

Homework — Forecasting the Financing Gap

Optional. Worked solutions are on the website

Practice problems

3.1

1. An analyst builds a pro forma and types the value 4,200 into the inventory cell because "that's roughly what it should be." Describe two specific ways this will produce a wrong answer later, and say what should have been in the cell.
2. Sketch the input-output map for a model built to answer: "can this school afford to build a second campus?" List at least five inputs and name the single output that matters.
3. A manager says: "your model says we need GH¢3.8 million, but last year your model said we'd need GH¢2.1 million and we only needed GH¢1.4 million, so why should I believe it?" Write a three-sentence response.

3.2

1. Last year's receivables-to-sales ratio is 22%; the prior four-year average is 14%. What operational question must be answered before choosing a forecast ratio? Describe the evidence that would push you toward each choice.
2. Show algebraically that applying last year's ratio to next year's sales gives the same answer as growing last year's balance by the sales growth rate.
3. A firm's payables-to-sales ratio has been 9%, 9%, and 3%. Management says the 3% is because they paid down suppliers ahead of an audit and will return to normal terms. Forecast payables on sales of GH¢40M under both readings, and state which you would use and what you would ask for.

3.3

1. Classify each of the following, using one of six labels — sales-driven, asset-driven, debt-driven, policy, identity, or a rate applied to a computed figure: cost of goods sold; depreciation; interest expense; share capital; retained earnings; taxes; gross profit; accounts payable.
2. A firm has opening PP&E of GH¢42M, plans capital expenditure of GH¢9M, and expects depreciation of GH¢6M. Compute closing PP&E. Then explain why forecasting PP&E as a fixed percentage of sales would have been unreliable for a single year.
3. A colleague forecasts equity as 30% of total assets, because that is what it was last year. Explain what is wrong with this, and give the correct mechanic.

3.4

1. Using Adom Scenario A, recompute the financing gap if the company pays a dividend of GH¢1.5M. Explain the direction of the change in one sentence.

2. A firm computes a financing gap of negative GH¢6M. List three things management could do with the surplus, and describe one circumstance in which each would be the right choice.
3. Adom's Scenario A gap is GH¢3.81M and the bank will lend at most GH¢2.0M. Holding the 25% growth assumption fixed, find a combination of collection period and days inventory that brings the gap to GH¢2.0M or below. Show your working and comment on whether the combination you found is realistic.

3.5

1. The same firm begins with GH¢30M of debt, so D/E is 1.0. If it grows at its sustainable rate and keeps D/E constant, what closing debt and new borrowing are implied?
2. The firm is planning to grow revenue at 22%. How large is the gap above its sustainable rate, and roughly how much financing beyond the constant-ratio plan would it need if total assets are GH¢75M and assets grow in proportion to sales?
3. Show that raising asset turnover raises the sustainable growth rate, using the DuPont decomposition from video 2.2. Then explain in two sentences why cutting Adom's collection period is both a working-capital fix and a growth-capacity fix.

3.6

1. An analyst reports that a project's NPV is GH¢4,732,891. Give two criticisms of presenting the figure this way, and rewrite the finding in one sentence.
2. Using the two-way table in the video, describe in words what happens to Adom's financing gap as you move diagonally from the top-left cell to the bottom-right cell, and state which single cell you would recommend the company target.
3. Adom's gross margin assumption barely affects the financing gap but is the most important number in the business. Name a different question about Adom for which the gross margin assumption would be the dominant driver, and explain why.