CPA IRELAND | CERTIFIED PUBLIC ACCOUNTANTS

MANAGERIAL FINANCE

PROFESSIONAL 1 EXAMINATION - APRIL 2016

NOTES:

Section A – Answer Question 1 and Question 2 and **either** Part A **or** Part B of Question 3.
Section B – Answer Question 4 and **either** Part A **or** Part B of Question 5.
Should you provide answers to both Parts A and B in Question 3 and/or Question 5, you must draw a clearly distinguishable line through the answer Part(s) not to be marked. Otherwise, only the first answer(s) to hand for each of these questions will be marked.

MANAGERIAL FINANCE TABLES ARE PROVIDED

TIME ALLOWED:

3 hours, plus 10 minutes to read the paper.

INSTRUCTIONS:

During the reading time you may write notes on the examination paper, but you may not commence writing in your answer book. **Please read each Question carefully.**

Marks for each question are shown. The pass mark required is 50% in total over the whole paper.

Start your answer to each question on a new page.

You are reminded to pay particular attention to your communication skills, and care must be taken regarding the format and literacy of your solutions. The marking system will take into account the content of your answers and the extent to which answers are supported with relevant legislation, case law or examples, where appropriate.

List on the cover of each answer booklet, in the space provided, the number of each question attempted.

NB: PLEASE ENSURE TO ENCLOSE YOUR ANSWER SHEET TO QUESTION 4 IN THE ENVELOPE PROVIDED.

THE INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS IN IRELAND

MANAGERIAL FINANCE

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Time allowed 3 hours, plus 10 minutes to read the paper.

SECTION A
(Answer Questions 1 and 2 and either Part A <u>or</u> Part B of Question 3)

1. GCL Limited owns and operates a business that includes a garden centre, a retail outlet and a café located on the outskirts of Dublin. Initially, this was a small business that sold plants and garden products. In 2006, it expanded and opened a retail outlet (selling household products) and a café. After a few years of difficult trading conditions, the company is now profitable and is considering further expansion.

The Managing Director of GCL Limited has stated that the proposed expansion will not take place unless the project has a minimum payback period of two years and a positive NPV after three years. The company's cost of capital is 7%.

In order to facilitate this proposed business development, the company could use land that it owns. The company has recently received a report, which it commissioned on the proposed project. The cost of this report is €55,000 which will be paid immediately. The report provides the following information about the initial costs and another possible use for the land:

- The building will cost €4.5 million and will be written off over 20 years. Fixtures and Equipment costing €1.2 million will be depreciated at 30% per annum using the reducing balance method.
- The land could be leased for three years to a reputable client for €5,000 per month. This client would also pay €175,000 immediately for site development costs previously incurred.

The details regarding sales likely to be generated from the proposed expansion are as follows:

- In Year 1, forecast annual Sales for Garden Products will be €1 million, increasing by 20% each subsequent year; and will be €200,000 for Household Products in Year 1, increasing by 15% each subsequent year.
- The café will be open for 360 days each year with 100 'peak' days (weekends and bank holidays). The maximum number of customer servings will be 1,600 per day, with an average customer spend of €10.
- The capacities at which the café will operate are:

	Year 1	**Year 2**	**Year 3**
Peak Days	70%	80%	90%
Non-Peak Days	40%	50%	60%

The report also provides the following information regarding the proposed expansion:

- Advertising Costs are forecast to be €90,000 per annum. In Year 1, a supplier will pay 40% of this cost. These costs and the payment are not included in the Establishment Costs detailed below.
- Mainly part-time staff will be employed amounting to the equivalent of ten full-time staff with a forecast average annual salary of €28,000 each. It has been agreed that salaries for these staff members will increase by 10% in Years 2 and 3. These salary costs are not included in the Establishment Costs detailed below.
- Total Establishment Costs have been estimated as €785,000 per annum. This figure includes the Depreciation for the Building and the Fixtures & Equipment as described earlier. It also includes a Non-cash Administration Charge of €82,000 per annum.
- The Variable Costs as a percentage of Sales will be
  - o 50% (for Garden Products);
  - o 40% (for Household Products); and
  - o 20% (for the Café).
- Due to favourable rates of capital allowances, tax will not be payable on any profits arising from the proposed expansion.

REQUIREMENT:

Appraise GCL Limited's proposed expansion using its own Payback and NPV policy and the relevant information provided on Page 1. This appraisal should be incorporated into a report (the format is outlined in (a) and (b) below) that you are required to draft to the Managing Director of GCL Limited.

(a) Summarise <u>in a table</u> the results of your appraisal and initial recommendations based on (i) the Payback, and (ii) NPV methods. Include your detailed workings as an appendix to the report.

(17 marks)

(b) Briefly discuss the feasibility of the proposed expansion, providing appropriate recommendations. (8 Marks)

[Total: 25 Marks]

2. CB Limited manufactures plastic components as an outsourcing partner with a multinational organisation. The contract to supply the components is structured so that there are penalties for late delivery or not meeting required quality standards. The directors of CB Limited are considering the implementation of an incentive scheme based on the performance of the various project teams responsible for producing batches of components each week.

One possible approach to calculating the amount of a bonus paid for project team members is to compare actual performance each week with information from the company's budget that is based on standards agreed in the previous year. It has been decided to investigate the performance of Project Team Z and the results for March 2016 are provided below.

Actual Costs

Cost Item	**Quantities**		**€**
Materials Consumed	22,600	kilograms(kgs)	46,330
Direct Labour	360	hours	4,500
Variable Overheads	360	hours	8,640

The company records show that 1,450 units of the component were sold for €131,950.

These records also show that the project team's budgeted sales were 1,200 units. The budgeted selling price was €95 per component unit. Standard cost information has been summarised below.

Standard Costs per unit

Cost Item	**Quantities**	**€**
Materials	20 kgs x €1.80 per kg	36
Direct Labour	15 minutes x €12 per hour	3
Variable Overheads	15 minutes x €20 per hour	5

REQUIREMENT:

(a) Prepare an Operating Statement for March 2016, reconciling the actual and budgeted contribution for the component produced by Project Team Z showing the amounts and nature of the variances.

(12 marks)

(b) Assess critically three important factors which the directors of CB Limited should consider before implementing a project team performance incentive scheme based on standard costing principles.

(8 marks)

[Total: 20 Marks]

3. Answer <u>either</u> Part A <u>OR</u> Part B.

The information provided below has been extracted from a recent report on the Building and Construction (B&C) sector in Ireland.

'The Irish economic recovery began in earnest in 2014 [and continued throughout 2015] with the first recovery in domestic demand since 2007. Residential building is leading the recovery in the B&C sector, followed by civil engineering and non-residential building.

Construction costs and related indices have yet to respond to the recovery although respondents to a recent valid and reliable survey expect costs to rise by up to 5 per cent per annum, both this year and next year. The weak euro is expected to drive up input costs for imported products. One cost faced by construction contractors, notably earnings for persons employed in specialised construction activities, increased at an accelerating rate over the past year.

The modest improvement in the numbers employed is welcome although a significant challenge raised in the recent survey is the availability of the requisite technical skills in the medium term.'

Part A
REQUIREMENT:
Distinguish between *Systematic* and *Unsystematic Risk*. Advise how consideration of fundamental factors in conjunction with an assessment of systematic risk could be applied to a company currently operating in the construction sector in Ireland.

[Total: 15 Marks]

<u>OR</u>

Part B
REQUIREMENT:
Some Irish organisations that operate in the construction sector have diversified through involvement in contracts based in countries throughout the world. Evaluate the risks associated with such a strategy and discuss the methods which organisations may use to manage foreign currency exchange risks.

[Total: 15 Marks]

SECTION B
Answer Question 4 and either Part A OR Part B of Question 5.

4. **The following multiple-choice question contains eight sections, each of which is followed by a choice of answers. Only one answer is correct in each case. Each question carries equal marks. On the answer sheet provided indicate for each question, which of the options you think is the correct answer. Marks will not be awarded where you select more than one answer for any question.**

INFORMATION RELEVANT TO REQUIREMENTS 1, 2, 3 AND 4 ONLY

JDU Limited is reviewing its cash inflows (i.e. its cash receipts) from credit customers and the impact of an existing discount. Presently, a 10% discount is offered to credit customers if they pay in accordance with the company's credit terms – payment should be received in the month following the date of sale. However, it has been discovered that just over one half of credit customers have availed of this discount and hence the company is considering withdrawing it. Instead, it would reduce the selling price in order to attract more customers. Research into payment trends from credit customers has revealed the following:

Payment Received from Credit Customers	**With Settlement Discount**	**Without Settlement Discount**
On time (one month after date of Sale)	55%	40%
One month late	20%	35%
Two months late	15%	20%

The remaining balances outstanding are written off as bad debts.

In order to conduct a comparative analysis of the impact on cash inflows by removing the discount, the company has also compiled information on forecast sales and margins:

Forecast	**With Settlement Discount**	**Without Settlement Discount**
Cost of Sales for June	€120,000	€120,000
Gross Profit Margin for June, July and August	50%	40%
Increases in Sales (from previous month)	20%	30%

The cash inflows from Receivables on 1 June will be the same regardless of the policy on the settlement discount and may be ignored in the calculations required below.

REQUIREMENT:

1. If the settlement discount is retained, the cash inflows from credit sales received in July and August combined will be:

(a) €190,560
(b) €309,360
(c) €318,560
(d) €338,400

2. If the settlement discount is retained, the cash inflows from credit sales received in September will be:

(a) €264,672
(b) €284,072
(c) €294,672
(d) €283,680

3. If the settlement discount is discontinued, the cash inflows from credit sales received in July and August combined will be:

(a) €254,000
(b) €274,000
(c) €294,000
(d) €381,000

4. If the settlement discount is discontinued, the cash inflows from credit sales received in September will be:

(a) €216,200
(b) €246,200
(c) €266,200
(d) €399,300

INFORMATION RELEVANT TO REQUIREMENTS 5, 6, 7 AND 8 ONLY

The remaining parts of this question relate to Working Capital Management (WCM).

5. In relation to Working Capital Management (WCM), which of the following statements is correct?

(i) WCM involves consideration of both the investment and financing decision.
(ii) An increased amount of inventory decreases the risk of obsolescence.
(iii) An increased amount of inventory decreases the risk of 'stock outs' and the possibility of losing customers.

(a) Statements (i) and (ii) only
(b) Statements (i) and (iii) only
(c) Statements (ii) and (iii) only
(d) None of the combinations listed above.

6. With regard to inventory and operations management, which of the following statements is correct?

(i) A Lean Manufacturing system uses a minimum amount of resources to produce goods.
(ii) A Just In Time (JIT) inventory policy means increased exposure to exogenous factors, price volatility, and to fluctuating demand arising from changes in the macro economic environment.
(iii) A JIT inventory policy that leads to reduced levels of closing inventory will increase the operating cycle of a firm.

(a) Statements (i) and (ii) only
(b) Statements (i) and (iii) only
(c) Statements (ii) and (iii) only
(d) None of the combinations listed above.

7. Which of the following statements is correct?

(i) Ignoring other variables, firms that 'factor' an account receivable estimate that the cost of collecting the debt is less than the discount provided to the company that has factored the debt.
(ii) A sharp increase in sales combined with increases in the amounts of closing receivables and inventory are indications of overtrading.
(iii) A retail organisation that has a long period of credit from its credit suppliers is likely to have a large amount of working capital.

(a) Statements (i) and (ii) only
(b) Statements (i) and (iii) only
(c) Statements (ii) and (iii) only
(d) None of the combinations listed above.

Q8) The annual demand for a product is 2,400 units. Its purchase price is €400 per unit. The cost per order is €60 and the annual holding cost is 5% of the purchase price. Based on this information, the Economic Order Quantity is:

(a) 120 units
(b) 220 units
(c) 310 units
(d) 170 units

[Total: 20 Marks]

5.

Answer either Part (A) <u>OR</u> Part (B)

Part (A)

As part of its expansion plans, BG plc is considering acquiring 100% of the equity shares of MD Limited. You have been asked to provide advice on an appropriate price that should be offered based on a range of valuation methods. Extracts from the most recent financial statements of MD Limited show the following information:

MD Limited
Extracts from the Income Statement for year ended 31 December 2015

	€ 000
Revenues	8,580
Operating Expenses	5,265
Operating Profit	3,315
Interest Costs	825
Profits Before Tax	2,490
Tax	498
Profit for the Year	1,992

Extracts from the Statement of Financial Position as at 31 December 2015

	€ 000
Non-Current Assets	
Intangibles	7,600
Property Plant & Equipment	14,500
Investments	3,200
Total Non-Current Assets	**25,300**
Current Assets	
Inventory	5,400
Receivables	2,480
Cash and Cash Equivalents	3,610
Total Current Assets	**11,490**
Current Liabilities	
Payables	2,390
Other Liabilities	10,260
Total Current Liabilities	**12,650**
Non-Current Liabilities	
Long-term Borrowings	7,300
Derivative Obligations	3,890
Other Provisions	1,400
Total Non-Current Liabilities	**12,590**

Quoted companies operating in the same sector as MD Limited currently have an average P/E ratio of 20 but it has been agreed by all parties that this should be reduced by 60% to take account of the company's smaller size and private status.

It has also been agreed that the following valuation multiples should be applied to the most recent figures from the financial statements before and after the adjustments for current market values described below:

Basis (Most Recent)	**Agreed Multiple (Before and after adjustments)**
Net Assets	1.0
Revenues	2.5
Profit Before Interest and Tax	5.0

As part of the due diligence process, independent research found that adjustments were required in order to reflect updated market values:

- The Intangibles have significantly less market value than the figure stated in the financial statements and should be reduced by 75%.
- Property Plant and Equipment has been understated by 20%.
- The Investments have lost 10% of their value since the date of the Statement of Financial Position.
- 15% of the Inventory is obsolete.
- €360,000 should be written off as bad debts.
- Due to a favourable movement in currency exchange rates, the Derivative Obligation should be reduced by €710,000.
- Other Provisions should be increased by 25%.

During the course of negotiations it was agreed that:

- Revenues should be reduced by €940,000.
- Only the write offs in respect of Inventory and Receivables should be charged to the adjusted operating expenses.
- All other changes in market values to balance sheet items should reduce Equity directly without affecting Income Statement figures.
- A corporation tax rate of 20% should be applied to profits before tax both before and after adjustments.

REQUIREMENT:

(a) Assess the value of MD Limited, both before and after the appropriate adjustments arising from the information above, using the following methods:

(i) The Net Asset basis
(ii) Revenue Multiple
(iii) Profit before Interest and Tax Multiple, and
(iv) The P/E basis

You are also required to summarise, in tabular format, the valuations of MD Limited both before and after the relevant adjustments.

(15 marks)

(b) Recommend and justify an appropriate amount that BG should pay for 100% ownership of MD Limited.

(5 marks)

[Total: 20 Marks]

OR

Part (B)

REQUIREMENT:

The determination of the cost of capital to be used in the evaluation of proposed acquisitions is an important consideration. Assess critically possible approaches to this task (the determination of the cost of capital).

[Total: 20 Marks]

END OF PAPER

SUGGESTED SOLUTIONS

THE INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS IN IRELAND

MANAGERIAL FINANCE

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SOLUTION 1

REPORT

TO: Managing Director of GC Limited
FROM: CPA Financial Consultant

RE: Proposed Expansion Project

This report presents the results of the investment appraisal of the proposed expansion using the NPV and Payback methods, initial recommendations and some further points that should be considered in the assessment of the project.

(a) GC Limited – Proposed Expansion

Examiner's Note
Please note that the question specifically requested a table format. See also workings.

Method	Result	Initial Recommendation
NPV (in €000s)	1,344.8	Accept
Payback	2.25 years	Reject

(17 marks)

(b) Feasibility of the project

Factors relevant to the feasibility of the project include:
- The reliability of the estimation of future cash flows
- The impact of cash flows outside the specified time period of three years
- Sensitivity of viability of the proposed expansion project to changes in demand, levels of costs etc.

Other specific factors that could impact on this project's feasibility include:
- Is the proposed expansion subject to planning permission?
- Has adequate provision been made for extra parking spaces?
- What is the likely response of competitors in each of the three business segments (Garden, Hardware and Café)? For instance if a new/existing competitor in the Café sector was to open a new premises that had superior quality and/or more competitive prices this could affect not only future Café revenues and cash-flows, but could also have an adverse knock-on impact on garden and hardware sales because of reduced customer numbers on the premises.
- Similar concerns are relevant to competitor responses in the Garden and Hardware business sectors.
- Has sufficient research been conducted in order to ensure a supply of skilled staff will be available at what appears to be very low rates of pay? Also, has there been any consideration given to the amounts of training of staff especially in the areas of health and safety?

(8 marks)

W1 NPV & Cash Flows

	Wkg.				
Years		**0**	**1**	**2**	**3**
Inflow			**€000**	**€000**	**€000**
Revenues					
Garden	*W3*		1,000.0	1,200.0	1,440.0
Household	*W3*		200.0	230.0	264.5
Café	*W4*		2,784.0	3,360.0	3,936.0
Total			**3,984.0**	**4,790.0**	**5,640.5**
Outflow					
Fixtures & Equipment		1,200.0			
Building		4,500.0			
Opp. cost: Sub-lease			60.0	60.0	60.0
Opp. cost: Site Development		175.0			
Marketing Costs			54.0	90.0	90.0
Variable Costs					
Garden			500.0	600.0	720.0
Household			80.0	92.0	105.8
Café			556.8	672.0	787.2
Staff Costs			280.0	308.0	338.8
Relevant Establishment Costs	*W5*		118.0	226.0	301.6
Total		**5,875.0**	**1,648.8**	**2,048.0**	**2,403.4**
(ii) Expected NPV					
Expected Net Cash Flow		**-5,875.0**	**2,335.2**	**2,742.0**	**3,237.1**
Discount Factor @ 7%		1.000	0.9346	0.8734	0.8163
PV @ 7%		-5,875.0	2,182.5	2,394.9	2,642.4
ENPV @ 7%		**1,344.8**			

W2 Payback Period

	Cash Flows €	Cumulative €
0	-5,875	-5,875
1	2,335	-3,540
2	2,742	-798
3	3,237	2,439

2	+	(	798	/	3,237 *)*
2	+			0.25	
2.25	**years**				
2	**years**	**3.0 months**			

W3 Revenues	Year Annual Increase	1 €000	2 €000	3 €000
Garden	20%	1,000.0	1,200.0	1,440.0
Household	15%	200.0	230.0	264.5

W4 Revenues

Total Days Open	360.0
Peak	100.0
Off-Peak	260.0

Average Meal Price		€10
No of Customer Servings	x	1,600
Max Sales per day		€16,000

Capacity		Peak	Off-Peak
Max Sales per day		€16,000	€16,000
No of days	x	100	260
Max Sales per		€1,600,000	€4,160,000

		Year 1	Year 2	Year 3
Peak: Capacity		70%	80%	90%
Peak Revenues:	**€000**	**1,120.0**	**1,280.0**	**1,440.0**
Off-Peak: Capacity		40%	50%	60%
Off-Peak Revenues:	**€000**	**1,664.0**	**2,080.0**	**2,496.0**
TOTAL	**€000**	**2,784.0**	**3,360.0**	**3,936.0**

W5 Depreciation & Establishment Costs

Depreciation	Year	1	2	3
Fixtures & Equipment		**€000**	**€000**	**€000**
Cost		1,200.0		
Open NBV			840.0	588.0
Deprec. (E&F)		**360.0**	**252.0**	**176.4**
Closing NBV		840.0	588.0	411.6
Building				
Cost		4,500.0		
Deprec. (Build)		**225.0**	**225.0**	**225.0**
Total		**585.0**	**477.0**	**401.4**

	Year	1	2	3
Establishment Costs		**€000**	**€000**	**€000**
Total Establishment Costs		**785.0**	**785.0**	**785.0**
Less:				
Total Deprec.		**585.0**	**477.0**	**401.4**
Charge out incl. w. Estbl. Costs		**82.0**	**82.0**	**82.0**
Relevant Establishment Costs		**118.0**	**226.0**	**301.6**

SOLUTION 2

(a)

Reconciliation: From Budgeted Contrubution to Actual Contribution. **See also workings.**

	Favourable	Adverse	Total
	€	€	€
Total Budgeted Contribution			**61,200**
Variances			
Sales Price		-5,800	
Sales Volume	12,750		
Material price		-5,650	
Material usage	11,520		
Labour rate		-180	
Labour efficiency	30		
Variable O/h Expenditure Variance		-1,440	
Variable O/h Efficiency Variance	50		
	24,350 F	-13,070 A	**11,280** F
Actual profit			**72,480**

(12 marks)

(b)
There a wide range of factors that the directors should consider. Some of the most important factors include:

1) The interdependence of the various functions – if the incentive scheme is team based, then delays in one part of the production process may unfairly have an adverse effect on the performance of other members of the team
2) The standard setting process – care should be taken that the information compiled should be current, relevant and as fair as possible
3) The impact on quality and customer relations etc. – as with all incentive schemes, if volume of production is increased in order to maximise remuneration, there may be a reduction in the quality of output which would have a negative impact on the company's reputation.

(8 marks)

Workings

(i) Sales Price Variance

(Act S. Price	-	Std S. Price)	x	Actual Sales Volume						
(€91.00	-	€95.00)	x	1,450	=					-€5,800 A

€131,950	
1,450	
€91.00	per unit

(ii) Sales Volume PROFIT Variance

(Act Sales Qty	-	Budg Sales Qty)	x		Std PROFIT				
(1,450	-	1,200)	x	(	€95.00	-	€44.00)	=	€12,750 F

(iii) Materials Price Variance

(Std P per kgs	-	Actual P per kgs)	x	Actual Qty kgs purchased			
(€1.80	-	€2.05)	x	22,600	=		-€5,650 A

€46,330	
22,600	
€2.05	per unit

(iv) Materials Usage Variance

				Matls Used				
[(Std Qty	x	Act units produced)	-	Act Qty]	x	Std P per kgs		
[(20	x	1,450)	-	22,600]	x	€1.80	=	€11,520 F
as per Ques								

(v) Labour Rate Variance

(Std Rate per hr	-	Act Rate per hr)	x	Actual Hours		
(€12.00	-	€12.50)	x	360	=	-€180 F

€4,500	
360	
€12.50	per hour

(vi) Labour Efficiency Variance

Q 2 April 2016

[(Std Hours	x	Actual units produced)	-	Actual Hrs]	x	Std Rate per hr		
(15 / 60	x	1,450)	-	360]	x	€12.00	=	€30 F

(vii) Variable O/h Expenditure Variance

(Std Rate per hr	-	Act Rate per hr)	x	Actual Hours		
(€20.00	-	€24.00)	x	360	=	-€1,440 A

	€8,640	
	360	hours
=	€24.00	per hour

(viii) Variable O/h Efficiency Variance

[(Std Hours	x	Actual units produced)	-	Actual Hrs]	x	Std Rate per hr		
(15 / 60	x	1,450)	-	360]	x	€20.00	=	€50 F

SOLUTION 3

Part A

Systematic Risk
This is the risk from forces outside of a firm's control such as inflation, interest rates, and Government policies. It is also called non-diversifiable or market risk. This type of risk is assessed relative to the risk of a fully diversified portfolio of securities, or the Market Portfolio. According to mainstream theory in finance, systematic risk is measured by the Beta for each company.

Systematic Risk
Unsystematic (or diversifiable) risk relates specifically to each particular company. In theory, it can be diversified away by holding a portfolio of investments in different sectors.

Based on this distinction, one possible approach to assessing a company's strategy is an examination of the relationship between systematic risk and company fundamentals. This method views systematic risk as a combination of:

1. The sensitivity of a company's Revenues, Costs, Assets and Finances to Macro-economic factors; and

2. Its proportion of fixed to variable costs; and

3. The impact of other events, issues and factors on Revenues etc.

Applying this approach to a company operating in the construction sector in Ireland would include:

- Identifying customer segments (residential, industrial etc.) in the construction sector and estimating the impact of external factors on their revenues, costs and spending patterns etc.

- Carrying out a similar exercise on suppliers of all significant goods, services, assets, and finance etc. For instance as noted in the report referred to in the question, there is a scarcity of supply in some specialised technical skills

- Analysis of costs to estimate fixed and variable elements. Construction companies have large amounts of variable costs such as direct material and direct labour that can be avoided/reduced in response to changes in demand

- Examination of other sources of information in order to identify other relevant issues and risk factors. For instance both oil prices and interest rates are low and should have an overall positive impact on costs but political factors can impact on these and other factors.

- Review of findings in order to identify resources, risk factors, opportunities and possible responses.

(15 marks)

Part B

Risks associated with a strategy of international expansion

- The difficulties of assessing the feasibility of overseas investment projects

- Uncertainties caused by political instability

- Issues arising from managing in different cultural contexts

- Logistics of managing operations in remote and/or unfamiliar locations

- Foreign Exchange Volatility
  - o Impact on Income to be received from abroad
  - o Impact on the amount actually paid for imports at some future date
  - o Changes in the valuation of foreign assets and liabilities

- Specific Foreign Exchange Risks
  - transaction risk
  - translation risk
  - economic risk.

Transaction risk strategies

- Invoice the customer in the home currency

- Netting

- Matching

- Leading and lagging

- Forward market hedge

- Money market hedge

- Do nothing

- Foreign currency futures contract

- Foreign currency options

(15 marks)

SOLUTION 4

1	B
2	A
3	A
4	C
5	B
6	A
7	D
8	A

[Total: 20 Marks]

WORKINGS

Q1) and Q2)

Discount Retained

		€000
Sales	100%	240
COS	50%	120
GP	50%	120

	June €	**July** €	**August** €	**Sept** €
June Sales				
240,000 x 55% x 90% =		118,800		
240,000 x 20% x =			48,000	
240,000 x 15% x =				36,000
July Sales				
288,000 x 55% x 90% =			142,560	
288,000 x 20% x =				57,600
August Sales				
345,600 x 55% x 90% =				171,072
Inflows from Receivables	Nil	118,800	190,560	**264,672**

Total Inflows for July and August 118,800 + 190,560 = 309,360

Q2) and Q3)

Discount Discontinued

		€000
Sales	100%	200
COS	60%	120
GP	40%	80

	June €	July €	August €	Sept €
June Sales				
200,000 x 40% x 100% =		80,000		
200,000 x 35% x =			70,000	
200,000 x 20% x =				40,000
July Sales				
260,000 x 40% x 100% =			104,000	
260,000 x 33% x =				91,000
August Sales				
338,000 x 40% x 100% =				135,200
Inflows from Receivables	Nil	80,000	174,000	**266,200**

Total Inflows for July and August 80,000 + 174,400 = 254,000

5. Statement (ii) is incorrect. An increased amount of inventory ***increases*** the risk of obsolescence.

6. Statement (iii) is incorrect. Reduced levels of closing inventory will ***decrease*** the operating cycle of a firm.

7. Statements (i) and (iii) are incorrect.

Firms that 'factor' an account receivable estimate that the cost of collecting the debt is ***more than*** the discount provided to the company that has factored the debt.

A retail organisation that has a long period of credit from its credit suppliers is likely to have ***a small (or negative) amount*** of working capital.

8.

$$EOQ = \sqrt{[\,2\,(\text{Annual Demand})\,(\text{Cost per Order})\,]\ /\ (\text{Annual Holding Cost})}$$

$$EOQ = \sqrt{[\,2\,(2{,}400)\,(60)\,]\ /\ (400 \times 5\%)}$$

$$EOQ = \sqrt{[\,288{,}000\,]\ /\ 20}$$

$$EOQ = \sqrt{14{,}400} = \mathbf{120}$$

SOLUTION 5

Part (A)

(a) ***Examiner's Note***
Please note that the question specifically requested a table format. See also workings

ESTIMATED VALUATIONS	**Prior to Adjustment**	**Post Adjustment**
Method	**€000s**	**€000s**
Net Assets	11,550	7,620
Revenues	21,450	19,100
PBIT	16,575	6,025
PAT	15,936	2,432

(15 marks)

(b) **Recommendation**
A wide range of valuations could be recommended based on the calculations. Using the figures presented above, a figure of €7.2 million may be the maximum amount that should be offered because this would be the amount realised if the company was closed down. The Revenue multiple gives an abnormally large valuation and because of relatively modest profitability levels a figure of €5 million may be appropriate unless the purchasing company can achieve significant cost savings post acquisition.

(5 marks)

WORKINGS

W1

Net Assets Basis	**Bal. Sheet Per Ques €000s**		**Adjustments**	**€000s**	**Revised Amounts €000s**
Intangibles	7,600	–	75%	-5,700	1,900
PPE	14,500	+	20%	2,900	17,400
Investments	3,200	–	10%	-320	2,880
Inventory	5,400	–	15%	-810	4,590
Receivables	2,480	–		-360	2,120
Cash etc.	3,610				3,610
Total Assets	36,790			-4,290	32,500
Total C. Liabilities	12,650				12,650
LT Borrowings	7,300				7,300
Derivatives	3,890	–		-710	3,180
Provisions etc.	1,400	+	25%	350	1,750
Total Liabilities	25,240			-360	24,880
Net Assets (or Equity)	**11,550**			**-4,650**	**7,620**

W2

Adjustments to Revenues and Profits					
Revenues	8,580	–		-940	7,640
Operating Expenses	5,265	+	810	360	6,435
Profits Before Interest and Tax	3,315				1,205
Interest Costs	825				825
Profits Before Tax	2,490				380
Tax at 20%	498				76
PAT	1,992				304

W3

Valuations based on Multiples

(Prior to Adjustments)

	Prior to Adjustments €000s		Multiples		Valuations €000s
Revenues	8,580	x	2.5		21,450
PBIT	3,315	x	5		16,575
PAT	1,992	x	8	(W4)	15,936

(Post Adjustments)

	Prior to Adjustments €000s		Multiples		Valuations €000s
Revenues	7,640	X	2.5		19,100
PBIT	1,205	X	5		6,025
PAT	304	X	8	(W 4)	2,432

SOLUTION 5

Part (B)

Estimating the appropriate cost of capital is a critical function for managerial finance. The cost of capital is an essential element in a net present value calculation that provides the basis for investments decisions that should lead to maximization of shareholder wealth. Use of a significantly inaccurate cost of capital figure in discounted cash flows can lead to incorrect decisions regarding the allocation of scarce resources.

The cost of capital should be consistent with both the riskiness and the type of proposed project. The cost of capital should be higher for riskier investments and lower for safer investments. While risk is usually defined in terms of the variance of actual returns around an expected return, risk and return models in finance assume that the risk that should be rewarded (and thus built into the cost of capital).

Possible approaches and relevant issues include:

- The weighted average cost of capital (WACC)
    - Calculating the weights – if MV is used, then fluctuations in the market price can lead to an inconsistent basis for the calculation of WACC. Alternatively, if historic cost is used this will make the calculations easier but the results may be out of date and misleading.
    - Identifying the elements of the financial structure of a company may be difficult (e.g. how are convertibles classified?) with resultant difficulties in estimating their cost.
    - Use of the WACC as the basis for estimating the cost of capital assumes that any new projects will be financed by a mix of debt and equity equal to the existing proportions – this will not always be appropriate. It also assumes that the risk attached to the proposed new project will be the same as the risk associated with existing company's operations and investment.

- The cost of equity capital
    - The cost of retained earnings – as referred to above, this can appear to be a relatively cheap source of capital because of a low opportunity cost. However, the retained earnings may not be available in the form of cash/bank that could fund a proposed investment.
    - CAPM – this calculation depends on an accurate assessment of a number of items including the risk free interest rate, the expected return of individual companies and that of the overall market, and individual company beta factors (a measure of share price volatility relative to the market). Each of these can be difficult to measure and will not be available for unquoted companies.
    - Dividend growth model – applies only to companies that pay dividends on a consistent basis and depends on a number of assumptions including the sustainability of continuing historic growth rates in dividend payments.

- The cost of debt capital
    - In basic terms, a company's cost of debt will be calculated as the risk free rate plus a risk premium. Smaller companies, because of a perceived high risk of failure, normally pay high rates of interest. Larger companies will have bond ratings that are set by agencies such as Standard and Poor's and Moody's.
    - Factors that impact on company ratings include the risk of the proposed investment or project and existing levels of debt etc.
    - The 'tax shield' of debt capital means that debt capital can be cheaper than equity capital because dividends cannot reduce taxable profits. However, if levels of gearing are increased, the providers of the extra debt capital will charge a risk premium to compensate for the financial risk thus possibly cancelling out the tax benefit of the interest charged.

- The cost of preference share capital
    - Preference shares have the characteristics of both debt and equity capital.
    - They are similar to debt capital in that they normally have a fixed annual cost (i.e. a coupon rate similar to an interest rate) and they take priority to equity in the course of annual dividend payments and in the event of liquidation.
    - Preference shares are similar to equity insofar as dividends may be missed in certain circumstances and the dividends are not tax deductible. Note however that most preference shares are cumulative and the dividend must be paid eventually.

- Other sources and issues
  - The cost of short-term debt – if (say) a company's current account is overdrawn throughout the year and from year to year, then its cost should be taken into account when calculating the cost of capital.
  - Hybrid securities – convertibles, warrants etc.
  - The impact of existing and additional financial leverage

- The cost of capital as a marginal cost
  - The marginal cost of capital is the cost of obtaining an extra amount of capital to finance a new project such as the acquisition of a new asset.
  - The marginal cost of capital will vary according to the source of capital that it is intended to use for the proposed project. This can lead to variations in the proposed cost of capital and thus possibly conflicting results in NPV calculations. For instance if a project is to be financed by a new loan or issue of debentures, the providers of the debt finance may charge a large risk premium if the company is already highly geared. Tax relief on the extra interest may or may not apply. Alternatively, the company may consider using equity (in the form of retained earnings). If the opportunity cost of this is low (which is likely in today's low deposit interest environment) then this will mean that the marginal cost of capital will be also be low and will lead to higher forecasted NPV results.

(20 marks)