

# How LIFO Works & LIFOPro's Offerings

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**LIFOPro**  
Software & Turnkey Outsourcing Solutions



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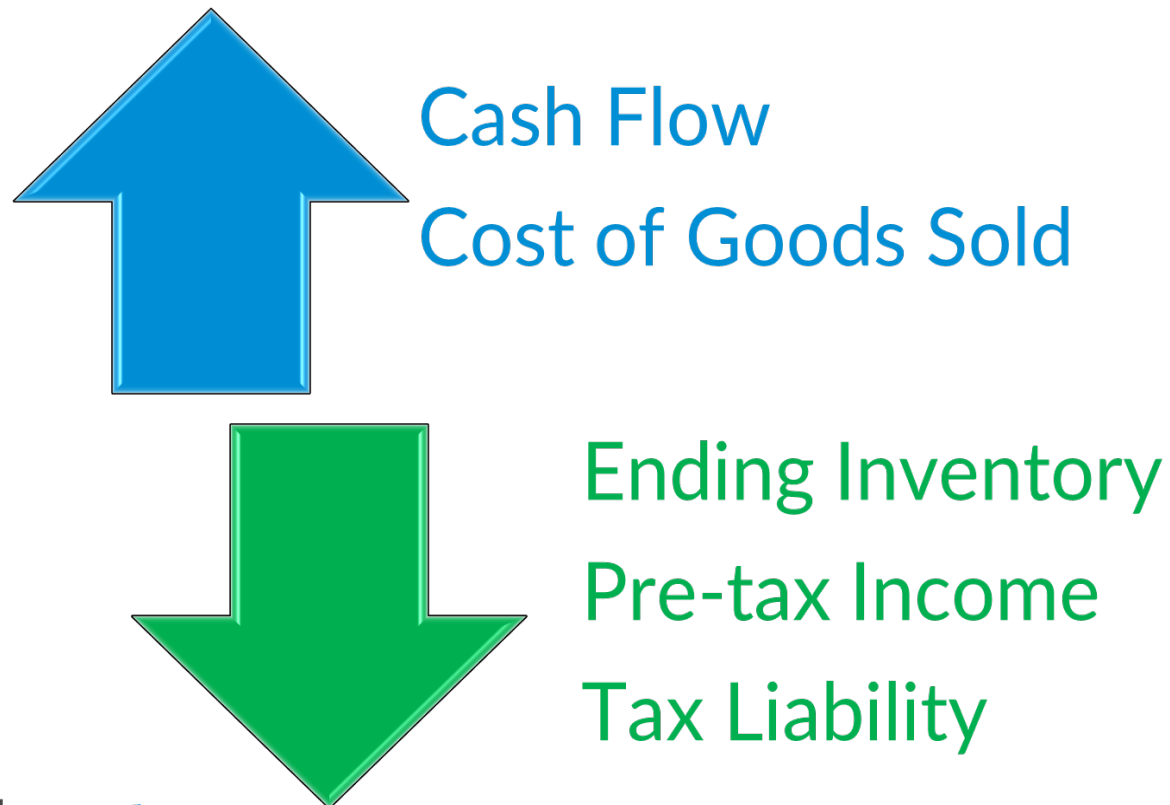
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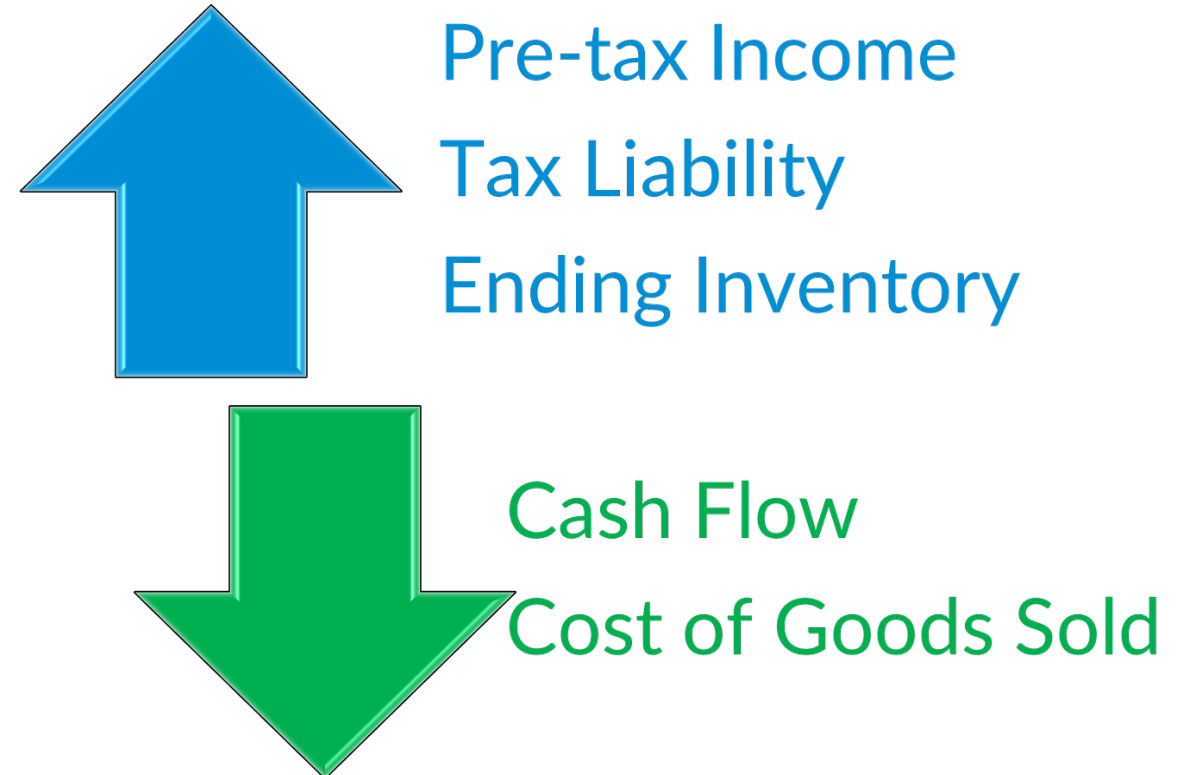
# How LIFO Works

## Effect of Inflation on Financial Statements & Tax Return

### With LIFO



### Without LIFO



# Why Use LIFO?

- **LIFO often creates material long-term tax deferral/savings:** Not just a one-time tax benefit or timing difference between book & tax such as straight-line vs. accelerated depreciation
- **During periods of rising costs, LIFO:**
  - Provides more after-tax free cash flow than non-LIFO methods when there's inflation
  - Ensures taxes aren't paid on goods that have been purchased, but have yet to be sold
  - Improves ability to replenish & maintain an adequate level of inventory
- **The following trains of thought exist regarding LIFO:**
  - **Some consider LIFO to act as a tax deferral tool that can be thought of as an interest-free loan**
  - **Others believe that LIFO essentially acts as a permanent form of tax savings if a company is profitable, satisfies the going concern assumption & intends to stay on LIFO in perpetuity**
- **Tax court opinion regarding LIFO (see Amity Leather Prods. Co. v. Comm):**

*The theory behind LIFO is that income may be more accurately determined by matching current costs against current revenues, thereby eliminating from earnings any artificial profits resulting from inflationary increases in inventory costs. At the heart of the LIFO method is the principle that income is more clearly reflected by matching current costs with current revenues.*

- **LIFO is an accounting method permissible under GAAP, not just a tax incentive:** Provides a more conservative measure of income compared to non-LIFO methods during periods of rising costs.



# Why Use LIFO?

## LIFO Cost/Benefit Case Study: Building Products Manufacturer

### Company Overview

- Years on LIFO: 6 (2017 = 1<sup>st</sup> year on LIFO)
- 2022 y/e inventory balance @ Cost: \$15M
- 2022 y/e inventory balance @ LIFO: \$12.1M
- Combined federal + state tax rate: 30%
- Interest rate on debt: 6%
- 2022 y/e LIFO reserve: \$2.9M

### Benefits

- **Cumulative after-tax savings:**

2022 y/e LIFO reserve \* tax rate =  $\$2.9\text{M} * 30\% = \$860\text{K}$

- **Savings on interest expense:**

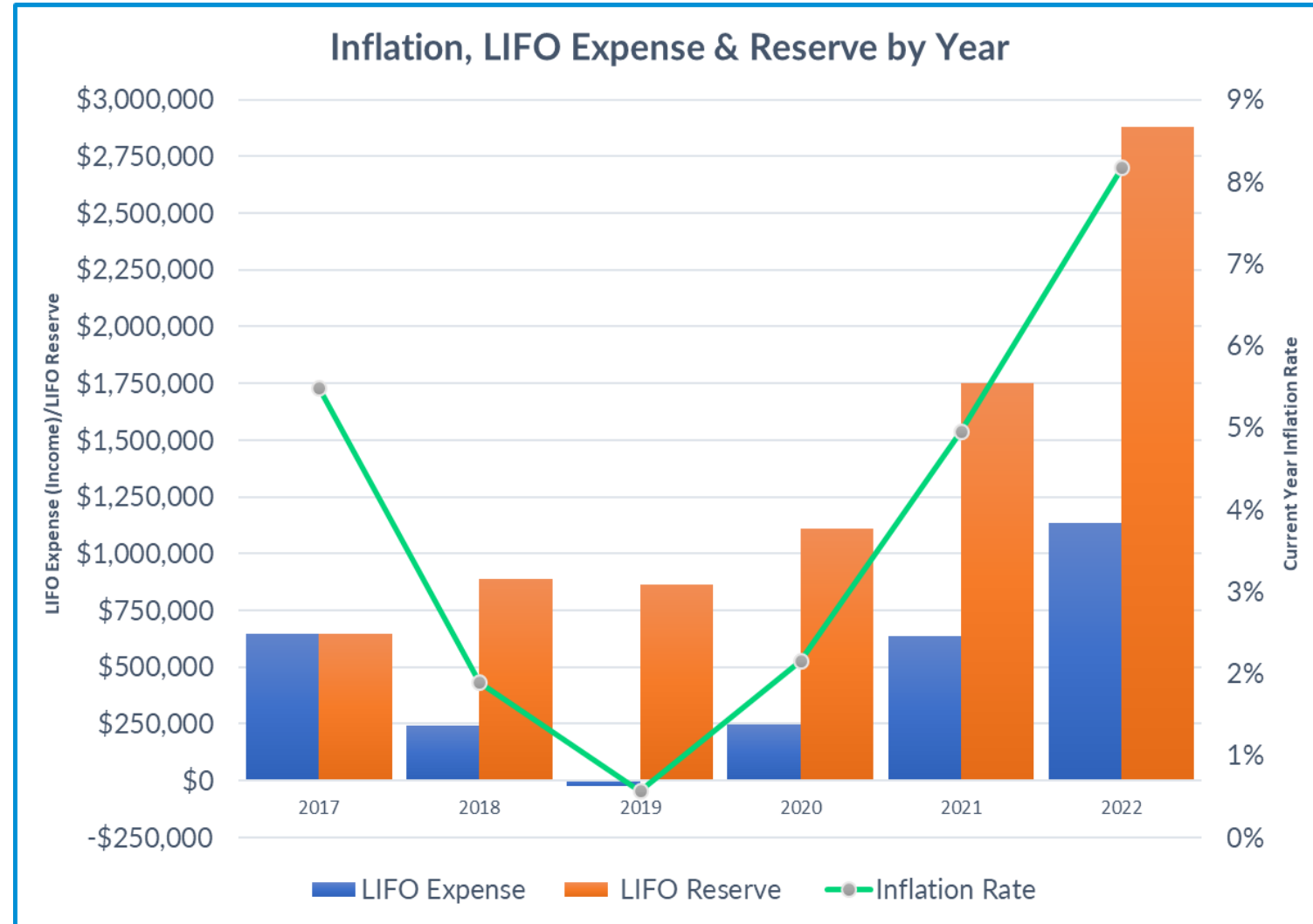
Cumulative after-tax savings \* interest rate on debt  
=  $\$860\text{K} * 6\% = \$52\text{K}$

### Costs

- First year fee including IRS forms prep (2017): \$5K
- Recurring annual outsourcing fee: \$2,500 (years 2 - 6)
- **Cumulative outsourcing costs: \$17,500**

### Cost as a percentage of after-tax savings:

$\$17,500 \div \$860\text{K} = 2\%$



# Common LIFO Misconceptions

- **Misconception #1: The following burdens & costs outweigh the benefits of LIFO:**
  - Management, cost accounting & purchasing/sales functions & responsibilities will be complicated by using LIFO
  - Wholesale changes must be made to accounting system since item costs & the physical flow of goods must be tracked on a LIFO basis
  - **Clarifications**
    - Under the dollar-value method, the LIFO value of inventory is determined outside of the accounting system & a top-side accounting entry is recorded to adjust ending inventory from cost to LIFO & accrue the change in the LIFO reserve
    - Under dollar-value LIFO, item costs remain being tracked the same way they did prior to electing LIFO & requires no changes to the accounting system other than adding a contra-inventory subledger account called the LIFO reserve
- **Misconception #2**
  - Employee compensation & bonuses will be complicated from using LIFO
  - **Clarification:** Internal management reports can be presented on a non-LIFO basis as long as they're not shared externally with third parties
- **Misconception #3: Tax savings from LIFO will be minimal because:**
  - **High inventory turnover or new item rates**
  - **Just in time inventory or lean accounting practices**
  - **Clarifications**
    - Under the dollar-value method, the inflation rate used to calculate the LIFO reserve change is based on a 12 month comparison of current vs. prior year's item/unit costs extended by quantities on hand in ending inventory regardless of the turnover ratio
    - External indexes reconstruct inflation on new items, which ensures the same amount of inflation is applied to new & preexisting items
    - Manufacturers will always have raw materials & WIP; wholesalers/distributors & retailers still must maintain adequate base stock
- **Misconception #4: Internal costs must be used to measure LIFO inflation**
  - **Clarification:** External indexes such as the BLS CPI/PPI can be used to measure inflation, thereby minimizing reliance on accounting information systems



# LIFO Misconceptions: Clarifying LIFO Reserve Changes

- 12/31/21 LIFO Calculation Summary (last year closed)
  - Prior year end inventory balance at cost (FIFO): \$28.1M
  - Prior year end inventory balance at LIFO: \$25M
  - Prior year end LIFO reserve: \$3.1M
- Clarifications
  - In most cases, material LIFO recapture only occurs when there is either substantial deflation and/or substantial inventory liquidations
  - When there's inflation, LIFO reserve can increase even when current vs. prior year inventory balances decrease

## 12/31/2022 Year End Interim Estimate: LIFO Projections Report

Inventory @ Cost	Next Year LIFO Expense (Income) Resulting From Current Year Inflation Rates & Inventory Balance at Cost Values Shown Below															
	-6%	-5%	-4%	-3%	-2%	-1%	0%	1%	2%	3%	4%	5%	6%	7%	8%	
10,000,000	-1,845,836	-1,754,013	-1,664,104	-1,576,049	-1,489,790	-1,405,274	-1,322,449	-1,241,263	-1,161,670	-1,083,622	-1,007,074	-931,985	-858,313	-786,018	-715,061	
11,000,000	-1,718,147	-1,617,143	-1,518,243	-1,421,382	-1,326,497	-1,233,530	-1,142,422	-1,053,118	-965,565	-879,712	-795,510	-712,912	-631,872	-552,348	-474,296	
12,000,000	-1,590,459	-1,480,272	-1,372,381	-1,266,714	-1,163,204	-1,061,785	-962,395	-864,972	-769,460	-675,802	-583,946	-493,839	-405,432	-318,678	-233,530	
13,000,000	-1,462,771	-1,343,402	-1,226,520	-1,112,047	-999,911	-890,041	-782,368	-676,827	-573,355	-471,892	-372,381	-274,765	-178,991	-85,007	7,236	
14,000,000	-1,335,082	-1,206,531	-1,080,658	-957,380	-836,619	-718,296	-602,341	-488,681	-377,250	-267,983	-160,817	-55,692	47,449	148,663	248,002	
15,000,000	-1,239,040	-1,087,724	-939,561	-802,713	-673,326	-546,552	-422,314	-300,535	-181,145	-64,073	50,748	163,381	273,890	382,333	488,768	
16,000,000	-1,197,375	-1,035,971	-877,930	-723,148	-571,524	-422,963	-277,374	-134,667	5,241	139,837	262,312	382,455	500,331	616,003	729,533	
17,000,000	-1,155,709	-984,218	-816,299	-651,843	-490,743	-332,897	-178,208	-26,583	122,070	267,836	410,799	551,039	688,632	823,654	956,176	
18,000,000	-1,148,936	-947,368	-754,668	-580,538	-409,961	-242,831	-79,042	81,502	238,899	393,240	544,612	693,101	838,789	981,753	1,122,070	
19,000,000	-1,212,766	-1,000,000	-791,667	-587,629	-387,755	-191,919	0	188,119	355,728	518,643	678,425	835,164	988,945	1,139,852	1,287,964	
20,000,000	-1,276,596	-1,052,632	-833,333	-618,557	-408,163	-202,020	0	198,020	392,157	582,524	769,231	952,381	1,132,075	1,297,951	1,453,858	
21,000,000	-1,340,426	-1,105,263	-875,000	-649,485	-428,571	-212,121	0	207,921	411,765	611,650	807,692	1,000,000	1,188,679	1,373,832	1,555,556	
22,000,000	-1,404,255	-1,157,895	-916,667	-680,412	-448,980	-222,222	0	217,822	431,373	640,777	846,154	1,047,619	1,245,283	1,439,252	1,629,630	
23,000,000	-1,468,085	-1,210,526	-958,333	-711,340	-469,388	-232,323	0	227,723	450,980	669,903	884,615	1,095,238	1,301,887	1,504,673	1,703,704	
24,000,000	-1,531,915	-1,263,158	-1,000,000	-742,268	-489,796	-242,424	0	237,624	470,588	699,029	923,077	1,142,857	1,358,491	1,570,093	1,777,778	
25,000,000	-1,595,745	-1,315,789	-1,041,667	-773,196	-510,204	-252,525	0	247,525	490,196	728,155	961,538	1,190,476	1,415,094	1,635,514	1,851,852	
26,000,000	-1,659,574	-1,368,421	-1,083,333	-804,124	-530,612	-262,626	0	257,426	509,804	757,282	1,000,000	1,238,095	1,471,698	1,700,935	1,925,926	
27,000,000	-1,685,605	-1,404,671	-1,123,737	-835,052	-551,020	-272,727	0	267,327	529,412	786,408	1,038,462	1,285,714	1,528,302	1,766,355	2,000,000	
28,000,000	-1,685,605	-1,404,671	-1,123,737	-842,803	-561,868	-280,934	0	277,228	549,020	815,534	1,076,923	1,333,333	1,584,906	1,831,776	2,074,074	
29,000,000	-1,685,605	-1,404,671	-1,123,737	-842,803	-561,868	-280,934	0	280,934	561,868	842,803	1,115,385	1,380,952	1,641,509	1,897,196	2,148,148	
30,000,000	-1,685,605	-1,404,671	-1,123,737	-842,803	-561,868	-280,934	0	280,934	561,868	842,803	1,123,737	1,404,671	1,685,605	1,962,617	2,222,222	
31,000,000	-1,685,605	-1,404,671	-1,123,737	-842,803	-561,868	-280,934	0	280,934	561,868	842,803	1,123,737	1,404,671	1,685,605	1,966,539	2,247,473	
32,000,000	-1,685,605	-1,404,671	-1,123,737	-842,803	-561,868	-280,934	0	280,934	561,868	842,803	1,123,737	1,404,671	1,685,605	1,966,539	2,247,473	
12/31/2022 minimum inventory balance at cost required to completely avoid LIFO layer erosions																
	26,407,813	26,688,747	26,969,681	27,250,616	27,531,550	27,812,484	28,093,418	28,374,352	28,655,286	28,936,221	29,217,155	29,498,089	29,779,023	30,059,957	30,340,892	

LIFO expense (income) = current vs. prior year LIFO reserve change. 12/31/2022 LIFO reserve = 2021 year end LIFO reserve (3,122,719) ± 2022 year end LIFO expense (income) amount shown above.

# Dollar-value LIFO Overview

## Inflation Calculation

If using internal index, current quantities & current/prior period item/unit costs double extended to calculate current year & cumulative inflation index

If using external index BLS CPI/PPI categories assigned to all goods & inventory balances by BLS category used to calculate current year & cumulative inflation index

## Base Year & LIFO Layers Calculation

Current year inventory at base year cost & base year increment (decrement(s)) calculated using cumulative index(es)

Current year LIFO increment (decrement(s)) & LIFO inventory balance calculated using cumulative index(es)

## LIFO Reserve & Expense (Income) Calculation

LIFO reserve calculated by taking the difference between inventory balance at cost & LIFO; LIFO expense (income) calculated by taking difference in current vs. prior year LIFO reserve

Journal entry recorded to debit/credit COGS & LIFO reserve





# What Makes a Good LIFO Candidate?

- **Good LIFO Candidate:** LIFOPro has developed a proprietary scoring system to identify good candidates, which requires for the following criteria to be met -
  - **High inflation frequency:** Must have inflation in more than half of the last 20 years (11 or more). Best LIFO candidates have high inflation frequency because the more often inflation is expected to occur, the higher the likelihood that LIFO acts as annuity & the lower the likelihood of deflation/LIFO recapture
  - **Historical Average Annual Inflation Rate of 1% or greater:** Using 20 year average annual inflation rate (or 3/5/10 year)
  - **At least \$2M - \$5M of inventory:** Dependent on inflation level, tax rate & company's perceived value of LIFO tax benefits
- **Good LIFO Election Candidate:** Must meet the good LIFO candidate criteria listed above & have an election year inflation rate that's greater than or equal to the historical average annual inflation rate
- **Good 2022 LIFO Election Candidates:** Download list here - [LIFOPro's 2022 Good LIFO Election Candidates & Client ID Tool](#)
- **Election Year LIFO Tax Savings Formula & Example**
  - **Formulas**
    - **Election year taxable income reduction from LIFO (LIFO expense):** Prior year inventory balance at cost \* Current year inflation rate
    - **Election year LIFO tax benefit:** Current year LIFO expense \* Combined federal & state tax rate
  - **Example:**
    - **Assumptions:** \$5M prior year end inventory balance, 10% current year inflation & 40% tax rate
    - **Results:**
      - **Election year LIFO expense:**  $\$5M * 10\% = \$500K$
      - **Election year LIFO tax benefit:**  $\$500K * 40\% = \$200K$



# Why Elect LIFO in 2022?

- 2022 inflation will likely be well or far above historical averages in many industries, which will create some of the best LIFO tax deferral/savings opportunities seen in 4-5 decades.
- When compared to a normal inflation period, many years worth of LIFO tax benefits can be obtained in a single year by electing in 2022
- One of the best possible times to elect LIFO is in a year with above-average or record high inflation because it greatly increases the probability of the year one LIFO reserve being much larger than the sum of any future LIFO recapture (taxable income) that could potentially be created during deflationary periods. See example below.

## 10-year LIFO Reserve Comparison: Differential Between Electing in an Average vs. High Inflation Period

### High Inflation Period - 10% election year inflation (2022)

Period	Inventory at Cost	Current Year Inflation Rate	Cumulative Inflation Rate	Inventory at LIFO	LIFO Reserve	LIFO Expense (Income)
12/31/2021	20,000,000	-	-	20,000,000	-	-
12/31/2022	25,000,000	10.0%	10.0%	23,000,000	2,000,000	2,000,000
12/31/2023	26,500,000	2.0%	12.2%	24,000,000	2,500,000	500,000
12/31/2024	25,000,000	1.0%	13.3%	22,267,133	2,732,867	232,867
12/31/2025	24,000,000	-3.0%	9.9%	22,016,956	1,983,044	-749,823
12/31/2026	25,000,000	-1.0%	8.8%	23,256,958	1,743,042	-240,002
12/31/2027	26,000,000	1.5%	10.5%	23,881,958	2,118,042	375,000
12/31/2028	28,000,000	-1.5%	8.8%	26,271,958	1,728,042	-390,000
12/31/2029	30,000,000	3.0%	12.1%	27,431,958	2,568,042	840,000
12/31/2030	30,500,000	2.5%	14.9%	27,188,056	3,311,944	743,902
12/31/2031	31,000,000	4.0%	19.5%	26,512,634	4,487,366	1,175,422

### Average Inflation Period - 2% election year inflation (2023)

Period	Inventory at Cost	Current Year Inflation Rate	Cumulative Inflation Rate	Inventory at LIFO	LIFO Reserve	LIFO Expense (Income)
12/31/2022	25,000,000	-	-	25,000,000	-	-
12/31/2023	26,500,000	2.0%	2.0%	26,000,000	500,000	500,000
12/31/2024	25,000,000	1.0%	3.0%	24,267,133	732,867	232,867
12/31/2025	24,000,000	-3.0%	-0.1%	24,016,956	-16,956	-749,823
12/31/2026	25,000,000	-1.0%	-1.1%	25,256,958	-256,958	-240,002
12/31/2027	26,000,000	1.5%	0.4%	25,881,958	118,042	375,000
12/31/2028	28,000,000	-1.5%	-1.1%	28,271,958	-271,958	-390,000
12/31/2029	30,000,000	3.0%	1.9%	29,431,958	568,042	840,000
12/31/2030	30,500,000	2.5%	4.4%	29,188,056	1,311,944	743,902
12/31/2031	31,000,000	4.0%	8.6%	28,512,634	2,487,366	1,175,422
12/31/2032	31,500,000	0.5%	9.1%	28,857,634	2,642,366	155,000



# LIFO Election Requirements & Disclaimers

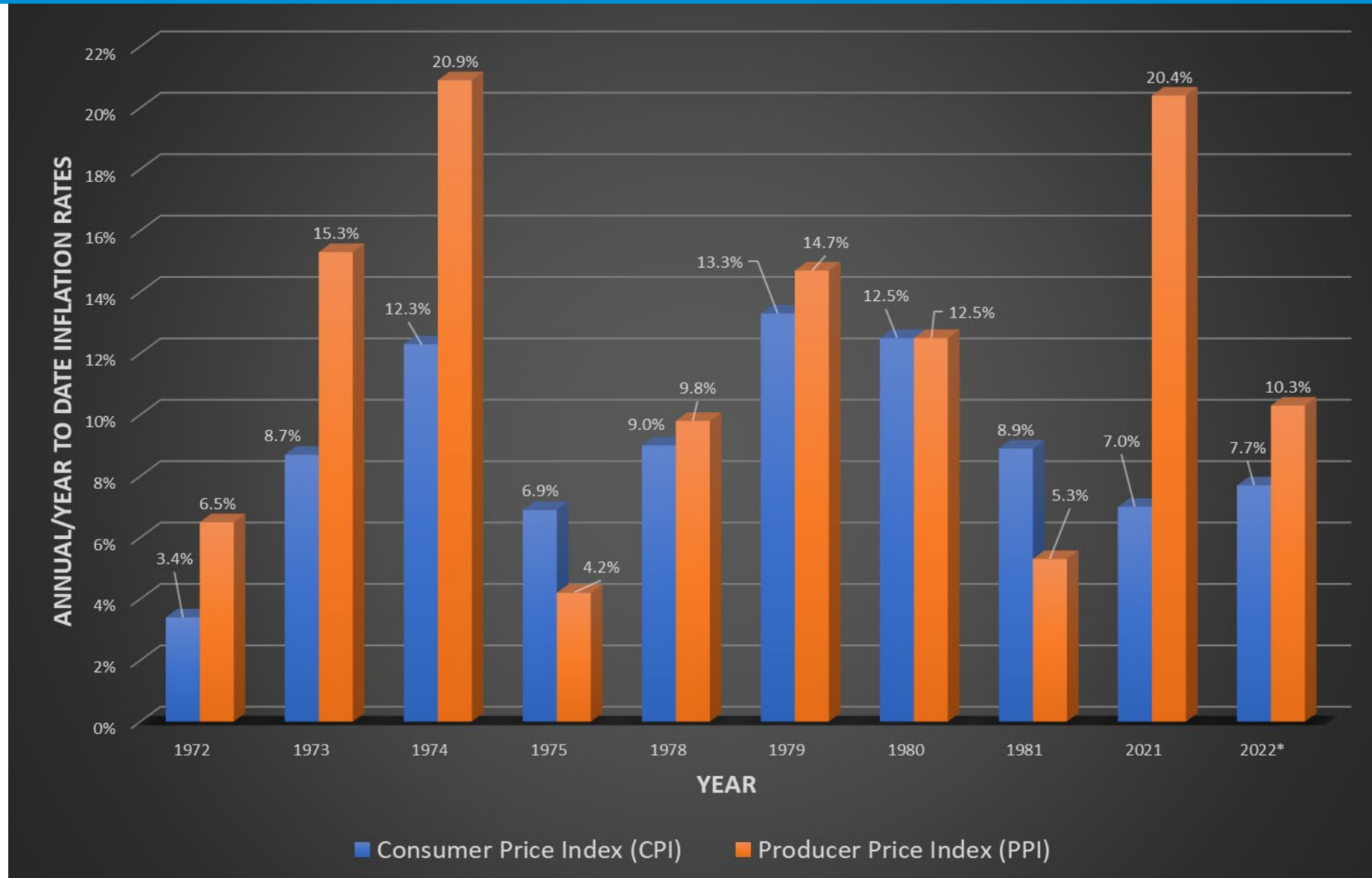
- **Election Requirements**

- **LIFO Conformity Rule:** Must value inventory using LIFO on financial statements beginning with the same period LIFO is elected & reported on the tax return (although financial statements must show inventory & income reported under LIFO, disclosures can be made in notes to financial statements to present amounts such as ending inventory and income using non-LIFO method for comparative purposes)
- Election scope or the goods to be valued under LIFO for tax purposes can not be greater than inventories valued under LIFO for financial reporting (can have more goods on LIFO for book than for tax, but not vice versa)
- **Must take NON-LIFO reserves into income over 4-year period beginning with year of election. Examples include:**
  - Lower of cost or market reserve
  - Slow-moving/obsolete reserve
  - Arbitrary write-downs other than shrink
- Must stay on LIFO for five years prior to being allowed to automatically terminate election (must pay \$12K users fee & complete change prior to year end if terminating LIFO election less than five years before original year of adoption)

- **Disclaimers**

- **Portions or all of LIFO reserve may be taken back into income if the following occurs:**
  - **Portion of LIFO reserve may be taken back into income in periods where one or both of the following occurs:**
    - Deflation
    - Material inventory liquidations (for example, a 50% decrease in the current vs. prior year's ending inventory balance at cost)
  - **All of LIFO reserve will be taken back into income over 4 years when either of the following occurs:**
    - C to S Corp conversions
    - Business asset sales

# Present vs. Past High-Inflation Periods Comparison



Source: Bureau of Labor Statistics. Seasonally unadjusted figures.

\*2022 figures are year to date for the 9 months ended September 2022 (Sep. '22 ÷ Dec. '21)



# 2022 Inflation Environment & Historical Comparisons - BLS PPI

PPI Code	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
PPI Major Commodity Group	Farm products	Processed foods and feeds	Textile products and apparel	Hides, skins, leather & related products	Fuels and related products and power	Chemicals and allied products	Rubber and plastic products	Lumber and wood products	Pulp, paper, and allied products	Metals and metal products	Machinery and equipment	Furniture and household durables	Nonmetallic mineral products	Transportation equipment	Misc. products
Inflation Measurement Period															
10M Ended October 2022 (YTD)	17.1%	9.3%	8.3%	5.5%	27.9%	4.4%	8.7%	-0.7%	8.5%	-7.1%	8.2%	6.9%	12.4%	4.2%	7.4%
12M Ended October 2022	26.7%	9.5%	12.9%	-8.4%	36.6%	6.4%	14.3%	10.3%	12.8%	0.0%	10.1%	9.3%	13.8%	5.1%	9.0%
12M Ended December 2021	23.9%	10.4%	15.4%	0.9%	38.3%	22.9%	21.1%	16.4%	16.0%	43.3%	7.1%	10.9%	7.8%	3.9%	6.3%
12M Ended December 2020	3.1%	2.0%	-0.2%	3.0%	-6.3%	0.7%	0.6%	16.1%	3.0%	6.7%	1.0%	1.6%	2.1%	0.9%	2.8%
12M Ended December 2019	-1.4%	2.5%	-0.4%	-3.1%	-6.2%	-2.7%	-1.1%	-0.9%	-2.3%	-4.2%	1.6%	2.0%	1.5%	0.5%	4.0%
12M Ended December 2018	4.4%	0.7%	3.7%	-9.8%	4.2%	1.1%	3.1%	1.1%	2.5%	7.3%	2.5%	3.9%	4.1%	1.3%	2.3%
12M Ended December 2017	5.9%	0.4%	1.5%	-3.1%	10.4%	7.2%	3.1%	4.9%	2.4%	5.6%	0.9%	1.6%	2.3%	0.8%	2.4%
12M Ended December 2016	-5.4%	0.5%	-0.3%	-1.1%	8.3%	2.5%	0.3%	2.0%	1.0%	6.0%	0.0%	0.1%	2.0%	1.0%	1.8%
12M Ended December 2015	-14.9%	-6.2%	-1.0%	-14.8%	-19.8%	-4.8%	-2.6%	-2.1%	-1.1%	-11.3%	0.3%	0.7%	1.5%	1.0%	1.9%
12M Ended December 2014	1.8%	4.2%	1.3%	4.5%	-13.6%	0.0%	0.4%	3.2%	-0.1%	-0.5%	0.7%	1.5%	3.8%	1.3%	1.4%
12M Ended December 2013	-7.8%	-0.8%	0.9%	5.2%	0.6%	0.5%	1.7%	5.4%	1.7%	-1.8%	1.0%	0.7%	2.7%	1.1%	1.5%
12M Ended December 2012	10.1%	4.1%	-0.5%	7.0%	-3.0%	0.8%	0.8%	5.8%	1.0%	-2.3%	0.6%	1.2%	2.5%	1.8%	2.5%
12M Ended December 2011	8.7%	7.2%	7.8%	3.6%	8.7%	7.2%	6.7%	1.8%	0.6%	3.6%	1.9%	3.0%	2.4%	2.6%	3.6%
12M Ended December 2010	18.4%	5.0%	2.2%	16.3%	12.3%	7.3%	4.1%	3.5%	7.8%	9.7%	-0.3%	0.3%	0.6%	0.7%	2.9%
12M Ended December 2009	5.1%	-0.7%	0.2%	-5.5%	18.5%	2.7%	-2.4%	-1.4%	-1.3%	3.8%	0.3%	0.6%	-1.6%	0.4%	0.1%
12M Ended December 2008	-15.9%	5.6%	2.1%	-0.1%	-24.0%	2.5%	8.3%	-1.0%	3.4%	-2.8%	2.7%	4.8%	9.5%	3.6%	2.6%
12M Ended December 2007	25.6%	8.2%	1.6%	0.4%	18.2%	9.0%	1.8%	-0.1%	3.8%	4.0%	-0.1%	1.4%	2.0%	0.9%	2.6%
12M Ended December 2006	5.2%	2.2%	0.9%	3.8%	-5.8%	3.9%	1.3%	-3.0%	4.0%	12.1%	3.2%	1.0%	7.7%	2.5%	2.4%
12M Ended December 2005	1.9%	1.5%	1.8%	-0.3%	30.6%	8.4%	10.5%	1.2%	2.5%	5.1%	0.8%	3.5%	8.1%	0.1%	8.4%
12M Ended December 2004	-4.6%	2.5%	1.6%	0.5%	19.8%	12.4%	5.4%	4.9%	4.3%	19.4%	0.9%	2.5%	5.4%	2.6%	3.2%
12M Ended December 2003	25.5%	7.0%	-0.2%	2.5%	11.0%	5.2%	3.0%	7.1%	1.8%	4.4%	-0.7%	0.5%	1.6%	2.3%	-1.5%
12M Ended December 2002	2.5%	1.3%	-0.6%	5.8%	20.9%	5.5%	0.3%	0.9%	2.0%	3.0%	-0.7%	0.2%	0.8%	-0.8%	0.0%
<b>3Y Annual Average: 12/19 - 12/21</b>	<b>8.0%</b>	<b>4.9%</b>	<b>4.7%</b>	<b>0.3%</b>	<b>6.7%</b>	<b>6.4%</b>	<b>6.4%</b>	<b>10.2%</b>	<b>5.3%</b>	<b>13.6%</b>	<b>3.2%</b>	<b>4.7%</b>	<b>3.8%</b>	<b>1.7%</b>	<b>4.3%</b>
<b>5Y Annual Average: 12/17 - 12/21</b>	<b>6.8%</b>	<b>3.2%</b>	<b>3.8%</b>	<b>-2.5%</b>	<b>6.9%</b>	<b>5.5%</b>	<b>5.1%</b>	<b>7.3%</b>	<b>4.1%</b>	<b>10.7%</b>	<b>2.6%</b>	<b>3.9%</b>	<b>3.5%</b>	<b>1.5%</b>	<b>3.6%</b>
<b>10Y Annual Average: 12/12 - 12/21</b>	<b>1.5%</b>	<b>1.7%</b>	<b>1.9%</b>	<b>-1.3%</b>	<b>0.2%</b>	<b>2.6%</b>	<b>2.5%</b>	<b>5.0%</b>	<b>2.3%</b>	<b>4.1%</b>	<b>1.5%</b>	<b>2.4%</b>	<b>3.0%</b>	<b>1.3%</b>	<b>2.7%</b>
<b>20Y Annual Average: 12/02 - 12/21</b>	<b>4.0%</b>	<b>2.8%</b>	<b>1.8%</b>	<b>0.6%</b>	<b>4.9%</b>	<b>4.5%</b>	<b>3.2%</b>	<b>3.2%</b>	<b>2.6%</b>	<b>5.1%</b>	<b>1.2%</b>	<b>2.1%</b>	<b>3.3%</b>	<b>1.4%</b>	<b>2.5%</b>
<b>Inflation Frequency: 12/02 - 12/21</b>	<b>14 of 20</b>	<b>17 of 20</b>	<b>13 of 20</b>	<b>12 of 20</b>	<b>13 of 20</b>	<b>17 of 20</b>	<b>17 of 20</b>	<b>14 of 20</b>	<b>16 of 20</b>	<b>14 of 20</b>	<b>15 of 20</b>	<b>20 of 20</b>	<b>19 of 20</b>	<b>19 of 20</b>	<b>18 of 20</b>
<b>2021 - 2022 vs. 20 Year Annual Average Inflation Rate Multipliers: Current/Prior Year Inflation Rate Comparison to 20 Year Annual Average Inflation Rates (2021 - 2022 Inflation Rates ÷ 20 Year Average Annual Inflation Rates)</b>															
<b>10M Ended October '22 (YTD)</b>	<b>4.3</b>	<b>3.3</b>	<b>4.6</b>	<b>9.3</b>	<b>5.6</b>	<b>1.0</b>	<b>2.7</b>	<b>-0.2</b>	<b>3.3</b>	<b>-1.4</b>	<b>7.1</b>	<b>3.3</b>	<b>3.7</b>	<b>3.0</b>	<b>2.9</b>
<b>12M Ended October '22</b>	<b>6.7</b>	<b>3.4</b>	<b>7.1</b>	<b>-14.3</b>	<b>7.4</b>	<b>1.4</b>	<b>4.5</b>	<b>3.3</b>	<b>5.0</b>	<b>0.0</b>	<b>8.6</b>	<b>4.5</b>	<b>4.2</b>	<b>3.6</b>	<b>3.6</b>
<b>12M Ended December '21</b>	<b>6.0</b>	<b>3.7</b>	<b>8.4</b>	<b>1.5</b>	<b>7.7</b>	<b>5.1</b>	<b>6.6</b>	<b>5.2</b>	<b>6.2</b>	<b>8.5</b>	<b>6.1</b>	<b>5.3</b>	<b>2.4</b>	<b>2.7</b>	<b>2.5</b>

# 2022 Inflation Environment & Historical Comparisons - BLS CPI

CPI Code	SAF	SEHE	SAH3	SAA	SAM1	SEEA	SEGA	SEGB	SEGE	SAG	SAT1	SS45011	SS45021	SETA02	SETC
BLS CPI Major Expenditure Group	Food & Beverages	Fuel Oil & Other Fuels	Household Furnishings & Operations	Apparel	Medical Care Commodities	Educational Books & Supplies	Tobacco & Smoking Products	Personal Care Products	Miscellaneous Personal Goods	Other Goods And Services	Private Transportation	New Cars	New Trucks	Used Cars And Trucks	Motor Vehicle Parts & Equipment
Inflation Measurement Period															
10M Ended October 2022 (YTD)	9.6%	41.2%	6.8%	6.9%	2.9%	5.0%	4.9%	7.4%	8.5%	5.7%	7.9%	6.1%	5.8%	-3.9%	9.2%
12M Ended October 2022	10.6%	44.2%	8.4%	4.1%	3.1%	4.7%	6.6%	6.8%	9.8%	6.5%	10.4%	9.6%	8.0%	2.0%	12.2%
12M Ended December 2021	6.0%	38.0%	7.4%	5.8%	0.4%	-0.4%	9.0%	0.1%	6.2%	4.5%	22.6%	12.0%	11.6%	37.3%	11.3%
12M Ended December 2020	3.8%	-13.3%	3.2%	-3.9%	-2.5%	0.7%	5.1%	-0.3%	-0.2%	2.4%	-1.5%	2.1%	1.9%	10.0%	0.4%
12M Ended December 2019	1.7%	2.2%	1.0%	-1.2%	2.5%	-2.0%	5.5%	-0.9%	6.8%	2.3%	2.0%	0.1%	0.3%	-0.7%	1.8%
12M Ended December 2018	1.6%	1.3%	2.1%	-0.1%	-0.5%	1.0%	3.4%	-0.4%	-9.3%	2.1%	0.9%	0.2%	-0.7%	1.4%	2.2%
12M Ended December 2017	1.6%	12.6%	-0.8%	-1.6%	2.3%	-1.8%	6.5%	-0.8%	-2.4%	2.0%	3.8%	-1.1%	-0.1%	-1.0%	-0.5%
12M Ended December 2016	-0.1%	7.9%	-1.1%	-0.1%	4.7%	5.5%	3.6%	-0.3%	-0.9%	2.1%	2.8%	-0.2%	0.6%	-3.5%	-1.0%
12M Ended December 2015	0.8%	-23.2%	-0.1%	-0.9%	1.5%	4.4%	3.6%	0.1%	-4.7%	1.9%	-4.4%	-0.4%	0.7%	0.4%	-0.3%
12M Ended December 2014	3.3%	-13.7%	-0.9%	-2.0%	4.8%	4.6%	3.0%	0.3%	-0.6%	1.6%	-6.4%	-0.1%	1.3%	-4.2%	-0.7%
12M Ended December 2013	1.1%	2.9%	-1.4%	0.6%	0.3%	5.0%	3.2%	0.8%	-2.2%	1.8%	0.5%	-0.6%	1.4%	-4.5%	-2.1%
12M Ended December 2012	1.8%	-1.4%	0.0%	1.8%	1.7%	7.0%	1.9%	0.2%	-0.6%	1.5%	1.5%	1.1%	2.1%	-3.2%	0.9%
12M Ended December 2011	4.5%	14.3%	1.0%	4.6%	3.2%	5.2%	2.3%	0.1%	-1.0%	1.7%	5.3%	4.0%	2.3%	-0.8%	5.9%
12M Ended December 2010	1.5%	13.5%	-2.5%	-1.1%	2.9%	3.5%	5.6%	-1.0%	-1.8%	1.9%	5.3%	-1.1%	1.0%	1.1%	3.3%
12M Ended December 2009	-0.4%	2.5%	-1.1%	1.9%	3.3%	6.9%	30.1%	0.5%	0.6%	8.0%	15.3%	3.6%	6.6%	1.7%	1.3%
12M Ended December 2008	5.8%	-14.4%	2.0%	-1.0%	1.6%	7.0%	6.3%	2.0%	1.4%	3.4%	-14.4%	-1.1%	-5.3%	1.9%	7.4%
12M Ended December 2007	4.8%	28.3%	-0.7%	-0.3%	2.7%	8.7%	7.5%	-0.5%	0.7%	3.3%	8.3%	-0.4%	-0.2%	2.0%	3.7%
12M Ended December 2006	2.2%	2.4%	0.5%	0.9%	1.8%	6.7%	2.8%	2.3%	0.6%	3.0%	1.7%	0.2%	-2.0%	1.8%	4.8%
12M Ended December 2005	2.3%	24.0%	0.7%	-1.1%	3.7%	5.2%	5.8%	1.3%	-0.2%	3.1%	4.7%	0.8%	-1.9%	0.2%	3.7%
12M Ended December 2004	2.6%	34.1%	0.6%	-0.2%	2.2%	3.8%	3.1%	0.0%	-2.7%	2.5%	7.0%	0.5%	0.5%	-1.6%	2.0%
12M Ended December 2003	3.5%	9.1%	-1.8%	-2.1%	2.1%	6.0%	-0.4%	0.0%	-4.9%	1.5%	0.3%	-2.1%	-1.5%	-3.3%	0.7%
12M Ended December 2002	1.5%	11.4%	-1.5%	-1.8%	3.1%	9.7%	9.5%	-1.3%	-0.8%	3.3%	4.2%	-2.0%	-2.2%	-3.9%	1.1%
3Y Annual Average: 12/19 - 12/21	2.0%	11.3%	2.4%	1.9%	0.1%	-0.1%	2.9%	0.0%	2.0%	1.5%	7.0%	3.8%	3.7%	11.1%	3.6%
5Y Annual Average: 12/17 - 12/21	2.9%	6.9%	2.5%	-0.3%	0.4%	-0.5%	5.9%	-0.4%	0.0%	2.7%	5.2%	2.6%	2.5%	8.5%	3.0%
10Y Annual Average: 12/12 - 12/21	2.1%	0.1%	0.9%	-0.2%	1.5%	2.4%	4.4%	-0.1%	-0.9%	2.2%	1.9%	1.3%	1.9%	3.4%	1.1%
20Y Annual Average: 12/02 - 12/21	2.5%	5.7%	0.3%	-0.1%	2.1%	4.3%	5.7%	0.1%	-0.9%	2.7%	2.7%	0.7%	0.8%	1.4%	2.3%
Inflation Frequency: 12/02 - 12/21	18 of 20	15 of 20	10 of 20	6 of 20	18 of 20	17 of 20	19 of 20	10 of 20	6 of 20	20 of 20	16 of 20	10 of 20	12 of 20	10 of 20	15 of 20
2021 - 2022 vs. 20 Year Annual Average Inflation Rate Multipliers: Current/Prior Year Inflation Rate Comparison to 20 Year Annual Average Inflation Rates (Multiplier > 1 = above-average; < 1 or negative = below-average)															
10M Ended October '22 (YTD)	3.9	7.2	22.9	64.1	1.4	1.2	0.9	63.9	9.8	2.1	2.9	8.3	7.5	-2.8	4.1
12M Ended October '22	4.3	7.7	28.3	38.1	1.5	1.1	1.2	58.2	11.4	2.4	3.8	13.0	10.3	1.5	5.4
12M Ended December '21	2.4	6.6	24.9	53.9	0.2	-0.1	1.6	1.2	7.3	1.7	8.3	16.2	15.0	26.8	5.0

# Why Perform Analysis?

- Thorough LIFO Due diligence should be considered essential
- Failing to perform thorough LIFO due diligence can lead to the following:
  - Materially lower tax benefits being obtained in the long-term as a result of selecting suboptimal methods
  - Impermissible methods unknowingly being used & audit risk being created
  - Utilizing methods that are more error-prone or burdensome than simpler, less time-intensive alternatives
  - Higher likelihood of eventually terminating LIFO election due to lack of benefits and/or excessive administrative costs/resources
- Performing thorough LIFO due diligence ensures the following:
  - Historical inflation studied to predict & understand potential long-term benefits & risks
  - Expectations can be developed & best vs. worst case scenarios are understood upfront
  - All method alternatives are explored & best practices are considered/employed
  - Best possible tax answer is achieved while ensuring compliance
  - Election year and ongoing responsibilities & requirements are clearly defined



# Why Outsource LIFO or License LIFO Software?

- **In-house calculations made WITHOUT software**
  - Inflation calculation can be very complex when performed in spreadsheets
  - Important steps may be overlooked or left out altogether when manually performed in-house, such as:
    - Including new items in calculation ensure compliance or reconstructing new item cost to avoid inflation dilution that'd otherwise occur
    - Performing inflation calculation reasonableness testing, setting criteria for identifying inflation outliers & establishing standard procedures for handling outliers
    - Uniform BLS category assignment to new items to ensure the same BLS indexes are applied to similar new vs. preexisting items
  - Calculating layers & decrements can be complex because it's unknown whether there'll be an increment or decrement in any given year & different math steps are required to calculate an increment vs. decrement(s)
  - Calculation errors become more inevitable the longer you've been on LIFO as decades worth of LIFO layers accumulate
- **Outsourced calculations or those made in-house WITH software**
  - Make being on LIFO as simple as possible with outsourcing & minimize time spent on LIFO in-house with software
  - Simplifies audit procedures for companies & auditors by providing them with comprehensive, standardized documentation
  - CPA firms & companies can rely on LIFOPro to act as their LIFO subject matter expert rather than having to develop & maintain in-house expertise
  - Guarantee calculation accuracy & eliminate IRS audit risk
  - Easily obtain interim estimates to focus on forecasting & planning
  - Avoid getting bogged down with compliance work & getting hit with big LIFO surprises at year end
- **All of LIFOPro's offerings come with the assurance of a SOC 1 Type II Report**

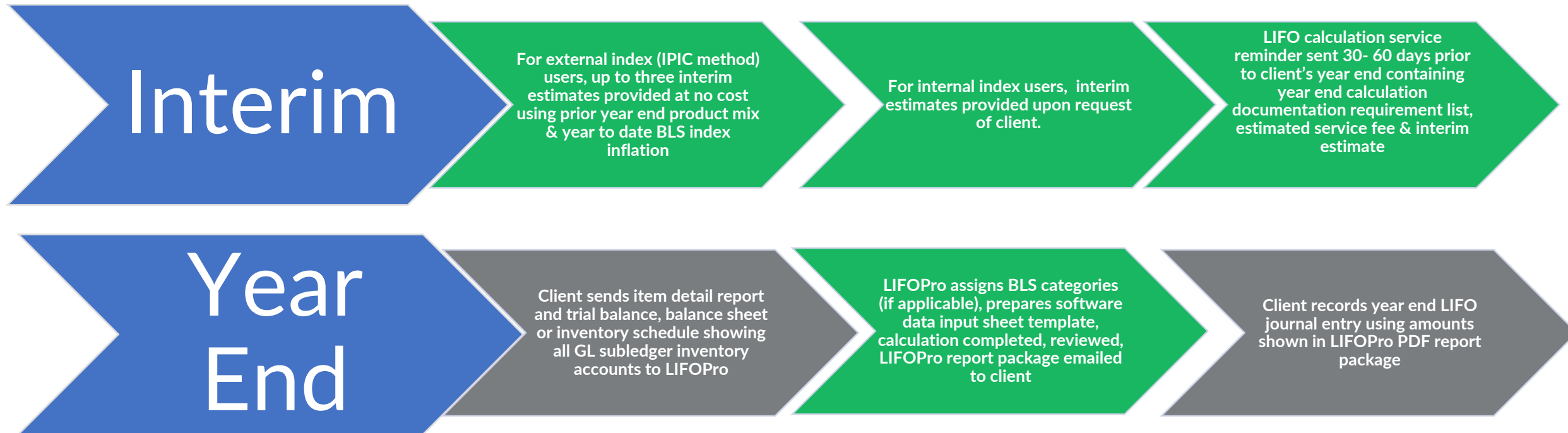




# LIFO Benefit Analysis & Turnkey Solutions Process Flow: First Year



# Turnkey Outsourcing Solutions Process Flow: Recurring



# LIFOPro Outsourcing Fee Range

Inventory Balance at Cost on LIFO	Internal Indexes		External Indexes (IPIC CPI/PPI)	
	First Year	Recurring	First Year	Recurring
< \$1 million	\$500 - \$1,500	\$500 - \$1,000	\$500 - \$1,500	\$500 - \$1,000
\$1M - \$19M	\$1,500 - \$7,500	\$500 - \$1,500	\$1,500 - \$7,500	\$1,000 - \$5,000
\$20M - \$99M	\$3,500 - \$15,000	\$1,500 - \$7,500	\$3,500 - \$15,000	\$2,000 - \$12,500
\$100M - \$499M	\$7,500 - \$20,000	\$3,500 - \$10,000	\$7,500 - \$20,000	\$5,000 - \$15,000
\$500M - \$999M	\$10,000 - \$30,000	\$7,500 - \$15,000	\$10,000 - \$40,000	\$7,500 - \$30,000
\$1B or more	\$12,500 - \$50,000	\$10,000 - \$25,000	\$12,500 - \$50,000	\$10,000 - \$50,000



# How to Get Started

- Get a complimentary LIFO Election Benefit Analysis & fee quote
- **Report includes the following:**
  - Current year LIFO inventory/reserve balance & estimated tax savings from LIFO – can be used to incorporate estimated LIFO figure in financial statement to ensure LIFO conformity compliance
  - 20 year pro forma LIFO calculation using Bureau of Labor Statistics Consumer/Producer Price Indexes to determine the historical inflation trends, whether a company is a good LIFO candidate & what inflation measurement source should be used
  - How LIFO Works appendix covering all the must-knows about LIFO
- See sample LIFO Election Benefit Analysis report here: **[Sample LIFO Election Benefit Analysis Report](#)**
- **How to get started**
  - Send LIFOPro documentation required to receive complimentary LIFO Election Benefit Analysis
    - Required LIFO election benefit analysis documentation:
      - **Companies other than dealerships:**
        - Completed questionnaire – **[LIFO Benefit Analysis Document Request List](#)**
        - Current & prior period's **item detail reports** (see document request list & sample templates contained in above file)
      - **Dealerships**
        - Completed questionnaire OR current & prior year trial balance or balance sheet schedules
        - **[Auto dealer questionnaire](#)**
        - **[All other dealers questionnaire](#)** (RV, ag/farm, construction, powersports, etc.)
    - Email applicable documents to [lifopro@lifopro.com](mailto:lifopro@lifopro.com) or upload here: <https://spaces.hightail.com/uplink/LIFO-PRO>
  - LIFOPro will email you analysis report & fee quote within one week of receiving above documents (expedited delivery available)
  - LIFOPro will also offer a free discovery call/online meeting to discuss report findings, recommendations & fee quote
  - For outsourcing clients, LIFOPro will turn around final calculation & deliver PDF report package as quickly as needed

