**FIN 440 LECTURE 15**

**risk & capital budgeting**

**CHAPTER REFERENCE – CHP 12**

* **For Investors, the** rate of return on a security is a *benefit* of investing.
* **For Financial Managers,** that same rate of return is a *cost* of raising funds that are needed to operate the firm.
* In other words**, the cost of raising funds is the firm’s *cost of capital*.**

***How can the firm raise capital***

* **Bonds**
* **Preferred Stock**
* **Common Stock**
* *Each of these offers a rate of return to investors.*
* *This return is a cost to the firm.*
* *“Cost of capital” actually refers to the weighted cost of capital - a weighted average cost of financing sources.*

***Cost of Debt***

**For the issuing firm, the cost of debt is:**

* the rate of return required by investors,
* adjusted for flotation costs (any costs associated with issuing new bonds), and
* adjusted for taxes.

 **After-tax Before-tax Marginal**

 **% cost of = % cost of x tax**

 **Debt Debt rate**

 **Kd = kd (1 - T)**

***Example: Cost of Debt***

* *Prescott Corporation issues a $1,000 par, 20 year bond paying the market rate of 10%. Coupons are semiannual. The bond will sell for par since it pays the market rate, but flotation costs amount to $50 per bond. What is the pre-tax and after-tax cost of debt for Prescott Corporation?*
* **Pre-tax cost of debt: (using TVM)**

 **P/Y = 2 N = 40**

 **PMT = -50**

 **FV = -1000**

 **PV = 950**

 **solve: I = 10.61% = kd**

* **After-tax cost of debt:**

 **Kd = kd (1 - T)**

 **Kd = .1061 (1 - .34)**

 **Kd = .07 = 7%**

**So, a 10% bond costs the firm only 7% (with flotation costs) since the interest is tax deductible.**

***Cost of Preferred Stock***

* **Finding the cost of preferred stock is similar to finding the rate of return, (from Chapter 8) except that we have to consider the flotation costs associated with issuing preferred stock.**

**Recall:**

**kp = D / Po = Dividend / Price**

**From the firm’s point of view:**

**kp = D / NPo = Dividend / Net Price**

**NPo = price - flotation costs**

*If Prescott Corporation issues preferred stock, it will pay a dividend of $8 per year and should be valued at $75 per share. If flotation costs amount to $1 per share, what is the cost of preferred stock for Prescott?*

***kp = D / NPo = Dividend / Net Price***

 ***= 8.00 / 74.00 = 10.81%***

***Cost of Common Stock***

* **There are 2 sources of Common Equity:**

**1) Internal common equity (retained earnings), and**

**2) External common equity (new common stock issue)**

**Do these 2 sources have the same cost?**

***Cost of Internal Equity***

* **Since the stockholders own the firm’s retained earnings, the cost is simply the stockholders’ required rate of return.**

**Why?**

* **If managers are investing stockholders’ funds, stockholders will expect to earn an acceptable rate of return.**

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