determine if a new base year layer is created. If not, then reduce the layers and recalculate LIFO for the remaining base layers. Calculate the LIFO inventory value and LIFO reserve.

Reserve Calculation

Years	CY Layers	Base Cost	Index	LIFO Layers
Base	44,000	44,000	1.000	44,000
201412	2,000	458	1.053	482
201512	7,314	-	1.095	-
201612	<u>(8,856)</u>	<u>-</u>	1.101	<u>-</u>
Total	<u>\$44,458</u>	<u>\$44,458</u>		<u>\$44,482</u>
		FIFO Inventory Value		48,950
		LIFO Reserve		<u>(4,468)</u>
		LIFO Inventory Value		<u>\$44,482</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Link-chain Method (cont'd)

Calculate current-year cost (CYC)

EOY 12/31/2017

<u>Item</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>EOY Extended Cost</u>
A	-	1.120	-
B	-	1.400	-
C	5,000	1.500	7,500
D	15,000	1.350	20,250
E (new)	50,000	2.000	<u>100,000</u>
	Total EOY Cost		<u>\$127,750</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Link-chain Method (cont'd)

Calculate the current year's index. Calculate the current year cumulative index by multiplying the current year index by the prior year's cumulative index.

12/31/2017 Index Calculation Link Chain

<u>Item</u>	<u>EOY Quantity</u>	<u>EOY Unit Cost</u>	<u>EOY Extended Cost</u>	<u>BOY Unit Cost</u>	<u>BOY Extended Cost</u>
A	-	1.120	-	1.120	-
B	-	1.400	-	1.400	-
C	5,000	1.500	7,500	1.450	7,250
D	15,000	1.350	20,250	1.200	18,000
E (new)	50,000	2.000	<u>100,000</u>	2.000	<u>100,000</u>
		Total	<u>\$127,750</u>		<u>\$125,250</u>
			2017 CY Index		1.020
			PY Cumulative Index		1.101
			CY Cumulative Index		1.123
			CY Cost / CY Cum Index = Base Year Cost		
			127,750 / 1.123 = \$113,757		

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Link-chain Method (cont'd)

Deflate the current-year cost to base-year cost and determine if a new base year layer is created. If a new base year layer is created, then the layer is inflated to current cost to create a new LIFO layer. Add the LIFO layers together and calculate the LIFO inventory value. Calculate the LIFO reserve by subtracting the LIFO inventory from the current costs (FIFO) inventory cost.

Reserve Calculation

<u>Years</u>	<u>CY Layers</u>	<u>Base Cost</u>	<u>Index</u>	<u>LIFO Layers</u>
Base	44,000	44,000	1.000	44,000
201412	2,000	458	1.053	482
201512	7,314	-	1.095	-
201612	(8,856)	-	1.101	-
201712	<u>69,299</u>	<u>69,299</u>	1.123	<u>77,823</u>
Total	<u>\$113,757</u>	<u>\$113,757</u>		<u>\$122,305</u>
		FIFO Inventory Value		127,750
		LIFO Reserve		<u>(5,445)</u>
		LIFO Inventory Value		<u>\$122,305</u>

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Calculating IPIIC LIFO Using 7 Steps

Step 1 - Compute current cost

Step 2 - Compute inflation

- Select a BLS Table and appropriate month
- Assign all inventory item in the pool to BLS categories
- Compute the category inflation index
- Computation of the IPI

Step 3 - Reduce current cost to base

Step 4 - Determine current year base layer

Step 5 - Value current year base layer at current year cost

Step 6 - Total all LIFO Layers

Step 7 - Compute LIFO reserve

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Calculating IPIC LIFO Using 7 Steps (cont'd)

Steps 1, 2 & 3

		<u>Separate Skirts</u>	<u>Knit Shirts</u>	<u>Woven Shirts</u>	<u>Totals</u>	
(a) IPIC Code		03810523	03810601	03810602		
(b) CYC		110,000	120,000	130,000	360,000	(Step 1)
(c) CY BLS Index 1/17		1.129	1.052	1.025		
(d) BY BLS Index 1/16		1.133	1.012	1.022		
(e) Category Inflation	(c)/(d)	0.996	1.040	1.003		
(f) Weighted Quotient	(c)/(e)	110,390	115,437	129,620	355,446	
(g) CY LIFO Index					1.013	
(h) PY Cumulative Index					1.022	
(i) CY Cumulative Index	(g)*(h)				1.035	(Step 2)
(j) Inventory @ Base	(b)/(i)				347,795	(Step 3)

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Calculating IPIC LIFO Using 7 steps (cont'd)

Steps 4, 5, 6 & 7

			Base	Index	LIFO	
	Layers @ 1/31/2016					
(a)	Base year		251,000	1.000	251,000	
(b)	01/31/2016		<u>55,000</u>	1.022	<u>56,210</u>	
(c)	Total	(a)+(b)	<u>306,000</u>		<u>307,210</u>	
(d)	01/31/2017 @ Base		<u>347,795</u>		<u>N/A</u>	
(e)	Increment	(c)-(d)	<u>41,795</u>	1.035	<u>43,258</u>	(Step 4 & 5)
	Layers @ 1/31/2017					
(f)	Base year		251,000	1.000	251,000	
(g)	01/31/2016		55,000	1.022	56,210	
(h)	01/31/2017		<u>41,795</u>	1.035	<u>43,258</u>	
(i)	Total	(f)+(g)+(h)	<u>347,795</u>		<u>350,468</u>	(Step 6)
(j)	FIFO				<u>360,000</u>	
(k)	LIFO Reserve	(J)-(i)			9,532	(Step 7)

Examples of the Concept (cont'd)

Introduction to Dollar Value LIFO

Examples

Retail Inventory Method (RIM)

Taxpayer must value inventories at cost if they use the LIFO inventory method.

	<u>Cost</u>		<u>Retail</u>	
Inventory 1/1/XX	600		1,000	
Purchases	2,400		4,000	
Margin protection payment	<u>(240)</u>		<u>(400)</u>	
Total	2,760 (1)		4,600 (2)	
Cost compliment (Cost/ Retail)			60% (3)	(1)/(2)
Inventory 12/31/XX at retail			1,350 (4)	
Inventory 12/31/XX at cost			810 (5)	(3)*(4)

Index of Referenced Resources

Introduction to Dollar Value LIFO
IRC 472
Treas. Reg. 1.446-1(e)
Treas. Reg. 1.471-1
Treas. Reg. 1.471-8
Treas. Reg. 1.472-8(b)
Treas. Reg. 1.472-8(c)
Treas. Reg. 1.472-8(e)
Treas. Reg. 1.472-8(g)
FAA 20080401F
TAM 9129004
Form 3115 - <i>Application for Change in Accounting Method</i>

Training and Additional Resources

Introduction to Dollar Value LIFO	
Type of Resource	Description(s)
White Papers/Guidance	<ul style="list-style-type: none"> ▪ White Paper Analysis - <i>Manufacturer Natural Business Unit Pooling Goods Purchased for Resale</i> ▪ White Paper Analysis - <i>Establishing LIFO Pools</i>
Issue Toolkits	<ul style="list-style-type: none"> ▪ Issue Snapshot - <i>LIFO IPIC Pools for Manufactured Goods and Goods Purchased for Resale</i> ▪ Issue Snapshot - <i>LIFO Pooling Under Dollar Value Method</i> ▪ Issue Snapshot - <i>Establishing Pools Under the Dollar Value LIFO Method</i> ▪ Issue Snapshot - <i>Representative Sample Allowed to Compute a LIFO Index</i>
Other Training Materials	<ul style="list-style-type: none"> ▪ Basic LIFO Inventory PPT - 2012-03 ▪ IPIC LIFO PPT - 2012-03 ▪ Overview of IPIC method and BLS Reports PPT - 2015-04
Databases / Research Tools	<ul style="list-style-type: none"> ▪ United States Bureau of Labor Statistics (BLS) - <i>Producer Price Indexes and Percent Changes for Commodity Groupings and Individual Items, Not Seasonally Adjusted</i>

Glossary of Terms and Acronyms

Term/Acronym	Definition
BLS	United States Bureau of Labor Statistics
BOY	Beginning of the Year
BYC	Base Year Cost
CY	Current-year
CYC	Current-year Cost
EOY	End of the Year
EOYQ	End of the Year Quantities
IPIC	Inventory Price Index Computation
IRC	Internal Revenue Code
FIFO	First In-First Out
LIFO	Last In-First Out
PPI	Producer Price Index
PY	Prior year
RIM	Retail Inventory Method
Treas. Reg.	Treasury Regulation

Index of Related Practice Units

Associated UIL(s)	Related Practice Unit
	None at this time.