FP

Chartered Accountant SINGAPORE

# Singapore CA Qualification (Foundation) Examination

## 2 December 2024

# Financial Management

**INSTRUCTIONS TO CANDIDATES:**

1. The time allowed for this examination paper is **3 hours 15 minutes**.
2. This examination paper has **FOUR (4)** questions and comprises **EIGHTEEN (18)** pages (including this instruction sheet, Appendix A and Appendix B). Each question may have **MULTIPLE** parts, and **ALL** questions are examinable.
3. This is a restricted open-book examination. You are allowed to have only the following materials with you at your exam location:
   - One A4-sized double-sided cheat sheet
   - One A4-sized double-sided blank scratch paper
4. During the examination, you are allowed to use your laptop and any calculators that comply with the ISCA's regulations. Please note that smartwatches, mobile phones, tablets, and all other electronic devices **MUST NOT** be used during the examination.
5. During the examination, videos of you and your computer screen will be recorded for the purpose of ensuring examination integrity and you have consented to these recordings.
6. This examination paper and all video recordings of this exam are the property of the Accounting and Corporate Regulatory Authority.

**MODULE-SPECIFIC INSTRUCTIONS:**

7. Assume that all dollar amounts are in Singapore dollar (S$) unless otherwise stated.

**IMPORTANT NOTICE:**

**If you are not feeling well, please do not press "Start Assessment". If you have started and leave during the exam, you would be deemed to have attempted the paper.**

**e-Exam Question Number**

**1**

## ****VERY IMPORTANT NOTICE****

1. Your question paper is attached under the **"Resource"** tab found at the bottom right of **EACH** question.

**Other important information:**

2. You will **only be allowed** to access the Excel function from your computer.

3. You are **NOT ALLOWED** to access any websites or reference materials (except for your A4-sized double-sided cheat sheet) during the exam.

4. You are **NOT ALLOWED** to print the question paper.

5. **Please take note that your screen will be monitored throughout the examination. If you are found to have accessed unauthorised materials or websites, or if you cheat or attempt to cheat, you will be liable to severe disciplinary action.**

   Should you encounter any issues during the exam, please call the following number:

   +65 6028 9811

6. **You do not need to fill in an answer to this instruction question.**

**Question 1 – (a), (b) and (c)**

Belt-and-Braces Outfitters (BBO) is a listed manufacturer that produces a range of gentlemen's clothing accessories.

Extract Statement of Financial Position of BBO:

| | Note | $'000 | $'000 |
|---|---|---|---|
| Share capital ($1 shares) | **1** | 10,000 | |
| Reserves | | 25,500 | |
| Total equity | | | 35,500 |
| | | | |
| Redeemable debentures | **2** | | 20,000 |
| 10% bank loan | **3** | | 10,000 |
| | | | 65,500 |

**Note 1:** The shares are currently listed with a price of $2.50 per share. This is expected to grow at an annual rate of 10% indefinitely.

**Note 2:** The redeemable debentures pay a coupon rate of 5%, are redeemable in 5 years' time for cash at a premium of 10%, or convertible into 25 ordinary shares at the investor's choice. They are currently trading for $90 per $100 nominal.

**Note 3:** The bank loan is due for repayment in 10 years' time.

The Weighted Average Cost of Capital (WACC) of BBO is 11.7%.

BBO is looking to acquire a small local metalworking business to bring buckle-making in-house. This business is expected to generate incremental operating cash flows of $2m after tax in the first year, with a subsequent annual growth rate of 10% for two years, followed by growth at 0% into perpetuity after that. Additional financing will be required to be raised to pay for the acquisition.

Tax is payable at a rate of 17%.

The industry average gearing level for gentlemen's clothing accessories is 40% measured as Debt / (Debt + Equity) using market values.

| e-Exam Question Number | **Question 1 required:** |
|---|---|
| **2** | **(a)** Calculate the following:<br><br>**(i)** Cost and market value of the debentures; **(11 marks)**<br><br>**(ii)** Cost and value of the bank loan; and **(2 marks)**<br><br>**(iii)** Cost and market value of equity of BBO to the nearest whole percent. **(4 marks)** |
| **3** | **(b)** Using the cost of equity derived in **part (a)**, value the buckle business based on the forecast cash flows. **(6 marks)** |
| **4** | **(c)** Recommend and justify how BBO should finance the expansion, whether through debt or equity.<br><br>**Note:** You are required to provide supporting calculations in your recommendation. **(2 marks)**<br><br>**(Total: 25 marks)** |

**Question 2 – (a), (b) and (c)**

Wheely Secure Ltd (WSL) is a private business in Singapore that sells an inexpensive device called the 'binsnap' for securing rubbish bin lids (for example, so they do not get blown off if there are strong winds) whilst still making bins easy to operate. They are sold online in large batches. Government agencies and charities around the world are big customers as they brand them with their own logos and give them away at local events, for example, to highlight the need to 'keep the streets clean and tidy'.

WSL has been asked to submit a tender to supply the US government with 250,000 binsnaps a year for 5 years at a heavily discounted price of US$3 per unit. The variable cost to manufacture one binsnap is S$2.00. WSL currently pays rent of S$200,000 a year for the industrial unit which it uses as a base. It would need to move to larger premises if it undertook this contract and pay S$300,000 a year. If WSL moved, the old unit could be sublet for S$75,000 a year.

The company currently owns a 3-year-old machine that could be diverted to be used for this project, but it is currently used for another ongoing project. If the management decides to sell the existing machine today, it could be sold for S$100,000 or scrapped for zero dollars in 5 years from now. The net cash flows generated by the existing machine in its current use for the other ongoing project are forecasted to be approximately S$90,362 inflow per year before tax. A new machine would cost S$250,000 and would be worth S$75,000 in 5 years. WSL is unsure whether to buy a new machine or divert the existing machine from its current work to work on the new contract. Leasing the machine has been considered but it is prohibitively expensive.

Additional information:

- An appropriate discount rate to appraise the project is 15%.
- Corporation tax is charged at 17% per year on operating cash inflows. Capital allowances can be ignored.
- The current exchange rate is S$1.25: US$1. The Singapore dollar (S$) is expected to weaken against the US dollar (US$) by 5% per annum for the foreseeable future.

| e-Exam Question Number | Question 2 required: | |
|---|---|---|
| | For the US government project: | |
| 5 | **(a)** | Calculate whether to buy a new machine or redeploy/divert the existing machine for the new US government project and as a result, calculate the relevant cash flows for the initial cost and scrap value of the machine to be used in the investment appraisal calculation. **(9 marks)** |
| 6 | **(b)** | Calculate the forecast exchange rate for the 5 years of the project. **(3 marks)** |
| 7 | **(c)** | Calculate the net present value of the project and recommend whether or not to proceed. **(13 marks)** |
| | | **(Total: 25 marks)** |

**Question 3 – (a), (b) and (c)**

All Year Headgear (AYH) sells a high-tech, lightweight, battery-powered full-head helmet with air filtration, temperature, and humidity control for everyday use. They can be worn anywhere but are increasingly popular in cities that suffer from extremely high levels of air pollution. The product is renowned for its modern, urban design and is increasingly seen as a fashion accessory.

The finance team is forecasting cash flows for the coming quarter ending 31 March 20x5.

Forecast total units sold are: 6,500 in October 20x4, 8,000 in November 20x4, 10,000 in December 20x4, 3,000 in January 20x5, 4,000 in February, 6,000 in March, and 3,500 in April 20x5. There is a policy of holding enough inventory at the end of the month to fulfil 50% of the following month's sales. Customers pay 50% cash immediately and 50% on 1 month's credit, apart from one regular annual large order of 1,250 helmets included in the January sales forecast that will be sold on 3 months' credit. Helmets are bought in ready-made from suppliers on a 2-month credit for $40 per helmet. The helmets retail for $80 per helmet. Regular monthly expenses are $130,000 including $30,000 for depreciation.

The bank balance as at 1 January 20x5 is forecasted to be $3,000 in credit.

Customers take their full credit period and pay on time.

| e-Exam Question Number | Question 3 required: | | |
|---|---|---|---|
| 8 | **(a)** | Produce a monthly cash flow forecast for the 3 months ending 31 March 20x5 and comment on the results. | **(14 marks)** |

At a recent board meeting, concern was expressed that the staff did not feel risk management was their responsibility. In particular, several risks were discussed:

- The Board is concerned that their regular large January order may not happen as the customer has not been responding to emails.
- The risk that the warehouse burns down is not currently planned for in any way.
- There is a suspicion that helmets get stolen by temporary workers quite frequently, typically one or two helmets at a time.

| e-Exam Question Number | Question 3 required: | | |
|---|---|---|---|
| 9 | **(b)** | Using the TARA framework (Transfer, Accept, Reduce, Avoid), recommend and justify a course of action for each identified risk. | **(9 marks)** |
| 10 | **(c)** | Give **TWO** examples of ways in which risk management can be embedded in the culture and operations of the business. | **(2 marks)** |
| | | | **(Total: 25 marks)** |

**Question 4 – (a) to (e)**

Easy Dog Doors (EDD) manufactures secure and convenient dog doors that are fitted into domestic house entrance doors to allow dogs to freely exit and enter the owner's property. EDD is listed on the Singapore Exchange and has a growing global reputation.

EDD is considering a major expansion into Europe, where it has not previously sold its products. This would be a fundamental and permanent expansion. The Board is assuming that the all-new European customers would need a longer period of credit to take into account shipping times and so, is proposing to allow 100-day terms for all new European customers. However, the Board is concerned about the credit risk that the new European business may create.

EDD would need to invest in a new manufacturing line. There is debate amongst the Board about whether to invest in an 'elite' line, which would last for 10 years at an initial cost of $8.5 million and maintenance costs of $500,000 a year, or whether to go for a 'basic' option at a cost of $4 million that will last for 5 years with maintenance costs of $650,000 a year. Given the expansion into Europe is intended to be permanent, when the line equipment comes to the end of its life, it will be replaced like-for-like.

Either way, finance is needed and the Board is considering 1 of the following 2 options:

- **Dividend reduction:** Withholding the dividend for 3 years. EDD has consistently paid a steadily increasing dividend since it was listed 10 years ago; or
- **Working capital management:** Reduce inventory levels, reduce domestic customer credit from 60 to 30 days, and increase trade payables days to 90 from the current 60 days.

The cost of capital applicable for appraising the opportunity is 10% per year.

| e-Exam Question Number | Question 4 required: | |
|---|---|---|
| 11 | **(a)** | Calculate the Equivalent Annual Cost of <u>each</u> production line option and recommend on this basis which production line they should adopt. **(5 marks)** |
| 12 | **(b)** | Discuss **TWO** other factors EDD should consider before they decide which production line to adopt. **(4 marks)** |
| 13 | **(c)** | Recommend **THREE** ways credit risk could be effectively managed in relation to the new European customers. **(6 marks)** |
| 14 | **(d)** | Discuss with reference to the relevant theories the likely impact of withholding the dividend for 3 years. **(6 marks)** |
| 15 | **(e)** | Discuss the impact on working capital ratios, and the business more generally, of adopting the working capital management suggestions to raise the finance needed for the new production line. **(4 marks)** **(Total: 25 marks)** |

**END OF PAPER**

## Appendix A – Formulae and Present Value Tables

### Financial ratios

| | | |
|---|---|---|
| Current ratio | = | Current assets/Current liabilities |
| Net working capital | = | Current assets - Current liabilities |
| Return on total assets | = | Net income/Average total assets |
| Return on equity | = | Net income/Average shareholders' equity |
| Receivables days | = | (Accounts receivable balance/Annual credit sales) x 365 |
| Receivables turnover | = | (Annual credit sales/Accounts receivable balance) to give 'times a year' |
| Payables days | = | (Accounts payable balance/Annual purchases or cost of sales) x 365 |
| Payables turnover | = | (Annual purchases or cost of sales/Accounts payable balance) to give 'times a year' |
| Inventory days | = | (Inventory balance/Cost of sales) x 365 |
| Inventory turnover | = | (Cost of sales/Inventory balance) to give 'times a year' |
| Working Capital cycle | = | Receivables days + Inventory days - Payables days |

### Dividend Growth Model

$K_e = [D_0(1+g) / P_0] + g$

*Where:*

| | | |
|---|---|---|
| $K_e$ | = | The cost of equity |
| $D_0$ | = | The current dividend per share |
| g | = | Future anticipated annual growth rate in dividends per share |
| $P_0$ | = | The current ex-div share price |

**g can be estimated as**

$(D_r / D_e)^{(1/n)} -1$

*Where:*

$D_r$ = The latest dividend in a historical pattern

$D_e$ = The earliest dividend in a historical pattern

n = The number of years between the earliest and the latest dividend in a sequence of historical dividends

Or g = b x r

*Where:*

b = The proportion of earnings held back

r = The return on reinvested earnings

**Capital Asset Pricing Model ('CAPM'):**

$K_e = R_f + \beta(R_m-R_f)$

$K_e$ = The cost of equity

$R_f$ = The risk-free rate of return

$R_m$ = The return on a market portfolio

β = The systematic risk factor

## Valuations

**Weighted Average Cost of Capital (WACC)**

$WACC\% = [(V_e/(V_e+V_d) \times K_e] + [(V_d/(V_e+V_d) \times K_d]$

*Where:*

$V_e$ = The market value of all ordinary shares

$V_d$ = The market value of debt

$K_e$ = Cost of Equity

$K_d$ = After-tax Cost of Debt

**Constant Growth Dividend Discount Model**

$P_0 = D_0 (1+g) / (K_e-g)$

*Where:*

$K_e$ = The cost of equity

$D_0$ = The current dividend per share

g = Future anticipated annual growth rate in dividends per share

$P_0$ = The current ex-div share value of one share

**Price-Earnings (P/E) Model (EPS)**

$P_0$ = P/E x EPS

*Where:*

$P_0$ = Value of 1 ordinary share

P/E = An applicable price/earnings ratio (calculated as price per share/earnings per share)

EPS = Earnings per share (being earnings available for distribution to ordinary shareholders/number of ordinary shares)

**Present value of an annuity**

$$\frac{1 - (1 + r)^{-n}}{r}$$

*Where:*

r = Discount rate

n = Number of periods

**Present value**

$PV = FV_n /(1 + i)^n$

*Where:*

PV = Present value

$FV_n$ = Future value at end of period n

i = Interest rate per period

n = Number of periods

**Internal Rate of Return**

IRR is approximately $A + \frac{(B - A)N_A}{(N_A - N_B)}$

*Where:*

A = The lower discount rate chosen

B = The higher discount rate chosen

$N_A$ = The net present value calculated at A%

$N_B$ = The net present value calculated at B%

**The nominal (or money) cost of capital**

$(1+m) = (1+i) \times (1+r)$

m = The money rate

i = The inflation rate

r = The real rate

**The Baumol Model of Cash Management:**

$$Q = \sqrt{\frac{2C_O D}{C_H}}$$

*Where:*

Q = The value of securities to sell each time

$C_o$ = The fixed costs associated with selling a parcel of securities

D = The annual demand for cash

$C_H$ = The annual interest rate, as a decimal, associated with holding cash as opposed to investments

**Interest Rate Parity**

An unbiased estimate for the future spot rate of exchange can be calculated as:

$S_1 = S_0 \times (1+i_a / 1+i_b)$

*Where:*

$_a$ = One country

$_b$ = The base country

$S_1$ = The estimated future spot rate in 1 year's time in terms of the number of $ in country a per $1 in country b

$S_0$ = The current spot rate in terms of the number of $ in country a per $1 in country b

$i_a$ = Annual interest rate in country a as a decimal

$i_b$ = Annual interest rate in country b as a decimal

| Present value interest factor of an (ordinary) annuity of $1 per period at i% for n periods, PVIFA(i,n). | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Period | 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 |
| 7 | 6.728 | 6.472 | 6.230 | 6.002 | 5.786 | 5.582 | 5.389 | 5.206 | 5.033 | 4.868 |
| 8 | 7.652 | 7.325 | 7.020 | 6.733 | 6.463 | 6.210 | 5.971 | 5.747 | 5.535 | 5.335 |
| 9 | 8.566 | 8.162 | 7.786 | 7.435 | 7.108 | 6.802 | 6.515 | 6.247 | 5.995 | 5.759 |
| 10 | 9.471 | 8.983 | 8.530 | 8.111 | 7.722 | 7.360 | 7.024 | 6.710 | 6.418 | 6.145 |
| 11 | 10.368 | 9.787 | 9.253 | 8.760 | 8.306 | 7.887 | 7.499 | 7.139 | 6.805 | 6.495 |
| 12 | 11.255 | 10.575 | 9.954 | 9.385 | 8.863 | 8.384 | 7.943 | 7.536 | 7.161 | 6.814 |
| 13 | 12.134 | 11.348 | 10.635 | 9.986 | 9.394 | 8.853 | 8.358 | 7.904 | 7.487 | 7.103 |
| 14 | 13.004 | 12.106 | 11.296 | 10.563 | 9.899 | 9.295 | 8.745 | 8.244 | 7.786 | 7.367 |
| 15 | 13.865 | 12.849 | 11.938 | 11.118 | 10.380 | 9.712 | 9.108 | 8.559 | 8.061 | 7.606 |
| 16 | 14.718 | 13.578 | 12.561 | 11.652 | 10.838 | 10.106 | 9.447 | 8.851 | 8.313 | 7.824 |
| 17 | 15.562 | 14.292 | 13.166 | 12.166 | 11.274 | 10.477 | 9.763 | 9.122 | 8.544 | 8.022 |
| 18 | 16.398 | 14.992 | 13.754 | 12.659 | 11.690 | 10.828 | 10.059 | 9.372 | 8.756 | 8.201 |
| 19 | 17.226 | 15.678 | 14.324 | 13.134 | 12.085 | 11.158 | 10.336 | 9.604 | 8.950 | 8.365 |
| 20 | 18.046 | 16.351 | 14.877 | 13.590 | 12.462 | 11.470 | 10.594 | 9.818 | 9.129 | 8.514 |

| Period | 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 |
| 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 |
| 7 | 4.712 | 4.564 | 4.423 | 4.288 | 4.160 | 4.039 | 3.922 | 3.812 | 3.706 | 3.605 |
| 8 | 5.146 | 4.968 | 4.799 | 4.639 | 4.487 | 4.344 | 4.207 | 4.078 | 3.954 | 3.837 |
| 9 | 5.537 | 5.328 | 5.132 | 4.946 | 4.772 | 4.607 | 4.451 | 4.303 | 4.163 | 4.031 |
| 10 | 5.889 | 5.650 | 5.426 | 5.216 | 5.019 | 4.833 | 4.659 | 4.494 | 4.339 | 4.192 |
| 11 | 6.207 | 5.938 | 5.687 | 5.453 | 5.234 | 5.029 | 4.836 | 4.656 | 4.486 | 4.327 |
| 12 | 6.492 | 6.194 | 5.918 | 5.660 | 5.421 | 5.197 | 4.988 | 4.793 | 4.611 | 4.439 |
| 13 | 6.750 | 6.424 | 6.122 | 5.842 | 5.583 | 5.342 | 5.118 | 4.910 | 4.715 | 4.533 |
| 14 | 6.982 | 6.628 | 6.302 | 6.002 | 5.724 | 5.468 | 5.229 | 5.008 | 4.802 | 4.611 |
| 15 | 7.191 | 6.811 | 6.462 | 6.142 | 5.847 | 5.575 | 5.324 | 5.092 | 4.876 | 4.675 |
| 16 | 7.379 | 6.974 | 6.604 | 6.265 | 5.954 | 5.668 | 5.405 | 5.162 | 4.938 | 4.730 |
| 17 | 7.549 | 7.120 | 6.729 | 6.373 | 6.047 | 5.749 | 5.475 | 5.222 | 4.990 | 4.775 |
| 18 | 7.702 | 7.250 | 6.840 | 6.467 | 6.128 | 5.818 | 5.534 | 5.273 | 5.033 | 4.812 |
| 19 | 7.839 | 7.366 | 6.938 | 6.550 | 6.198 | 5.877 | 5.584 | 5.316 | 5.070 | 4.843 |
| 20 | 7.963 | 7.469 | 7.025 | 6.623 | 6.259 | 5.929 | 5.628 | 5.353 | 5.101 | 4.870 |

**Present value interest factor of $1 per period at i% for n periods, PVIF(i,n).**

| Period | 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 |
| 7 | 0.933 | 0.871 | 0.813 | 0.760 | 0.711 | 0.665 | 0.623 | 0.583 | 0.547 | 0.513 |
| 8 | 0.923 | 0.853 | 0.789 | 0.731 | 0.677 | 0.627 | 0.582 | 0.540 | 0.502 | 0.467 |
| 9 | 0.914 | 0.837 | 0.766 | 0.703 | 0.645 | 0.592 | 0.544 | 0.500 | 0.460 | 0.424 |
| 10 | 0.905 | 0.820 | 0.744 | 0.676 | 0.614 | 0.558 | 0.508 | 0.463 | 0.422 | 0.386 |
| 11 | 0.896 | 0.804 | 0.722 | 0.650 | 0.585 | 0.527 | 0.475 | 0.429 | 0.388 | 0.350 |
| 12 | 0.887 | 0.788 | 0.701 | 0.625 | 0.557 | 0.497 | 0.444 | 0.397 | 0.356 | 0.319 |
| 13 | 0.879 | 0.773 | 0.681 | 0.601 | 0.530 | 0.469 | 0.415 | 0.368 | 0.326 | 0.290 |
| 14 | 0.870 | 0.758 | 0.661 | 0.577 | 0.505 | 0.442 | 0.388 | 0.340 | 0.299 | 0.263 |
| 15 | 0.861 | 0.743 | 0.642 | 0.555 | 0.481 | 0.417 | 0.362 | 0.315 | 0.275 | 0.239 |
| 16 | 0.853 | 0.728 | 0.623 | 0.534 | 0.458 | 0.394 | 0.339 | 0.292 | 0.252 | 0.218 |
| 17 | 0.844 | 0.714 | 0.605 | 0.513 | 0.436 | 0.371 | 0.317 | 0.270 | 0.231 | 0.198 |
| 18 | 0.836 | 0.700 | 0.587 | 0.494 | 0.416 | 0.350 | 0.296 | 0.250 | 0.212 | 0.180 |
| 19 | 0.828 | 0.686 | 0.570 | 0.475 | 0.396 | 0.331 | 0.277 | 0.232 | 0.194 | 0.164 |
| 20 | 0.820 | 0.673 | 0.554 | 0.456 | 0.377 | 0.312 | 0.258 | 0.215 | 0.178 | 0.149 |

| Period | 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 |
| 7 | 0.482 | 0.452 | 0.425 | 0.400 | 0.376 | 0.354 | 0.333 | 0.314 | 0.296 | 0.279 |
| 8 | 0.434 | 0.404 | 0.376 | 0.351 | 0.327 | 0.305 | 0.285 | 0.266 | 0.249 | 0.233 |
| 9 | 0.391 | 0.361 | 0.333 | 0.308 | 0.284 | 0.263 | 0.243 | 0.225 | 0.209 | 0.194 |
| 10 | 0.352 | 0.322 | 0.295 | 0.270 | 0.247 | 0.227 | 0.208 | 0.191 | 0.176 | 0.162 |
| 11 | 0.317 | 0.287 | 0.261 | 0.237 | 0.215 | 0.195 | 0.178 | 0.162 | 0.148 | 0.135 |
| 12 | 0.286 | 0.257 | 0.231 | 0.208 | 0.187 | 0.168 | 0.152 | 0.137 | 0.124 | 0.112 |
| 13 | 0.258 | 0.229 | 0.204 | 0.182 | 0.163 | 0.145 | 0.130 | 0.116 | 0.104 | 0.093 |
| 14 | 0.232 | 0.205 | 0.181 | 0.160 | 0.141 | 0.125 | 0.111 | 0.099 | 0.088 | 0.078 |
| 15 | 0.209 | 0.183 | 0.160 | 0.140 | 0.123 | 0.108 | 0.095 | 0.084 | 0.074 | 0.065 |
| 16 | 0.188 | 0.163 | 0.141 | 0.123 | 0.107 | 0.093 | 0.081 | 0.071 | 0.062 | 0.054 |
| 17 | 0.170 | 0.146 | 0.125 | 0.108 | 0.093 | 0.080 | 0.069 | 0.060 | 0.052 | 0.045 |
| 18 | 0.153 | 0.130 | 0.111 | 0.095 | 0.081 | 0.069 | 0.059 | 0.051 | 0.044 | 0.038 |
| 19 | 0.138 | 0.116 | 0.098 | 0.083 | 0.070 | 0.060 | 0.051 | 0.043 | 0.037 | 0.031 |
| 20 | 0.124 | 0.104 | 0.087 | 0.073 | 0.061 | 0.051 | 0.043 | 0.037 | 0.031 | 0.026 |

## Appendix B – Common verbs used by the Examiners

| Verb | Description |
|---|---|
| **Calculate / Compute** | Do the number crunching and derive the correct answer. Make sure that you write down your workings and crosscheck your numbers. |
| **Comment** | **Comment** is similar to **evaluate** in that you are required to make a judgment or provide your opinion based on the facts at hand. Professional judgment and scepticism (a questioning mind) are called for when **commenting**. |
| **Discuss** | **Discuss** requires you to provide the 'for' and 'against' arguments, you cannot have a discussion without opposing views otherwise it would be just a conversation. If **discuss** is placed near the front of the instruction, then it requires you to provide an answer that is similar to **explain**, but addresses both the for and against arguments. |
| **Justify** | Whenever you see the word **justify** you must provide reasons for your answer, in other words, provide support for your argument or conclusion. If you fail to **justify** your answer, you will lose valuable marks. **Justify** is similar to **defend**. |
| **Propose** | Put forward (for example, a point of view, idea, argument, alternatives, etc.) for consideration or action and **justify** your opinion. |
| **Produce** | **Produce** requires you to present your answer in a specific format from scratch. For instance, you may be required to "**Produce** a Profit or Loss Statement". |
| **Use** | This instruction tells you the type of model that you must **use** when formulating your answer. For instance, "**Using** the Discounted Cash Flow approach, …" tells you what valuation approach to use. Another common phrase is "**Using** the facts of the case, ...", which tells you that you must relate your answer to the specific facts given in the question scenario. Generic answers will not pass |
| **Recommend** | Make a statement about the most appropriate course of action. If there is more than one possible course of action, **state** which action you would choose and why (**justify** your choice). Your professional judgment and your ability to **interpret** the wider situation are critical to scoring well in these types of questions. Don't forget to think about the future and the past, not just the present when making a **recommendation**. |