

Asset Pricing: Key

1. For a three-year bond:

$$\$90 = \frac{\$100}{(1 + y_t)^3} \quad (1)$$

It then follows that $y_t = 3.57\%$.

2. This would represent a decline in the demand for Treasury Bonds. Simple supply and demand then suggests that the price of bonds would decrease. Because bond prices and yields are inversely related, bond yields would increase.
3. This represents an increase in the supply of bonds. Bond prices thus fall and yields increase.
4. If a firm lacks the assets to pay its creditors, its only option is bankruptcy. The analogous outcome for government is default. Unlike a bankruptcy, governments usually do not have to fear that their assets will be recovered by their creditors.

Governments also have other options unavailable to private firms. They may increase taxes or cut spending to meet their obligations. They may also attempt to reduce the value of their debt through an inflationary policy.

5. Using the model from class.

$$s_t = \$10 = \frac{\$20}{1.01} = \$29.80 \quad (2)$$

6. i. The firm could be expected to pay dividends after at least 20 years. This is sufficient to sustain a positive price in the current period.

ii. The asset price could result from a speculative bubble where the price does not equal its fundamental value.

7. There are several possible mechanisms by which a decline in asset prices affects the real economy. The most important is the Life Cycle Model. faced with a decline in asset prices, households respond to a decline in their lifetime wealth by reducing their consumption. This may then result in reduced output and increased unemployment.

8. The fundamental value of a stock, for example, is the expected discounted stream of dividends. Because dividends are a part of firm profits, and because profits are correlated to the business cycle, an economic downturn may thus reduce the fundamental value of stocks. A similar argument may be made for housing prices.