

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

$$\text{Value} \begin{cases} > \\ = \\ < \end{cases} \text{Price} \Rightarrow \begin{cases} \text{Buy} \\ \text{Hold} \\ \text{Sell} \end{cases} \Rightarrow \text{Price} \begin{cases} \text{rises} \\ \text{falls} \end{cases}$$

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

$$\begin{aligned} \text{Value} = PV &= \frac{CF_1}{1+k} + \frac{CF_2}{(1+k)^2} + \dots + \frac{CF_n}{(1+k)^n} \\ &= \sum_{t=1}^n \frac{CF_t}{(1+k)^t} \end{aligned}$$

Discount Rate

Required Rate of Return

Opportunity Cost = Time Value of Money + Risk Premium

Determinants

- Risk of Cash Flows

$$k_d = k_{RF} + DRP + LP + MRP$$

$$k_s = k_{RF} + \beta_s(k_M - k_{RF})$$

- General Level of Interest Rates

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

k^* reflects Production Opportunities, Time Preference