

Ch 22: Inflation

inflation + prices

Definition: sustained rise in average price level

measured by consumer price index (CPI)

losers:

- fixed income
- lenders
- savers
- producers

benefits:

Hyperinflation:

- Germany WWI: printed money to pay reparations to GB
- Zimbabwe

CPI:

- average item total → watch the price

$$\text{price index} = \frac{\text{basket of goods (this year)}}{\text{basket of goods (last year)}} \times 100$$

Reason for indexing: compare years in a large table

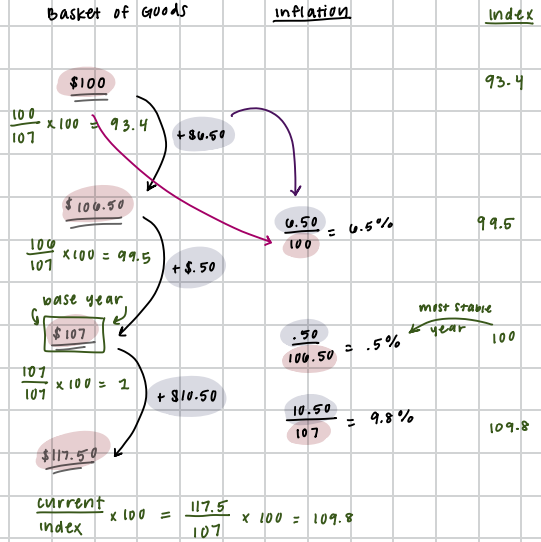
$$\begin{array}{l} 1982-1984 = 100 \\ \text{base year} \end{array} \quad 2023 = 322$$

$$\begin{array}{l} 1947 = 100 \\ \text{base year} \end{array} \quad 2025 = \sim 1000$$

Ch 22: Inflation Problems

33. indexing

	hamburger	Asprin	movies
year 1	\$3 $\frac{\$3}{\times 20}$ \$60	\$10 $\times \frac{1}{1}$ \$10	\$6 $\times \frac{5}{30}$ \$10
year 2	\$3.20 $\frac{\$3.20}{\times 20}$ \$64	\$10 $\times \frac{1}{1}$ \$10	\$6.50 $\times \frac{5}{30}$ \$10.83
year 3	\$3.10 $\frac{\$3.10}{\times 20}$ \$62	\$10 $\times \frac{1}{1}$ \$10	\$7 $\times \frac{5}{30}$ \$11.67
year 4	\$3.50 $\frac{\$3.50}{\times 20}$ \$70	\$10 $\times \frac{1}{1}$ \$10	\$7.50 $\times \frac{5}{30}$ \$12.50



Year	Inflation
1	110
2	115 $\frac{115-110}{110} \times 100 = 4.5\%$
3	120 $\frac{115-120}{115} \times 100 = 4.3\%$

34.

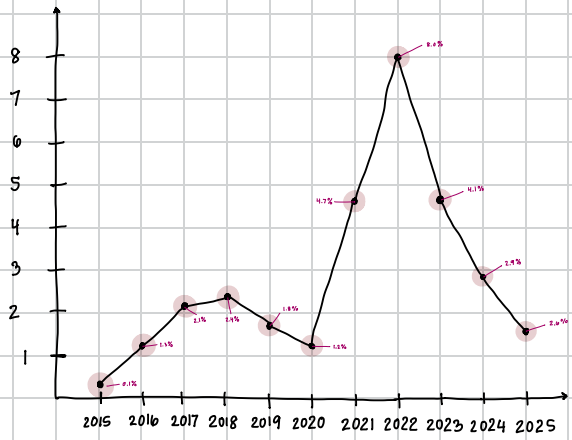
Year	f	Index
1	base year → 940	$\frac{940}{940} \times 100 = 100$ → +\$3.2
2	970	$\frac{970}{940} \times 100 = 103.2$
3	1000	$\frac{1000}{940} \times 100 = 106.4$
4	1070	$\frac{1070}{940} \times 100 = 113.80$

$\frac{\text{current}}{\text{base}} \times 100$

Inflation rate
$\frac{3.2}{100} \times 100 = 3.2\%$
$\frac{106.4 - 103.2}{106.4} \times 100 = 3.2\%$
$\frac{113.80 - 106.4}{113.8} \times 100 = 6.5\%$

#35. use this table

<https://www.minneapolisfed.org/about-us/monetary-policy/inflation-calculator/consumer-price-index-1913->



#36. inflation 5%

- (a) union member w/ labor contract: hurt
↳ inflation is eating your wage
- (b) person w/ large stash of cash: hurt
↳ worth of \$ is going lower
- (c) bank lending money to someone: hurt
↳ being paid w/ \$ worth less
- (d) borrower: benefits
↳ paying with less and less money

* inflation: still paying \$30,000 ????

- (e) employee will have pay raise in 12 mo: hurt
\$20/hr → \$21/hr (+5% raise) ↳ nominal raise
real raise: 5% - 5% = 0%

#37. rosalia the retiree

1-time payout of \$20,000 not indexed to inflation

$$FV = PV (1 + i)^t$$

$$FV = (20,000) (1 - .06)^{10}$$

$$\downarrow$$
$$(.94)^{10}$$

$$FV = (20,000) (.57)$$

$$FV = \$7,431$$

purchase
value