# Office of Chief Counsel Internal Revenue Service Memorandum

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to:

from: Area Counsel (Heavy Manufacturing & Transportation)

(Large & Mid-Size Business)

### subject:

This memorandum responds to your request for assistance dated June 29, 2004. This advice may not be used or cited as precedent.

Taxpayer = Year 1 = Year 2 =

### **ISSUE**

Whether Taxpayer, a manufacturer using the Inventory Price Index Computation inventory method, may properly determine its gross profit margin (to convert its selected BLS indexes to cost price indexes) using data from a selected month rather than data from the entire year.

### CONCLUSION

Taxpayer may not determine its gross profit margin by reference to a selected month's data for purposes of converting its BLS indexes to cost price indexes. Rather, in accordance with Rev. Proc. 84-57, the taxpayer is required to determine its gross profit margin by reference to the entire year's data.

## **FACTS**

Taxpayer is a manufacturer using the Inventory Price Index Computation (IPIC) Method to value its last-in, first-out (LIFO) inventories. In Year 2, Taxpayer elected to change from computing internal annual price indexes under the dollar-value LIFO method to using the IPIC method of computing annual price indexes. As part of the computation of the annual LIFO index for the Year 2 tax year, Taxpayer was required to convert indexes selected from the PPI Detailed Report into cost price indexes. In order to make the conversion, the taxpayer computed the cost complement (one minus the gross margin) for December, Year 1 and multiplied that percentage by the selected IPIC price index for December, Year 1. Taxpayer made a similar computation using its cost complement and the IPIC price index for December, Year 2. Taxpayer then divided the product of the Year 2 computation by the product of the Year 1 computation and used the quotient as the inventory price index for that category of goods.

A simple example of the taxpayer's computation, using the cost complement computed for the month of December, Year 1 and the month of December, Year 2 is as follows:

IPIC Category	Year 1 Index	DecYr 1 CC	Year 2 Index	DecYr 2 CC	<u>Index</u>
0011223344	100.0	0.6000	105.0	0.7000	1.2250

A simple example of the taxpayer's computation, using the cost complement computed for the entire Year 1 and Year 2 years is as follows:

IPIC Category	Year 1 Index	Year 1 CC	Year 2 Index	Year 2 CC	<u>Index</u>
0011223344	100.0	.7000	105.0	0.7200	1.080

### LAW

Treas. Reg. § 1.471-8 provides: (a) Retail merchants who employ what is known as the "retail method" of pricing inventories may make their returns upon that method, provided that the use of such method is designated upon the return, that accurate accounts are kept, and that such method is consistently adhered to unless a change is authorized by the Commissioner as provided in paragraph (e) of §1.446-1. Under the retail method the total of the retail selling prices of the goods on hand at the end of the year in each department or of each class of goods is reduced to approximate cost by deducting therefrom an amount which bears the same ratio to such total as —

- (1) The total of the retail selling prices of the goods included in the opening inventory plus the retail selling prices of the goods purchased *during the year*, with proper adjustment to such selling prices for all mark-ups and mark-downs, less
- (2) The cost of the goods included in the opening inventory plus the cost of the goods purchased *during the year*, bears to (1). (Emphasis added)

Treas. Reg. § 1.472-8(e)(3) in effect for years prior to 2001 provides: Use of inventory price index computed with reference to consumer or producer price indexes--(i) In general. For purposes of section 1.472-8(e)(1), for taxable years beginning after December 31, 1981, an inventory price index computed in the manner provided by section 1.472-8(e)(1) will be accepted by the Commissioner as an appropriate method of computing an index, and the use of such inventory price index to compute the LIFO value of a dollar-value inventory pool will be accepted as accurate, reliable, and suitable. A taxpayer using the inventory price index computation method provided by section 1.472-8(e)(3) must use such method in determining the value of all goods for which the taxpayer has elected to use the LIFO method.

Treas. Reg. § 1.472-8(e)(3)(iii) in effect for years prior to 2001 provides: Selection of consumer or producer price indexes--(A) In general. An inventory price index computed as provided by section 1.472-8(e)(3) is computed with reference to the consumer or producer price indexes for specific categories of inventory items in the CPI Detailed Report or Producer Prices and Price Indexes published by the United States Bureau of Labor Statistics.

Treas. Reg. § 1.472-8(e)(3)(iii)(C) in effect for years prior to 2001 provides: Other selection requirements. Manufacturers, processors, wholesalers, jobbers, and distributors may select indexes from only Producer Prices and Price Indexes. Retailers may select indexes from either the CPI Detailed Report or Producer Prices and Price Indexes, but if equally appropriate indexes could be selected from either publication, a retailer using the retail inventory method must select the index from the CPI Detailed Report and a retailer not using the retail inventory method must select the index from Producer Prices and Price Indexes. If a retailer using the retail inventory method selects a price index from Producer Prices and Price Indexes, the selected index must be converted into a retail price index. If a retailer not using the retail inventory method selects an index from the CPI Detailed Report, the selected index must be converted into a cost price index. Manufacturers, processors, wholesalers, jobbers, and distributors, must convert selected indexes into cost price indexes.

Revenue Ruling 54-49, 1954-1 C.B. 32, provides: A specialty store on the cost inventory method does not ordinarily compute the net markon percentages for its respective departments, for this is a tool of the retail inventory method. It does, however, compute its gross profit percentages for its respective departments, essentially the same quantity. The only material difference between the two is that the former is computed on the *year's purchases*, and the latter on the *year's sales*, and this difference will average out over a few years. It is, therefore, appropriate to derive a cost index by reference to the ratio between cost percentages derived by taking the complements of the gross profit ratios for a department. (Emphasis added)

Section 3.02 of Revenue Procedure 84-57, 1984-2 CB 496, provides:

1. If a retailer not using the retail inventory method selects an index from the CPI Detailed Report, the selected index must be converted into a cost price index because the CPI Detailed Report measures changes in retail prices, not changes in wholesale or cost prices. Cost price indexes may be derived from indexes selected from the CPI Detailed Report by reference to the changes in the cost complements of the gross profit margins of an individual index category.

The difference between the movements of wholesale (or cost) and retail prices for any given year must be reflected in a change in the markon percentage because cost and retail prices would necessarily change by the same relative amount if the markon were uniform. The change in the net markon percentage, or its complement, the cost percentage, may, therefore, be used to derive a cost index from a retail price index for a given department. Nevertheless, a retailer not using the retail method does not ordinarily compute the net markon percentages for its respective departments, for this is a tool of the retail inventory method. It does, however, compute its gross profit percentages for its respective departments using essentially the same quantity. The only material difference between the two is that the former is computed on the year's purchases and the latter on the year's sales, and this difference will average out over a few years. It is, therefore, appropriate to derive a cost index by reference to the ratio between cost percentages derived by taking the complements of the gross profit ratios for a department. A simplified method of computing is available, particularly for use when the base date for the retail price index is prior to the year of adoption of the elective inventory method by the taxpayer. This may be illustrated as follows:

	Dec. 31	Dec. 31	Dec. 31
	1981	1982	1983
1. Index from CPI Detailed Report (1967 = 100)	91.3	216.4	211.7
2. Gross profit percentage (see Note A)	41.2%	40.7%	41.5%
3. Cost percentage (complement of line 2)	58.8%	59.3%	58.5%
4. Adjusted price index (line 1 multiplied by line 3)	112.4844	128.3252	123.8445
5. Cost price index (Dec. 31, 1981 = 100)			
line 4 divided by 112.4844 and multiplied by 100	) 100.1	114.1	110.1

Note A.--To be determined by the taxpayer for each index category on the basis of its own average for the *tax year*. (Emphasis added)

2. If a retailer using the retail inventory method selects a price index from the Producer Prices and Price Indexes, the selected index must be converted into a retail price index. Retail price indexes may be derived from indexes selected from the Producer Price and Price Indexes by reference to the changes in the cost complements of the gross margins of an individual index category in the same manner as cost price indexes are derived in section 3.03 1.

# **ANALYSIS**

The regulations in effect during the years at issue required manufacturers and certain retailers using the dollar-value LIFO method and the IPIC computation method described in Treas. Reg. § 1.472-8(e)(3) to convert selected BLS indexes into cost price indexes before determining the LIFO value of their dollar-value pools. This conversion is necessary because indexes for LIFO purposes are based on the increases in cost, whereas BLS indexes are based on the prices at which items are sold. Specifically, the CPI Detailed Report is based on retail sales prices and the PPI Detailed Report is based on manufacturers' sales prices.

Former Treas. Reg. § 1.472-8(e)(3)(iii)(C) requires manufacturers and certain retailers to convert selected BLS indexes to cost price indexes before the indexes are used to determine the LIFO value of the inventory. In Rev. Proc. 84-57, the Service demonstrated how IPIC method taxpayers must convert their BLS indexes to cost price indexes. Specifically, section 3.02 of Rev. Proc. 84-57, requires taxpayers to convert the BLS indexes to cost price indexes using the gross profit percentage "determined by the taxpayer for each index category on the basis of its own average for the tax year."

The taxpayer contends it is not required to determine the gross margin based on the entire year's data because Rev. Proc. 84-57 illustrates this requirement by use of a retailer, not a manufacturer. The taxpayer misinterprets Rev. Proc. 84-57. Although Rev. Proc. 84-57 illustrates the requirement that an entire year's data be used to convert from BLS indexes to cost price indexes using a retailer, its requirements are equally applicable to manufacturers.

Section 1 of Rev. Proc. 84-57 states that the purpose of the revenue procedure was to "provide guidance to taxpayers that elect to use the dollar-value last-in, first-out (LIFO) inventory method and the inventory price index computation method described in section 1.472-8(e)(3) of the Income Tax Regulations." Consequently, the principles outlined in Rev. Proc. 84-57 apply to retailers and manufacturers alike.

The example involves a retailer that does not use the retail method but that selects indexes from the CPI Detailed Report. If this hypothetical retailer used the retail inventory method, it would not be required to adjust the CPI indexes because those indexes measure inflation in retail selling prices and the retail inventory method is a retail selling price-based inventory valuation method. Similarly, if the retailer selected indexes from the PPI Detailed Report, it would not have to adjust the indexes because its inventory method is cost-based and the PPI indexes reflect a retailer's cost of inventory. The retailer in the example is required to adjust the CPI indexes because it uses a cost-based inventory and the CPI indexes are based on retail sales prices.

A manufacturer using the IPIC method is in much the same situation as the retailer that does not use the retail inventory method but selects indexes from the CPI Detailed Report. Manufacturers use cost-based inventory methods and must select indexes

from the PPI Detailed Report. Indexes in the PPI Detailed Report reflect manufacturers' selling prices. Thus, the manufacturer must adjust the PPI indexes to cost-price indexes.

Since the purpose of the index conversion is the same for manufacturers as it is for the retailer in the Rev. Proc. 84-57 example, the procedure for converting the indexes should also be the same. Moreover, if the Service intended to permit manufacturers to convert their selected BLS indexes to cost price indexes under a method different than that required of retailers, the revenue procedure either would have included a statement that manufacturers can use alternative methods of converting selected indexes or included a separate example for manufacturers illustrating an alternative method. Given the stated purpose of the revenue procedure and the fact it does not provide a separate example for manufacturers, it is clear that manufacturers and retailers are required to convert their BLS indexes under the same procedures.

Outside the IPIC method context, the Service has consistently held that taxpayers required to convert BLS indexes to cost price indexes must do so by reference to an entire year's data. See Rev. Rul 54-49. In fact, there is no instance in which published guidance permits a taxpayer to convert external LIFO indexes to cost price using less than an entire year's inventory data.

Finally, the conversion from BLS indexes to cost price indexes is not the only time taxpayers are required to use an entire year's data when selling price-based data to cost price-based data. Treas. Reg. § 1.471-8 describes the retail method and requires a retail merchant to determine cost by application of the cost complement. Consistent with the requirements of Rev. Rul. 54-49 and Rev. Proc. 84-57, Treas. Reg. § 1.471-8 requires the cost complement be determined by reference to an entire year's data. Under the retail method, taxpayers are required to determine the ratio of cost of purchases during the year plus the cost of the beginning inventory to the total selling price of the purchases during the year. This ratio establishes a relationship between the selling price and actual cost and enables the retail taxpayer to determine the cost of its ending inventory by applying the ratio to the retail value of the ending inventory. Thus, although the retail method permits retailers to compute the retail value of the ending inventory at the ending retail price, the entire year's data for both purchases and selling prices must be used to compute the cost ratio.

In summary, based on the requirements provided in the regulations and illustrated in Rev. Proc. 84-57, 1984-2 C.B. 496, the taxpayer must determine its gross profit percentage used to convert its IPIC indexes to cost price indexes on the basis of the taxpayer's average gross profit for the entire year, not a selected month.

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Please call (313) 237-6437 if you have any further questions.

JOSEPH F. MASELLI Area Counsel (Heavy Manufacturing & Transportation:Edison)

By: \_\_\_\_\_

Phoebe L. Nearing Associate Area Counsel (LMSB)