Certified Public Accountants

# ADVANCED FINANCIAL ACCOUNTING

## PROFESSIONAL 2 EXAMINATION - AUGUST 2008

**NOTES:**
Answer all questions.

**PRO-FORMA INCOME STATEMENT BY NATURE, INCOME STATEMENT BY FUNCTION AND BALANCE SHEET ARE PROVIDED**

**TIME ALLOWED:**
3.5 hours, plus 10 minutes to read the paper.

**INSTRUCTIONS:**
During the reading time you may write notes on the examination paper but you may not commence writing in your answer book.

Marks for each question are shown. The pass mark required is 50% in total over the whole paper.

**Start your answer to each question on a new page**.

You are reminded that candidates are expected to pay particular attention to their communication skills and care must be taken regarding the format and literacy of the solutions. The marking system will take into account the content of the candidates' answers and the extent to which answers are supported with relevant legislation, case law or examples where appropriate.

List on the cover of each answer booklet, in the space provided, the number of each question(s) attempted.

THE INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS IN IRELAND

# ADVANCED FINANCIAL ACCOUNTING

PROFESSIONAL 2 EXAMINATION - AUGUST 2008

TIME ALLOWED: 3.5 hours and 10 minutes to read the paper. Answer ALL questions.

**1.** RECONNECT plc (RECONNECT), a company based in Ireland, is involved in the provision of renewable energy. RECONNECT has an interest in two other companies, SUN Limited (SUN) and WIND Limited (WIND). SUN manufactures solar panels, while WIND manufactures wind turbines.

RECONNECT acquired all of the ordinary capital of SUN, an Australian company, on 14th June 2005 when SUN's retained earnings were A$5,000,000. The fair value of SUN's net assets on 14th June 2005 was the same as their book value. The functional currency of RECONNECT is the euro (€), while the functional currency of SUN is the Australian dollar (A$). SUN's day to day operations are not dependent upon RECONNECT.

RECONNECT acquired 30% of the ordinary share capital of WIND on 1st July 2007. The fair value of WIND's net assets on 1st July 2007 was the same as their book value. RECONNECT participates fully in WIND's financial and operating policy decisions.

RECONNECT, SUN and WIND prepare their financial statements to 31st December each year, and their draft income statements for the year ended 31st December 2007 and draft balance sheets as at that date are presented as follows:

**Draft Income Statement for the Year Ended 31st December 2007**

| | RECONNECT | SUN | WIND |
|---|---|---|---|
| | €'000 | A$'000 | €'000 |
| Revenue | 15,200 | 28,200 | 7,800 |
| Cost of sales | (8,250) | (17,000) | (4,080) |
| Gross profit | 6,950 | 11,200 | 3,720 |
| Operating expenses | (2,350) | (6,100) | (1,120) |
| Operation profit | 4,600 | 5,100 | 2,600 |
| Investment income | 300 | - | - |
| Finance costs | (150) | (200) | (100) |
| Profit before tax | 4,750 | 4,900 | 2,500 |
| Income tax expense | (950) | (980) | (500) |
| Profit after tax | 3,800 | 3,920 | 2,000 |

**Draft Balance Sheet as at 31st December 2007**

| | RECONNECT €'000 | SUN A$'000 | WIND €'000 |
|---|---|---|---|
| ASSETS | | | |
| Non-Current Assets | | | |
| Property, Plant and Equipment | 25,000 | 22,000 | 16,000 |
| Investment in SUN | 7,500 | - | - |
| Investment in WIND | 5,000 | - | - |
| | | | |
| Current Assets | | | |
| Inventory | 1,800 | 3,800 | 900 |
| Trade Receivables | 2,450 | 4,900 | 600 |
| Dividends Receivable | 300 | - | - |
| Bank and Cash | 450 | 250 | 50 |
| | 42,500 | 30,950 | 17,550 |
| | | | |
| EQUITY AND LIABILITIES | | | |
| Capital and Reserves | | | |
| €1/A$1 Ordinary Shares | 8,000 | 10,000 | 5,000 |
| Retained Earnings | 28,300 | 12,500 | 6,000 |
| | | | |
| Non-Current Liabilities | 3,500 | 4,000 | 3,000 |
| | | | |
| Current Liabilities | | | |
| Trade Payables | 1,900 | 2,650 | 1,250 |
| Other Payables | 800 | 300 | 2,300 |
| Proposed Dividends | - | 1,500 | - |
| | 42,500 | 30,950 | 17,550 |

**Additional Information**

1. On 1st January 2004, RECONNECT planted an extensive area of land in the West of Ireland with young trees. After seven years the trees can be harvested and used in wood fuelled heating systems. On 1st January 2007, when the trees were three years old, RECONNECT entered into an agreement with GREEN INVESTMENT BANK plc (GREEN) to sell the trees to GREEN for €3,000,000. On 1st January 2007, the trees, which had originally cost €1,000,000, had an estimated market value of €4,000,000 due to increasing demand for energy systems that utilise natural resources. RECONNECT credited the cash received from GREEN to revenue and transferred the trees from inventory to cost of sales at their book value of €1,000,000. RECONNECT has an option to repurchase the trees at any time during the subsequent four years at a cost of €3,000,000 plus accumulated interest at 5% per annum, calculated from 1st January 2007. The Directors of RECONNECT intend to repurchase the trees from GREEN on 31st December 2010 and resell them for €6,000,000.

2. Given the nature of their business, and in order to encourage new customers, WIND has a policy of refunding purchases to dissatisfied customers, even though the company has no legal obligation to do so. The company's refund policy is generally known. For accounting purposes, WIND calculates returns as 5% of revenue each year. On average, 50% of returns are in respect of damaged turbines and have to be scrapped, whilst 50% are suitable for re-sale. The cost of re-saleable returns is estimated to be 30% of sales value. Of the sales in 2007, 4% has already been refunded during the year by WIND.

3. In December 2007, SUN's Directors proposed dividends of A$1,500,000. RECONNECT has taken account of its share of these dividends as SUN's shareholders are expected to approve the dividends in 2008.

4. The activities and transactions of RECONNECT, SUN and WIND occur evenly throughout the year. There has been no change in the ordinary share capital of the three companies since their incorporation. The Directors of RECONNECT estimate that goodwill arising on the acquisition of SUN and WIND was impaired for the first time on 31st December 2007 by €500,000 and €200,000 respectively.

5. Rates of exchange between the Euro (€) and the Australian dollar (A$) were as follows:

| | |
|---|---|
| Through 2005 and on 31st December 2005 | €1 = A$2.5 |
| Through 2006 and on 31st December 2006 | €1 = A$3 |

Average for 2007 €1 = A$4
On 31st December 2007 €1 = A$5

**REQUIREMENT:**

Prepare the consolidated income statement for the year ended 31st December 2007, and the consolidated balance sheet as at that date, for RECONNECT group in a form suitable for publication.

(59 Marks )
Format & Presentation (6 Marks)
**[Total: 65 Marks]**

*Notes to the consolidated income statement and consolidated balance sheet are NOT required.*

**2.** The Directors of RECONNECT have identified WATER Limited (WATER), a company involved in the generation of hydro electricity, as a potential acquisition target. RECONNECT has obtained the following information with respect to WATER.

**WATER**
**Income Statement for the Year Ended 31st December**

| | 2007 €'000 | 2006 €'000 |
|---|---|---|
| Revenue | 888,500 | 847,500 |
| Cost of sales | (762,200) | (731,000) |
| Gross profit | 126,300 | 116,500 |
| Operating expenses | (35,200) | (32,900) |
| Operation profit | 91,100 | 83,600 |
| Net finance costs | (29,100) | (25,200) |
| Profit before tax | 62,000 | 58,400 |
| Income tax expense | (15,200) | (18,500) |
| Profit after tax | 46,800 | 39,900 |

**WATER**
**Balance Sheet as at 31st December**

| | 2007 €'000 | 2006 €'000 |
|---|---|---|
| ASSETS | | |
| Non-Current Assets | | |
| Property, plant and equipment | 793,500 | 756,700 |
| | | |
| Current Assets | | |
| Inventory | 19,000 | 13,700 |
| Other receivables | 11,800 | 10,000 |
| Cash and cash equivalents | 19,100 | 21,100 |
| Assets held for sale | 800 | 2,400 |
| | 844,200 | 803,900 |
| | | |
| EQUITY AND LIABILITIES | | |
| Capital and Reserves | | |
| €1 ordinary shares | 145,800 | 139,900 |
| Retained earnings | 26,800 | 61,700 |
| | | |
| Non-Current Liabilities | | |
| Financial liabilities | 456,500 | 383,800 |
| Deferred tax | 85,600 | 89,600 |
| | | |
| Current Liabilities | | |
| Trade and other payables | 119,200 | 118,100 |
| Current income tax | 10,300 | 10,800 |
| | 844,200 | 803,900 |

**WATER**
**Cash Flow Statement for the Year Ended 31st December**

| | 2007 €'000 | 2006 €'000 |
|---|---|---|
| Net Cash Flows from Operating Activities | | |
| Cash generated from operations | 124,900 | 133,300 |
| Interest received | 200 | 300 |
| Interest paid | (27,600) | (23,400) |
| Refinancing cost paid | - | (1,400) |
| Corporation tax paid | (19,600) | (14,800) |
| Purchase of own shares for share-based payments | (1,500) | (3,500) |
| | 76,400 | 90,500 |
| Net Cash Flows from Investing Activities | | |
| Purchase of property, plant and equipment | (76,000) | (37,500) |
| Proceeds of sale of property, plant and equipment | 4,800 | 4,600 |
| | (71,200) | (32,900) |
| Net Cash Flows from Financing Activities | | |
| Equity dividends paid | (10,300) | (7,400) |
| Proceeds from issue of shares | 5,900 | 7,000 |
| Purchase of shares | (77,000) | (78,700) |
| Advances of bank loans | 76,100 | 304,500 |
| Repayments of bank loans | - | (280,000) |
| Finance lease principal payments | (1,900) | - |
| | (7,200) | (54,600) |
| (Decrease) / increase in cash and cash equivalents | (2,000) | 3,000 |
| Opening Cash and Cash Equivalents | 21,100 | 18,100 |
| Closing Cash and Cash Equivalents | 19,100 | 21,100 |

**REQUIREMENT:**

Prepare a report addressed to the Board of Directors of RECONNECT which clearly:

(a) Interprets and evaluates the financial performance and position of WATER; and (14 Marks)

(b) Identifies any additional information that should be obtained before deciding whether to proceed with the acquisition of WATER. (5 Marks)

Presentation Marks (1 Mark)

**[Total: 20 Marks]**

**3.** **(a)** What is environmental accounting? (5 Marks)

**(b)** Why might businesses consider adopting environmental accounting as part of their accounting systems? (10 Marks)

**[Total: 15 Marks]**

**[Total: 100 Marks]**

**END OF PAPER**

**SUGGESTED SOLUTIONS**

THE INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS IN IRELAND

# ADVANCED FINANCIAL ACCOUNTING

PROFESSIONAL 2 EXAMINATION - AUGUST 2008

**SOLUTION 1**

**RECONNECT**
**Consolidated Income Statement for the Year Ended 31st December 2007**

| | RECONNECT €'000 | SUN €'000 *(See w3)* | Adjustments €'000 | Consolidated €'000 |
|---|---|---|---|---|
| Revenue | 15,200 | 7,050 | (w7a) (3,000) | 19,250 |
| Cost of sales | (8,250) | (4,250) | (w7a) 1,000 | (11,500) |
| Gross profit | 6,950 | 2,800 | | 7,750 |
| Operating expenses | (2,350) | (1,525) | (w2) (500) | (4,375) |
| Operating profit | 4,600 | 1,275 | | 3,375 |
| Investment income | 300 | - | (w1b) (300) | - |
| Finance costs | (150) | (50) | (w7b) (150) | (350) |
| Share of profit of associate | - | - | (w10) 92,395 | 92,395 |
| Profit before tax | 4,750 | 1,225 | | 3,117,395 |
| Income tax expense | (950) | (245) | | (1,195) |
| Profit after tax | 3,800 | 980 | | 1,922,395 |

**Format & presentation 2 Marks**

**RECONNECT**
**Consolidated Balance Sheet as at 31st December 2007**

| | RECONNECT €'000 | SUN €'000 (see w4) | Adjustments €'000 | Consolidated €'000 |
|---|---|---|---|---|
| ASSETS | | | | |
| Non Current Assets | | | | |
| Property, plant and equipment | 25,000 | 4,400 | | 29,400 |
| Investment in SUN | 7,500 | - | (w2) (7,500) | - |
| Investment in WIND | 5,000 | - | (w9) (5,000) | - |
| Goodwill | - | - | (w2) 1,000 | 1,000 |
| Investment in associate | - | - | (w10b) 5,092.395 | 5,092.395 |
| | | | | |
| Current Assets | | | | |
| Inventory | 1,800 | 760 | (w7a) 1,000 | 3,560 |
| Trade receivables | 2,450 | 980 | | 3,430 |
| Dividends receivable | 300 | - | (w1b) (300) | - |
| Bank and cash | 450 | 50 | | 500 |
| | 42,500 | 6,190 | | 42,982.395 |
| | | | | |
| EQUITY AND LIABILITIES | | | | |
| Capital and Reserves | | | | |
| €1/A$1 ordinary shares | 8,000 | 4,000 | (w2) (4,000) | 8,000 |
| Retained earnings | 28,300 | 800 | (See w11) | 24,242.395 |
| | | | | |
| Non Current Liabilities | 3,500 | 800 | (w7a&b) 3,150 | 7,450 |
| | | | | |
| Current Liabilities | | | | |
| Trade payables | 1,900 | 530 | | 2,430 |
| Other payables | 800 | 60 | | 860 |
| Proposed dividends | - | - | | - |
| | 42,500 | 6,190 | | 42,982.395 |

**Format & presentation 2 Marks**

Workings:

1. Reverse dividends proposed by SUN
Ordinary dividend – as no legal obligation / entitlement until approved by the shareholders at the AGM in 2008, therefore no accrual required at 31st December 2007.

(a) SUN's books

| | | | |
|---|---|---|---|
| DR | Dividends payable | A$1,500,000 | |
| CR | RE – post acquisition | | A$1,500,000 |

**(2 Marks)**

(b) RECONNECT's books

| | | | |
|---|---|---|---|
| DR | Investment income (& RE) | €300,000 | |
| CR | Dividends receivable | | €300,000 |

**(2 Marks)**

2. Acquisition of SUN (100% = subsidiary)

| | **A$'000** | **€'000** |
|---|---|---|
| Paid | | 7,500 |
| Fair value of net assets acquired: | | |
| Share capital | 10,000 | |
| RE – 14th June 2005 | 5,000 | |
| | 15,000 | |
| ER @ A$2.5 | | (6,000) |
| Goodwill | | 1,500 |
| Impairment | | (500) |
| Carrying value at 31st December 2007 | | 1,000 |

**(5 Marks)**

**Note**

With respect to SUN, the company's functional currency # presentation currency:

- RECONNECT's investment is based on the net worth of SUN;
- SUN's day to day operations are not dependent on RECONNECT's currency; and
- Net investment will remain until business is liquidated or disposed.

The mechanics are:

- Income statement translated using average rate;
- Assets and liabilities translated using closing rate;
- Share capital and pre-acquisition reserves translated using historic/acquisition rate;
- Obtain reserves as balancing figure;
- Compare difference between opening net assets and closing net assets, with translated retained earnings, to obtain exchange difference;
- Exchange difference will arise from:
  - Retranslating the opening net assets at this year's closing rate,
  - Translating income statement at average rate and balance sheet at closing rate; and
- Exchange differences taken directly to reserves.

3. Translate SUN's income statement using average rate

| | **A$'000** | **ER** | **€'000** |
|---|---|---|---|
| Revenue | 28,200 | 4 | 7,050 |
| Cost of sales | (17,000) | 4 | (4,250) |
| Gross profit | 11,200 | 4 | 2,800 |
| Operating expenses | (6,100) | 4 | (1,525) |
| Operation profit | 5,100 | 4 | 1,275 |
| Finance costs | (200) | 4 | (50) |
| Profit before tax | 4,900 | 4 | 1,225 |
| Income tax expense | (980) | 4 | (245) |
| Profit after tax | 3,920 | 4 | 980 |

**(5 Marks)**

4. Translate SUN's balance sheet as at 31st December 2007

| | A$'000 | ER | €'000 |
|---|---|---|---|
| ASSETS | | | |
| Non Current Assets | | | |
| Property, plant and equipment | 22,000 | 5 | 4,400 |
| | | | |
| Current Assets | | | |
| Inventory | 3,800 | 5 | 760 |
| Trade receivables | 4,900 | 5 | 980 |
| Bank and cash | 250 | 5 | 50 |
| | 30,950 | | 6,190 |
| | | | |
| EQUITY AND LIABILITIES | | | |
| Capital and Reserves | | | |
| A$1 ordinary shares | 10,000 | 2.5 | 4,000 |
| Retained earnings – pre-acquisition | 5,000 | 2.5 | 2,000 |
| Retained earnings – post-acquisition | (incl. w1a) 9,000 | Balance | (1,200) |
| | | | |
| Non Current Liabilities | 4,000 | 5 | 800 |
| | | | |
| Current Liabilities | | | |
| Trade payables | 2,650 | 5 | 530 |
| Other payables | 300 | 5 | 60 |
| | 30,950 | | 6,190 |

**(5 Marks)**

5. Calculate exchange difference

| | | A$'000 | ER | €'000 |
|---|---|---|---|---|
| (a) | Opening net assets @ OR (2006 CR) | | | |
| | Share capital | 10,000 | 2.5 | 4,000 |
| | RE – pre-acquisition | 5,000 | 2.5 | 2,000 |
| | RE – post-acquisition: A$(12,500 + (w1a) 1,500 - pre-acqn 5,000 - PAT 3,920) | 5,080 | Balance | 693.33 |
| | | 20,080 | 3 | 6,693.33 |
| | Opening net assets @ CR | 20,080 | 5 | 4,016.00 |
| | | | | 2,677.33 |

**(3 Marks)**

| | | A$'000 | ER | €'000 |
|---|---|---|---|---|
| (b) | Translate current year RE (IS @ AR v BS @ CR | | | |
| | PAT – per IS | 3,920 | 4 | 980 |
| | PAT – per BS | 3,920 | 5 | 784 |
| | | | | 196 |

**(2 Marks)**

| | | | |
|---|---|---|---|
| (c) | Total FX loss | = (a) + (b) | 2,873.33 |

**(1 Mark)**

6. Movement on SUN's RE

| | | €'000 |
|---|---|---|
| Opening RE on 1st January 2007 | (see w5a) | 693.33 |
| PAT – 2007 (see w5b) | | 980 |
| FX loss (see w5c) | | (2,873.33) |
| Closing RE on 31st December 2007 | | (1,200) |

**(3 Marks)**

7. Sale of inventory by RECONNECT

Substance of transaction is that of a loan against inventory i.e. not a sale and repurchase

| | 2007 | 2008 (Memo Only) | 2009 (Memo Only) | 2010 (Memo Only) |
|---|---|---|---|---|
| Income Statement | € | € | € | € |
| Revenue | - | - | - | 6,000,000 |
| Cost of sales | - | - | - | (1,000,000) |
| Gross profit | - | - | - | 5,000,000 |
| Interest (see below) | (150,000) | (157,500) | (165,375 | (173,644) |
| Profit/(loss) | (150,000) | (157,50) | (165,375) | 4,826,356 |
| | | | | |
| Balance Sheet | | | | |
| Inventory | 1,000,000 | 1,000,000 | 1,000,000 | (trees sold & loan repaid on 31/12/10) |
| Loan (including interest) | (3,150,000) | (3,307,500) | (3,472,875) | |

| | Opening Balance € | Interest (5%) € | Closing Balance € |
|---|---|---|---|
| 2007 | 3,000,000 | 150,000 | 3,150,000 |
| 2008 | 3,150,000 | 157,500 | 3,307,500 |
| 2009 | 3,307,500 | 165,375 | 3,472,875 |
| 2010 | 3,472,875 | 173,644 | 3,646,519 |

(a)

| | € | € |
|---|---|---|
| DR Revenue | 3,000,000 | |
| CR Non Current Liabilities – loan | | 3,000,000 |
| | | |
| DR Inventory | 1,000,000 | |
| CR Cost of Sales | | 1,000,000 |
| - To reverse initial entry | | |

**(3 Marks)**

(b)

| | € | € |
|---|---|---|
| DR Income Statement – interest | 150,000 | |
| CR Non Current Liabilities – loan | | 150,000 |
| - Interest charge for 2007 | | |

**(3 Marks)**

Note: RECONNECT has the option of capitalising inventory-related interest costs

8. Sales refunds – WIND

| | | € |
|---|---|---|
| Total returns for 2007 | 5% x €7,800,000 | 390,000 |
| Returns already accounted for in 2007 | 4% x €7,800,000 | (312,000) |
| Unaccounted for in 2007 | 1% x €7,800,000 | 78,000 |
| (of which 50% will be scrapped and 50% resold) | | |
| | | |
| Scrap: cost = 50% x 1% x €7,800,000 | | 39,000 |
| Resold: cost = 50% x 1% x (€7,800,000 x 30%) | | 11,700 |
| | | 50,700 |

| | | € | € |
|---|---|---|---|
| DR | WIND – IS | 50,700 | |
| CR | WIND – BS | | 50,700 |

**(4 Marks)**

9. Acquisition of WIND on 1st July 2007 (30% = associate)

| | €'000 | €'000 | €'000 |
|---|---|---|---|
| Paid | | | 5,000 |
| Fair value of net assets acquired: | | | |
| Ordinary share capital | | 5,000 | |
| RE at 1st January 2007 (€6,000,000 - €2,000,000) | | 4,000 | |
| PAT – year ended 31st December 2007 | 2,000 | | |
| Sales refunds (w8) | (50.7) | | |
| | 1,949.3 | | |
| | x 6/12 | 974.65 | |
| | | 9,974.65 | |
| | | @ 30% | 2,992.395 |
| Goodwill | | | 2,007.605 |
| Less impairment | | | (200) |
| | | | 1,807.605 |

**(5 Marks)**

10. Disclosure of associate – WIND

(a) Income statement (acquisition on 1st July 2007)

| | | €'000 |
|---|---|---|
| PAT | | 1,949.3 |
| | x 6/12 | 974.65 |
| | x 30% | 292.395 |
| Less goodwill impairment | | (200) |
| | | 92.395 |

**(4 Marks)**

(b) Balance sheet

(i) Investment in associate

| | | €'000 |
|---|---|---|
| Net assets per draft balance sheet | | 11,000 |
| Less sales refunds (w8) | | (50.7) |
| | | 10,949.30 |
| | x 30% | |
| | | 3,284.79 |
| Add unimpaired goodwill | | 1,807.605 |
| | | 5,092.395 |

**(4 Marks)**

(ii) Consolidated reserves

| | | |
|---|---|---|
| Share of post acquisition retained profits less impaired goodwill | (w10a) | 92.395 |

**(4 Marks)**

11. Consolidated RE

| | €'000 |
|---|---|
| RECONNECT (per draft balance sheet) | 28,300 |
| Reverse SUN's proposed dividends (w1b) | (300) |
| SUN – impairment of goodwill (w2) | (500) |
| SUN – RE (w6) | (1,200) |
| RECONNECT – sale of inventory (w7a) | (2,000) |
| RECONNECT – loan interest (w7b) | (150) |
| WIND (w10bii) | 92.395 |
| | 24,242.395 |

**(6 Marks)**

**[Total : 65 Marks]**

**SOLUTION 2**

**REPORT**

**Format & presentation 1 Mark**
**Interpretation & evaluation 9 Marks**
**Ratios 5 Marks**
**Further information 5 marks**

**[Total : 20 Marks]**

dd/mm/yy

The Board of Directors,

**Proposed acquisition of WATER**

As requested, please find…

(a) Interpretation and evaluation of the financial performance and position of WATER

A certain amount of information can be gleaned from the information provided by simply comparing this year with last year. For example:

**Income statement**

- Revenue has increased by 4.84%, operating profit has increased by 8.97%, profit available for the shareholders increased by 17.29%. This indicates that the company has kept tight control over expenses.

**Cash flow statement**

- Although there was considerable investment this year in property, plant and equipment, this was covered by the income generated during the year.
- The company continued to purchase its own shares, which was mostly covered by bank borrowing.

**Balance sheet**

- The cash balance has declined a little, although the cash flow statement shows that helped to pay this year's dividends.
- The current liabilities have not increased by much and current assets have increased, largely due to increased inventories held (this also helps to explain the increase in profit).
- Property, plant and equipment have increased (as per the cash flow statement).
- Financial liabilities have increased by nearly 20% (as per the cash flow statement).
- Shareholders' funds have decreased mainly due to the decrease in retained earnings. This seems to be because of the continued purchase of own shares.

**Ratios**

Using the pyramid structure of the six key ratios to analyse the financial statements for 2007 and 2006 (see Appendix One), it is possible to make some more observations:

- Operating return on equity: this has increase by approximately 11% – for two 2 reasons: equity has decreased and also profits have increased.
- Financial leverage multiplier: this has increased by approximately 22_% – for 2 reasons: the asset base (and therefore the capital employed) has increased and equity has decreased.
- ROCE: this has increased by 0.39%.
- Asset turnover: this has stayed constant.
- Gross profit / net profit margin: these have both increased slightly.

Overall, it is fair at this point to say that WATER is performing better this year than last year, although the company appears to be very dependent on 'other people's money', especially bank loans.

**(9 Marks)**

(b) Additional information that should be obtained before deciding whether to proceed with the acquisition of WATER.

For example:

A comprehensive examination of the full financial statements of WATER for the past three to five years, including the supporting notes, is essential in order to provide further information on the issues raised above.

In order to assess how well WATER is performing, it is necessary to compare the performance WATER against other similar companies in the industry. Moreover, it is important to ensure that the bases of ratios are identical.

Furthermore, projections for WATER and the industry should be obtained.

**(4 Marks)**

**[Total : 20 Marks]**

**APPENDIX ONE**

| | **2007** | | **2006** | |
|---|---|---|---|---|
| Return on Equity | 91,100 / 172,600 | 52.78% | 83,600 / 201,600 | 41.47% |
| Fin/Lev Multiplier | 844,200 / 172,600 | 4.89 times | 803,900 / 201,600 | 3.99 times |
| ROCE | 91,100 / 844,200 | 10.79% | 83,600 / 803,900 | 10.40% |
| Asset Turnover | 888,500 / 844,200 | 1.05 times | 847,500 / 803,900 | 1.05 times |
| Gross Profit Margin | 126,300 / 888,500 | 14.22% | 116,500 / 847,500 | 13.75% |
| Net Profit Margin | 91,100 / 888,500 | 10.25% | 83,600 / 847,500 | 9.86% |
| Current Ratio | 49,900 / 129,500 | 0.39:1 | 44,800 / 128,900 | 0.35:1 |

**Pyramid of Ratios 2007:**

Operating return on equity
(52.78%)

x

Financial leverage multiplier (4.89 times)

R.O.C.E. (10.79%)

x

Asset turnover (1.05 times)

Net profit margin (10.25%)

**Pyramid of Ratios 2006:**

Operating return on equity
(41.47%)

x

Financial leverage multiplier (3.99 times)

R.O.C.E. (10.40%)

x

Asset turnover (1.05 times)

Net profit margin (9.86%)

**(5 Marks)**

## SOLUTION 3

**(a) What is environmental accounting?**

Environmental accounting can be defined as:

'The collection, analysis and assessment of environmental and financial performance data obtained from business management information systems, environmental management and financial accounting systems. The taking of corrective management action to reduce environmental impacts and costs plus, where appropriate, the external reporting of the environmental and financial benefits in verified corporate environmental reports or published annual reports and accounts'.

Environmental accounting can be considered either a subset or superset of accounting proper, because it aims to incorporate both economic and environmental information. It can operate at the company level or at the level of the national economy via links to the National Accounts of countries (among other things, the National Accounts produce the estimates of Gross Domestic Product otherwise known as GDP).

Environmental Accounting is a growing field that identifies resource use, measures and communicates costs of a company's or national economy actual or potential impact on the environment. Costs can include costs to clean up or remediate contaminated sites, environmental fines, penalties and taxes, purchase of pollution prevention technologies and waste management costs.

An environmental accounting system is composed of environmentally differentiated conventional accounting and ecological accounting. Environmentally differentiated accounting measures impacts of the natural environment on a company in monetary terms. Ecological accounting measures the impact a company has on the environment, but in physical units (e.g. kilograms of waste produced, kilojoules of energy consumed) rather than in monetary units.

**(5 Marks)**

**(b) Why might businesses consider adopting environmental accounting as part of their accounting system?**

There are several reasons why businesses may consider adopting environmental accounting as part of their accounting system:

- Possible significant reduction or elimination of environmental costs;
- Environmental costs and benefits may be overlooked or hidden in overhead accounts;
- Possible revenue generation may offset environmental costs (e.g. transfer of pollution allowances);
- Improved environmental performance which may have a positive impact on human health and business success;
- May result in more accurate costing or pricing of products and more environmentally desired processes;
- Possible competitive advantages as customers may prefer environmentally friendly products and services; and
- Can support the development and running of an overall environmental management system, which may be required by regulation for some types of businesses.

Environmental accounting is a vital tool to assist in the management of environmental risks and operational costs. To ensure good corporate governance, a business should publish environmental accounting disclosures in corporate documents. As well as delivering environmental benefits, there are clear efficiency gains and cost savings that can be made from linking financial information with resource use.

**(10 Marks)**

**[Total : 15 Marks]**

**[Total: 100 Marks]**