# ACF838 Corporate Financial Management

University Examinations May 2025

Ulster University

2025-05-01

**Module Code:** ACF838
**CRN:** 59747
**Time Allowed:** 3 Hours
**Use of Dictionaries:** Dictionaries are not permitted
**Examination Aids:** Calculators, which are in accordance with University policy, are permitted. Discount Tables are attached.

**Instructions to Candidates:** Candidates should read this section carefully before commencement of the examination.

- Answer **ALL** questions from **SECTION A**
- Answer **TWO** questions from **SECTION B**

Students are advised to write their ID number and desk number only on any attachment, e.g. graph paper, or any other documentation being submitted with their examination script book(s).

# SECTION A - ANSWER ALL QUESTIONS IN THIS SECTION

## Question 1 [30 marks]

Oakland Plc is considering a major investment project. The initial outlay of £900,000 will, in subsequent years, be followed by positive cash flows, as shown below.

| Year | Cash Flow (£) |
|---|---|
| 1 | 500,000 |
| 2 | 620,000 |
| 3 | 750,000 |
| 4 | 800,000 |
| 5 | 800,000 |

The initial £900,000 investment is in plant and equipment. These assets will have no disposable value.

Cash expenditures of £60,000 per year will be required to maintain these assets. Marketing expenditure of £140,000 is required in the first year, increased by 4% in each year from year 2.

This project, once started, will take up existing office spaces owned by Oakland. These offices currently bring in rent income of £100,000 per year to Oakland.

Additional investment in working capital equivalent to 10% of the initial outlay is required at the start of the project, which will be maintained during the project's life and released at the end of the project.

Oakland has a cost of capital of 9%.

**Required:**

**(a)** Calculate the Net Present Value (NPV) of the project, and advise Oakland if the project can be accepted. **(12 marks)**

**(b)** Using the IRR technique, evaluate the project. You should clearly state the reason for accepting or rejecting the project using IRR, supported by appropriate workings. **(5 marks)**

**(c)** Oakland has a policy of not accepting projects with Discounted Payback Period longer than 3 years. Evaluate the project using the DPP technique (fund invested at T0 includes working capital investment). **(5 marks)**

**(d)** Write a memo to Oakland Plc's board of directors and evaluate the results using NPV, IRR and DPP. In your memo, also discuss other non-financial factors that the company needs to consider before investing. **(8 marks)**

## Question 2 [30 marks]

Triglass Plc has three types of capital.

The market value of their ordinary shares is £12 per share. These ordinary shares have a beta of 0.9. The current risk-free rate of return on UK government bond is 4.5%. The average market return is 12%. There are currently 3.5 million ordinary shares in issue.

The current market price of its irredeemable preference shares is £6.7. Dividend is paid each year at a rate of 65% on its nominal value (£1). The company currently has 2 million preference shares.

The 8% debentures have a total book value of £15 million. The market price is currently £97. It is redeemable at par after 6 years.

Corporate tax is 30%.

**Required:**

**(a)** Explain the differences of using debt financing and equity financing and the meaning of capital structure for a public company. **(5 marks)**

**(b)** Triglass has a beta of 0.9. Explain the meaning of beta in the Capital Asset Pricing Model (CAPM), and the underlying assumptions of the CAPM. **(5 marks)**

**(c)** Calculate the Weighted Average Cost of Capital for Triglass. **(15 marks)**

**(d)** Triglass Plc is considering taking out a 10 year £10 million bank loan with an annual interest charge of 3%. Calculate the company's gearing ratio with and without the loan, and discuss the general impact of this decision on the company's finance risk and share price. **(5 marks)**

# SECTION B - ANSWER ANY TWO QUESTIONS FROM THIS SECTION

## Question 3 [20 marks]

**(a)** Discuss the following statement:

*Small firms find it more difficult to raise finance than larger firms.*

**(10 marks)**

**(b)** Discuss an example of government funds/support available to small business owners (start-ups with 1-2 years of trading). **(10 marks)**

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## Question 4 [20 marks]

**(a)** Outline FOUR factors that a company is likely to take into account in deciding on its dividend policy. **(8 marks)**

**(b)** Anta Plc has surplus earnings of £100,000 in 2024, and currently has £500,000 in the bank. These funds were accumulated to purchase a competitor; however, the purchase has fallen through. The funds only earn 2% interest per year, and there are no immediate investment opportunities available to the company. The company has a track record of paying a set amount of dividend per share, which increases slightly each year. Earnings fluctuate from year to year. Discuss the options available to the company. **(12 marks)**

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## Question 5 [20 marks]

Meridian Industries Plc is a UK-based manufacturing company considering an international expansion strategy. The company currently operates only in the domestic market but is evaluating establishing operations in emerging markets where the business risk profile would be significantly different from their current operations.

The following information is available for Meridian Industries:

**Current Capital Structure:** - Ordinary shares: 5 million shares trading at £8.50 per share - 6% Preference shares: 1 million shares with £2 nominal value, currently trading at £1.85 per share - 7% Corporate bonds: £20 million nominal value, currently trading at 105% of par, redeemable in 4 years - Bank loan: £15 million at 5.5% interest rate

**Market Data:** - Risk-free rate: 3.8% - UK market return: 11.2% - Current beta for domestic operations: 1.1 - Corporate tax rate: 25%

**International Expansion Details:** The proposed international expansion would require £25 million investment and would involve higher business risk. Research suggests that companies operating in similar emerging markets have betas ranging from 1.6 to 2.2, with an average of 1.8.

The expansion would be financed through: - £10 million new debt at 8% interest rate - £15 million new equity issue (issue costs estimated at 4% of gross proceeds)

**Required:**

**(a)** Calculate Meridian's current Weighted Average Cost of Capital (WACC). **(12 marks)**

**(b)** The finance director argues that the same WACC should be used to evaluate the international expansion project. Critically evaluate this approach and explain what adjustments, if any, should be made to the cost of capital for this project. **(5 marks)**

**(c)** Calculate an appropriate cost of capital for evaluating the international expansion project, clearly stating and justifying your assumptions. **(3 marks)**

# FORMULAE

**Capital Asset Pricing Model:**

$$r_j = r_f + \beta(r_m - r_f)$$

**Dividend Valuation Model (with growth):**

$$K_e = \frac{D_0(1+g)}{P_0} + g$$

**Interpolation (IRR):**

$$\text{IRR rate} = \text{Rate 1} + \frac{\text{NPV 1}}{\text{NPV 1} - \text{NPV 2}} \times (\text{Rate 2} - \text{Rate 1})$$

**Nominal Discount Rate:**

$$\text{Nominal discount rate} = ((1 + \text{Real rate}) \times (1 + \text{Inflation rate})) - 1$$

# PRESENT VALUE TABLES

## Present Value of 1, i.e. $(1+r)^{-n}$

*where $r$ = discount rate, $n$ = number of periods until payment*

| Periods (n) | 1% | 2% | 3% | 4% | 5% | 6% | 7% | 8% | 9% | 10% |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.990 | 0.980 | 0.971 | 0.962 | 0.952 | 0.943 | 0.935 | 0.926 | 0.917 | 0.909 |
| 2 | 0.980 | 0.961 | 0.943 | 0.925 | 0.907 | 0.890 | 0.873 | 0.857 | 0.842 | 0.826 |
| 3 | 0.971 | 0.942 | 0.915 | 0.889 | 0.864 | 0.840 | 0.816 | 0.794 | 0.772 | 0.751 |
| 4 | 0.961 | 0.924 | 0.888 | 0.855 | 0.823 | 0.792 | 0.763 | 0.735 | 0.708 | 0.683 |
| 5 | 0.951 | 0.906 | 0.863 | 0.822 | 0.784 | 0.747 | 0.713 | 0.681 | 0.650 | 0.621 |
| 6 | 0.942 | 0.888 | 0.837 | 0.790 | 0.746 | 0.705 | 0.666 | 0.630 | 0.596 | 0.564 |

| Periods (n) | 11% | 12% | 13% | 14% | 15% | 16% | 17% | 18% | 19% | 20% |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.901 | 0.893 | 0.885 | 0.877 | 0.870 | 0.862 | 0.855 | 0.847 | 0.840 | 0.833 |
| 2 | 0.812 | 0.797 | 0.783 | 0.769 | 0.756 | 0.743 | 0.731 | 0.718 | 0.706 | 0.694 |
| 3 | 0.731 | 0.712 | 0.693 | 0.675 | 0.658 | 0.641 | 0.624 | 0.609 | 0.593 | 0.579 |
| 4 | 0.659 | 0.636 | 0.613 | 0.592 | 0.572 | 0.552 | 0.534 | 0.516 | 0.499 | 0.482 |
| 5 | 0.593 | 0.567 | 0.543 | 0.519 | 0.497 | 0.476 | 0.456 | 0.437 | 0.419 | 0.402 |
| 6 | 0.535 | 0.507 | 0.480 | 0.456 | 0.432 | 0.410 | 0.390 | 0.370 | 0.352 | 0.335 |

## Annuity Table: Present Value of Annuity of 1

*Present value of an annuity of 1, i.e.* $\frac{1-(1+r)^{-n}}{r}$

| Periods (n) | 1% | 2% | 3% | 4% | 5% | 6% | 7% | 8% | 9% | 10% |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.990 | 0.980 | 0.971 | 0.962 | 0.952 | 0.943 | 0.935 | 0.926 | 0.917 | 0.909 |
| 2 | 1.970 | 1.942 | 1.913 | 1.886 | 1.859 | 1.833 | 1.808 | 1.783 | 1.759 | 1.736 |
| 3 | 2.941 | 2.884 | 2.829 | 2.775 | 2.723 | 2.673 | 2.624 | 2.577 | 2.531 | 2.487 |
| 4 | 3.902 | 3.808 | 3.717 | 3.630 | 3.546 | 3.465 | 3.387 | 3.312 | 3.240 | 3.170 |
| 5 | 4.853 | 4.713 | 4.580 | 4.452 | 4.329 | 4.212 | 4.100 | 3.993 | 3.890 | 3.791 |
| 6 | 5.795 | 5.601 | 5.417 | 5.242 | 5.076 | 4.917 | 4.767 | 4.623 | 4.486 | 4.355 |

| Periods (n) | 11% | 12% | 13% | 14% | 15% | 16% | 17% | 18% | 19% | 20% |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.901 | 0.893 | 0.885 | 0.877 | 0.870 | 0.862 | 0.855 | 0.847 | 0.840 | 0.833 |
| 2 | 1.713 | 1.690 | 1.668 | 1.647 | 1.626 | 1.605 | 1.585 | 1.566 | 1.547 | 1.528 |
| 3 | 2.444 | 2.402 | 2.361 | 2.322 | 2.283 | 2.246 | 2.210 | 2.174 | 2.140 | 2.106 |

| Periods (n) | 11% | 12% | 13% | 14% | 15% | 16% | 17% | 18% | 19% | 20% |
|---|---|---|---|---|---|---|---|---|---|---|
| 4 | 3.102 | 3.037 | 2.974 | 2.914 | 2.855 | 2.798 | 2.743 | 2.690 | 2.639 | 2.589 |
| 5 | 3.696 | 3.605 | 3.517 | 3.433 | 3.352 | 3.274 | 3.199 | 3.127 | 3.058 | 2.991 |
| 6 | 4.231 | 4.111 | 3.998 | 3.889 | 3.784 | 3.685 | 3.589 | 3.498 | 3.410 | 3.326 |

**END OF EXAMINATION PAPER**