Framework for the Economic Analysis of Financial Markets

Activity in financial markets is connected to the state of the economy. Financial markets connect savers to investors, which provides capital for companies.

Present Value Model

Assets are valuable because of the benefits that we expect to derive from them. For many financial assets, the expected benefits come in the form of future cash flows.

Present value models are based on the idea that investors would prefer to have a certain amount of money today rather than having to wait until a future date to receive the same amount of money. Cash flows that are expected to be received in the future are discounted in order to convert the amount into present value terms.

The general expression for the value of Asset i at time t (today) is shown in the formula below:

$$P_t^i = \sum_{s=1}^{N} \frac{E_t\left[\tilde{CF}_{t+s}^i\right]}{\left(1 + l_{t,s} + \theta_{t,s} + \rho_{t,s}^i\right)^s}$$

where:

- $l_{t,s}$ is the yield to maturity on a real default-free investment today. An example of a default-free investment is an inflation-linked bond.
- $\theta_{t,s}$ is the expected inflation rate between t and $t+s$. This factor accounts for the expected change in real purchasing power.
- $\rho_{t,s}^i$ is the risk premium today on the asset's cash flows to be received s periods in the future. There is a big risk difference in various asset classes. Depending on the type of asset, premiums may need to be added to the discount rate in order to account for default risk, liquidity risk, etc.

Expectations and Asset Values

Asset values depend on expected future cash flows, not past cash flows. Everything is based on the current information when the cash flows are valued, which is time t in the equation. The current valuation reflects all information that is currently known or anticipated, but this estimate may be adjusted over time as new information becomes available and expectations are updated.