

PwC's Academy Middle East

Capital Budgeting and Risk Modeling

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Capital Budgeting: Key points in practice

1. NPV supersedes all other methods
2. Forecasting cash flows is most challenging and subject to significant estimation error
3. WACC (used for discounting cash flows) must be project specific
4. WACC is tough to estimate in various scenarios – private companies, creative projects
5. Soft issues matter a lot more than what we see in books

Capital budgeting - refresher

Steps

1. Forecast future cash flows
2. Determine discount rates
3. Sum up all the present values

Cash Flow Phase I: Initiation

1. All investment outflows at the initiation
2. All recoveries from sale of existing plant in case of replacement

Cash Flow Phase II: Operation

1. $(\text{Sales} - \text{Costs}) \cdot (1-t) + \text{Depreciation Tax Shield}$
2. Ignore sunk costs and interest expenses
3. Don't ignore opportunity costs

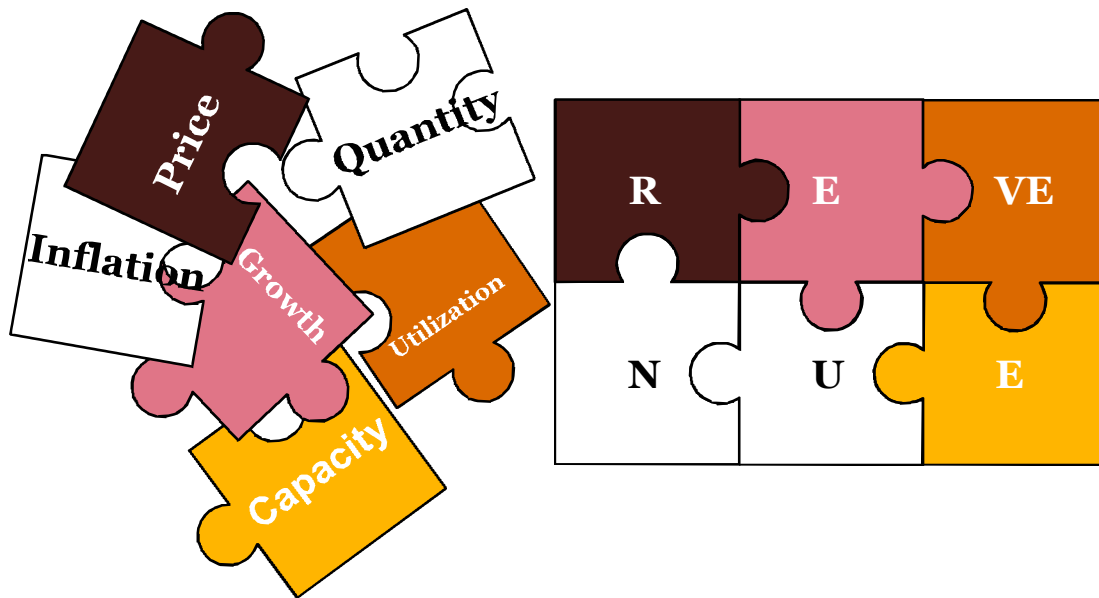
Cash Flow Phase III: Termination

1. Disposal of all existing assets
2. Reversal of working capital

Forecasting – do you have the crystal ball?

It is more important to have a story about future than to have an accurate forecast

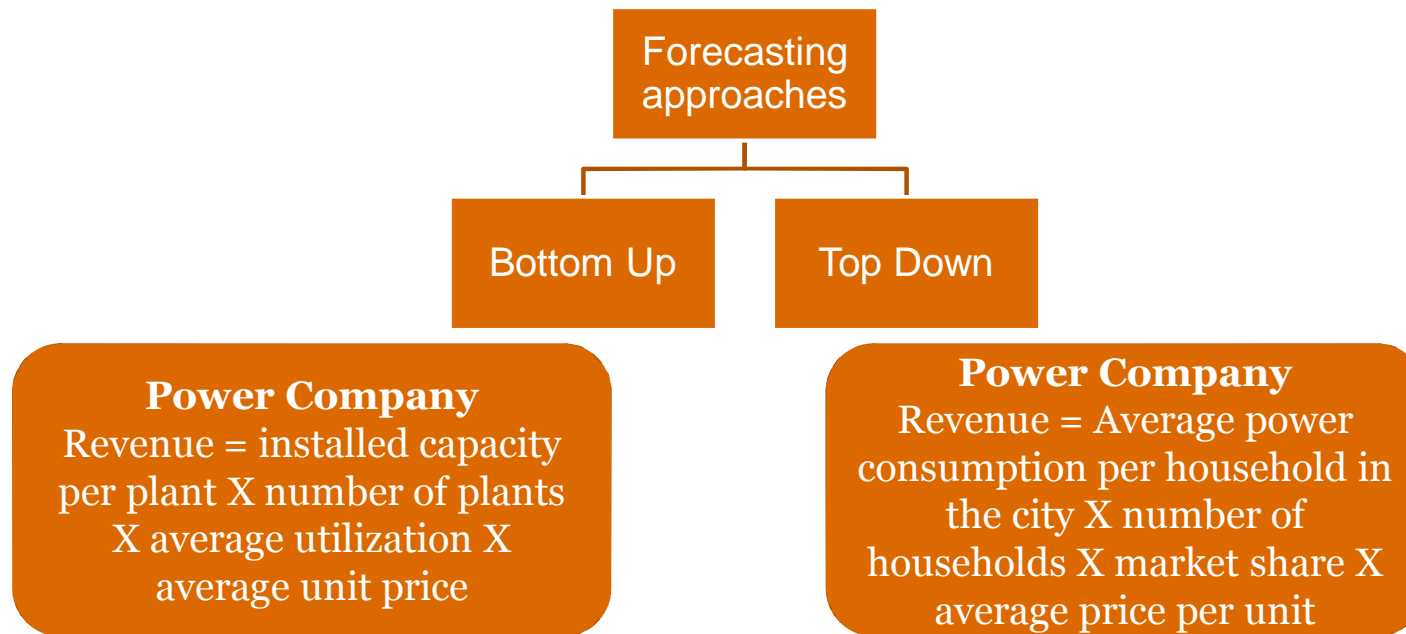
- Prof Aswath Damodaran



Forecasting revenue always takes the center stage during financial modeling

How to forecast revenue?

$$\text{Revenue} = \text{Price} \times \text{Quantity}$$



Industry Specific Ratios - a few examples

1. Retail – Sales per square foot, foot fall, same store sales growth, growth in stores
2. Aviation – Average occupancy, average revenue per seat, number of flights
3. Manufacturing – EBITDA per unit of output, capacity and utilization
4. Telecom – Average revenue per user, user growth
5. Construction – backlog, burn rate, average delivery time, delays, defensive interval
6. Banks – Net Interest Margin, Capital Adequacy Ratio, Net Fee Income %, CASA growth

Case study