HENDERSON MANUFACTURING

FINANCIAL MODELING INSTITUTE ("FMI") CASE STUDY

CANDIDATES WHO SUCCESSFULLY PASS THIS EXAM WILL BE AWARDED THE ADVANCED FINANCIAL MODELER ("AFM") DESIGNATION

INSTRUCTIONS

1. An Excel worksheet file will be provided for your exam.
2. The exam will run for 4.0 hours.
3. The exam is a closed book exam. You may not refer to any materials (on paper or electronically).
4. You cannot communicate with any other candidate during the exam (verbally or electronically).
5. All the data you need is in the case study or the worksheet file. You may add any other reasonable assumptions that you need to build the model.
6. When marking the exam, the emphasis will be on the buildup of the financial statements and schedules. Marks will be given out for every section completed correctly.

Good luck!

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COMPANY OVERVIEW

Henderson is a large manufacturer of industrial storage tanks that are used by companies in the oil and gas industry.

FINANCIAL MODEL

You have been provided with three years of annual historical financial statements for Henderson. The most recent statement available to you is 2017. Your task is to build an integrated annual model for the Company for the next 5 years (2018-2022) using the historical data and the following assumptions. Assume all figures are in dollars unless stated otherwise.

Sales

- In 2017, net revenue was $594.44 per unit (ie. gross revenue of $694.44 per unit, less freight & warehousing costs of $100.00 per unit).
- This is a cyclical industry and the sales prices are expected to average $800 in 2018, $725 in 2019, $825 in 2020, $800 in 2021 and $750 in 2022.
- Freight & warehousing costs are expected to increase at inflation.
- Henderson's factory has a capacity of 420,000 units per year.
- The company expects sales volumes to grow at 5.0% in 2018 and 4.0% every year thereafter.

Operating Costs

- A breakdown of the forecasted operating costs for 2018 is provided below.

Description	Units	Amount
Variable Costs		
Raw Materials	$	226.00
Utilities	$	66.20
Total Variable Costs	$	292.20
Fixed Costs		
Rent	$MM	23.50
Operating Labour	$MM	43.50
Other	$MM	2.00
Total Fixed Costs	$MM	69.00

- Operating costs are expected to grow at inflation thereafter.
- SG&A is expected to be $3.9 million in F2018 and grow at inflation thereafter.

Capex and Depreciation

- The company plans to invest $16.0 million on capex in 2018, $17.0 million in 2019, $17.3 million in 2020, $17.5 million in 2021 and $18.0 million in 2022.
- Henderson uses the Straight-Line method of depreciation.
- Existing assets have a remaining useful life of 25 years while new assets will be depreciated over 30 years.

Working Capital
- Based on the historical data, please make reasonable assumptions for the working capital days over the next five years.

Income Taxes
- The Company's tax rate is 35%.
- The aggregate reduction in government pre-tax earnings due to timing differences between accounting and government rules is expected to be $5 million per year for the next five years.

Debt
- The senior secured term debt and revolver pay interest at a fixed rate of 6.0%.
- Excess cash earns interest income at a rate of 1.0%.
- Amortization on senior secured term debt will be $25 million per year until the debt is repaid.
- The Company will draw on its revolver if it ever has a cash shortfall.
- The revolver has a cash sweep such that whenever a revolver balance is outstanding, all excess cash flow after dividends and share repurchases is used to pay off the revolver.

Equity
- The dividend for its common shares is expected to be based on a payout ratio of 20.0% of Net Income.

Other Assumptions
- Feel free to make any other reasonable assumptions that you may need to build the model.

INSTRUCTIONS

1. Using the spreadsheet provided and the information in this case, build a financial model that forecasts the Company's financial statements annually for the next five years.
2. Create an assumptions page to enter your inputs. Please make sure the assumptions page is logical and well organized.
3. Build scenarios to run three cases (Base/Best/Worst) on a few of the assumptions that create the most variability on the Company's earnings (make reasonable assumptions for the Best case and Worst case variables).
4. Create schedules for the key items that will appear on the financial statements.
5. Summarize the key operating and financial results for each of the three cases (Base/Best/Worst).