Chapter 7
COST OF CAPITAL

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The Rate of Return the Firm Must Earn on Its Investments to be Able to Reward the Firm's Investors (Stock and Bond Holders) with the Rate of Return they Demand

COMPONENT COSTS OF CAPITAL

COST OF DEBT (BONDS) - Return Bond Holders Demand

\[ K_i = K_d(1 - T) \]

\( K_i \) = After-Tax Cost of Debt
\( K_d \) = Before-Tax Cost of Debt
\( T \) = Firm's Marginal Tax Rate

\( K_d \) is Estimated with the Firm's Bond YTM
COST OF PREFERRED STOCK - Return Preferred Stockholders Demand

\[ K_p = \frac{D}{P_{\text{net}}} \]

\( D \) = Annual Dividend
\( P_{\text{net}} \) = Net Issue Price

Company Can Sell New Issue of Preferred for $25 with a Flotation Cost of $1 and Will Pay a $2.50 Annual Dividend -

\[ K_p = \frac{D}{P_{\text{net}}} = \frac{2.50}{24} = 0.104, \text{ or } 10.4\% \]
COST OF RETAINED EARNINGS

Using the Constant Dividend Growth Model

\[ K_c = \frac{D_1}{VC} \]

Using the Capital Asset Pricing Model

\[ K_c = R_f + (K_m - R_f)\beta \]

Using Rule of Thumb Method

\[ K_c = \text{Bond YTM} + \text{Historical Yield on Stock over Bonds (3\% to 6\%)} \]

COST OF NEW COMMON

\[ K_{nc} = \frac{D_t}{P_{net}} + g \]
AVERAGE COST OF CAPITAL

\[ K_a = W_i K_i + W_p K_p + W_c K_c \]

\( K_a \) = Weighted Average Cost of Capital
\( K_i \) = After-Tax Cost of Debt
\( K_p \) = Cost of Preferred
\( K_c \) = Cost of Common
\( W \) = Proportion of Total Capital From a Source
\( W_i + W_p + W_c = 1 \)
MARKET VALUE WEIGHTS VS. BOOK VALUE WEIGHTS

Market Value of Debt $5,000,000
Market Value of Preferred 1,000,000
Market Value of Common 4,000,000
Total Financing $10,000,000

\[ wd = \frac{5,000,000}{10,000,000} = .50 \]
\[ wp = \frac{1,000,000}{10,000,000} = .10 \]
\[ wc = \frac{4,000,000}{10,000,000} = .40 \]

FINANCIAL LEVERAGE AND COST OF CAPITAL