Flations: Inflation and Deflation

C15.0042
Lesson 9
Edward M. Kerschner

Inflation
Wholesale prices in the U.S. - 1750-2000

Price Level

Rolling 10 year Inflation Rate

1.6 % average

4.4 % average
Inflation

Inflation is not a “natural disaster” that strikes economies randomly, like a drought or a tornado. Inflation is an aberration that occurs when the government pursues a systematic policy in favor of rising prices.

Inflation periods

<table>
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<tr>
<th>Year of peak 10-year inflation</th>
<th>Inflation periods</th>
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<tr>
<td>1779</td>
<td>American Revolution financed by issuance of paper money by the 13 states and the Continental Congress, which had virtually no power to tax. This, in conjunction with curtailment of productive economic activity, leads to hyperinflation.</td>
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<td>1796</td>
<td>Boom caused by commercial prosperity during the War of the French Revolution, and also by the founding of many new banks in the U.S., which expands money supply.</td>
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<td>1864</td>
<td>Civil War, financed partly through the issuance by the federal government of “greenbacks,” paper money not redeemable in gold or silver.</td>
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<td>1920</td>
<td>World War I, which followed two-decade period of rising prices around the world as a result of gold discoveries in South Africa, Alaska, Colorado.</td>
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<td>1945</td>
<td>World War II.</td>
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<td>1981</td>
<td>Legacy of Vietnam War and Great Society social programs—“Guns and Butter,” combined with OPEC oil embargoes, faltering productivity growth, increasing government regulation of private sector, and refusal of Fed and other government officials to permit a severe recession that would kill inflation.</td>
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Inflation and Deflationary Policies

+ Inflation has been used as a primary method of financing wars. Prior to the mid-twentieth century nearly every bout of severe inflation in the U.S. was associated with, and caused by, a war. During the Revolutionary War the Continental dollar lost 99% of its value. The Civil War period did not experience the hyperinflation of the Revolution, but still experienced an annual inflation rate of 20%.
- The government pursued deflationary policies after the Civil War, shrinking the money supply by using the Federal budget surplus to buy in greenbacks. By 1879, prices had returned to pre-Civil War levels.
- Whereas the deflation of the late 19th century was either good or bad, depending upon where you were situated in the U.S. economy, the deflation of the 1930s was a catastrophe for everybody. Americans took away from the trauma of the 1930s a single, overriding lesson: Deflation = Disaster.

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Inflation and Deflationary Policies

+ After World War II, the U.S., haunted by the Great Depression, systematically pursued inflationary policies. The inflationary bias in the economy of the 1950s did not immediately lead to high inflation because President Eisenhower, who had witnessed hyperinflation in Europe in the late 1940s, was a vigilant inflation fighter.
+ Kennedy brought to Washington neo-Keynesian economists who planned to use deficit spending and accommodative monetary policy to expand GNP 4.5% annually without increasing the rate of inflation.
+ Guns, Butter and Inflation: 1965-70. President Johnson decided in the mid-1960s to fight both the War on Poverty and the rapidly escalating War in Vietnam without raising taxes.

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Inflation and Deflationary Policies

+ The U.S. did not take the threat of inflation seriously in the early 1970s. In the late 1970s the overwhelming bulk of leading economists argued that we should learn to live with high inflation, indexing more contracts and government programs, and attempt to stabilize the inflation rate at around 10 percent. The thinking at the time was that the substantial cost of disinflation was unbearable.
- By 1979/80 two newcomers to Washington’s corridors of power, Paul Volcker and Ronald Reagan, pursued an anti-inflation mandate. By the turn of the 21st century inflation was nil; fears of deflation arose.
+ Aggressive monetary (near zero Fed rates “longer and lower” than “normal”) and fiscal (President Bush’s tax cuts produced record deficits) seemed to remove the deflationary risk.
+ Is reinflation now inevitable?

Benign Deflation

- Although moderate deflation may seem abnormal and therefore dangerous to investors accustomed to secular inflation since World War II, short periods of deflation have been common in American history. Therefore, prices have been relatively stable over the long term; they were actually no higher in 1940 than in 1795. It is the secular inflation of the 50 years after WWII that is an aberration. Long term (since 1750), average annual inflation rate is around 1½%.
- Benign deflation is distinct from debt deflation, when prices plunge because debtors are unable to pay their debts, the financial system is damaged, and economic activity declines.
- By preventing companies from boosting earnings through price increases, benign deflation encourages cost-cutting via innovation. This occurred in the late nineteenth century.
Benign Deflation

- Even though the price level was declining, the decades after the Civil War were a period of explosive economic growth and creativity. Completion of a continental railroad network, and the concomitant telegraph system, created a national market that encouraged a spate of technological innovations. The number of patents issued doubled between the 1860s and 1880s. Among the specific innovations:
  - use of electricity in factories;
  - the electric streetcar;
  - refrigerated cars for meat-packing;
  - the telephone;
  - the typewriter;
  - the roller mill to process oatmeal and flour;
  - major advances in making steel, which replaced iron for many uses.

Benign Deflation

- In the last four decades of the 19th century, value added by U.S. manufacturers grew at a pace of 5-7% annually. From the 1870s to the 1890s—a period of rapid population growth driven by heavy immigration from Europe—national income per capita expanded by a remarkable 88%.
- It is quite possible that the deflation of the late 19th century to some degree caused this spate of technological innovations. Unable to raise prices in order to boost profits, businesses had no choice but to cut costs via innovation—whether that involved using electricity in a factory, replacing clerks’ pens with typewriters, installing labor-saving manufacturing equipment, or using railroads to distribute products more efficiently.
- Was the late 1990s a period again of “benign deflation” caused by the technological innovations of the “information age?”
Benign Deflation

- Investing in a deflationary environment. Companies with one or more of the following characteristics benefited in late 1990s:
  - Strong brands that reduce vulnerability to price competition. Almost by definition, the companies with the strongest brands also have the largest market share, giving them a competitive advantage via economies of scale.
  - Rapid unit growth that is sustainable because the company has a large market share and is gaining market share, which enhances competitiveness by providing economies of scale.
  - Sells proprietary products such as patented drugs, standard-setting software, etc.
  - Firms that can successfully grow through acquisition because they generate free cash flow or can do stock-for-stock deals effectively.

Benign Deflation

- Companies whose prices are declining more slowly than their costs, in part because competition in the industry is not too heavily based on price. Banks are a good example. Technology costs are plunging and the price of money is moving down, but banks are still able to boost prices subtly by raising fees, late charges, etc. Customers usually will not go to the hassle of changing banks to get cheaper service, so long as their current bank is providing decent service.
- In a deflationary environment, firms have to cut costs to survive, which boosts demand for productivity-enhancing high-technology equipment and services.
Stocks and Inflation

Value?

**S&P 500 P/E**

P/E on trailing EPS

1925 1950 1975 2000

1970 - 2000 Average 14.7x

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Stocks and Inflation

Value?

**Interest Rates**

Rolling 10-year CAGR, annually

1925 1950 1975 2000

1970 - 2000 Average 8.4%
Wholesale Prices in the U.S
Rolling 10-year CAGR, annually

1925 1950 1975 2000

Stocks and Inflation

S&P 500 P/E vs inflation
Growth stocks’ P/E vs inflation

P/E drop when 25% grower becomes 20%
Why are stocks not an effective hedge against inflation? In the 1950s and 1960s, stocks were considered an effective hedge against inflation. But, stocks were not an inflation hedge because corporations had to pay taxes on illusory profits created when inventories rose in price and when there was under-depreciation of plant and equipment.