# Sessions #7 → #12: Practice Problems

## Session #7 – Reformulation (4)

- Which of the following is *NOT* an objective when reformulating the Statement of Cash Flows?
  1) To separate equity and debt financing cash flows
  2) To calculate the firm's free cash flow (FCF), and to show how it is both generated and used
  3) To ensure that the firm has a positive free cash flow (FCF)
  4) To separate items within the reported Cash Flows from Investing section into investments from/to operating assets from those from/to financial assets.

- Which of the following statements about a firm's free cash flow (FCF) is *TRUE*?
  1) If a firm's free cash flow (FCF) is negative, it will have funds to invest in financial assets
  2) Uses of free cash flow classified under the 'Debt financing cash flows' include the following: investments in financial cash, interest paid, and interest income.
  3) If a firm's free cash flow (FCF) is negative, it has invested too much in long-term operating assets such as property, plant, and equipment
  4) Uses of free cash flow (FCF) classified under the 'Equity financing cash flows' include each of the following: payment of dividends to common shareholders, payment of dividends to preference shareholders, and share repurchases.



- The reformulated s presented below.

  Core Operati
  
  Core Other Operating Inco
  Unusual Operating Income (before tax) 200
  Net Financial Expenses (before tax) 250
  Profit Before Tax 1,350
  

  Income tax expense 450

  Based on this information, what is the tax allocation to Core Operating Income from Sales?
  1) 345
  2) 270
  3) 195
  4) 450

- Condensed versions of the reformulated 2020 and 2019 Balance Sheet and Income Statement for a company which pays no tax are presented below.

| Balance Sheet | 2019 | 2020 | | 2019 | 2020 |
|---|---|---|---|---|---|
| | | | | | |
| Operating Assets (OA) | 250 | 275 | Financial Assets (FA) | 12 | 15 |
| Operating Liabilities (OL) | (70) | (83) | Financial Obligations (FO) | (122) | (132) |
| | | | Net Financial Obligations (NFO) | 110 | 117 |
| Net Operating Assets (NOA) | 180 | 192 | | | |
| | | | Shareholders' Equity | 70 | 75 |

| Income Statement | 2019 | 2020 |
|---|---|---|
| | | |
| Operating Income (after tax) | 142 | 164 |
| Net Financial Expenses (after tax) | (10) | (15) |
| Comprehensive Income (after tax) | 132 | 149 |

Based on this information, what is company's free cash flow (FCF) for 2020?
1) 144
2) 152
3) 176
4) 164

## Session #8 – Earnings Management (4)

- Which of the following in *NOT* a reason that CFO's identify as a consequence of failing to meet earnings benchmarks?
  1) It reduces information risk
  2) It creates uncertainty about the firm's future prospects
  
  3) Management will have to take time away from managing the business to explain why the benchmarks were missed
  4) Missing benchm fied problems



- Which of the following is *NOT* an example of an ac anagement (EM) strategy?
  
  1) Unusually high (Level 3) fair value estimates
  2) Unusually low warranty liability estimates
  3) Unusually low cash flow from operations
  4) Unusually low deferred revenues

- Which of the following is *NOT* an example of a situation where earnings management (EM) is more likely?
  1) When the firm is 'in play' as a takeover target
  2) The firm has very low positive earnings
  3) When there has been a change in the firm's management
  4) The firm conducts all of its business with unrelated parties

- Which of the following statements about earnings management is *NOT* true?
  1) If accruals are overstated by earnings management this year, they will be understated in some future period or periods
  2) An unusual decrease in the provision for employee benefits is a red flag that the company might be overstating its operating assets to increase earnings
  3) An unusual increase in inventories is a red flag that the company might be overstating its operating assets to increase earnings
  4) An unusual increase in net operating assets is a red flag that the company might be managing its operating accruals in order to increase earnings.

## Session #9 – Financial Statement Analysis (7)

- At the end of its fiscal year, a company has a quick ratio of 0.6, a current ratio of 0.8, and the balance of its current asset accounts is $3 million. Its sales for the year were $15 million and the associated cost of goods sold (COGS) is equal to 60% of sales. What is the company's inventory turnover ratio based on average-of-year values, if its beginning inventory balance was $2 million?
  1) 4.50
  2) 6.55
  3) 7.50
  4) 9.45

- Your firm received a $1 million purchase order on the last day of its fiscal year, which it immediately filled with $600,000 of inventory. The customer paid $250,000 in cash and you firm invoiced the customer for the balance. Based on this information, which of the following statements is *TRUE*?
  1) The firm's current ratio will remain unchanged
  2) The firm's current ratio will increase
  3) The firm's current ratio will decrease
  4) The firm's quick ratio will decrease

- Which of the following would typically lead to an increase in a firm's current ratio?
  1) The sale of inventory
  2) The purchase of additional inventory for cash
  3) Taking out a ban
  4) A customer payi



- The following financial information is drawn from Ge ated 2010 financial statements:

| | |
|---|---|
| Net Operating Assets (NOA) | 11,632 |
| Net Financial Obligations (NFO) | 6,099 |
| Operating Income (OI) (after tax) | 1,177 |
| Net Financial Expenses (NFE) (after tax) | 251 |

  Based on this information and using end-of-year figures, what is General Mill's return on common equity (ROCE) for 2010?
  1) 0.213
  2) 0.101
  3) 0.167
  4) 0.041

- GL Ltd. is a manufacturer of small appliances. Following is a condensed AASB/IFRS Income Statement for the most recently completed fiscal period:

| | |
|---|---|
| Sales | $1,500,000 |
| Cost of Goods Sold | (600,000) |
| Gross Profit | 900,000 |
| Rental Income | 50,000 |
| Interest Expense | (125,000) |
| Depreciation | (275,000) |
| Net Profit before Tax | 550,000 |
| Income Tax Expense (30%) | (165,000) |
| Net Profit After Tax (NPAT) | 385,000 |

Based on this information, what is GL's times-interest-earned ratio and its operating profit margin (after tax)?

1) Its times-interest-earned ratio is 4.400 and its operating profit margin is 0.315
2) Its times-interest-earned ratio is 4.400 and its operating profit margin is 0.450
3) Its times-interest-earned ratio is 5.400 and its operating profit margin is 0.450
4) Its times-interest-earned ratio is 5.400 and its operating profit margin is 0.315

- The following turnover ratios for individual operating assets and operating liabilities have been calculated using end-of-year figures based on Trail Inc.'s reported 2020 Balance Sheet:



| | |
|---|---|
| Cash turnover | 6.0 |
| Accounts receivable turnover | 4.0 |
| Invent | 3.0 |
| Prope | |
| Accou | |
| Provis | 3.0 |



Based on this information, what is Trail's asset turn )?



1) 25.500
2) 1.277
3) 0.583
4) 0.800

- The following financial information is drawn from Crazy Horse Inc.'s reformulated 2019 financial statements:

| | |
|---|---|
| Operating Assets (NOA) | 10,000 |
| Operating Liabilities (OL) | 7,000 |
| Operating Income (OI) (after tax) | 1,800 |
| Net Financial Expenses (NFE) (after tax) | 150 |
| Stated short-term borrowing rate | 6% |
| Tax rate | 30% |

Based on this information and using end-of-year figures, what is General Mill's return on net operating assets (RNOA) for 2010?

1) 0.209
2) 0.698
3) 0.600
4) 0.042

## Session #10 – Financial Statement Analysis; Forecasting (5)

- Which of the following ratios is *NOT* in the 'DuPont System'?
  1) Operating profit margin
  2) Asset turnover
  3) Current ratio
  4) Financial Leverage

- Which of the following changes will lead to an increase in ROCE for a profitable company?
  1) An increase in Shareholders' Equity (S/E), all else remaining unchanged
  2) A decrease in the amount of long-term debt outstanding, all else remaining unchanged
  3) A decrease in the corporate tax rate, all else remaining unchanged
  4) A decrease in operating income (after tax), all else remaining unchanged

- Which of the following calculations is correct if sales are $5,600, operating profit after tax is $2,090, the tax rate is 30%, there are no 'other comprehensive income' items, net financial obligations (NFO) are $30,900 and shareholders' equity (S/E) is $16,500?
  1) operating profit margin = 0.358
  2) asset turnover = 0.156
  3) financial leverage = 1.572
  4) ROCE = 0.127



- Which of the state
  1) The appropriate f in a mature industry than for a firm in a
  2) The 'regression to the mean' phenomenon confirms that poor performing firms will not survive in the longer term
  3) When a company has reached its 'steady state' grow g profit margin will grow at the terminal growth rate
  4) The sustainable growth rate, g*, is the growth rate in sales that the firm can achieve if it is able to issue new debt and/or new equity.



- Which of the statements arising from a 'third level' break down of ROCE is *NOT* true?
  1) An increase in Accounts Receivable turnover will result in an increase in ROCE, assuming all else remains unchanged
  2) A reduction in the Accounts Payable balance will result in an increase in ROCE, assuming all else remains unchanged
  3) A reduction in production costs will result in an increase in ROCE, assuming all else remains unchanged
  4) A decrease in the inventory balance will lead to an increase in ROCE, assuming all else remains unchanged.

## Session #11 – Forecasting and Valuation (5)

➢ Which of the following statements about the process of forecasting a firm's pro forma Financial Statements is *NOT* true?

1) The focus of the forecasting process should be on the firm's sustainable (core) earnings
2) A firm's core sales profit margin relates its operating income to the level of its investment in net operating assets
3) The extent to which a firm's operating costs are fixed helps to determine its core sales profit margin
4) A firm's core sales profit margin captures its ability to generate operating profits from sales

➢ Which of the following factors does *NOT* influence the extent to which Shareholders' Equity (S/E) grows?

1) The growth rate in the firm's sales
2) A change in the firm's degree of financial leverage
3) A change in the firm's investment in net operating assets (NOA)
4) A change in the cost of the firm's financial obligations (net borrowing cost)

➢ You have been provided the following actual financial information from the reformulated 2020 financial statements of Castlegar Ltd. and forecasts of the same figures for 2021



| | 2020 Actual | 2021 E |
|---|---|---|
| Sales rev | 37,408 | 38,776 |
| Operating | | |
| Net Oper | | |



Based on these actual and forecasted values, which of the following statements is *TRUE*?

1) Both the firm's operating profit margin and its asse ed to increase
2) Both the firm's operating profit margin and its asse ted to decrease
3) The firm's operating profit margin is forecasted to i urnover to decrease
4) The firm's operating profit margin is forecasted to decrease and its asset turnover to increase



➢ Based on the reformulated financial statements for its most recently completed fiscal year (2020), a firm has net operating assets (NOA) of $250,000 and net financial obligations (NFO) of $175,000.

As an analyst, you have already forecasted a 8% growth in the firm's shareholders' equity. You are now trying to decide how to forecast the firm's net financial obligations (NFO) and then its net financing expenses (NFE) for 2021. While you are comfortable with your forecast of the firm's net borrowing costs (NBC) of 4% after tax, you are uncertain about how best to forecast the firm's net financial obligations (NFO).

One approach you are considering is to forecast an increase in net financial obligations equal to your forecast of the growth in the firm's property, plant & equipment (p,p&e) of 2.5% because these assets are leased and the lease obligation will be recorded as a NFO. Thus, from this perspective, NFOs should grow at the same rate as p,p&e.

The other possible approach that you are considering is to base your forecast of the firm's net financial obligations on your forecast of the firm's degree of financial leverage (FLEV). Here, you believe that the firm is at its optimal capital structure and as such, FLEV will remain constant.

Based on this information, which approach to forecasting net financial obligations (NFO) will lead to a higher net financing expense (NFE), the approach based on the growth rate in p,p&e of 2.5%, or the approach based on the assumption that FLEV will remain constant?

1) The approach based on the 2.5% growth rate in p,p&e will lead to a higher NFE
2) The approach based on a constant FLEV will lead to a higher NFE
3) The two approaches will lead to the same NFO and hence the same NFE
4) It is not possible to determine which approach will result in a higher NFE based on the information provided

- You have been provided the following actual financial information from the reformulated financial statements of Mission Beach Ltd. for the years 2019 and 2020, and then a set of forecasted financial information for the three period, 2021 – 2023.

| | 2020 Actual | 2019 Actual |
|---|---|---|
| Net Operating Assets (NOA) | 7,750 | 7,500 |
| Net Financial Obligations (NFO) | 1,750 | 1,750 |

| | 2021 E | 2022 E | 2023 E |
|---|---|---|---|
| Sales forecasts | 10,000 | 10,500 | 11,000 |
| Operating profit margin (after tax) | 0.20 | 0.20 | 0.20 |
| Asset turnover | 1.25 | 1.25 | 1.25 |
| Net Financing Expenses (after tax) | 175 | 175 | 175 |



Using the Abnorm is the intrinsic value of a common share of appropriate cost of equity capital is 7.5%, net financial obligations (NFO) remain unchanged from their value in 2020, there are no Other Comprehensive Income (OCI) items, Miss 00 common shares outstanding, and abnormal earnings are forecasted t



1) $26.55
2) $32.55
3) $33.32
4) $34.23

## Session #12 – Forecasting and Valuation (5)

- Based on its reformulated Financial Statements for the fiscal year 2020, WaveJumper (WJ) Inc. had net operating assets (NOA) of $100,000, net financial obligations (NFO) of $25,000, and sales revenue of $200,000. An analyst has recently made the following forecasts for the 3-year period 2021 – 2023:

| | 2021 E | 2022 E | 2023 E |
|---|---|---|---|
| Sales growth forecasts | 5% | 5% | 5% |
| Operating profit margin (after tax) | 0.25 | 0.25 | 0.25 |
| Asset turnover | 2.0 | 2.0 | 2.0 |

Based on these forecasts and using the Abnormal Earnings (Residual Income) valuation model, the analyst then valued WJ's 200,000 common shares using a weighted average cost of capital (WACC) of 6% and assuming that residual operating income would grow at 3% after 2023.

You have now had the chance to examine the analyst's forecasts and agree with all of them except the operating profit margin forecasts which you believe should be 20% and not 25%. Based on this one difference in forecasts, how much would your estimate of the intrinsic value of a common share of WJ differ from the analyst's estimate?

1) lower by $1.82 ($6.60 versus $8.42)
2) lower by $0.20
3) higher by $1.82
4) the estimates will be the same

- Which of the following factors typically will *NOT* influence the magnitude of the price-earnings (P/E) ratio?

1) a permanent change in earnings
2) the firm's business risk
3) the anticipated growth in the firm's future earnings
4) the firm's choice of accounting policy

- Which of the following statements about the price-earnings (P/E) and market-to-book (M/B) ratios is *TRUE*?

1) If a firm has a high (above normal) P/E and a high (above normal) M/B, its future abnormal earnings are expected to be constant
2) If a firm has a high (above normal) P/E and a low (below normal) M/B, its abnormal earnings are expected to decrease



3) If a firm has a low (below normal) P/E and a high (above normal) M/B, its future abnormal earnings are e
4) If a firm has a hig M/B, its future abnormal earnings are e



- An analyst has provided you with the following actual cial information for Ferny Ltd.:



| | 2020 Actual | 2021 E | 2022 E |
|---|---|---|---|
| Sales | $500,000 | $550,000,000 | $575,000,000 |
| Operating profit margin (after tax) | 20% | 20% | 20% |
| Net Operating Assets (NOA) | 200,000 | 220,000 | 230,000 |
| Asset turnover | 2.5 | 2.5 | 2.5 |
| Net Financial Obligations (NFO) | 125,000 | 130,000 | 135,000 |

The analyst has also provided the following additional information:

- the forecasted growth rate in residual comprehensive income (CI) after 2022 is 2%
- the firm's net borrowing cost (NBC) after tax is 3%
- the firm's cost of equity capital is 6%
- the firm has no other comprehensive income (OCI) items

Having received the analyst's report, you are now trying to determine whether the estimate of the intrinsic value of Ferny's common equity is more sensitive to a 0.5% decrease in the terminal growth rate to 1.5% or a 1% decrease in the operating profit margin to 19%. Based on the information provided, which of the following statements is *TRUE*?

1) The estimated intrinsic value is more sensitive to the decrease in the terminal growth than to the decrease in the operating profit margin
2) The estimated intrinsic value is more sensitive to the decrease in the operating profit margin than to the decrease in the terminal growth rate

3) There is no difference in the sensitivity of the estimated intrinsic value to the changes in the terminal growth rate and the operating profit margin
4) The estimated intrinsic value is not sensitive to changes in either the terminal growth rate or the operating profit margin

➢ An analyst has provided you with the following actual and forecasted financial information for White Rock Inc.:

| | 2020 Actual | 2021 E | 2022 E |
|---|---|---|---|
| Sales | $25,000,000 | $30,000,000 | $35,000,000 |
| Operating profit margin (after tax) | 20% | 20% | 20% |
| Asset turnover | 2.0 | 2.0 | 2.0 |
| Net Operating Assets (NOA) | 12,500,000 | 15,000,000 | 17,500,000 |

As confirmed by their forecasts, while the analyst believes that the firm's sales will grow, they also believe that its operating profit margin and asset turnover will remain constant.

Having received the analyst's report, you have now conducted your own investigation into the financial prospects of White Rock Inc. While you agree with the analyst's forecast for a terminal growth rate in residual operating income of 4% after 2022 and that the required rate of return on the firm's operations is 8%, you do not agree with either their forecasted operating profit margin or asset turnover figures. Based on your own investigation, you believe that White Rock's operating profit margin will be slightly higher at 21% in both 2021 and 2022, but that its asset turnover will be somewhat lower at 1.8 in both years. Given this information, which of the following stateme



1) Your estimate of es will be lower than the analyst's esti



2) Your estimate of the intrinsic value of White Rock l be the same as the analyst's estimate
3) Your estimate of the intrinsic value of White Rock l be higher than the analyst's estimate



4) Based on the information provided, it is not possible to determine whether your estimate or the analyst's estimate of the intrinsic value of White Rock's common shares will be higher