UNIWERSYTET EKONOMICZNY W KRAKOWIE

Lecture 4

Present Values vs Valuing

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Agenda

- Valuing
- Market value
- Investment value
- Real estate valuation

Present Values vs Valuing

- PVs can be **added together to evaluate multiple cash flows**.

$$PV = \frac{C_1}{(1+r)^1} + \frac{C_2}{(1+r)^2} + ... = \sum \frac{C_t}{(1+r)^t}$$

Stock Valuation – an example

Consider a situation in which we are valuing a share of common stock that we plan to hold for only one year.

What will be the value of the stock today if it pays a dividend of $2.00, is expected to have a price of $75 and the investor's required rate of return is 12%?

Stock Valuation - solution

Value of Common stock

= Present Value of future cash flows = Present Value of (dividend + expected selling price)

Market value vs Investment value

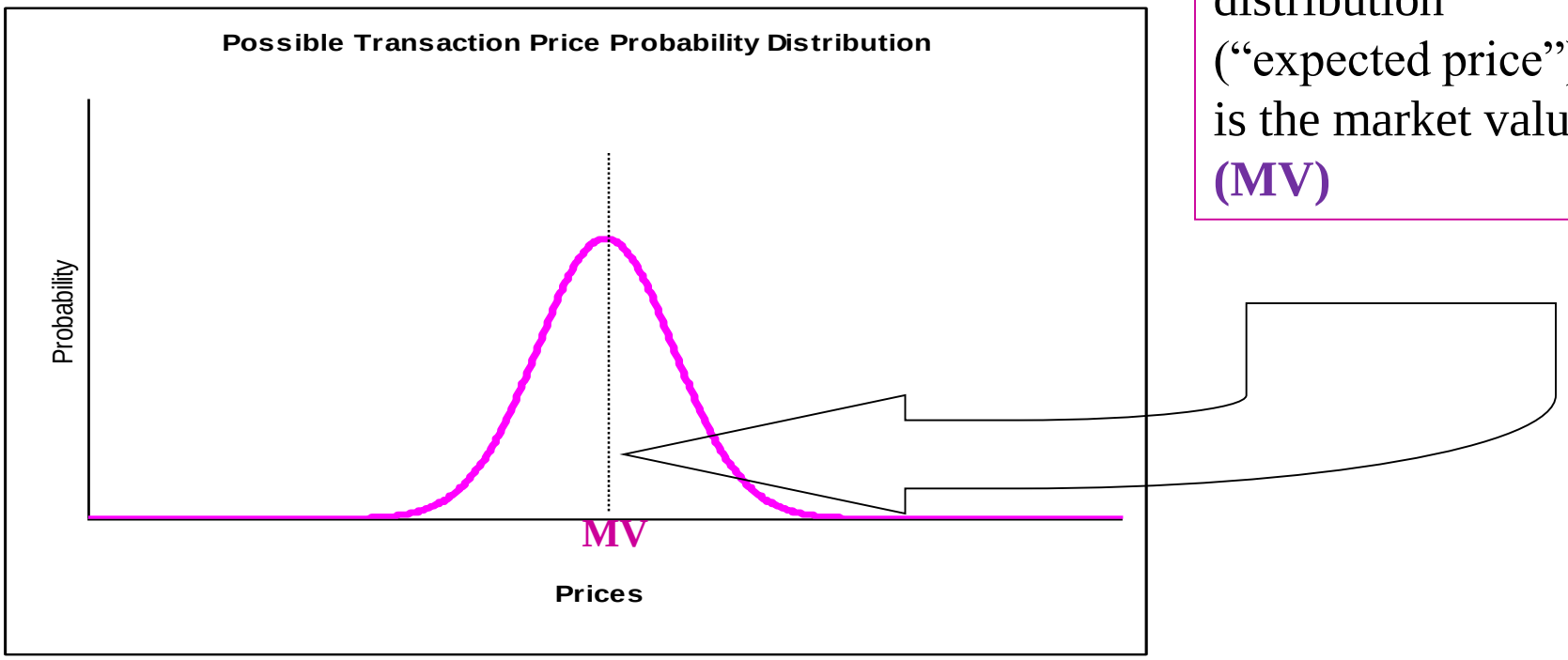
- **MARKET VALUE" (MV)** = What you can sell (buy) the asset for today.

- **INVESTMENT VALUE (IV)** = What the asset is worth to you if you're not going to sell it for a long time.

- **IV ≠ MV**

Market Value:

- When you sell a property (or some other asset), you don't know exactly what price you can get.
- There is a probability distribution of the possible prices…



The mean of this distribution ("expected price") is the market value **(MV)**

Investment Value:

- Ignoring current market value ("exchange value"), i.e., assuming (in most cases) a long-term holding of the asset.
- Defined with respect to a particular specified owner (Can be different for different investors)
- Based on expected future net after-tax cash flows from the asset to that particular owner/investor.

IV > MV

Example from REM?

Valuing a Bond – MV vs. IV

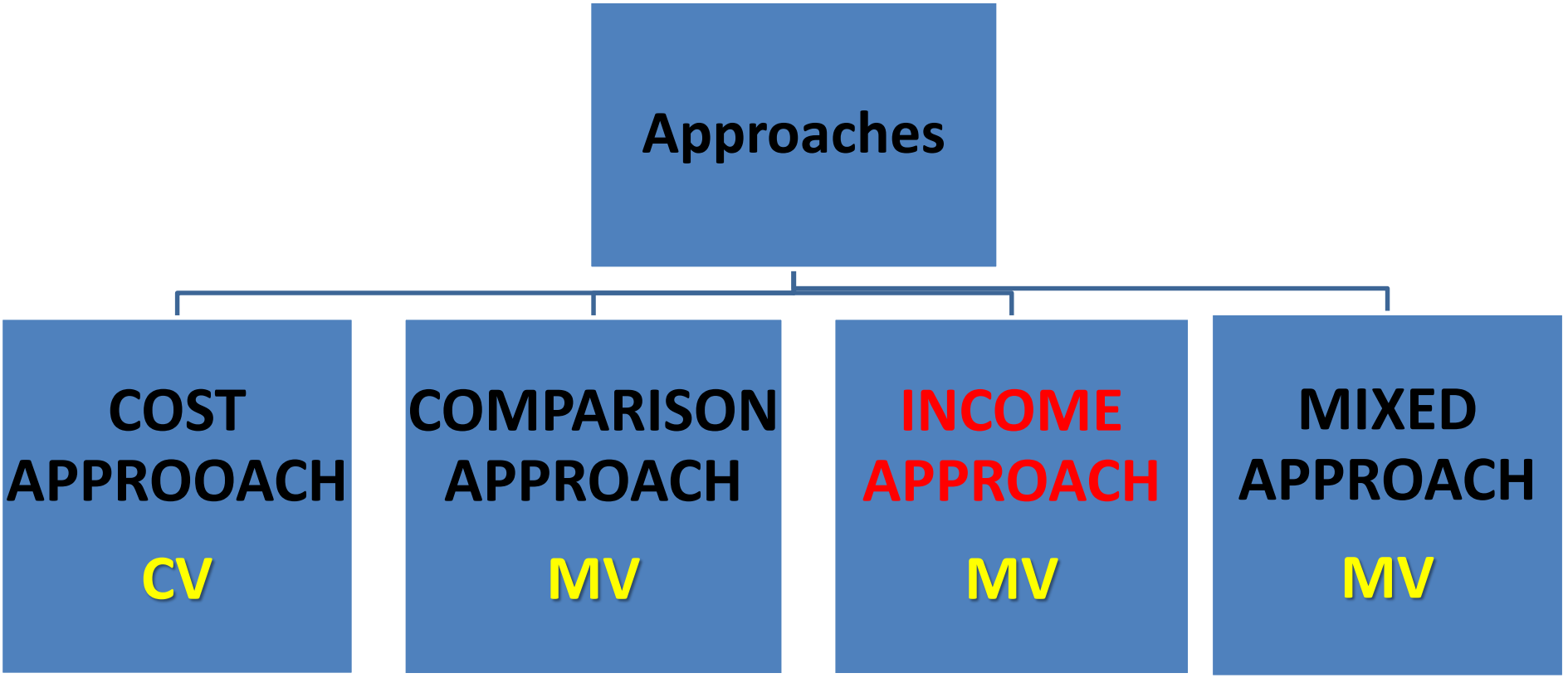
Two Questions:

- If today is October 2012, what is the value of the following bond?
- If market value is $1,162.00, should we invest in such a stock?

Assumption:

- An IBM Bond pays $115 every Sept for 5 years. In Sept 2017 it pays an additional $1000 and retires the bond.
- The bond Yield to maturity (YTM) is 7.5% (r =7,5 %)

4 approaches in REV according to Polish Law



MV in income approach

- The present value of future expected benefits discounted at the market rate

- The most probable price that real estate would bring in an arm's length transaction, under normal market conditions, on the open market.

Income approach

When should it be used?

- for all commercial property
- for all income producing property
- whenever buyers would think in terms of buying for return on investment

Market value : Income approach

$$V_{DCF} = C_{F1} * \frac{1}{(1+r)} + C_{F2} * \frac{1}{(1+r)^2} + ... + C_{Fn} * \frac{1}{(1+r)^n} + RV * \frac{1}{(1+r)^n}$$

V_{DCF} –Market value

RV – Residual value

CF – cash flow (net operating income; NOI)

r – discount rate

Forces that determine Value

- Physical Forces
- Economic and Social Forces
- Political Forces
- Others

5 minutes to enumerate 10 forces

Physical Forces

Economic and social Forces

Political Forces

Literature

- *D. Geltner, N. Miller, Commercial Real Estate Analysis and Investments, South-Western Educational Pub; 2006 (2 edition)*

Part IV, chapter 12: Advanced Micro-level valuation

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Thank you for attention

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