THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

This exam paper must not be removed from the venue

Venue _____

Seat Number _____

Student Number |__|__|__|__|__|__|__|__|

Family Name _____

First Name _____

## School of Business

## EXAMINATION

Semester One Final Examinations, 2019

# ACCT7106 Financial Statement Analysis

*This paper is for St Lucia Campus students.*

Examination Duration: 120 minutes

Reading Time: 10 minutes



**Exam Conditions:**

This is a Central



This is a Closed

During reading time, write only on the rough paper p



This examination paper will be released to the Librar

**Materials Permitted In The Exam Venue:**

Calculators - Casio FX82 series or UQ approved (labelled)

**(No electronic aids are permitted e.g. laptops, phones)**

**Materials To Be Supplied To Students:**

1 x 14-Page Answer Booklet

1 x Multiple Choice Answer Sheet

**Instructions to Students:**

**Additional exam materials (e.g. answer booklets, rough paper) will be provided upon request.**

Please manage your time and attempt all questions. Provide all workings.

**For Examiner Use Only**

| Question | Mark |
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**Question 1: Multiple Choice Questions (20 Marks)**

Select the best answer for each of the following questions, and enter the answer in the answer sheet. Choose only one answer for each question, and note that only the answer sheet will be marked. 2 marks for each question.

1. 'Industry growth is slow' is a factor in which of Porter's Five Forces?
   A. Threat of New Entrants
   B. Bargaining Power of Suppliers
   C. Bargaining Power of Buyers
   D. Threat of Substitutes
   E. Rivalry Between Existing Competitors

2. Airlines pilots are difficult and expensive to replace. From the perspective of an airline company (e.g. Qantas), this is an example of which of Porter's Five Forces?
   A. Threat of New Entrants
   B. Bargaining Power of Suppliers
   C. Bargaining Power of Buyers
   D. Threat of Substitutes
   E. Rivalry Between Existing Competitors

3. Which of the following is NOT an example of a way that a company might compete on differentiation?
   A. Offering a higher quality product than competitors
   B. Expl
   C. Inve
   D. Dev and development
   E. Offe



4. Which of the following is NOT an indicator th /expense might be Unusual Operating Income?
   A. The amount of the revenue/expense
   B. The amount of the revenue/expense is zero in some years
   C. The item is described as a 'restructuring charge'
   D. The item is a recurring part of the company's 'other income'
   E. The amount of the revenue/expense is unpredictable



5. A chief financial officer wants to inflate earnings using accrual-based earnings management. Which of the following will increase earnings in the current year?
   A. Overestimate the Provision for Doubtful Debts
   B. Underestimate the Provision for Warranty Expenses
   C. Underestimate the useful life of Property, Plant and Equipment
   D. Write-down Inventory to lower of cost and net realisable value
   E. All of the above

6. A company called ABC has a small investment in the shares of a private company. ABC cannot observe the market price of the private company's shares, so the management of ABC estimates the fair value of the private company's shares using a discounted free cash flow model, internal estimates of future free cash flow, and internal estimates of weighted average cost of capital.

How would this fair value be described under accounting standards?

A. Level 1 fair value
B. Level 2 fair value
C. Level 3 fair value
D. Level 1 or 2 fair value
E. Level 2 or 3 fair value

7. Which of the following is NOT a reason why price-to-book (P/B) ratios are usually greater than 1?

A. Most assets are measured at fair value
B. Accounting does not recognise most internally generated intangible assets
C. Expenditures on R&D and advertising are expensed as incurred, but may generate value for multiple periods
D. A collection of assets can be worth more when used together than when used separately, but accounting generally records each asset individually
E. All of the above



8. Which of the following is NOT a typical disadvantage of using comparable company multiples to value a company?

A. It ca es
B. The
C. It do
D. It implicitly assumes that market prices of comparable companies are accurate
E. The denominator can be negative for g the mo meaningful



9. The weighted average cost of capital (WACC) is the appropriate discount rate for which two valuation models?

A. Dividend discount model (DDM) and discounted free cash flows (DCF)
B. Discounted free cash flows (DCF) and residual operating income model (ReOI)
C. Residual income model (RIM) and residual operating income model (ReOI)
D. Dividend discount model (DDM) and residual income model (RIM)
E. Residual income model (RIM) and discounted free cash flows (DCF)

10. Suppose you are using the dividend discount model (DDM) to value a company. You calculate the terminal value by assuming that the company's dividend will be the same forever after the company reaches a steady state. Which valuation Scenario are you assuming?

A. Scenario 1
B. Scenario 2
C. Scenario 3
D. Scenario 1 or 2
E. None of the above

**Question 2: Balance Sheet Reformulation (20 Marks)**

Suppose you have been given the following Balance Sheet, prepared under Australian Accounting Standards. The company is an ordinary retail company.

| | FY18 $m | | FY18 $m |
|---|---|---|---|
| Current Assets | | Current Liabilities | |
| Cash & cash equivalents | 150.0 | Accounts payable | 30.0 |
| Accounts receivable | 125.0 | Current tax liability | 20.0 |
| Inventories | 70.0 | Other current liabilities | 25.0 |
| Other financial assets | 10.0 | | 75.0 |
| | 355.0 | Non-Current Liabilities | |
| | | Interest-bearing liabilities | 400.0 |
| Non-Current Assets | | Provision for employee benefits | 50.0 |
| Goodwill | 200.0 | Deferred tax liabilities | 50.0 |
| PPE (net) | 400.0 | | 500.0 |
| Equity-accounted investments | 40.0 | | |
| Deferred tax asset | 40.0 | **Total Liabilities** | **575.0** |
| | | | 300.0 |
| | | Retained earnings | 110.0 |
| | | | 50.0 |
| | | | **460.0** |
| **Total Assets** | **1,035.0** | **Total Equity and Liabilities** | **1,035.0** |



Note the following additional information:

- Revenue for FY18 was $750m
- Assume operating cash is 0.5% of revenue

**Required:** Reformulate the Balance Sheet, following the approach taught in the course.

**Question 3: Cash Flow Statement Reformulation (10 Marks)**

Suppose you have been given the following extract from a Statement of Cash Flows, prepared under Australian Accounting Standards. The company is an ordinary retail company.

| | FY18 $m |
|---|---|
| Cash Flow from Operations: | |
| Cash receipts from customers | 200.0 |
| Payments to suppliers and employees | (100.0) |
| Royalties received | 10.0 |
| Interest paid | (40.0) |
| Interest received | 10.0 |
| Income tax paid | (60.0) |
| Cash Flow from Operations | 20.0 |
| | |
| Cash Flow Investing: | |
| Purchases of PPE | (50.0) |
| Purchases of short-term money market investments | (20.0) |
| Purchase of business acquisition | (20.0) |
| Proceeds fr | |
| Cash Flow fr | |



Other information:

- The company had an increase in operat FY18
- The company's corporate tax rate is 30

**Required:** Reformulate the Cash Flow from Operations and Cash Flow from Investing sections of the Statement of Cash Flows, following the approach taught in the course.

**Question 4: Accounting and Financial Analysis (30 Marks)**

Below are the reformulated Balance Sheet, Income Statement, and Equity Statement for Blackmores, the Australian vitamin and health supplement manufacturer.

**Reformulated Balance Sheet**

| | FY17 $000 | FY18 $000 |
|---|---|---|
| **Operating assets** | | |
| Operating cash | 5,522 | 6,011 |
| Receivables | 132,146 | 150,788 |
| Inventories | 84,794 | 103,965 |
| Other assets | 7,463 | 10,811 |
| Property, plant and equipment | 74,207 | 76,261 |
| Goodwill and intangible assets | 61,754 | 66,212 |
| Deferred tax assets | 9,960 | 12,590 |
| Amounts advanced to related parties | 4,111 | 3,600 |
| | 379,957 | 430,238 |
| **Operating liabilities** | | |
| Trade and o | | 8 |
| Current tax l | | 3 |
| Provisions | | 4 |
| Other liabilities | | |
| Deferred tax liabilities | | |
| **Net operating assets (NOA)** | **226,055** | **244,921** |
| **Financial assets** | | |
| Financial cash | 28,729 | 30,457 |
| Derivative assets | 8 | 475 |
| Investment property | 2,160 | 2,160 |
| Other financial assets | 1,320 | 1,520 |
| | 32,217 | 34,612 |
| **Financial obligations** | | |
| Derivative liabilities | 485 | 203 |
| Interest-bearing liabilities | 78,968 | 86,000 |
| | 79,453 | 86,203 |
| **Net financial obligations (NFO)** | **47,236** | **51,591** |
| **Common Shareholders' Equity (CSE)** | **178,819** | **193,330** |

**Reformulated Income Statement**

| | FY18 $000 |
|---|---|
| **Core Operating Income from Sales (before tax):** | |
| Sales | 601,136 |
| Raw materials and consumables used | (232,374) |
| Gross profit | 368,762 |
| Other core operating expenses (total) | (266,727) |
| Core Operating Income from Sales (before tax) | 102,035 |
| **Core Other Operating Income (before tax):** | |
| Government grant | 602 |
| Core Other Operating Income (before tax) | 602 |
| **Unusual Operating Income (before tax):** | |
| Proceeds from the disposal of fixed assets | 29 |
| Unusual Operating Income (before tax) | 29 |
| **Net Financial** | |
| Interest rev | 416 |
| Interest expense | (4,346) |
| Dividends received | 87 |
| Bank charges | (1,141) |
| Net Financial Expense (before tax) | (4,984) |
| **Tax Allocation:** | |
| Income tax expense | 28,459 |
| Tax shield from NFE | 1,495 |
| Tax allocation to Unusual OI | 9 |
| Tax allocation to Core Other OI | 181 |
| Tax Allocation to Core OI from Sales | 29,765 |
| **After Tax Amounts:** | |
| Core OI from Sales (after tax) | 72,270 |
| Core Other OI (after tax) | 421 |
| Unusual OI (after tax) | 20 |
| NFE (after tax) | (3,489) |
| **Operating OCI (after tax):** | |
| Exchange differences arising on translation of foreign subsidiaries | 2,625 |

| | |
|---|---|
| **Financing OCI (after tax):** | |
| Net gain/(loss) on hedging instruments entered into for cash flow hedges (net of tax) | 603 |
| **Total Operating income (OI) after-tax** | 75,337 |
| **Total Net financial expense (NFE) after-tax** | (2,886) |
| **Comprehensive income (CI)** | 72,451 |

**Reformulated Equity Statement**

| | **FY18 $000** |
|---|---|
| Beginning balance | 178,819 |
| Comprehensive income (CI) | |
| Net profit after tax (NPAT) | 69,223 |
| Other comprehensive Income (OCI) | 3,228 |
| | 72,451 |
| Transactions | |
| Dividends d | 49,957 |
| Share-base | (1,259) |
| Issue of shares under employee long-term incentive plans | 9,242 |
| | 57,940 |
| Ending balance | 193,330 |



**Required:**

a. Briefly explain why 'Proceeds from the disposal of fixed assets' is classified as Unusual Operating Income. (2 marks)

b. Briefly explain why 'Exchange differences arising on translation of foreign subsidiaries' is classified as Operating OCI, rather than Financing OCI. (2 marks)

c. Blackmore's 'Investment property' is carried at historical cost. What other measurement method is permitted for investment properties under accounting standards? (2 marks)

d. Show that the clean surplus relation holds for FY18. Show workings. (2 marks)

e. Calculate free cash flow (FCF) for FY18. Show workings. (2 marks)

f. Sales in FY17 was $552,160,000. Calculate normal change in net operating assets (NOA) for FY18. Assume that normal asset turnover (ATO) is 2.62. Show workings. (3 marks)

g. Compare normal change in net operating assets (NOA) to the actual change for FY18. Briefly state what the difference between the normal change in NOA and the actual change in NOA suggests about Blackmore's accounting quality.

**Note**: You do not need to discuss why the two numbers are different. Simply comment on what the difference suggests about Blackmore's accounting quality. (2 marks)

h. Calculate ROCE, and show that ROCE = RNOA + FLEV x SPREAD holds for FY18. Show all workings. (6 marks)

i. Show that RNOA = ROOA + OLLEV x OLSPREAD holds for FY18. Assume a short-term borrowing rate after tax of 3%. Show all workings. (6 marks)

j. Calculate profit before tax (PBT). Show all workings. (3 marks)

**Question 5: Valuation (20 Marks)**

Suppose you have been given the following information about an Australian company called Acme. Acme operates entirely within Australia.

Beta ($\beta$) = 1.2
Market risk premium = 6.5%
Risk-free rate = 3.2%

Acme currently has Common Shareholders' Equity (CSE) per share of 200 cents/share.

Analysts have issued the following forecasts:

| | 2018A | 2019E | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|
| Dividends per share | 15.00 | 17.00 | 23.00 | 28.00 | 30.00 |
| Earnings per share | 35.00 | 30.00 | 35.00 | 37.00 | 39.00 |

Assume that Acme will reach a steady state in 2022. Analysts forecast Acme's terminal growth rate to be 6.0% after 2022.

**Required:**



a. Calculate Acme's cost of equity using the CAPM. (2 marks)

b. Using th wth rate assumption, calculat ividend Discount Model. (5 marks)



c. Using the analysts' forecasts and the an rate assumption, calculate Acme's residual income for 20 22. Calculate the value per share of Acme's ual Income Model. Show all workings. (8 marks)



d. Why might the analysts' terminal growth rate assumption be too high? (3 marks)

e. Compare your Residual Income Model valuation to Acme's current Common Shareholders' Equity (CSE). What explains the difference between your valuation and Acme's current CSE? (2 marks)

**END OF EXAMINATION**

**Formula Sheet**

$$\Delta CSE = CI - d$$

$$C - I = d + F$$
$$C - I = OI\left(after\ tax\right) - \Delta NOA$$
$$C - I = NFE\left(after\ tax\right) - \Delta NFO + d$$
$$C - I = -NFI\left(after\ tax\right) + \Delta NFA + d$$

$$Normal\ \Delta NOA = \frac{\Delta Sales}{Normal\ ATO}$$
$$Normal\ OI = C - I + Normal\ \Delta NOA$$

$$ROCE = RNOA + FLEV \times SPREAD$$
$$RNOA = ROOA + OLLEV \times OLSPREAD$$
$$ROOA = \frac{OI\left(after\ tax\right) + Implicit\ Interest\left(after\ tax\right)}{AvgOA}$$



$$RI_t = CI_t - r_E CSE_t$$
$$ReOI_t = OI\left(after\ tax\right)_t - r_F NOA_{t-1}$$





$$V_E = \frac{E\left[d_1\right]}{\left(1+r_E\right)^1} + \frac{E\left[d_2\right]}{\left(1+r_E\right)^2} + \ldots + \frac{E\left[d_T\right]}{\left(1+r_E\right)^T} + \frac{E\left[d_{T+1}\right]}{r_E - g} \times \frac{1}{\left(1+r_E\right)^T}$$
$$V_E = CSE_0 + \frac{E\left[RI_1\right]}{\left(1+r_E\right)^1} + \frac{E\left[RI_2\right]}{\left(1+r_E\right)^2} + \ldots + \frac{E\left[RI_T\right]}{\left(1+r_E\right)^T} + \frac{E\left[RI_{T+1}\right]}{r_E - g} \times \frac{1}{\left(1+r_E\right)^T}$$
$$V_F = \frac{E\left[FCF_1\right]}{\left(1+r_F\right)^1} + \frac{E\left[FCF_2\right]}{\left(1+r_F\right)^2} + \ldots + \frac{E\left[FCF_T\right]}{\left(1+r_F\right)^T} + \frac{E\left[FCF_{T+1}\right]}{r_F - g} \times \frac{1}{\left(1+r_F\right)^T}$$
$$V_F = NOA_0 + \frac{E\left[ReOI_1\right]}{\left(1+r_F\right)^1} + \frac{E\left[ReOI_2\right]}{\left(1+r_F\right)^2} + \ldots + \frac{E\left[ReOI_T\right]}{\left(1+r_F\right)^T} + \frac{E\left[ReOI_{T+1}\right]}{r_F - g} \times \frac{1}{\left(1+r_F\right)^T}$$

$$r_E = r_f + \beta\left(E\left[r_M\right] - r_f\right)$$
$$r_F = \frac{NFO}{V_E + NFO} r_D + \frac{V_E}{V_E + NFO} r_E$$