Value

Market Value
Price: amount for which can buy/sell
Objective, Public

(Intrinsic/Economic/Fair/True) Value
Worth: most willing to pay/least willing to accept
Subjective, Private

Compare Price and Value

$$\text{Value} \left\{ \begin{matrix} > \\ = \\ < \end{matrix} \right\} \text{Price} \Rightarrow \left\{ \begin{matrix} \text{Buy} \\ \text{Hold} \\ \text{Sell} \end{matrix} \right\} \Rightarrow \text{Price} \left\{ \begin{matrix} \text{rises} \\ \\ \text{falls} \end{matrix} \right.$$

Though not identical, Price and Value will be equal in equilibrium.

Market Efficiency
Since people can acquire and act on information, prices reflect values (and information).

General Valuation Model

Concept
Value of *any* asset—real or financial—is PV of expected future cash flows associated with it, discounted at investor's required rate of return.

Dimensions of Value
Value depends on characteristics of future cash flows:
- Size
- Timing
- Risk

Process
1. Estimate Future Cash Flows (CF_t)
2. Determine Required Rate of Return (k)
3. Discount

$$Value = PV = \frac{CF_1}{1+k} + \frac{CF_2}{(1+k)^2} + \cdots + \frac{CF_n}{(1+k)^n}$$

$$= \sum_{t=1}^{n} \frac{CF_t}{(1+k)^t}$$

Discount Rate

Required Rate of Return
Opportunity Cost = Time Value of Money + Risk Premium

Determinants
- Risk of Cash Flows

$$k_d = k_{RF} + DRP + LP + MRP$$
$$k_s = k_{RF} + \beta_s\left(k_M - k_{RF}\right)$$

- General Level of Interest Rates

$$k_{RF} = k^* + IRP$$

k^* reflects Production Opportunities, Time Preference