DECEMBER 2022 PROFESSIONAL EXAMINATIONS
FINANCIAL MANAGEMENT (PAPER 2.4)
CHIEF EXAMINER'S REPORT, QUESTIONS AND MARKING SCHEME

STANDARD OF PAPER

The paper was of the required standard for the level devoid of ambiguities and greatly reflected in the quality of answers provided and the general performance of the candidates. The distribution of the questions was considered good as each aspect of the syllabus was generally covered and also providing candidates with a spread of sub questions to test their broader and comprehensive understanding of the subject.

The paper in this sitting was almost evenly distributed in questions that were theory based and questions that were calculation or quantitative based. The theory-based questions covered a total 43% and quantitative based questions covering the remaining 57%. This was a slight departure from the average historic trends of theory taking up to 39% and the remaining 61% coming from the quantitative side. The candidates generally were stronger in theory based than the quantitative based contributing to the very good pass rate.

The standard of the questions again was considered good with all the required information needed to satisfactorily understand and answer the questions provided. The allocation of marks was well spread and in line with the difficulty level and coverage of answers expected from the candidates.

Where there was the need for alternative solutions it was done to ensure that different alternatives provided by candidates which were good were appropriately considered.

PERFORMANCE OF CANDIDATES

The pass rate for the December, 2022 exams was 66% compared to the 49% performance in August exams this year. This was another milestone of the excellent performance in the history of this paper and a far significant improvement in the performance of the candidates in the paper.

Drivers of the good performance:

- Strong performance of large number of the candidates in the theory-based areas which constituted 43% of the paper.
- The composition and spread of the questions were precise and unambiguous giving candidates who prepared well to provide good answers avoiding deviations on their part.
- Better preparations by the candidates before writing the paper as some candidates provided very good answers and scored very good marks.
- We noticed improvement in candidates' ability to generally provide answers to all questions satisfactorily within the stipulated time thereby increasing their chances of scoring very good marks

The candidate's answers did not exhibit the same pattern of answers and responses as each candidate provided answers based on their unique understanding of the requirements of the questions and scored varying marks. There was no any noticed pattern of copying in the exams

NOTABLE STRENTHGS AND WEAKNESSES OF STUDENTS

The following strengths were observed:

- Good knowledge of the theory-based questions by candidates.
- Candidates ability to generally respond to all questions and getting reasonable marks across the questions.
- Very strong knowledge of both quantitative and theory aspect of the paper by some candidates.
- Well-rounded preparations by candidates and ensuring good overage of the syllabus
- Continuous use of good feedback from interactions with examiners and tutors at tuition centres.

Observed reasons of the strengths:

- Preparing well before sitting for the exams.
- Strong improvement in the level of student's research and studies across the entire syllabus.
- Good access to tuition providers and exam preparation materials and increased use of one on one tailor made tuition by some tuition providers.
- Graduate candidates with studies of similar subject areas at the degree level.

The strengths can be enhanced by:

- Improving in the productive use of time in preparing for the exams.
- Also, still relevant is the continuous coverage of the syllabus, supported with wide range of practice questions across the syllabus in both the theory and quantitative areas.
- Exhibiting calmness in the exams and tackling the easy to answer questions first to the candidate as this help boost confidence and helps in the productive use of time in the exams.
- Utilising the best available tools in learning both at group discussion and individual levels leveraging on improved access to technology.

Observed weaknesses demonstrated by candidates:

- Failure of some candidates to use the right Finance terminology in answering questions but using ordinary non-finance English depicting candidates' weaknesses in displaying good knowledge and grasp of the subject of financial management.
- Ability to identify the right formulas to use in answering the questions still featured especially in Financial mathematics area.
- Very poor hand writing by some candidates and use of faded pens still persisted making reading and marking difficult.

Remedies for observed weaknesses:

- Learning to absorb and utilise the finance terminology in the learning process and applying that in the exams to demonstrate candidates' understanding of finance.
- Spend a bit more time in the study process to identify the various finance formulas for various parts of the syllabus and improving their knowledge to pick the right formulas from the list provided relevant to the various questions.
- Make deliberate attempt to write legibly and avoid using pens that appear faded and unreadable.

QUESTION ONE

a) Shareholders generally look forward to acceleration of the growth rate of their business. They therefore, prefer management report on wealth maximisation to profit maximisation.

Required:
In the light of this, explain the following:
i) Profit maximisation. **(2 marks)**
ii) Wealth maximisation. **(2 marks)**

b) Explain to a shareholder **THREE (3)** inherent disadvantages of using profit as a performance measure and **TWO (2)** advantages of using wealth maximisation as a performance measure. **(8 marks)**

c) Sobolo Ghana Ltd has taken a strategic decision to expand its scope of operations to enhance revenue growth. A new venture has been identified and requires funding to execute. Management in the light of the above has agreed to raise funding through rights issue. The rights issue will be done at GH¢6 per share and existing shareholders will receive 2 rights for each 3 shares currently held. The company has 600,000 shares outstanding and they are currently trading at GH¢8 per share.

Required:
i) Calculate the ***number of new shares*** to be issued. **(3 marks)**
ii) Calculate the amount of money raised from the right issue and the total value of the company after the rights issue. **(5 marks)**

(Total: 20 marks)

QUESTION TWO

a) Panpana Ltd is in advanced negotiation with shareholders of Zanu Ltd to acquire 70% shares in that company.

The following financial information is provided for Zanu Ltd:
- Number of ordinary shares = 20 million
- Net assets per share = GH¢8
- Earning per share = GH¢15
- Price Earnings ratio (P/E) = 10

The Finance Director who performed a due diligence review recommended the following:
1. Fixed assets included in the net assets were overstated by GH¢6 million
2. A key customer who owes GH¢4 million has gone bankrupt and debt considered irrecoverable
3. A provision of GH¢10 million is made for a tax liability
4. Panpana Ltd cost of capital is 16% and risk premium of 4% is added in the valuation of Zanu Ltd to take care of additional operational risk.

5. The Finance manager provided a statement showing projected cash inflows for the next 5 years as follows:

Year	(GH¢)
1	125 million
2	60 million
3	150 million
4	200 million
5	110 million

Required:
Advise shareholders of Panpana Ltd on how much to pay for 70% of the shares of Zanu Ltd using the following valuation methods:

i) Price Earning (P/E) ratio. **(4 marks)**
ii) Balance sheet valuation basis. **(5 marks)**
iii) Cash flow valuation. **(5 marks)**

b) Explain **THREE (3)** reasons business valuation is undertaken in the corporate environment. **(6 marks)**

(Total: 20 marks)

QUESTION THREE

a) TekApps is a small technology company that develops financial technology (FinTech) applications for mobile devices. The company is selling one of its highly rated FinTech apps to a financial institution. The financial institution has proposed the following strategic payment options for TekApps' consideration:

Strategy 1: An immediate payment of GH¢1.2 million followed by payments of GH¢50,000 at the end of each quarter during the next five years.

Strategy 2: Payment of GH¢55,000 at the beginning of each month for the next five years.

TekApps' required rate of return is 25% per annum.

Required:

i) Identify the type of cash flow pattern described under each option. **(3 marks)**
ii) Compute the present value of the cash flows for each Strategy and advise TekApps on the best payment option. **(7 marks)**

b) BKB Entertainment Ltd (BKB) currently borrows at an average rate of 24% per annum. The Treasury Manager of the company believes that BKB can borrow at a lower interest rate if its creditworthiness is assessed and rated by a rating agency. He has therefore recommended to the Board of Directors to consider requesting a credit rating.

Required:

i) Explain **TWO (2)** benefits of credit rating to BKB. **(4 marks)**

ii) Advise the directors on **THREE (3)** factors rating agencies will consider in determining the company's credit rating. **(6 marks)**

(Total: 20 marks)

QUESTION FOUR

a) In periods of difficult global financial environment, raising of capital is a challenge necessitating the need for prudent and best use of scarce capital for projects.

Required:
In reference to the above:
i) Explain the term ***capital rationing***. **(2 marks)**
ii) Distinguish between ***soft capital rationing*** and ***hard capital rationing*** giving an example each. **(3 marks)**

b) Akonta Ghana Ltd has excess funds of GH¢200 million and is looking for attractive investment opportunities that will yield a return of 15% per annum or better to deploy the funds. An extract from a Feasibility report submitted by a team of investment and project experts is as follows:

Project	**Initial Investment Required (GH¢)**	**Constant Annual Cash Inflow (GH¢)**	**Project Life (Years)**
A	80,000,000	36,000,000	4
B	40,000,000	23,000,000	3
C	78,000,000	30,000,000	5
D	40,000,000	20,000,000	4
E	40,000,000	22,000,000	3

The cash flows per project is constant for the life span of each project and each project is divisible for the purpose of capital allocation.

Required:
i) Calculate the ***Net Present Values (NPVs)*** of each project. **(7 marks)**
ii) Rank the projects using ***Profitability Index*** and allocate the GH¢200 million among the projects. **(3 marks)**

c) There are many sources of debt finance available to a company which has viable and profitable investment opportunities to utilise the funds. It is however very important for the Finance Manager to do a thorough work before deciding the type and source of debt finance to tap into.

Required:
Explain **THREE (3)** factors a Finance Manager should consider when deciding the type of debt finance to raise. **(5 marks)**

(Total: 20 marks)

QUESTION FIVE

a) Markwei Pharmaceuticals Ltd plans to import active ingredients to produce vitamin syrup. The company's managers are considering three financing options for the cedi equivalent of an invoice value of GH¢2.5 million. The options are detailed below:

Option 1: Use supplier's credit. The credit term is 1.5/10 net 45.

Option 2: Issue a commercial paper to raise the money from the Ghanaian money market. The commercial paper will pay interest at the rate of 18% per annum. Issue costs totaling GH¢15,000 will be incurred.

Option 3: Obtain a 3-month bank loan. The interest rate on the loan is 22% per annum. Loan arrangement and processing fees are expected to be GH¢5,000.

Required:

i) Compute the effective annual cost of each financing option and recommend the most cost-effective option. **(10 marks)**

ii) Explain **TWO (2)** advantages of financing the invoice through the issue of a commercial paper instead of a bank loan. **(5 marks)**

b) Abongo Shoes Ltd (Abongo) imports leather from Italy. Abongo's demand for euros to settle its import bills exposes its cash flow to foreign exchange risk. Abongo's Management is looking for internal strategies they can deploy to hedge the company's currency risk exposure as external hedging strategies might be too expensive for the company.

Required:

Explain **TWO (2)** internal strategies for managing foreign currency risk exposures that Abongo's Management can use.

(5 marks)

(Total: 20 marks)

SUGGESTED SOLUTION

QUESTION ONE

a)

i) Profit maximization refers to good financial performance which focuses more on short term thinking of quick wins or high profits irrespective of the long-term implications or consequences of this short-term profits on a company and its shareholders. It focuses more on a narrow, short-term performance parameters like return on equity, return on investment, return on assets etc. **(2 marks)**

ii) Shareholder wealth maximisation relates to long term approach to sustainably grow the value of shareholder interest which translates to sustainable share price growth and good dividend payments and focuses more on long term value and decisions made based on long term strategic focus rather than short term quick profits. **(2 marks)**

b) The inherent disadvantages of profit measure are:

- Profits are short term and might be driven by short term management interest.
- Creative accounting can be used to produce and boost profits which might not be sustainable.
- Profits might be book profits with no bearing on the real cash or cash flow of the entity.
- Profit might not consider time value of money.
- Profits might ignore the interest of other non-shareholders like the environment which will create long term problem for the company.

(Any 3 points @ 2 marks each = 6 marks)

Advantages of wealth maximisation

- Time value of money
- It promotes the economic welfare of shareholders
- It helps for achieving other objectives
- It is useful for taking investment decisions
- Payment of regular dividend

(Any 2 points @ 1 marks each = 2 marks)

c)

i) Number of new shares:
3 old shares = 2 new shares
600,000 old shares = ?

600,000 shares/3 x 2= **400,000 new shares** under rights issue **(3 marks)**

ii) Amount of money of new shares issued = Number of new shares x right issue price
= 400,000 x GH¢6 = GH¢2,400,000

Existing value of shares = number of issued shares x currently share price
= 600,000 x GH¢8 = GH¢4,800,000

Total value of the company = Existing value + new shares issued value
= GH¢4,800,000 + GH¢2,400,000
= **GH¢7,200,000**

(5 marks)

(Total: 20 marks)

EXAMINER'S COMMENTS

This question tested the candidates understanding of the difference between profit and wealth maximisations and expected candidates to explain further the inherent disadvantages of using profit as a performance measure vis a vis the advantages of wealth maximisation in part a) and b).

The c) part examined the candidate's ability to calculate the numbers of new shares to be issued on rights issue scenario and the total funding to raise from the rights issue and the combined value of the company after the rights issue.

The candidates understood what was expected and provided very good answers to all aspects of the question and some scored maximum marks. This was the best answered question and thus contributed to the good pass rate in the paper.

QUESTION TWO

a)

i) **P/E ratio valuation**

Value = (P/E x EPS) X number of Shares

Value = (10 x 15) x 20 million shares

= 150 x 20 million shares

= 3,000 million

70% x 3,000 million = **GH¢2,100 million**

(4 marks)

ii) Balance sheet valuation

		GH¢
Net assets per share x no of shares		
(8 x 20 million)	=	160 million
Adjustments:		
Overstated fixed assets		(6 million)
Irrecoverable debt		(4 million)
Provision for tax liability		(10 million)
Adjusted net assets		**140 million**
70% of 140 million	=	**98 million**

(5 marks)

iii) Discounted cash flow

Year	**Cash flow GH¢ million**	**DF@20%**	**PV GH¢ million**
1	125	0.83333	104
2	60	0.6944	41.67
3	150	0.5787	86.81
4	200	0.4826	96.52
5	110	0.4019	44.18
			373.18

70% x 373.18 = **GH¢261.23 million**

(5 marks)

Summary of results

i) P/E Valuation = GH¢2,100 million

ii) Balance sheet = GH¢98 million

iii) Discounted cash flow = GH¢261.23 million

Value between GH¢98 million and GH¢2,100 million

b) Reasons for Business Valuations

- When the company is embarking on Initial Public share offering (IPO) to raise funds from the general public.
- Where there is a decision for takeover or merger or business combination situation.

- When the company intends to take a facility or borrow from a financial institution and uses the shares or assets to pledge as security for the funding.
- When a shareholder intends to sell his shares and there is the need to do valuation to ascertain the value.
- When a director who holds shares resigns or wishes to resign and the regulations requires the shares to be valued and sold back to the company.

(Any 3 points @ 2 marks each = 6 marks)

(Total: 20 marks)

EXAMINER'S COMMENTS

The sub-question a) centred on valuation for 70% acquisition of a target company. The candidates were therefore expected to determine the value of the target company using three valuation methods namely: price earning method, balance sheet method, and cash flow method and advise management of the acquirer appropriately.

This received varying answers and approaches from the candidates. Some were able to answers some parts well and struggled on other parts especially the cashflow method as some used only the cost of capital without adjusting for the premium. Some candidates however answered well and scored the maximum marks

The b) part was theory which expected candidates to explain three reasons for undertaking business valuation in corporate environment. This part was well answered.

This was the third best answered question.

QUESTION THREE

a)

i) Identification of the type of cash flow pattern described under each option.

There are three main cash flow patterns: single amount, series of even cash flows, and mixed cash flows. A single amount is when there is a one-off (or bullet or lump sum) payment over the period under consideration. A series of even cash flows is where the same amount of payment is made within the same time interval over the period under consideration. Series of even cash flows could be annuity due, ordinary annuity, or perpetuity. A mixed cash flow (or series of uneven cash flows) is where different amounts are paid in the periods under consideration.

The cash flows under **Option 1** follow the pattern of a mixed cash flow. The payments comprise an initial amount and an ordinary annuity occurring in quarterly intervals.

The pattern of the cash flows under **Option 2** is that of a series of even cash flows as there are equal amounts occurring within the time interval. Specifically, the cash flows form an annuity due because the same amount will be paid at the beginning of each of the payment periods.

Correct cash flow pattern = 0.5 mark each = 1 mark

Explanation supporting the identification = 1 mark each = 2 marks

ii) **Computation of the PV of payments under each option and advice**

Option 1

The PV of payments under option 1 is the down payment of GH¢1.2 million plus the PV of the ordinary annuity of GH¢50,000:

$$\text{PV} = \text{Down PMT} + \text{PMT}\left[\frac{1 - \dfrac{1}{\left(1 + \dfrac{i}{m}\right)^{n*m}}}{\dfrac{i}{m}}\right]$$

$$\text{PV} = \text{GH¢}1{,}200{,}000 + \text{GH¢}50{,}000\left[\frac{1 - \dfrac{1}{\left(1 + \dfrac{0.25}{4}\right)^{5\times4}}}{\dfrac{0.25}{4}}\right]$$

$$\text{PV} = \text{GH¢}1{,}200{,}000 + \text{GH¢}562{,}036.03$$

$$\text{PV} = \text{GH¢}1{,}762{,}036.03$$

(3 marks)

Option 2

As an annuity due, the aggregate PV is the first payment in the series plus the PV of the subsequent payments:

$$PVAD = PMT_0 + PMT\left[\frac{1-\frac{1}{\left(1+\frac{i}{m}\right)^{(n*m)-1}}}{\frac{i}{m}}\right]$$

$$PVAD = GH¢55,000 + GH¢55,000\left[\frac{1-\frac{1}{\left(1+\frac{0.25}{12}\right)^{(5\times 12)-1}}}{\frac{0.25}{12}}\right]$$

$$PVAD = GH¢55,000 + GH¢1,857,889.33$$

$$PVAD = GH¢1,912,889.33$$

(3 marks)

Advice:
Based on the PVs, Option 2 is the better payment option to TechApps.
However, it is worth noting that the computations are on the assumption that the required rate of return will remain at 25% throughout the five-year period. Should the average interest rate rise substantially in the economy, Option 2 might no longer be the better payment option as much of its cash flows will be discounted heavily at a rather higher required rate of return.

(1 mark)

b) **BKB Entertainment Ltd**

i) **The benefits of credit rating to borrowing firms.**

- Credit rating is beneficial to borrowing firms in several ways. One main benefit of firms having a credit rating is the **opportunity to raise capital in the international capital markets**. Global capital markets and book runners would facilitate international bond issues like Eurobonds from issuers that have a credit rating since credit rating is critical for assessing the bond's default risk, which influences the yield on the bond.
- Another benefit of firms having a credit rating is the **fairness in determining market yield and interest rate**. With a credit rating, the borrowing firm has a greater assurance that the market required return on its debt issues would be appropriate for its default risk.

(2 points @ 2 marks each = 4 marks)

ii) **Factors the rating agency would consider**

Rating agencies consider several factors in determining the credit rating of a security issuer. The main factors are explained below:

- **Country risk:** The risk associated with the country where the company is domiciled. Based on the "sovereign ceiling" concept, private issuer's debts are commonly not rated higher than the rating of the country of origin. Thus, the credit

rating of BKB would not be better than the credit rating of the country in which it is located.

- **Universal/country importance:** The standing of the issuer relative to other companies in the country or globally. If BKB's relative importance in its country of origin and the world is low, it would be handed a lower rating; otherwise, it would be assigned a higher rating.
- **Industry risk:** The strength of the company's industry within its country of origin. If BKB's industry is considered a resilient industry, a higher credit rating may be assigned to it. And if it is considered to be operating in a cyclical industry, it may be handed a lower credit rating.
- **Industry position**: The position of the issuer in its industry. If BKB is a significant industry player, a higher rating may be assigned; otherwise, a lower credit rating would be assigned.
- **Management quality:** Assessment of quality of management. If the overall quality of management is high, chances are that the company will do well financially and be able to discharge debt obligations. In that case, a higher rating may be assigned to the company. The rating agency will assign a lower rating to BKB if it assesses that the quality of its management is low.
- **Accounting quality:** Assessment of the quality of financial reporting. High quality of financial reporting suggests that reported earnings are reliable and suitable for assessing the ability to discharge financial obligations. Higher accounting quality would enhance BKB's chances of receiving a relatively higher credit rating.
- **Earnings protection:** The ability of the company to maintain earnings in changing situations. Earnings protection is influenced by the diversity in income sources. High earnings power and diversity enhances an issuer's credit rating.
- **Financial leverage:** The extent of debt usage in the financing structure of the issuer. A high debt to assets ratio suggests a high default risk. If BKB's financial leverage is high, it would be assigned a lower credit rating; otherwise, it would be assigned a higher credit rating.
- **Cash flow adequacy:** The ability to generate adequate cash flows to cover financial obligations and business cash needs. If BKB generates sufficient cash flows, it would have adequate coverage for debt payments. And that would boost its chances of receiving a relatively higher credit rating.
- **Financial flexibility:** The ability of the issuer to raise needed funds from varied sources even under stress. High financial flexibility enhances credit rating.

(3 points @ 2 marks each = 6 marks)

(Total: 20 marks)

EXAMINER'S COMMENTS

This question tested candidates' knowledge on cash flow pattern identification and ability of candidates to compute the present values of cash flows under two strategy scenarios. Strategy one provided an immediate lump sum payment followed by quarterly equal payments at the end of each quarter during a five-year period while strategy two provided only monthly payments at the beginning of each month for the same five years. Based on the present values candidates were expected to advice

which option provided a better value. A lot of candidates struggled to even understand the formula to apply to determine the present values but few candidates who were well prepared understood what was expected and provided excellent computations and scored the maximum mark

The sub-question b) was on credit rating and candidates were to explain the benefits of credit rating and the factors that will be considered by rating agencies to determine the credit rating of a company. This received good answers.

QUESTION FOUR

a)

i) ***Capital rationing*** refers to the allocation of scare or restricted capital among acceptable projects based on the most profitable and efficient use of the capital. For example, if a company has a total available capital of GH¢ 1m to investment among competing profitable projects whose capital investments is above the GH¢ 1m available, then the company will have to allocate or ration the capital in order of best values or profitability. **(2 marks)**

ii) ***Soft Capital rationing*** is the situation where the constraint of raising and using capital is internally driven policies and decisions. A company with past poor return on investment compared to initial projections can cause internal tightening of capital allocations and raising of returns expectation on projects.

Hard capital rationing where company has raising capital constraints which are externally driven

(1.5 marks each = 3 marks)

b)

i) **Net Present Value**

Project (Opportunity)	**Initial Investment Outlay (GH¢)**	**Constant Annual Cash flows (GH¢)**	**Annuity Discount Factor @ 15%**	**Present Value**	**Net Present Value**
A	80,000,000	36,000,000	2.855	102,780,000	22,780,000
B	40,000,000	23,000,000	2.283	52,509,000	12,509.000
C	78,000,000	30,000,000	3.352	100,560,000	22,560,000
D	40,000,000	20,000,000	2.855	57,100,000	17,100,000
E	40,000,000	22,000,000	2.283	50,226,000	10,226,000

(marks are evenly spread = 7 marks)

ii) Profitability Index

Project (Opportunity)	Initial Investment Outlay (GH¢)	Present Value	Profitability Index (PI)	RANK
A	80,000,000	102.780,000	1.28	4
B	40,000,000	52,509,000	1.31	2
C	78,000,000	100,560,000	1.29	3
D	40,000,000	57,100,000	1.43	1
E	40,000,000	50,226,000	1.26	5

(marks are evenly spread = 3 marks)

Allocation of GH¢200 million

Project (Opportunity)	RANK	Amount of Allocation GH¢
D	1	40,000,000
B	2	40,000,000
C	3	78,000,000
A	4	42,000,000
Total		**200,000,000**

c) The factors to consider when choosing a source of debt finance

- **Cost:** This will cover the interest rate, the issue cost, renewal fees etc since the cost can affect the viability and profitability of the project. Also, to be considered is the tax benefits of the debt finance. The basis of interest rate is also important as fixed interest and variable interest rates have different implications.

- **Purpose/Maturity:** The purpose of the finance will determine the tenor of the debt or finance. Capital expenditure or assets base investment should be financed with long term debt or tenor finance while working capital finance should be financed with short tenor finance like overdraft.

- **Gearing level/Financial risk:** The gearing level of the company will also determine whether more debt should be raised or equity and the attitude of existing shareholders on the dilution of control if new shareholders are brought on board. Over gearing and the associated risk of default on debt service and principal payments can expose shareholders to a greater risk

- **Flexibility:** The terms and conditions and covenants that go with the facility should be reviewed and ensure that they friendly and will not squeeze the company unfavourably. Ability to restructure and renegotiate during difficult times should be considered

- **Control:** Will the new source lead to dilution of control of existing shareholder and will they be happy? Will any debt put a lot of restrictions on shareholder and dividend payment and will they be happy? All should be considered and analysed. Will the debt providers exercise a; lot of control and interference in the management?

- **Security/Collateral:** Providing collateral or security for the debt is also crucial and should be carefully considered. The bigger and longer the debt tenor the more the requirement to provide security or Collateral.

(Any 3 points @ 1.66 marks each = 5 marks)

(Total: 20 marks)

EXAMINER'S COMMENTS

This question produced the second-best results in the paper. The a) tested candidates on capital rationing and they were also required to explain soft and hard capital rationing giving examples which received good answers generally.

The second aspect expected candidates to compute the net present values (NPV) of 5 projects and rank the projects using profitability index and advising on the projects to invest in based on the ranking due to capital resource constraint. The candidates exhibited excellent knowledge in this area and scored good marks

The c) aspect tested candidates' ability to identify and explain the factors to consider in determining the type and source of debt finance to tap into. This part also received good answers.

QUESTION FIVE

a)

i) **Computation of effective annual cost and recommended financing option. Computation of effective annual cost**

Trade credit

$$Effective\ Cost = \frac{d}{1-d} \times \frac{12}{3}$$

$$\text{Effective Cost} = \frac{0.015}{1-0.015} \times \frac{365}{45-10} = 15.8811\%$$

Alternative using 360 days

$$Effective\ Cost = \frac{d}{1-d} \times \frac{12}{3}$$

$$\text{Effective Cost} = \frac{0.015}{1-0.015} \times \frac{360}{45-10} = 15.66\%$$

Commercial paper

On the assumption that the company would borrow enough to cover the cost of the inventory and the issue cost, the effective cost of the commercial paper would be 20.3857%:

$$\text{Interest} = 0.18 \times \text{GH¢}2{,}515{,}000 \times \frac{3}{12} = \text{GH¢}113{,}175$$

$$\text{Effective Cost} = \frac{\text{GH¢}113{,}175 + \text{GH¢}15{,}000}{\text{GH¢}2{,}515{,}000} \times \frac{12}{3}$$

$$\text{Effective Cost} = 0.050964 \times \frac{12}{3} = 0.203857$$

Alternatively, a candidate may assume that the company would pay the issue cost from existing funds. In that case, the effective cost would be 20.4%:

$$\text{Effective Cost} = \frac{\text{Interest} + \text{Issue cost}}{\text{Principal}} \times \frac{12}{3}$$

$$\text{Interest} = 0.18 \times \text{GH¢}2{,}500{,}000 \times \frac{3}{12} = \text{GH¢}112{,}500$$

$$\text{Effective Cost} = \frac{\text{GH¢}112{,}500 + \text{GH¢}15{,}000}{\text{GH¢}2{,}500{,}000} \times \frac{12}{3}$$

$$\text{Effective Cost} = 0.051 \times \frac{12}{3} = 0.204$$

Alternative Assuming annual interest charges

$$\text{Interest} = 0.18 \times \text{GH¢}2{,}515{,}000 = \text{GH¢}452{,}500$$

$$\text{Effective Cost} = \frac{\text{GH¢}452{,}500 + \text{GH¢}15{,}000}{\text{GH¢}2{,}515{,}000}$$

$$\text{Effective Cost} = 18.59\%$$

If , a candidate may assume that the company would pay the issue cost from existing funds.:

$$\text{Effective Cost} = \frac{\text{Interest} + \text{Issue cost}}{\text{Principal}}$$

$$\text{Interest} = 0.18 \times \text{GH¢}2{,}500{,}000 = \text{GH¢}450{,}000$$

$$\text{Effective Cost} = \frac{\text{GH¢}450{,}000 + \text{GH¢}15{,}000}{\text{GH¢}2{,}500{,}000}$$

$$\text{Effective Cost} = 18.6\%$$

Bank loan

$$\text{Effective Cost} = \frac{\text{Interest} + \text{Arrangement Costs}}{\text{Principal}} \times \frac{12}{3}$$

Assuming the company borrows enough to cover the cost of both inventory and loan arrangement and processing, the effective cost of the loan will be 22.7984%:

$$\text{Interest} = 0.22 \times \text{GH¢}2{,}505{,}000 \times \frac{3}{12} = \text{GH¢}137{,}775$$

$$\text{Effective Cost} = \frac{\text{GH¢}137{,}775 + \text{GH¢}5{,}000}{\text{GH¢}2{,}505{,}000} \times \frac{12}{3}$$

$$\text{Effective Cost} = 0.056996 \times \frac{12}{3} = 0.227984$$

Assuming the company would pay the loan arrangement and processing costs from existing funds, the effective cost would be 22.8%:

$$\text{Effective Cost} = \frac{\text{Interest} + \text{Arrangement Costs}}{\text{Principal}} \times \frac{12}{3}$$

$$\text{Interest} = 0.22 \times \text{GH¢}2{,}500{,}000 \times \frac{3}{12} = \text{GH¢}137{,}500$$

$$\text{Effective Cost} = \frac{\text{GH¢}137{,}500 + \text{GH¢}5{,}000}{\text{GH¢}2{,}500{,}000} \times \frac{12}{3}$$

$$\text{Effective Cost} = 0.057 \times \frac{12}{3} = 0.228$$

If a student assumes that the processing and arrangement fee of GH¢5,000 is per transaction or per quarter and annualized to 5,000 x 4 = GH¢20,000 per annum it should be accepted.

Recommendation

Based on cost-effectiveness, the recommended financing option is the trade credit. The effective annual cost of the trade credit (15.9%) is significantly lower than that of the commercial paper (20.4%) and the bank loan (22.8%).

marks allocation:

Computation of effective annual cost of each options = 3 marks for each = 9 marks

Recommendation = 1 mark

ii) **Advantages commercial paper instead of the bank loan**
Raising funds through the issue of Commercial Paper (CP) has several advantages over taking a bank loan.

- The first advantage is related to the interest rate on the loan. As CPs are financial securities issued by large and reputable entities, the interest rate quoted on them are relatively lower than the interest on comparable bank loans. With the help of transaction advisors, the company can benefit from quoting the interest rate that it deems appropriate for its creditworthiness and investors' required return. Although the company can negotiate the interest rate on the bank loan, borrowers are interest takers when it comes to bank loans.

- The second advantage relates to the amount that can be raised. Since CPs are negotiable instruments that can be issued in multiple amounts to several investors in a single issue, it is a better avenue for raising bigger sums of money than a bank loan.

- A third advantage is that the company could enhance its credit reputation amongst several institutional lenders in the financial market through the issue of the CP. If the company can successfully raise the CPs and discharges its financial obligations to the expectation of the market, it would be a track record that it could leverage in the future to raise larger amounts at lower interest rates in the future.

(Any 2 points @ 2.5 marks each = 5 marks)

(a) Abongo Shoes' foreign currency risk exposure

- **Invoice currency**: A way of avoiding the currency risk exposure altogether is to have goods and services invoiced in the entity's local currency. This strategy effectively shifts the currency risk exposure to the counterparty. The company can negotiate with its suppliers to have the leather imports invoiced and settled in its local currency.
- **Leading and lagging**: To avoid a potential currency loss in the future, the company can collect the underlying foreign currency receivable or pay the underlying foreign currency payable earlier (i.e., leading). And to enjoy a potential currency gain in the future, the company can delay the collection of the underlying foreign currency receivable or the payment of the underlying foreign currency payable (i.e., lagging).
- **Matching**: To reduce the company's underlying exposure in a currency, its receivables and payables in that currency may be set off to a lower net receivable or payable. If the company has some receivables in the euro, it can consider matching them with the euro payable. Otherwise, the company may consider exporting some of its output for the foreign currency to match the resulting receivables against the payables arising from the import of leather.

(Any 2 points @ 2.5 marks each = 5 marks)

(Total: 20 marks)

EXAMINER'S COMMENTS

This question examined the candidates' ability to compute the cost and advise on the best financing option to take for trade credit. The option was on taking discounts for paying within the first 15 days or pay the full amount, issue commercial paper and using bank loans to finance. This was the question most students struggled to answer. Only few candidates had it right. It received poor to average answers.

The b) aspect expected candidates to explain the internal strategies for hedging foreign currency risk. This received good answers.

The risk management part of the paper still poses challenges to candidates and requires more attention to improve the performance.

The pass rate for this question was poor.