Specimen Exam 1

Exam Name: Corporate Finance Professional (SCF)
Time Allowed: 3 hours 15 minutes
Pass Mark: 50%

This exam contains 2 sections:

Section A:
1 question, worth 50 marks

Section B:
2 questions, each worth 25 marks

Total 100 marks

Section A

Question 1

The following **exhibits** provide information relevant to the question:

1. International investment in Edland – company background, industry information and details on Edland and the Central Trade Area
2. Financial details of the investment – information on a new investment proposal in Edland to be evaluated
3. ESG concerns – information on investor concerns about ESG criteria

1 International investment in Edland

Drimpton Co is a large, listed company based in the country of Ceeland (currency dollar ($)). It manufactures air conditioning units for homes and commercial buildings. It is regarded as a market leader as a result of its investment in the continual development of its products.

Drimpton Co has expanded its sales to foreign countries over time. Recently, it has started selling to the country of Edland and the countries surrounding it, which are located in a different continent to Drimpton Co. Edland and the surrounding countries have recently established a single market, the Central Trade Area (CTA), with the same regulations affecting how businesses operate. They have also entered monetary union and share a common currency, the peso (P). Ceeland is not a member of the CTA.

There has been increased demand for air conditioning in the countries in the CTA, due to higher summer temperatures. However, the number of companies selling air conditioning units in these countries has been increasing. Many companies based in the CTA have focused on selling air conditioning units to homes and are competing on price. These units are smaller and therefore better suited to homes than the units which Drimpton Co currently manufactures.

Drimpton Co is proposing to establish a subsidiary in Edland, which would focus on manufacturing smaller air conditioning units for sale to homes in the CTA. Labour costs for the subsidiary in the CTA are forecast to be lower than they would be if the air conditioning units were manufactured in Ceeland.

2. Financial details of the investment

The following financial details for the investment have been provided:

Expected sales of the air conditioning unit are as follows:

Year	1	2	3	4
Sales units (000s)	80	110	150	160

The contribution in year 1, before deducting the costs of components imported from Drimpton Co in Ceeland, will be P200 per unit, increasing in each of years 2 to 4 by the annual rate of inflation in Edland.

The subsidiary will purchase some of the components from Drimpton Co and pay component costs of $12 per unit to Drimpton Co in year 1. The component costs will increase in each of years 2 to 4 by the annual rate of inflation in Ceeland. Drimpton Co will achieve a 60% pre-tax contribution on the sale of components to the subsidiary.

Inflation-adjusted fixed costs will be incurred by the subsidiary, as follows:

Year	1	2	3	4
	P000	**P000**	**P000**	**P000**
Fixed costs	3,200	3,360	3,562	3,776

Drimpton Co will pay tax on profits at an annual rate of 20% in Edland on its profits there. Drimpton Co pays tax on profits at an annual rate of 28% in Ceeland. A bi-lateral tax treaty exists between Edland and Ceeland, which permits offset of overseas tax against any tax liability in Ceeland on overseas profits. Tax in both countries is payable in the year in which the tax liability arises. Tax credits for tax losses are given at annual rates of 20% in Edland and 28% in Ceeland, with the bi-lateral tax treaty also applying to tax credits.

There will be an immediate investment in the subsidiary of P30m. Tax allowable depreciation is available on the initial investment at 25% per year on a reducing balance basis, with the first allowance claimed in year 1. It can be assumed that the realisable value at the end of year 4 will be equal to the tax written down value at the end of year 3, so that there will be no tax allowable depreciation in year 4.

The total working capital requirements (including inflation) for each year will be as follows:

Year	1	2	3	4
	P000	**P000**	**P000**	**P000**
Working capital	1,440	2,080	3,000	3,390

Each year's working capital will be required at the start of the year. Working capital will be released at the end of the four years.

Predicted annual inflation rates are as follows:

Year	**1**	**2**	**3**	**4**
Edland/CTA	4%	5%	6%	6%
Ceeland	7%	6%	5%	4%

The current exchange rate is P6.2000 = $1.

The subsidiary is likely to take some future sales of air conditioning units to homes away from Drimpton Co. Drimpton Co's loss of future sales can be assumed to be 11% of the subsidiary's forecast sales. The unit sales price on these sales can be assumed to be $70 in year 1, increasing each year by the rate of inflation in Ceeland. The pre-tax contribution margin on these sales can be assumed to be 40%.

Assume a cost of capital of 10%.

3. ESG concerns

The majority of Drimpton Co's shares are held by institutional investors. There have recently been reports in Ceeland's media about institutional investors' varying attitudes towards companies fulfilling environmental, social and governance (ESG) criteria. Some institutional investors are still judging companies mainly on financial grounds, focusing on the aspects of ESG which most affect profit, for example strong financial controls being part of governance. However, an increasing number of investors are going beyond financial considerations and assessing the sustainability of companies' business models in the context of their record in relation to ESG criteria. These investors want companies to take sufficient actions to fulfil ESG criteria across their whole business and clearly disclose what they have been doing in their annual reports.

Drimpton Co's board is increasingly concerned about how its business will be judged using ESG criteria. It believes that it has robust governance systems. It feels that Drimpton Co treats its employees well in Ceeland and pays them relatively high wages. However, the board is aware that labour costs for the proposed subsidiary in Edland have been forecast on the basis of paying employees the average wage for their jobs in Edland. The average wage in Edland and the rest of the CTA is lower than in Ceeland.

Drimpton Co's board is also concerned about studies which highlight adverse environmental impacts of air conditioning units. One aspect is that their emissions contribute significantly to global warming. Worldwide pressures over the last few years have resulted in governments introducing regulations requiring manufacturers of air conditioning units to restrict the level of emissions. There is also widespread concern about air conditioning units contributing significantly to electricity usage in hotter countries. Countries in the CTA are all considered to be hotter countries. Research is currently being conducted to develop alternative methods of cooling.

Requirements:

Prepare a report to the board of Drimpton Co which:

(i) Evaluates the net present value of Drimpton Co's investment in Edland and recommends whether on financial grounds the investment should be undertaken;

(21 marks)

(ii) Assesses the validity of the assumptions made in part (i);

(8 marks)

(iii) Assesses the issues which Drimpton Co faces concerning its performance in relation to environmental, social and governance (ESG) criteria and recommends actions Drimpton Co can take to overcome these issues.

(11 marks)

Professional marks will be awarded for the demonstration of skill in communication, analysis and evaluation, scepticism and commercial acumen in your answer.

(10 marks)

(50 marks)

Section B

Question 2

The following **exhibits** provide information relevant to the question.

1. Oxwick Co's acquisition of Ludham Co – company background, industry information and details on the potential acquisition synergies
2. Financial data for both companies – detailed financial information relating to the acquisition proposal to be evaluated

1 Oxwick Co's acquisition of Ludham Co

Oxwick Co is a listed fruit-flavoured soft drinks manufacturer which has increased its profits significantly over the last few years and is looking to expand. Oxwick Co's directors have identified Ludham Co as a potential target. Ludham Co is an unlisted, family-owned company. It produces a premium brand of soft drink, the Ludorchard brand. Oxwick Co's directors are aware that the Ludorchard brand is stocked in a number of retail outlets where Oxwick Co's drinks are not stocked.

Assuming Ludham Co is acquired, Oxwick Co's directors believe that Oxwick Co will be able to spend more on marketing the Ludorchard brand than Ludham Co has been able to spend, increasing sales significantly. It will also achieve other synergies which will increase value and justify the acquisition. However, one of Oxwick Co's non-executive directors believes that the acquisition will be of no value to Oxwick Co because it does not reduce risk. He feels that Oxwick Co's shareholders want it to make acquisitions which reduce risk and therefore increase company value. He believes that Oxwick Co should therefore consider acquiring companies with different product streams or potentially acquiring one or more of its suppliers.

2 Financial data for both companies

Ludham Co's profits have remained static during the past three years. As it is an unlisted company, there is no information available about Ludham Co's forecast cash flows.

Oxwick Co has 200 million shares in issue and its current market price per share is $11.52. Its most recent post-tax earnings were $128m.

Ludham Co has 80 million shares in issue. Its most recent post-tax earnings were $52m.

Assume that Ludham Co's current valuation can be obtained by using Oxwick Co's P/E ratio, reduced by 40% to reflect Ludham Co's unlisted status.

The post-tax cash flows for the first year of the combined company are estimated to be $270m. These are expected to increase by the following % each year as a result of sales volume increases, synergies and inflation:

Year	**2**	**3**	**4**
% increase in post-tax cash flows	12%	10%	7%

Tax allowable depreciation is assumed to be equivalent to the amount of investment needed to maintain existing operations. However, an additional investment in assets (including working capital) will be required of $28m at the end of year 1. In years 2 to 4, additional investment in assets at the end of each year will be $0.80 for every $1 increase in post-tax cash flows in that year.

After four years, the annual growth rate of free cash flows is expected to be 5% for the foreseeable future. It is assumed that there will be no additional capital investment from year 5 onwards.

The combined company's cost of capital is estimated to be 12%. It is expected that the combined company's debt to equity level will be maintained at 20:80, in market value terms, after the acquisition has taken place.

The directors of Oxwick Co assume that the shareholders of Ludham Co will require a 15% premium on the fair value of their shares. To satisfy their own shareholders, Oxwick Co's directors believe that the acquisition should result in a minimum gain to their shareholders of at least 15%.

Requirements:

(a) Assess the non-executive director's views in relation to Oxwick Co's acquisition strategy and the acquisition of Ludham Co.

(5 marks)

(b) Evaluate, using the data available:

- **the equity value of the combination of Oxwick Co and Ludham Co; and**
- **the % gain in value which would be gained by Oxwick Co's shareholders from the acquisition, concluding whether it will fulfil the expected shareholder requirement of a 15% gain in value.**

(10 marks)

(c) Assess the validity of the valuation methods used in the calculations in part (b).

(5 marks)

Professional marks will be awarded for the demonstration of skill in analysis and evaluation, scepticism and commercial acumen in your answer.

(5 marks)

(25 marks)

Question 3

The following **exhibits** provide information relevant to the question:

1. Abertafol Co's interest rate hedging – company background and details on hedging methods to be evaluated for a loan and an investment
2. Directors' queries about hedging – detailed queries about the validity of the proposed hedging methods

1 Abertafol Co's interest rate hedging

Abertafol Co is planning a change in its arrangements for distributing its products. The company wishes to dispose of its large distribution centre in the middle of its home country and invest the proceeds of sale in two smaller distribution centres, one in the north and the other in the south of the country.

It is currently 1 February 20X8. Because of expected timing differences in the three transactions, Abertafol Co expects to take out a short-term loan of $24m from 1 May 20X8 to 1 September 20X8. It then expects to make a short-term investment of $18m from 1 September 20X8 to 1 February 20X9.

Abertafol Co intends to hedge interest rate risk using derivatives. The terms offered on derivatives are based on the central bank base rate. It can be assumed that futures or options contracts are settled at the end of each month. Basis can be assumed to diminish to zero at contract maturity at a constant rate, based on monthly time intervals. It can also be assumed that there is no basis risk and there are no margin requirements.

$24m loan

Abertafol Co can borrow at central bank base rate plus 40 basis points. At present the central bank base rate is 5.1%. Commentators expect the government to raise the central bank base rate by up to 0.8% to 5.9% before 1 May 20X8.

Abertafol Co's finance department intends to use forward rate agreements or futures to hedge the loan. It has already found out that using a forward rate agreement for the loan would result in a net payment of $461,600, which is an effective annual interest rate of 5.77%.

Three-month $ futures, $500,000 contract size

Prices are quoted in basis points at 100 – annual % yield

Month	Price
June	94.55
September	94.50

$18m investment

Abertafol Co can invest at central bank base rate minus basis 30 points.

An election is due on 1 July 20X8. The main opposition party has promised that it will reduce the central bank base rate from whatever the level was before the election. Commentators expect that the central bank base rate could be a minimum of 4.5% if the main opposition party wins the election. At present, the election result cannot be predicted with confidence. It can be assumed that interest rates will not be reduced if the current government wins the election.

Abertafol Co's finance department has already found out that using a forward rate agreement for the investment would guarantee $378,750, which is an effective annual interest rate of 5.05%.

Because of the uncertainty surrounding the election result, the finance department is looking at buying call options, as the alternative to using a forward rate agreement to hedge the investment.

Options on three-month September $ futures, $500,000 contract size, option premiums are in annual %

Calls	**Exercise price**
0.298	94.75

2 Directors' queries about hedging

At the last board meeting, Abertafol Co's finance director explained to the board the possible strategies for hedging the loan and the investment. She has received a number of queries from directors about the plans:

Director A stated that Abertafol Co should not be using derivatives, as trading in derivatives was not part of the company's normal activities. Therefore, shareholders would not expect the company to be using derivatives.

Director B understood that futures or a forward rate agreement might be the best solution if the central bank rate rose up to 5.9% or fell down to 4.5%. However, she queried what would happen if rates did not rise as high as 5.9%, nor fall as low as 4.5%. Abertafol Co could possibly lose the chance of benefiting from more favourable rates than those offered by the futures or forward rate agreement.

Director C stated that options should not be used to hedge the investment, as they would never be the best choice because of their premium. The best choice would be not to hedge at all.

Requirements:

(a) Advise on hedging strategies, based on the hedging choices which the finance department is considering for:

- **the loan of $24m, assuming the central bank base rate rises to 5.9%;**
- **the investment of $18m, assuming the central bank base rate falls to 4.5%.**

(13 marks)

(b) Assess the validity of the queries raised by each of the directors.

(7 marks)

Professional marks will be awarded for the demonstration of skill in analysis and evaluation, scepticism and commercial acumen in your answer.

(5 marks)

(25 marks)