

# ITE WACC

- ▶ Need
  - Weights of debt and equity ( $D/V$  and  $E/V$ )
    - MV vs. BV weights
  - Cost of debt
    - Very risky debt – small business
  - Cost of equity
    - Capital asset pricing model
  - Tax rate – assume

# Finding a Discount Rate – Cost of Equity

- ▶ Finding beta using comparable company information
- ▶ Levering and unlevering beta
- ▶ Why – have beta reflect both asset risk and financing risk

$$\beta_L = \beta_U \left( 1 + \left( \frac{D}{E} * (1 - T) \right) \right)$$

# Comparable Company Data

- ▶ Assess comparable company data
  - Available: brief descriptions of companies and limited financial data
- ▶ Choose which companies you will use as comps
- ▶ Lever and unlever betas and average
- ▶ Re-lever according to ITE's capital structure
  - Current or target?

# Capital Asset Pricing Model

- ▶ Beta from comparable companies
- ▶ Risk-free rate
- ▶ Market risk premium

$$R = R_f + \beta(R_m - R_f)$$

- ▶ Size premiums – which?

# Cash Flow from Operations

- ▶ Forecast revenues – most likely 10 year forecast
  - Use William's forecast of future sales: \$6 million in 5 years, \$14 million in 10 years, 20% growth rate
- ▶ Costs as a historical percent of sales
- ▶ What about taxes?
- ▶ Add back depreciation

# Free Cash Flows

- ▶ Start with cash flow from operations
- ▶ PP&E estimated as 15–20% of sales (remember to use the change in PP&E)
- ▶ Working capital forecast as a percent of sales (historical average) – again use the change in NWC
- ▶ Subtract change in capital expenditures and working capital

# Terminal Value

- ▶ Forecast one more year of free cash flows
- ▶ Determine terminal growth rate
- ▶ Year 10 Present value =  
FCF in year 11 / (WACC - terminal growth rate)
- ▶ Add terminal value to Year 10 cash flows

# Find Enterprise and Equity Values

## Enterprise Value:

- ▶ Find the present value of the free cash flows
  - Add cash
- ▶ Find Equity Value
  - Subtract debt
- ▶ No shares given; can't find a per share price



# Sensitivity Analysis

- ▶ What are you (or William) most uncertain about in the analysis
- ▶ See list from class where we discussed sensitivities
- ▶ Once the base case spreadsheet is done, copying into a new sheet is an easy way to create a sensitivity analysis
- ▶ Examples (but not necessarily limited to):
  - Revenues
  - Discount rate
  - Terminal value growth rate
  - Capital structure weights

# Multiples Valuation

- ▶ Use Pratt's Stats
- ▶ MVIC (market value of invested capital) to net income, revenues, gross profit, earnings before income and taxes and book value
- ▶ Some multiples may be better than others
- ▶ Use appropriate size category
- ▶ Throw out outliers (remember MFL problem where this was done)

# Final Valuation

- ▶ Best valuations are a combination of discounted cash flow and comparable company analysis
- ▶ Range of likely values – not a single number down to the penny
- ▶ Deliverable:
  - Excel – base case, sensitivities, multiples
  - Assumptions page with explanations of what was used (and why if relevant)