DECISION MAKING AND SCENARIOS
MODULE 4.1 – New Product Venture

Introduction And Setup

Professor Robert Holthausen
Professor Richard Lambert

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Agenda – Valuation of a Proposed New Product Venture and Evaluation of Alternative Scenarios

- **Introduction and Spreadsheet Set up**
- Forecasting of Future Cash Flows
- Valuation (NPV and IRR)
- Formulation and Evaluation of Alternative Scenarios
- Expanding the Time Horizon

Iterative Process

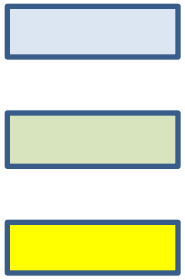
- Translate your project idea into the future economic actions, transactions, events needed to carry out the project and your best estimate of the outcomes
- Map those predictions into forecasted financial statements.
- Calculate the NPV of the forecasted cash flows
- Rethink your strategy
  - Consider Alternative Courses of Action
  - Alternative Scenarios

We can’t know the future for certain

- But if we plan carefully we improve our chances for success
- Many ideas prove to be unprofitable when you initially put numbers to them
- But forcing yourself to lay out your strategy can help expose the weaknesses and help identify where you need to rethink your idea and strategy for execution

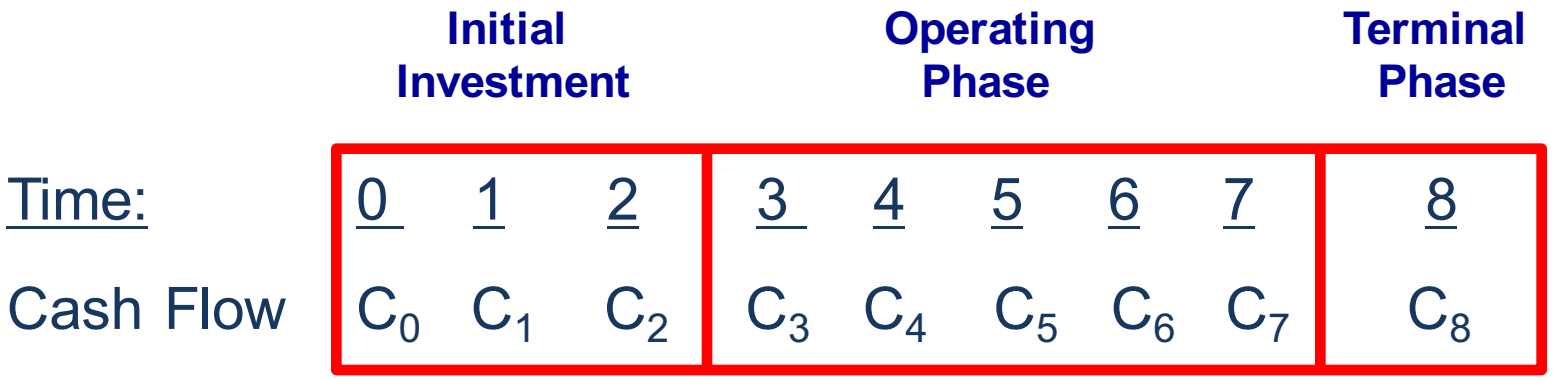
Spreadsheet Set Up – Open the Spreadsheet and Follow Along!

- Assumptions Section
  - So you can identify and change them
- Intermediate Calculations Section
- Forecasted Financial Statements
  - Income Statement
  - Tax Return
  - Balance Sheet
  - Cash Flow Statement
- Calculation of NPV and IRR



- Using Color Codes in the Spreadsheet can be Helpful!
- Keep the Spreadsheet simple at first, make sure it works, and then add complexity

New Product Venture



ASSUMPTIONS	
Discount Rate	6.00%
Tax rate	40.00%

Investment / Start Up Phase -- Years 1 and 2

- Investment In PPE at the start
- Research & Development over two years
- Marketing and Administrative Costs over two years

Startup Phase	
Iniital Investment in PPE (paid in cash)	$70,000.00
Residual Value for Depreciation Purposes	$0.00
Useful Life in Years	7
R&D per year During Startup Phase (in cash and expensed)	$20,000.00

Operating Phase -- Years 3 though 7

- Production and Sales
  - Working Capital - Some payments and some collections occur with a lag
- Continued S,G & A Activities (that ramp up relative to the start up phase)
- Allows for Sales Growth over the period
- Allows for Inflation in prices over the period

Operating Phase – Initial Assumptions

Operating Phase - Sales		
Iniitial Sales Volume (in units) - Starts in Year 3		2000
Sales Growth Rate per year		0.00%
Sales Price Per Unit		$100.00
Product Gross Margin Pct		55.00%
Inflation Rate for Sales and COGS		0.00%
SG&A - Fixed Costs per year (not subject to inflation) - Starts in Year 1	$	25,000.00
SG&A - Variable Cost Per Unit (not subject to inflation) Starts in Year 3 because there are no sales until then	$	15.00

Working Capital Timing Issues	
Collections	
In year of sale	90.00%
Following year	10.00%
Desired Units of Inventory as a Percent of that year's sales	10.00%
Payments on Purchases Made This year	
Percent Paid this year	95.00%
Percent Paid next year	5.00%
Payments to Employees for Compensaton and Benefits Earned this year	
Percent Paid this year	70.00%
Percent Paid Next year	30.00%

Termination / Shut Down / Disposal Phase -- Year 8

- Remaining Inventory Liquidated (at a lower price)
- Remaining Receivables Collected
- Remaining Payables Paid
- Remaining Long Term Assets Sold
- Other Disposal Costs

Termination / Shut Down Phase	
Proceeds from Disposal of PPE	$5,000.00
Other Disposal or Cleanup Costs	$2,000.00
Markup Over Cost for Sale of Ending Inventory	0.00%
Fixed SG&A Costs During This Phase	$0.00
Variable SG&A During This Phase	$0.00

Our Focus is on the Cash Inflows and Outflows of the New Venture

- Not looking at how the New Venture is **Financed**
- The discount rate (6%) represents the opportunity cost of the capital we're employing in the project (regardless of the source)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