SECTION 5.4 INFLATION

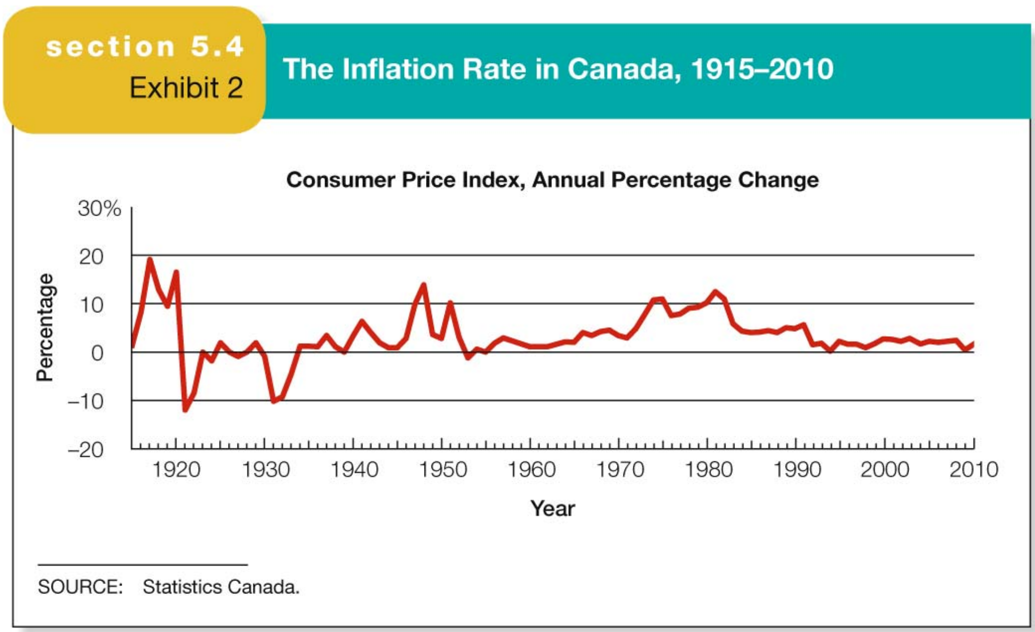
- Just as full employment brings about economic security of one kind, stable **prices** increase another form of security. In both **inflation**—a continuing rise in the overall price level—and **deflation**—a falling overall price level—a country's currency unit changes in purchasing power. Without price stability, consumers and producers will experience more difficulty in coordinating their plans and decisions.
- In general, the only thing that can cause a sustained increase in the rate of inflation is a high rate of growth in money.
- Unanticipated and sharp price changes are almost universally considered to be "bad" and to require a policy remedy. Inflationary price increases can send mixed signals whether an increase in the price of a good is an increase in relative price (compared with other goods) or just part of the inflationary trend.
- The **consumer price index** is the standard measure of inflation. It measures the prices of a basket of consumer goods and services purchased by a typical Canadian household.

Exhibit 1: *2009 CPI Weights by Major Component, Canada*

Consumer Price Index and Major Components, Canada	
	Relative importance
	%
All-items CPI	**100.00**
Food	15.99
Shelter	27.49
Household operations, furnishings, and equipment	11.55
Clothing and footwear	5.31
Transportation	20.60
Health and personal care	4.95
Recreation, education, and reading	11.20
Alcoholic beverages and tobacco products	2.91

- The CPI is not completely accurate and tends to overestimate changes in the cost of living. Goods and services change in quality over time (e.g. televisions and computers). New products are introduced and old products disappear. Also, the CPI does not capture the fact that consumers can keep the cost of living down but substituting away from those goods whose prices have risen relatively quickly.

Exhibit 2: *The Inflation Rate in Canada, 1915-2010*



- Retirees on fixed pensions, creditors, and those whose incomes are tied to long-term contracts can be hurt by inflation, because inflation erodes the purchasing power of the money they receive. Debtors and those who can quickly raise the prices on their goods can gain from inflation.

- Wage earners sometimes lose from inflation because wages may rise at a slower rate than the price level.

- The uncertainty that inflation creates can also discourage investment and economic growth. In its extreme form, inflation can lead to a complete erosion in faith in the value of the pieces of paper we call money.

- Inflation brings about changes in real incomes of persons, and these changes may be either desirable or undesirable. The redistributional impact of inflation is not the result of conscious public policy; it just happens.

- Inflation can raise one nation's price level relative to price levels in other countries, which can lead to that nation's goods becoming less competitive in international markets, or to a decline in the value of the national currency relative to that of other countries. In its extreme form, inflation can lead to a complete erosion in faith in the value of money, as in Germany after both world wars, or **hyperinflation**, as in Argentina in the 1980s and Brazil in the 1990s.

- In periods of high and variable inflation, households and firms have a difficult time distinguishing changes in relative prices from changes in the general price level, distorting the information that flows from price signals. This undermines good decision-making.

- Another cost of inflation is the cost that firms incur as a result of being forced to change their prices more often, called **menu costs**. Another cost is **shoe-leather costs**—the costs of checking on your assets. These costs are modest with low inflation rates, but can be quite large where inflation is substantial.

- The **real interest rate**—the increase in purchasing power per year—equals the **nominal interest rate**—the amount you have to pay in dollars and cents—minus the inflation rate.

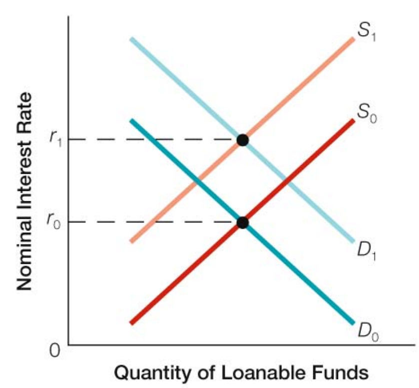
- If people correctly anticipate inflation, they will behave in a manner that will largely protect them against loss. To protect themselves, lenders will demand a rate of interest that is large enough to compensate for the deteriorating value of the dollar.

- An interest rate is, in effect, the price that one pays for the use of funds. Like other prices, interest rates are determined by the interaction of demand and supply forces. The lower the interest rate (price), the greater the quantity of funds people will demand, ceteris paribus; the higher the interest rate (price), the greater the quantity of loanable funds supplied by individuals and institutions like banks, ceteris paribus. The equilibrium price, or interest rate, will be where the quantity demanded equals the quantity supplied.

Exhibit 3: *Nominal Interest Rates*

section 5.4
Exhibit 3

Nominal Interest Rates



Nominal interest rates are determined by the intersection of the demand and supply curves for loanable funds. The lower the interest rate (price), the greater the quantity of loanable funds demanded, *ceteris paribus;* the higher the interest rate, the greater the quantity of loanable funds supplied by individuals and institutions like banks, *ceteris paribus.* Expected inflation shifts the supply curve left and the demand curve right, both of which tend to increase nominal (money) interest rates.

- When people start expecting future inflation, creditors become less willing to lend funds at any given interest rate, because they fear they will be repaid in dollars of lesser value than those they loaned. This is depicted by a leftward shift in the supply curve of loanable funds (a decrease in supply). Likewise, demanders of funds (borrowers) are more anxious to borrow, because they think they will pay their loans back in dollars of lesser purchasing power than the dollars they borrowed. Thus, the demand for funds increases. Both the decrease in supply and the increase in demand push up the interest rate to a new higher equilibrium level. Whether the equilibrium quantity of loanable funds will increase or decrease depends on the relative sizes of the shifts in the respective curves.

- Often lenders are able to anticipate inflation with reasonable accuracy. When inflation is expected to be high, nominal interest rates are also high. If the inflation rate is accurately anticipated, new creditors do not lose, nor do debtors gain, from inflation.
- Nominal interest rates and real interest rates do not always move together. For example, in periods of high unexpected inflation, the nominal interest rates can be very high while the real interest rates are low or even negative.

- Some groups try to protect themselves from inflation by using cost-of-living clauses in contracts. Workers covered by these clauses receive automatic wage adjustments that are linked to the increase in the consumer price index. Some private pension plans include inflation adjustment, as does the government-run Canada Pension Plan. Personal income taxes are now indexed (adjusted) for inflation. Some economists have argued that we should go one step further and index everything, meaning that all contractual arrangements would be adjusted frequently to take account of changing prices. Such an arrangement might reduce the impact of inflation, but it would also entail additional contracting costs (and not every good—notably currency—can be indexed).
- Approaches to try to stop inflation include various policies relating to the amount of government spending, tax rates, or the amount of money created.