JULY 2025 PROFESSIONAL EXAMINATIONS
FINANCIAL MANAGEMENT (PAPER 2.4)
CHIEF EXAMINER'S REPORT, QUESTIONS AND MARKING SCHEME

EXAMINER'S GENERAL COMMENTS

The standard of the paper was considered appropriate to the level. The questions were generally well structured and distributed across the syllabus. Each question was considered to be appropriate in spread and contained a reasonable number of sub questions for good coverage of the subject area. The allocation of the marks per question and sub questions were also in line with the syllabus weightings.

PERFORMANCE OF CANDIDATES

The performance of the candidates deteriorated to 31% pass rate compared to the 42% in the March diet. This was driven by poor pass rates across all questions except question one. The deterioration came across in almost all questions ranging from the highest fail rate of 90% in question two to 31% in question one. Question one was the only question with pass rate above 50%. Candidates failed and had a pass rate below 50% in the other four questions which was low compared to the prior sittings which had better pass rates.

NOTABLE STRENGTHS AND WEAKNESSES OF CANDIDATES

The following strengths were observed:

- Some level of good understanding of the questions.
- Better overall preparation especially on the quantitative or calculation-based areas by some candidates which carried the bulk of the marks.
- Better preparation and focus by candidates in the new areas of public sector and information technology.
- Candidates generally showed some level of improvement in their approach to answering the questions.

Observed weaknesses demonstrated by students:

- Weak appreciation of the quantitative aspect of the subject still persisted.
- Weak knowledge of some key concepts in the subject area and the right terms or finance terminologies to use.
- Poor appreciation of the level of coverage of answers based on marks allocated still persisted. Providing more or less answers relative to the requirements of the question.
- Workings on the answer booklets not properly indicated and not cancelled.
- Few repeat answers of the same question.

QUESTION ONE

a) Agado Pharmaceuticals, a leading company in the pharmaceutical industry, is considering expanding into digital health and telemedicine, a new area that differs from its current operations. Digital health and telemedicine involve the use of technology to deliver healthcare services and manage patient care remotely.

The company currently has an equity beta of 0.9 and has issued 10,000,000 ordinary shares. The market value of each ordinary share is GH₵7.50. In addition to equity financing, Agado Pharmaceuticals is also financed by 7% irredeemable bonds, with a nominal value of GH₵100 per bond. The bonds have a total nominal value of GH₵14,000,000. Interest on the bonds has recently been paid and the current market value of each bond is GH₵107.14.

As part of its strategic expansion, Agado Pharmaceuticals is evaluating a potential investment in a project aligned with the business operations of Konte LTD, a company that operates in digital health. Konte LTD has an equity beta of 1.2.

Given the financial landscape, the risk-free rate of return is 4% per year and the average stock market return per year is 11%. Both companies are subject to a 25% corporate tax rate.

Required:

i) Using Capital Asset Pricing Model (CAPM), estimate the cost of equity for Agado Pharmaceuticals. **(2 marks)**

ii) Calculate the Weighted Average Cost of Capital for Agado Pharmaceuticals. **(5 marks)**

iii) Estimate the cost of equity which could be applied in evaluating the new project using Konte's equity beta. **(4 marks)**

iv) Explain **TWO** Islamic finance sources that Agado Pharmaceuticals could consider as alternatives to equity or debt financing. **(4 marks)**

b) Finance Managers of companies play a pivotal role in steering an organisation towards success by managing financial resources and aligning financial objectives with the organisation's technological and market goals.

Required:

Explain **FIVE** factors that are indicative of a company's success. **(5 marks)**

(Total: 20 marks)

QUESTION TWO

Kakraba Pharmaceuticals LTD is considering commercialising a herbal-based medicine for managing blood sugar levels.
The following information relates to Kakraba Pharmaceuticals:

i) Commercialising the medicine requires constructing a new production facility, which entails capital expenditures of GH¢120 million immediately and GH¢210 million in the first year. The capital expenditure qualifies for capital allowance at 30% on a reducing balance basis. It is also estimated that the company will invest GH¢45 million in additional net working capital at the end of the first year. The working capital will be fully utilised and therefore there will be no recovery.

ii) Commercial production and sale of the medicine will commence in the second year and continue forever. However, the finance team is working with a five-year forecast period and assuming a constant growth rate in cash flows for periods beyond the forecast years.

iii) For the first year of commercial production and sale (i.e. year 2 of the project), the finance team projects that sales will be 10 million units, the unit sales price will be GH¢100, the unit variable cost will be GH¢80, and the relevant fixed costs will be GH¢30 million.

iv) The finance team forecasts annual growth rates in the cash flow factors for the three years following the commencement of commercial production and sale (i.e., year 3 to year 5) as follows:

Factor	**Annual growth rate**
Sales volume	10%
Sales price per unit	15%
Variable cost per unit	12%
Total fixed cost	10%

v) Beyond the five-year forecast period, after-tax net cash flows from the project are expected to grow at 5% every year in perpetuity.

vi) The company's corporate income tax rate is 25%. Assume taxes are payable at the end of the year in which the profit is made.

vii) The company's required rate of return on this project is 28%.

Required:

a) Appraise the project's viability based on ***Net Present Value***. **(12 marks)**
b) Calculate the discounted payback period. **(4 marks)**
c) Explain to the directors of the company the following types of real options and the circumstances under which they may consider exercising them:
i) Option to delay/defer. **(2 marks)**
ii) Option to expand (i.e. scale up). **(2 marks)**

(Total: 20 marks)

QUESTION THREE

a) Fufulso Engineering LTD is a Ghanaian company that sells and installs industrial machines imported from Germany. The company imported a consignment of machines invoiced at EUR 22.5 million on an open account. The company is expected to settle the invoice value in three months. However, foreign exchange market pundits predict that the Ghana Cedi will likely depreciate against the euro in the coming months. The company's directors are considering two proposals for managing the currency risk exposure.

Proposal 1: Forward market hedge

The company can hedge the foreign currency risk exposure using a currency forward hedge. The following quotations have been obtained from Ghana's foreign exchange market:

FX quotation	Bid	Ask (Offer)
Spot rate	GHS17.2584/EUR1	GHS17.3684/EUR1
3-month forward rate	GHS17.5584/EUR1	GHS17.6684/EUR1

Proposal 2: Money market hedge

The company takes positions in money market and foreign exchange market transactions to manage the currency risk exposure. The following data has been gathered from the Ghanaian and the European money markets:

	3-month interest rates	
Currency	**Borrowing**	**Investing**
Euro funds	4.45% p.a	3.75% p.a
Ghanaian cedi funds	31.12% p.a	28.35% p.a

Required:

i) Suppose the company uses the forward contract to hedge its currency exposure, compute the outcome in Ghana Cedis of the forward market hedge. **(4 marks)**

ii) Suppose the company uses a money market hedge:
- Compute the outcome in Ghana Cedis. **(4 marks)**
- Compute the net outcome of the forward market hedge and money market hedge. **(1 mark)**

iii) Explain how the parties could have used a letter of credit to settle the transaction. **(6 marks)**

b) In recent years, the financial sector has experienced a rapid acceleration of advanced technologies to enhance service delivery, improve customer experiences and streamline operations. However, this rapid adoption of technology has also led to certain practices that raise ethical concerns and potentially result in unfair treatment of customers, employees or competitors.

Required:

Discuss **TWO** impacts of unfair use of technology in the financial sector. **(5 marks)**

(Total: 20 marks)

QUESTION FOUR

a) At a recent investment forum, Atlantic Lithium indicated that Ghana's Minerals Income Investment Fund (MIIF) subscribed for 19,245,574 Atlantic Lithium shares at a price of US$0.2598. Additionally, MIIF subscribed to a warrant transaction that consists of one warrant for every two Atlantic Lithium shares subscribed for at a 40% premium. The warrant expires on July 23, 2025.

Required:

i) Distinguish between a ***warrant*** and a ***convertible feature*** in the capital market. **(3 marks)**
ii) Compute each warrant's exercise price and the warrant transaction cost to MIIF. **(2 marks)**
iii) What is the maximum loss MIIF can book on the warrant transaction? **(4 marks)**
iv) Assuming MIIF exercises its warrant by July 23 2025, what will be its effect on Atlantic Lithium's EPS? (Note: All other factors are considered to be constant). **(3 marks)**
v) Distinguish between ***bonus issue*** and ***share splits***. **(3 marks)**

b) The Ministry of Health in Ghana is conducting a review of its procurement practices and the overall performance of its Public Financial Management (PFM) system. The review aims to enhance value for money in public spending while adhering to the principles outlined by the Public Expenditure and Financial Accountability (PEFA) framework.

You are provided with the following data for the fiscal year 2023:

1) Budgeted Public Expenditure: GH¢450 billion
2) Actual Public Expenditure: GH¢156 billion
3) Total Procurement Expenditure: GH¢75 billion
4) Value of Contracts Awarded through Competitive Tendering: GH¢45 billion (60 contracts)
5) Value of Contracts Awarded through Restricted Tendering: GH¢15 billion (20 contracts)
6) Value of Contracts Awarded through Single-Source Procurement: GH¢15 billion (20 contracts)
7) Number of Procurement Violations Detected: 15 (with a total value of GH¢900 million)
8) Disposal of Stores and Equipment: GH¢300 million

Required:

Calculate the average value per contract for each procurement method (Competitive Tendering, Restricted Tendering and Single-Source Procurement). **(5 marks)**

(Total: 20 marks)

QUESTION FIVE

a) Akorkono Manufacturing LTD is a medium-sized company in Ghana that specialises in producing industrial machinery. The company has recently experienced challenges in managing its working capital efficiently. As a result, Management has decided to review and optimise its working capital strategies to improve cash flow and overall financial performance.

Akorkono's LTD's financial information:

- Annual Sales (on credit): GH¢60 million
- Purchases: GH¢32 million
- Cost of Goods Sold (COGS): GH¢40 million
- Average Inventory: GH¢8 million
- Average Accounts Receivable: GH¢12 million
- Average Accounts Payable: GH¢10 million
- Cash Balance: GH¢2 million

Akorkono Manufacturing LTD operates 365 days in a year.

Additional information:

- As a policy, the company offers 30 days' credit terms to its customers.
- Suppliers of Akorkono Manufacturing LTD have agreed in principle to grant 45 days to settle its payables.
- The company currently orders raw materials monthly, with each order costing GH¢500,000. The ordering cost is GH¢1,200 per order, and the carrying cost is GH¢10 per unit.

Required:

i) Compute the company's cash conversion cycle. **(4 marks)**

ii) Determine the Economic Order Quantity (EOQ) for Akorkono Manufacturing LTD and explain its significance in managing inventory. **(4 marks)**

iii) Using the Miller-Orr model, calculate the target spread, the return point and the upper cash limit assuming the following:

- The standard deviation of daily cash flow is GH¢5,000.
- The interest rate on short-term investments is 4% per annum.
- The transaction cost of transferring funds between cash and marketable securities is GH¢100 per transaction. **(7 marks)**

b) The Oti Regional Coordinating Council (ORCC) recently implemented an educational support programme to improve the BECE pass rates among pupils in rural districts, where the historical pass rate was about 10%.

The ORCC organised after-school classes for the pupils in collaboration with RM LTD, an exams preparation tuition company that was procured via a single-source procurement procedure at the insistence of the Regional Minister. The programme was budgeted at GH¢500,000. However, additional costs for feeding the students to sustain attendance led to a budget overrun, bringing the total expenditure to GH¢650,000.
Similar after-school exam preparation programmes sponsored by private sector institutions in Ghana typically cost GH¢450,000.

The Regional Minister has rated the programme highly successful, as 70% of participating pupils passed their exams with distinction, while only 5% failed.

Required:
Using Value for Money Analysis, assess the viability of ORCC's educational support programme. **(5 marks)**

(Total: 20 marks)

SUGGESTED SOLUTION

QUESTION ONE

a)

i) Cost of equity using the capital asset pricing model.
Rf = 4, Rm = 11, beta = 0.9
Cost of equity = 4 + (0.9 × (11 – 4)) = 4 + 6.3 = **10.3%**

(2 marks)

ii) After-tax cost of debt:
After-tax interest payment = GH¢100 × 7% × (1 – 0.25) = GH¢5.25 per bond

Year	Cash Flow	(GH¢)	5% DCF	PV (GH¢)	4% DCF	PV (GH¢)
0	Market value	(107.14)	1.000	(107.14)	1.000	(107.14)
1 – 7	Interest	5.25	5.786	30.38	6.002	31.51
7	Redemption	100	0.711	71.10	0.760	76.00
				(5.66)		**2.47**

After-tax cost of debt IRR = L + (NL/(NL – NH)) × (H – L)

= 4 + (2.47/(2.47 + 5.66)) × (5 – 4)
= 4 + 0.3 × 1 = 4.3%

Market value of equity = number of shares in issue × share price
= 10,000,000 × GH¢7.50
= GH¢75,000,000

Market value of Agado (debt) = Total nominal value/GH¢100 × market value per loan note = GH¢14,000,000/GH¢100 × GH¢107.14
= GH¢15,000,000
Total market value of company = 75,000 + 15,000 = GH¢90,000,000

WACC = [Ve/(Ve + Vd)] × ke + [Vd/(Ve + Vd)] × kd

WACC = [75/90] × 10.3 + [15/90] × 4.3 = **9.3%**

(5 marks)

iii) The cost of equity for apprising the new project
Risk-free rate (Rf): 4% or 0.04
Market return (Rm): 11% or 0.11
Equity beta for Konte (βe): 1.2
cost of equity = 4 + 1.2 × (11 – 4)
= 4 + 8.4 = 12.4%
The cost of equity (Ke) that could be used in appraising the new project for Agado Pharmaceuticals is **12.4%**.

(4 marks)

iv) Islamic financial instruments include:

- **Murabaha** This is effectively a form of credit sale, where the customer receives the goods but pays for them later on a fixed date. However, instead of charging interest, a fixed price is agreed before delivery – the mark-up effectively including the time value of money.

- **Ijara** This is effectively a lease, where the lessee pays rent to the lessor to use the asset. Depending on the agreement, at the end of the rental period the lessor might take back the asset (effectively an operating lease) or might sell it to the lessee (effectively a finance lease – Ijara-wa-Iqtina). Whatever the agreement, the lessor remains the owner of the asset and is responsible for maintenance and insurance, thus incurring the risk of ownership.

- **Muduraba** This is similar to equity finance, or a special kind of partnership. The investor provides capital and the business partner runs the business. Profits are shared between both parties, but all losses are attributable to the investor (limited to the capital provided)

- **Musharaka** This again is similar to a partnership, but here both parties provide both capital and expertise. Profits are shared between the parties according to whatever ratio is agreed in the contract, but losses are shared in proportion to the capital contributions. It is regarded as being similar to venture capital.

- **Sukuk**. This is the equivalent of debt finance (Islamic bonds). Sukuk are shariah compliant bonds. They are certificates that represent ownership of an asset or its usufruct (that is all the benefits that the ownership of an asset would convey). This is debt finance but Islamic bonds cannot bear interest. Sukuk holder must have an ownership interest in the assets which are being financed. The Sukuk holders' return for providing finance is a share of the income generated by the assets.

(2 marks each for any 2 points well explained = 4 marks)

b) **Factors indicative of a company's success**

- Consistent and sustainable revenue growth indicates that the company is expanding its market share and attracting new customers.
- High gross and net profit margins demonstrate the company's ability to control costs and price its products effectively.
- Positive cash flow ensures the company can meet its obligations, invest in growth and weather economic downturns.
- Low debt levels relative to equity indicate financial stability and a lower risk of default.
- Sufficient working capital ensures the company can meet its short-term obligations.
- Consistent and predictable earnings demonstrate a company's ability to generate revenue and profit over time.
- Consistent and reasonable dividend pay-outs to shareholders can attract investors and indicate financial stability.

(5 relevant points @ 1 mark each = 5 marks)

(Total: 20 marks)

EXAMINER'S COMMENTS

This was the best answered question in the paper with majority of the candidates obtaining a pass or better.

Candidates clearly understood the requirements of the question and provided good answers in line with expectation. The question was a blend of essay and calculations with candidates expected to compute cost of equity using Capital Asset Pricing Model (CAPM) and the weighted average cost of capital. It also tested candidates' ability to estimate the cost of equity which could be applied in evaluating a new project. Candidates generally provided good answers and scored good marks

The question also examined candidates' knowledge on Islamic finance which was also generally well answered even though some struggled to state the right terminology for those concepts but were able to explain well the details and mechanics of each.

Sub-question (b) was straight forward and tested candidates' ability to understand and provide five factors that were indicative of company success. This part also received excellent answers.

QUESTION TWO

a) **Viability of the project based on the net present value and the discounted payback period**

Schedule of after-tax incremental cash flows for the project

EOY	0	1	2	3	4	5
			GH¢' million			
Investments:						
Capital expenditure	(120.00)	(210.00)				
Net working capital		(45.00)				
Total investments	(120.00)	(255.00)	-	-	-	-
Operating cash flows:						
Sales revenue	-	-	1,000.00	1,265.00	1,600.23	2,024.32
Variable cost	-	-	(800.00)	(985.60)	(1,214.26)	(1,495.97)
Fixed cost	-	-	(30.00)	(33.00)	(36.30)	(39.93)
Capital allowance	-	-	(99.00)	(69.30)	(48.51)	(33.96)
Before-tax NOI	-	-	71.00	177.10	301.16	454.46
Tax on NOI @ 25%	-	-	(17.75)	(44.28)	(75.29)	(113.62)
After-tax NOI	-	-	53.25	132.83	225.87	340.85
Add back capital allowance	-	-	99.00	69.30	48.51	33.96
After-tax NOCF	-	-	152.25	202.13	274.38	374.80
Terminal cash flow:						
Terminal value of the project						1,711.06
After-tax NCFs	(120.00)	(255.00)	152.25	202.13	274.38	2,085.87

Supporting Workings:

1. Sales Revenue:

	0	1	2	3	4	5
Sales volume			10.00	11.000	12.100	13.310
Sales price per unit			100.00	115.00	132.25	152.09
Sales revenue (GH¢)			1,000.00	1,265.00	1,600.23	2,024.32

2. Variable Cost:

	0	1	2	3	4	5
Sales volume			10.00	11.00	12.10	13.31
Variable cost per unit			80.00	89.60	100.35	112.39

Total variable cost	800.00	985.60	1,214.26	1,495.97	

3. Capital Allowance:

	0	1	2	3	4	5
Beginning value	-	120.00	330.00	231.00	161.70	113.19
Addition	120.00	210.00				
Depreciable value	120.00	330.00	330.00	231.00	161.70	113.19
Capital allowance @ 30%			(99.00)	(69.30)	(48.51)	(33.96)
Ending value	120.00	330.00	231.00	161.70	113.19	79.23

4. Terminal value

$$TV_0 = \frac{NCF_5(1+g)}{k_e - g} = \frac{374.80\ (1+5\%)}{0.28 - 0.05} = 1{,}711$$

Appraise the project's viability based on net present value:

EOY	0	1	2	3	4	5
				GH¢' million		
After-tax NCFs	(120.00)	(255.00)	152.25	202.13	274.38	2,085.87
DF @ 28%	1.0000	0.7813	0.6104	0.4768	0.3725	0.2910
PV @ 28%	(120.00)	(199.22)	92.93	96.38	102.21	607.07
NPV @ 28%	579.37					

Recommendation:
The positive NPV suggests that the implementation of the project will add value to the firm. Thus, it should be accepted for implementation.

(12 marks)

b) ***Appraisal of the project's viability based on the discounted payback period***

EOY	0	1	2	3	4	5
				GH¢' million		
PV @ 28%	(120.00)	(199.22)	92.93	96.38	102.21	607.07
Cumulative PV	(120.00)	(319.22)	(226.29)	(129.91)	(27.70)	579.37
Discounted payback period	4.05					

$$\text{Period} = \text{Years before full recovery} + \frac{\text{Balance of investment to be recovered}}{\text{DCF of the full recovery year}}$$

$$\text{Period} = 4 + \frac{27.70}{607.07} = 4.05 \text{ years}$$

Recommendation:
The initial investment will be recovered before the end of the project's lifespan. Thus, it should be accepted for implementation.

(4 marks)

c) **Explanation of the given types of real options and the circumstances under which they may consider exercising them.**

i) Option to delay/defer

This is the case where the company's management has the flexibility or the right to delay the implementation of the project until any uncertainties surrounding the project's success are cleared or better knowledge or skills are acquired to ensure the successful implementation of the project.

This option should be exercised when uncertainties surround the project's success. For instance, if the directors foresee uncertainties about demand for the new herbal-based medicine, feasibility of the production technology, or regulatory clearance, they should consider waiting until the uncertainties are cleared to prevent avoidable losses and enhance the value of the project when implemented later.

(2 marks)

ii) Option to expand (i.e., scale up)

This is where management can make more investments to expand capacity to meet increasing demand as the market grows or turns out to be bigger than anticipated.

This option should be exercised in situations where the market can grow, the investment can be made in phases (i.e., divisible), and expanding to leverage the market's growth will enhance the project's value. For instance, if the demand for the new herbal-based medicine can grow beyond what is currently projected when the early users attest to its effectiveness, the directors should consider implementing the project even as the NPV is low and expand later when demand grows to enhance its value.

(2 marks)

(Total: 20 marks)

EXAMINER'S COMMENTS

Question two posed a major challenge to almost all candidates which reflected on the poor pass rate of 10%. Most candidates struggled to clearly compute the variables needed to answer the question satisfactorily.

The question was on investment appraisal with candidates expected to appraise project viability based on the net present value (NPV) approach and also discounted payback period. The question provided different period for initial capital outlays and required candidates to compute sales, variable and fixed costs along the various years using certain growth rates in both prices and volumes. This appeared a challenge and time consuming to candidates who spent a considerable period of time trying to compute the various variable needed to answer the question and most candidates got the computations wrong which impacted negatively on their ability to compute the correct NPV and discounted payback period.

The (c) part of the question which was essay on the option to delay/defer and option to expand and the circumstances under which that is done received average to good answers. This part was not enough to influence the overall marks to the question resulting in the poor pass rates.

Candidates are entreated to cover each topic in the syllabus under different scenarios as questions can be asked under the various subject areas to test candidates understanding.

QUESTION THREE

a)

i) **Forward market hedge**

As the company needs to have the EUR, it will have to buy it from the forward dealers at their ask rate (i.e., GHS17.6684/EUR1):

$$\text{Outcome of forward hedge} = \text{Currency Exposure} \times \text{Forward rate}$$

$$\text{Outcome of forward hedge} = \text{EUR22,500,000} \times \frac{\text{GHS17.66684}}{\text{EUR1}} = \text{GHS397,503,900}$$

(Workings 3marks+Final answer 1 marks = 4 marks)

ii) **Money market hedge**

Today:

1. Borrow the cedi equivalent of the PV of the euro payable (i.e., EUR22,500,000)

$$\text{PV of euro payable} = \frac{\text{EUR22,500,000}}{\left(1 + \frac{0.0375}{4}\right)} = \text{EUR22,291,021.67}$$

$$\text{cedis to borrow} = \text{EUR22,291,021.67} \times \frac{\text{GH¢17.3684}}{\text{EUR1}} = \text{GH¢387,159,380.80}$$

***The spot ask rate is used as euros will be bought immediately with the cedis borrowed*.

2. Sell the cedis borrowed to buy the PV of the euro payable at the spot offer rate.

$$= \text{EUR22,291,021.67}$$

3. Invest the EUR22,291,021.67 bought at the euro investing rate.

On Maturity:

4. Collect the maturity value of the euro investment.

$$\text{MV of euro Invetsment} = \text{EUR22,291,021.67} \times \left(1 + \frac{0.0375}{4}\right)$$

$$= \text{EUR22,500,000}$$

5. Settle the euro payable with the proceeds from the euro investment.

$$= \text{EUR22,500,000}$$

6. Settle the cedi loan as the guaranteed outcome of the hedge.

$$\text{MV of cedi loan} = \text{GH¢387,159,380.80} \times \left(1 + \frac{0.3112}{4}\right) = \text{GH¢417,280,380.6}$$

The outcome of the money market hedge is a net cost of GH¢417,280,380.6.

NB: Some candidates may use the relevant money market interest rates to estimate the future exchange rate for buying euros in three months and then multiply that by the euro payable to determine the net outcome of the hedge.

$$E(S_t^{d/f}) = S_0 \left[\frac{1 + i^d}{1 + i^f}\right]^T$$

$$E(S_t^{d/f}) = \text{GHS}17.3684 \left[\frac{1 + \frac{0.3112}{4}}{1 + \frac{0.0375}{4}}\right] = \text{GH¢}18.54579469$$

$$\text{Outcome} = \text{EUR}22{,}500{,}000 \text{ x} \frac{\text{GH¢}18.54579469}{\text{EUR}1} = \text{GH¢}417{,}280{,}380.6$$

(Computation of the future spot rate = 4 marks)
(Calculation of net outcome = 1 mark)

iii) **Explanation of the use of a letter of credit**

A Letter of Credit is a contractual obligation by the importer's bank to release payment upon the shipment of goods and submission of the necessary documentation to the exporter's bank as proof.

This international payment method is structured to safeguard the interests of both parties. For exporters, it provides a payment guarantee, while for importers, it provides reasonable payment terms and assurance that the goods ordered will be received.

In the transaction between Fufulso Engineering LTD, a Ghana-based company, and a German exporter, the trade could be settled using a letter of credit through the following steps:

1. After finalising the Sales Agreement, Fufulso Engineering LTD would apply to their bank to issue a Letter of Credit in favour of the German exporter.
2. Fufulso Engineering LTD's bank, acting as the issuing bank, would draft the Letter of Credit based on the terms and conditions of the Sales Agreement and transmit it to the exporter's bank, which would act as the advising bank.
3. The exporter's bank would review and approve the Letter of Credit before forwarding it to the exporter.
4. The exporter would ship the consignment of industrial machines as stipulated in the Letter of Credit and submit the required shipping and commercial documents to their bank. A freight forwarder may assist in this process.
5. The exporter's bank would check the documents for compliance with the terms and conditions of the Letter of Credit. Upon approval, the exporter's bank would forward the documents to Fufulso Engineering LTD's bank and request payment.
6. Fufulso Engineering Ltd.'s bank would verify the documents and, upon confirmation, release the payment to the exporter's bank. Fufulso Engineering Ltd receives the documents granting legal title to the goods in exchange for payment to their bank.

(Explanation of the concept of a letter of credit = 2 marks)
(Explanation of how the parties could settle the trade via a letter of credit = 4 marks)

c) **Impacts of unfair use of technology in the financial sector**

- Use of data without permission
- Exclusion of individuals from financial activities
- Inappropriate discrimination or bias
- Asymmetry of information

(2 relevant points well explained @ 2.5 marks each = 5 marks)

(Total: 20 marks)

EXAMINER'S COMMENTS

Question three (a) tested the candidate's ability to compute a hedging outcome for currency risk exposure using both forward rate and money market strategies and the best outcome for the hedge. This part was averagely answered as candidates provided some correct computations in some aspects and scored some marks especially computing the outcome in Ghana cedis. The second part which covered letter of credit as an alternative to settle the trade also generally received good answers except some candidates who had no clue as to what letter of credit was about.
The (b) aspect which was on impact of unfair use of technology in the financial sector was well answered by most candidates.
Overall this was the second best answered question.

QUESTION FOUR

a)

i) A warrant serves as a long call option for the holder, allowing the holder to *buy* shares in the company based on agreed terms (such as the price, and expiry date). On the other hand, a convertibility feature allows the holder to convert its current capital type into ordinary company shares based on agreed terms. For example, a debtholder with a convertible option can exercise the option to convert the debt into equity based on the conversion terms. Upon conversion, the debt holder ceases to be a debtholder and becomes an equity holder.

(3 marks)

ii) Exercise price = 1.4 * US$0.2598 = US$0.3637, with the total cost being = US$0.3637 * 0.5*19,245,574 = US$3.5million

(2 marks)

iii) In the worst-case scenario, the long leg of a call option will lose the premium paid. Assuming Atlantic Lithium's shares are worthless by July 23, 2025, MIIF will lose US$3.5 million.

(4 marks)

iv) Warrants have potential dilutive effects on companies. All things being equal, Atlantic Lithium's EPS will fall due to the larger number of shares used to compute it. Note that when MIIF exercises its warrants, the outstanding shares of Atlantic Lithium will increase by 9,623,316. Assuming the company's earnings remain stable, the EPS will decline.

(3 marks)

v) A ***bonus issue*** involves issuing new shares to shareholders, funded from company reserves, while a ***share split*** divides existing shares into multiple smaller shares without affecting reserves.

(3 marks)

b) Procurement Efficiency

Average Value per Contract:

$$Average\ Value\ per\ contract\ (Competitive\ Tendering) = \frac{Value\ of\ contracts\ awarded\ through\ Competitive\ Tendering}{Number\ of\ Competitive\ Contracts}$$

$$Average\ Value\ per\ contract\ (Competitive\ Tendering) = \frac{GHS15\ billion}{60} = GHS250\ m$$

$$Average\ Value\ per\ contract\ (Restricted\ Tendering) = \frac{Value\ of\ contracts\ awarded\ through\ Restricted\ Tendering}{Number\ of\ Restricted\ Contracts}$$

$$Average\ Value\ per\ contract\ (Competitive\ Tendering) = \frac{GHS5\ billion}{20} = GHS250\ m$$

$$Average\ Value\ per\ contract\ (Single\ Source\ Procurement) = \frac{Value\ of\ contracts\ awarded\ through\ Single\ Source\ Procurement}{Number\ of\ Single\ Source\ Contracts}$$

$$Average\ Value\ per\ contract\ (Competitive\ Tendering) = \frac{GHS5\ billion}{20} = GHS250\ m$$

Comment:
All three procurement methods (Competitive Tendering, Restricted Tendering, and Single-Source Procurement) have an average contract value of GHS 250 million. While the average value per contract is the same, competitive tendering is generally preferred because it promotes transparency and competition, leading to better value for money. Therefore, even though the values are the same, competitive tendering would typically be seen as the method that offers the best value for

(6 marks: 1.5 marks for each calculation [making 4.5 marks] and 1.5 marks for all the explanation)

(Total: 20 marks)

EXAMINER'S COMMENTS

Candidates were tested on share warrants and convertible instruments, bonus issue and share splits and computation of the warrants exercise price and transaction cost. This part received poor to average answers and require further attention by candidates.
The (b) part which was on Public Financial Management system and value for money analysis received average to good answers but some candidates applied general knowledge in answering the question without knowledge on the subject matter. Even though the performance in this area appeared good it carried only 5 marks and could not significantly influence the overall pass rate.

QUESTION FIVE

a)

i) **Calculation of the Operating Cycle and Cash Conversion Cycle**

The operating cycle and cash conversion cycle are critical indicators of a company's working capital efficiency.

Operating Cycle: The operating cycle is the time it takes for a company to purchase inventory, sell products, and collect cash from customers.

Operating Cycle = Inventory Turnover Period + Receivables Collection Period

$$Inventory\ Turnover\ Period = \frac{Average\ Inventory}{Cost\ of\ Goods\ Sold} \times 365$$

$$Inventory\ Turnover\ Period = \frac{8{,}000{,}000}{40{,}000{,}000} \times 365 = 73\ days$$

Receivables Collection Period: This is the average time taken to collect cash from customers.

$$Receivables\ Collection\ Period = \frac{Average\ Accounts\ Receivables}{Sales} \times 365$$

$$Receivables\ Collection\ Period = \frac{12{,}000{,}000}{60{,}000{,}000} \times 365 = 73\ days$$

$$Operating\ Cycle = 73 + 73 = 146\ days$$

Cash Conversion Cycle: The cash conversion cycle is the time between when a company pays for its inventory and when it receives cash from sales.

$$Cash\ Conversion\ Cycle = Operating\ Cycle - Payables\ Turnover\ Period$$

Payables Turnover Period: This is the average time taken to pay suppliers.

$$Payable\ Turnover\ Period = \frac{Average\ Accounts\ Payables}{Cost\ of\ Goods\ Sold} \times 365$$

$$Payable\ Turnover\ Period = \frac{GHS10{,}000{,}000}{40{,}000{,}000} \times 365 = 91\ days$$

$$Cash\ Conversion\ Cycle = 146 - 91 = 55\ days$$

(4 marks)

ii) Economic Order Quantity (EOQ) (4 marks)

$$EOQ = \sqrt{\frac{2DC}{h}} = \sqrt{\frac{2 \times 6{,}000{,}000 \times 1{,}200}{10}} = 37{,}947.33\ units$$

D = Annual demand = 500,000 x 12 = 6,000,000

C = cost per order = GHS1,200
h = holding cost = 10% x 8,000,000 = GHS800,000

(4 marks)

iii) **Cash Management**

daily interest rate = 4% = 0.011%
Standard Deviation = GHS5,000
Variance = 25,000,000
Transaction cost = 100
Lower limit = 20,000

$$Spread = 3 \times \left(\frac{3}{4} \times \frac{Transaction\ Cost\ \times Variance\ of\ cash\ flows}{Daily\ interest\ rate}\right)^{\frac{1}{3}}$$

$Spread = 3 \times \left(\frac{3}{4} \times \frac{100 \times 25{,}000{,}000}{0.00011}\right)^{\frac{1}{3}} = 77{,}304$ **(3 marks)**

$Return\ point = Lower\ limit + \frac{1}{3} \times Spread$ **(2 marks)**

$Return\ point = 2{,}000{,}000 + \frac{1}{3} \times 77{,}304 = 2.025{,}768$

$Upper\ Limit = Lower\ limit + Spread$

$Upper\ Limit = 2{,}000{,}000 + 77{,}304 = 2{,}077{,}304$ **(2 marks)**

b) *Programme Overview:*

Objective: Improve BECE pass rates among pupils in rural districts with a historical pass rate of 10%.
Budgeted Cost: GH₵500,000
Actual Cost: GH₵650,000 (including additional costs for feeding students)
Pass Rate Achieved: 70% distinction, 5% failure

VFM Analysis:

Economy

Economy refers to cost control and minimisation of resource use while achieving desired outcomes. The programme exceeded its budget by GH₵150,000 (30%) and was 44.4% more expensive than similar private sector programmes, typically costing GH₵450,000.
The RCC's programme was not economical, as it incurred higher costs than initially budgeted compared to similar programmes. The additional expenses, primarily for feeding students to maintain attendance, contributed to this overrun.

Efficiency

Efficiency measures the relationship between the resources used (inputs) and the results achieved (outputs).
The substantial improvement in pass rates suggests that despite the higher cost, the resources were effectively converted into significant educational outcomes. The additional costs helped to sustain the programme, indicating that the resources were well-utilized to achieve the desired educational outcomes.
In the absence of data on the outcome of similar programmes sponsored by private institutions to compare, it can be concluded that the programme demonstrated high efficiency.

Effectiveness

Effectiveness evaluates how well the programme achieved its intended objectives.
The programme's objective was to improve the BECE pass rates among rural pupils.
The programme resulted in 70% of students passing with distinction, a significant improvement from the historical pass rate of 10%. The outcome exceeded the historical performance, indicating that the programme successfully met its goals.
Thus, it can be concluded that the programme was highly effective, achieving and surpassing its primary objective of improving BECE pass rates among students in rural districts.

Equity

Equity assesses the fairness and inclusiveness of the programme, ensuring that the benefits are distributed appropriately, especially to disadvantaged groups.
The programme's target group were pupils in rural districts, who historically had low pass rates in the BECE (10%).
The programme was equitable as it specifically targeted and benefited a historically disadvantaged group, rural district pupils with low pass rates. The programme promoted fairness and inclusiveness in educational opportunities by significantly improving their academic outcomes.

Conclusion:
Despite the lack of economy, the programme provided substantial value for money in terms of efficiency, effectiveness, and equity. The investment significantly improved educational outcomes for a disadvantaged population, justifying the additional costs incurred.

(Assessment of VFM in terms of the 4Es = 4 marks)
(Conclusion on whether value for money achieved = 1 marks)

(Total: 20 marks)

EXAMINER'S COMMENTS

Question five examined candidates on cash conversion cycle, Economic order quantity and using Miller -Orr model to calculate the target spread, return point and the upper cash limit. This received poor to average answers as some candidates struggled to quote the right formulas to use and the variables to input into the formulas. More attention needed in this area by candidates to improve performance. Candidates who understood the areas provided good answers for good marks.
The (b) aspect which also carried 5 marks tested candidates' ability to analyse information provided and make a decision on value for money for the viability of an educational support programme. This also received average to good answers.

CONCLUSION AND RECOMMENDATIONS

Performance in the Financial Management paper can be enhanced by:

- Continuous improvement in preparations by candidates and ensuring they are well prepared before sitting for the paper
- Review of the various examination reports to avoid pit falls and improve on reported weakness of candidates in previous examinations
- Proper and comprehensive planning on when to be ready before writing the exams rather than rushing to write without adequate preparations.
- More efforts needed by both candidates and tuition providers on thorough coverage of the calculation-based areas.
- Candidates should improve on answer planning and neat and clear showing of workings and avoid scatterings of the same answer across different unrelated pages.
- Candidates should ensure readable pens are used and improvement in hand writing.