Inflation: an increase in the general level of prices that is sustained over time

- Prices rise unevenly
- February 2014 inflation rate was 1.1%
- Record high of 21.6% in June 1920 and record low of -17.8% in June 1921

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**Consumer Price Index:** an index that measures the prices of a fixed market/representative basket of goods and services that is bought by a “typical” consumer household

- Basket includes over 600 consumer goods and services
- Household is defined as urban with a size of 4 members
- Items are put in 1 of 8 groups and weighted for how important they are in a household’s basket
- Unlike GDP deflator it includes only consumer goods (domestic and imported) and services, not capital goods or government goods and services
4.3 INFLATION

Based on spending patterns of Canadian consumers in a specific period, presently 2002 (CPI for 2002 is set equal to 100)

Government uses index to report inflation rates each month and year, and adjust social benefits and income tax brackets

\[ \text{CPI} = \frac{\text{Price of the 2002 basket in the particular year}}{\text{Price of the same basket in the base year (2002)}} \times 100 \]

CPI can then be used to find the rate of inflation

\[ \text{Rate of inflation} = \frac{\text{CPI Year 2} - \text{CPI Year 1}}{\text{CPI Year 1}} \times 100 \]

<table>
<thead>
<tr>
<th>Year</th>
<th>All Items (2002=100)</th>
<th>Change from Previous Year (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>114.1</td>
<td>2.3</td>
</tr>
<tr>
<td>2009</td>
<td>114.4</td>
<td>0.3</td>
</tr>
<tr>
<td>2010</td>
<td>119.5</td>
<td>1.8</td>
</tr>
<tr>
<td>2011</td>
<td>119.9</td>
<td>2.9 (Highest in 10 years)</td>
</tr>
<tr>
<td>2012</td>
<td>121.7</td>
<td>1.5</td>
</tr>
<tr>
<td>2013</td>
<td>122.8</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Example rate of inflation for 2013:

\[
\frac{122.8 - 121.7}{121.7} \times 100 = \frac{1.1}{121.7} \times 100 = 0.009 \times 100 = 0.9\% 
\]
4.3 INFLATION

How to Use the Calculator:

- Enter the dollar amount, and the years you wish to compare, then click the Calculate button.
- The result will be displayed in the result box.

Table with columns labeled:
- Category:
- 2014
- 1959
- Price level 2014
- Price level 1959
- Nominal income
- Real income
- Change in real income

Example:
- In 2014, the nominal income was $10,000.
- In 1959, the nominal income was $2,000.
- The price level 2014 was 100.
- The price level 1959 was 10.
- The real income in 2014 was $10,000 / 100 = $100.
- The real income in 1959 was $2,000 / 10 = $200.
- The change in real income is $100 - $200 = -$100.

Comparing prices:

- E.g. Price of 1959 movie = price of 1959 movie × price level 2001

Rule of 70:
- Used to estimate the number of years it will take for a figure to double, given its annual percentage increase.
- Number of years to double = 70 / % growth rate

Costs of inflation:
- Inflation has redistributive effects and output effects.
- Distributive effects redistribute wealth, thereby helping some people and hurting others.
- Nominal income: present dollar-value of a person’s income.
- Real income: purchasing power of the income
  - = nominal income / price level
- Change in real income = % change in nominal income (i.e., year 2 - year 1) - the inflation rate
# 4.3 Inflation

- **Costs of inflation (continued):**
- **Redistributive effects (continued):**
  - Inflationary effects on real income of different groups will vary (e.g., elderly retired couple living off pension v. yuppie young couple earning income and commission)
  - Employees with weak bargaining power in the marketplace (e.g., because they are non-unionized) will struggle with inflation

- **Output effects:**
  - **Known** inflation can be managed as it is predictable; the uncertainty that arises from **unknown** inflation is problematic
  - Fear of unknown inflation may prevent businesses from launching new products or starting new initiatives, thus stunting investment spending and job creation (hence why unemployment is linked to inflation), an limiting the economy's output

- **Lenders may increase their nominal interest rates by adding an inflation rate to cover the added risk of lending money in times of inflation (thus, real interest rate = nominal interest rate – inflation rate)**
  - An unexpected rise in inflation hurts lenders but benefits borrowers (since their real income actually rose)
  - An unexpected decrease in inflation hurts borrowers but benefits lenders
4.3 INFLATION

- Costs of inflation (continued):
  - Output effects hurt everyone
  - Businesses incur menu costs: literally the cost of reproducing menus or other print materials to reflect the rising prices of a business' goods
  - Reduction in exports since the increase in their pricing makes them less attractive

4.3 INFLATION

- Demand-pull inflation: increases in the price level caused by an excess of total spending beyond the economy's capacity to produced
  - Resources are fully employed, so businesses cannot respond to excess demand by increasing output
  - I.e. demand pulls price up
- Cost-push inflation: increases in the price level resulting from an increase in resource costs and hence in per-unit production costs
  - Per unit cost = total input cost ÷ units of output
  - Resource prices push price level upward
  - Reduced profit limits the amount of output firms are willing to supply at existing price level

4.3 INFLATION

- Deflation: falling prices can lead to decreases in consumer and investment spending as consumers put off purchases until the future in anticipation of lower prices