RISK, RETURN, AND THE COST OF CAPITAL

Estimating the Cost of Debt

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COST OF DEBT CAPITAL

Rate of return = risk free rate
+ risk premium

3 methods:

- Historical cost
- Current yield to maturity
- Ratings adjusted yield

COST OF DEBT CAPITAL

- Historical cost
  - What did the company pay last time?
  - Look at interest expense over debt
  - What is the coupon rate on bonds?
- OK, but not great
  - May not reflect current market
  - Rates may have changed

COST OF DEBT CAPITAL

- Current yield to maturity
- Best method
  - If you have market prices
- Mainly large public companies

COST OF DEBT CAPITAL

- Ratings adjusted yield
  - Debt rating/credit score
  - Current treasury rate
- Adjust the treasury rate by the "credit spread"

COST OF DEBT CAPITAL

Example of ratings adjusted yield:

What is R_d for a 10-year A-rated firm?

Basis point spreads based on market prices				
Rating	**1 yr**	**5 yr**	**10 yr**	**20 yr**
US Treasury	0.2%	1.4%	2.0%	2.5%
AAA	21	53	76	122
AA	30	65	121	153
A	43	88	147	175
BBB	96	153	253	269
BB	172	343	361	364

$$R_d = 2.0\% + 147 \text{ b.p.} = 3.47\%$$

IMPORTANCE OF TAXES

- Interest payments are deductible
- The effective cost of debt is less than what you pay

$$R_d = R\,(1 - t_c)$$

IMPORTANCE OF TAXES

Example: You pay 5% on debt and have a 20% tax rate.

$5 goes to the bank

Your taxes go down by 20%*$5 = $1

So you only really paid $4

Effective cost of debt is 4%

COST OF DEBT: SUMMARY

- R_d reflects default and recovery
- Historical cost of debt
- Current yield on debt
- Ratings adjusted yield
- Interest is tax deductible