

# CPA

**Certified Public Accountant Examination**

**Stage: Advanced Level 2 A2.1**

**Subject Title: Strategic Corporate Finance**

**Revision Guide**



INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS OF RWANDA  
*Driving Sustainable Performance*

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# STUDY TECHNIQUE

What is the best way to manage my time?

- **Identify all available free time between now and the examinations.**
- **Prepare a revision timetable with a list of “*must do*” activities.**
- **Remember to take a break (approx 10 minutes) after periods of intense study.**



What areas should I revise?

- **Rank your competence from Low to Medium to High for each topic.**
- **Allocate the least amount of time to topics ranked as high.**
- **Allocate between 25% - 50% of time for medium competence.**
- **Allocate up to 50% of time for low competence.**

How do I prevent myself veering off-track?

- **Introduce variety to your revision schedule.**
- **Change from one subject to another during the course of the day.**
- **Stick to your revision timetable to avoid spending too much time on one topic.**

Are study groups a good idea?

- **Yes, great learning happens in groups.**
- **Organise a study group with 4 – 6 people.**
- **Invite classmates of different strengths so that you can learn from one another.**
- **Share your notes to identify any gaps.**

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# EXAMINATION TECHNIQUES

## INTRODUCTION

Solving and dealing with problems is an essential part of learning, thinking and intelligence. A career in accounting will require you to deal with many problems.

In order to prepare you for this important task, professional accounting bodies are placing greater emphasis on problem solving as part of their examination process.

In exams, some problems we face are relatively straightforward, and you will be able to deal with them directly and quickly. However, some issues are more complex and you will need to work around the problem before you can either solve it or deal with it in some other way.

The purpose of this article is to help students to deal with problems in an exam setting. To achieve this, the remaining parts of the article contain the following sections:

- Preliminary issues
- An approach to dealing with and solving problems
- Conclusion.

## Preliminaries

The first problem that you must deal with is your reaction to exam questions.

When presented with an exam paper, most students will quickly read through the questions and then many will ... **PANIC!**

Assuming that you have done a reasonable amount of work beforehand, you shouldn't be overly concerned about this reaction. It is both natural and essential. It is natural to panic in stressful situations because that is how the brain is programmed.

Archaeologists have estimated that humans have inhabited earth for over 200,000 years. For most of this time, we have been hunters, gatherers and protectors.

In order to survive on this planet we had to be good at spotting unusual items, because any strange occurrence in our immediate vicinity probably meant the presence of danger. The brain's natural reaction to sensing any extraordinary item is to prepare the body for 'fight or flight'. Unfortunately, neither reaction is appropriate in an exam setting.

The good news is that if you have spotted something unusual in the exam question, you have completed the first step in dealing with the problem: its identification. Students may wish to

use various relaxation techniques in order to control the effects of the brain's extreme reaction to the unforeseen items that will occur in all examination questions.

However, you should also be reassured that once you have identified the unusual item, you can now prepare yourself for dealing with this, and other problems, contained in the exam paper.

## **A Suggested Approach for Solving and Dealing with Problems in Exams.**

The main stages in the suggested approach are:

1. Identify the Problem
2. Define the Problem
3. Find and Implement a Solution
4. Review

### **1. Identify the Problem**

As discussed in the previous section, there is a natural tendency to panic when faced with unusual items. We suggest the following approach for the preliminary stage of solving and dealing with problems in exams:

#### **Scan through the exam question**

You should expect to find problem areas and that your body will react to these items.

#### **PANIC!!**

Remember that this is both natural and essential.

#### **Pause**

Take deep breaths or whatever it takes to help your mind and body to calm down.

Try not to exhale too loudly – you will only distract other students!



### **Do something practical**

Look at the question requirements.

Note the items that are essential and are worth the most marks.

Start your solution by neatly putting in the question number and labelling each part of your answer in accordance with the stated requirements.

### **Actively reread the question**

Underline (or highlight) important items that refer to the question requirements. Tick or otherwise indicate the issues that you are familiar with. Put a circle around unusual items that will require further consideration.

## **2. Define the Problem**

Having dealt with the preliminary issues outlined above, you have already made a good start by identifying the problem areas. Before you attempt to solve the problem, you should make sure that the problem is properly defined. This may take only a few seconds, but will be time well spent. In order to make sure that the problem is properly defined you should refer back to the question requirements. This is worth repeating: Every year, Examiner Reports note that students fail to pass exams because they do not answer the question asked. Examiners have a marking scheme and they can only award marks for solutions that deal with the issues as stipulated in the question requirements. Anything else is a waste of time. After you have re-read the question requirements ask yourself these questions in relation to the problem areas that you have identified:

### **Is this item essential in order to answer the question?**

Remember that occasionally, examiners will put 'red herrings' (irrelevant issues) into the question in order to test your knowledge of a topic.

### **What's it worth?**

Figure out approximately how many marks the problem item is worth. This will help you to allocate the appropriate amount of time to this issue.

### **Can I break it down into smaller parts?**

In many cases, significant problems can be broken down into its component parts. Some parts of the problem might be easy to solve.

### **Can I ignore this item (at least temporarily)?**

Obviously, you don't want to do this very often, but it can be a useful strategy for problems that cannot be solved immediately.

Note that if you leave something out, you should leave space in the solution to put in the answer at a later stage. There are a number of possible advantages to be gained from this approach:

- 1) It will allow you to make progress and complete other parts of the question that you are familiar with. This means that you will gain marks rather than fretting over something that your mind is not ready to deal with yet.
- 2) As you are working on the tasks that you are familiar with, your mind will relax and you may remember how to deal with the problem area.
- 3) When you complete parts of the answer, it may become apparent how to fill in the missing pieces of information. Many accounting questions are like jigsaw puzzles: when you put in some of the parts that fit together, it is easier to see where the missing pieces should go and what they look like.

## **3. Find and Implement a Solution**

In many cases, after identifying and defining the problem, it will be easy to deal with the issue and to move on to the next part of the question. However, for complex problems that are worth significant marks, you will have to spend more time working on the issue in order to deal with the problem. When this happens, you should follow these steps:

### **Map out the problem**

Depending on your preferred learning style, you can do this in a variety of ways including diagrams, tables, pictures, sentences, bullet points or any combination of methods. It is best to do this in a working on a separate page (not on the exam paper) because some of this work will earn marks. Neat and clearly referenced workings will illustrate to the examiner that you have a systematic approach to answering the question.

### **Summarise what you know about the problem**

Make sure that this is brief and that it relates to the question requirements. Put this information into the working where you have mapped out the problem. Be succinct and relevant. The information can be based on data contained in the question and your own knowledge and experience. Don't spend too long at this stage, but complete your workings as neatly as possible because this will maximise the marks you will be awarded.

### **Consider alternative solutions**

Review your workings and compare this information to the question requirements. Complete as much of the solution as you can. Make sure it is in the format as stipulated in the question requirements. Consider different ways of solving the problem and try to eliminate at least one alternative.

### **Implement a solution**

Go with your instinct and write in your solution. Leave extra space on the page for a change of mind and/or supplementary information. Make sure the solution refers to your workings that have been numbered.

## **4. Review**

After dealing with each problem and question, you should spend a short while reviewing your solution. The temptation is to rush onto the next question, but a few moments spent in reviewing your solution can help you to gain many marks. There are three questions to ask yourself here:

### **Have I met the question requirements?**

Yes, we have mentioned this already. Examiner Reports over the years advise that failure to follow the instructions provided in the question requirements is a significant factor in causing students to lose marks. For instance, easy marks can be gained by putting your answer in the correct format. This could be in the form of a report or memo or whatever is asked in the question. Likewise, look carefully at the time period requested. The standard accounting period is 12 months, but occasionally examiners will specify a different accounting period.

### **Is my solution reasonable?**

Look at the figures in your solution. How do they compare relative to the size of the figures provided in the question?

For example, if Revenue were 750,000 and your Net Profit figure was more than 1 million, then clearly this is worth checking.

If there were some extraordinary events it is possible for this to be correct, but more than likely, you have misread a figure from your calculator. Likewise, the depreciation expense should be a fraction of the value of the fixed assets.

### **What have I learned?**

Very often in exams, different parts of the solution are interlinked. An answer from one of your workings can frequently be used in another part of the solution. The method used to figure out an answer may also be applicable to other parts of your solution.

### **Conclusion**

In order to pass your exams you will have to solve many problems. The first problem to overcome is your reaction to unusual items. You must expect problems to arise in exams and be prepared to deal with them in a systematic manner. John Foster Dulles, a former US Secretary of State noted that: *The measure of success is not whether you have a tough problem to deal with, but whether it is the same problem you had last year.* We hope that, by applying the principles outlined in this article, you will be successful in your examinations and that you can move on to solve and deal with new problems.

## ***Stage: Advanced Level 2***

**Subject Title: A2.1 Strategic Corporate Finance**

**Examination Duration: 3.5 hours (Open Book)**

### **Assessment Strategy**

#### **Examination Approach**

This examination uses a case-study approach to test students' ability to apply technical skills, critical analysis, and demonstrate synthesis and decision-making. It also tests communication skills and familiarity with contemporary business issues. Questions require students to write reports, which must be tailored to the technical knowledge of the target audience. Students are also presented with the opportunity to demonstrate professional judgement and sensitivity.

#### **Examination Format**

Assessment is by an open-book examination of 3.5 hours' duration. It consists of one compulsory question, based on a case-study (worth 50% of the marks for the examination) plus a choice of two out of three optional questions, which may refer also to material in the major case-study and /or be based on mini case studies, each worth 25% of the marks for the examination.

#### ***Marks Allocation***

The total for the paper is 100 marks.

#### ***Marks***

Question 1 case-study (Compulsory)	50
Questions 2 to 4 (Answer any two, each carries 25 marks)	50
	Total 100

## ***Learning Resources***

### **Core Texts**

Arnold / Corporate Financial Management 4th Edition/ Pearson 2008 / ISBN 9780273725220

### **Manuals**

A2.1 Strategic Corporate Finance – Institute of Certified Public Accountants of Rwanda

### **Supplementary Texts and Journals**

Pilbeam / Finance and Financial Markets / McMillan 2010 / ISBN 978-0-230-23321-8

### **Recommended Journals**

Harvard Business Review.  
Investment International.

### **Useful Websites**

(as at date of publication)

[www.icparwanda.com](http://www.icparwanda.com)

<http://www.globaltaxnetwork.co.uk/>

<http://www.rse.rw/>

<http://www.internationaltaxreview.com/>

<http://www.rra.gov.rw/>

[www.cfo.com](http://www.cfo.com) -CFO.com

[www.ifac.org/](http://www.ifac.org/) - International Federation of Accountants.

[www.ft.com](http://www.ft.com) - Financial Times.

[www.wsj.com](http://www.wsj.com) - The Wall Street Journal online.

[www.investmentinternational.com](http://www.investmentinternational.com) - Investment International.

<http://www.gfmag.com/>

<http://www.rse.rw/>

# **REVISION QUESTIONS AND SOLUTIONS**

**Stage: Advanced Level A2.1**  
**Subject Title: Strategic Corporate  
Finance**

## ***Exercise 1 - a case study with 4 questions***

### **Background**

Kingbrew Limited is a local based company that brews and distributes beer to the Rwandan market. Kingbrew Limited was founded in 2000 by Ken Adwe, who previously was director of development of an international food and drinks company. During the first four years of Kingbrew's existence the company employed an entrepreneurial structure. The company achieved significant growth based mainly on the management team's close attention to customers' needs.

In 2005 the company was floated at a share price of RWF5,000 with a total market capitalisation of RWF250,000Million. The company then embarked upon a period of restructuring and corporate consolidation. Since flotation the company has not raised any further funds, thus remaining wholly equity financed. Any investment has been funded from retained earnings. The company has always paid a significant dividend to shareholders.

Since flotation, profits have plateaued, whilst average industry profitability has increased by 10% year-on-year. Ken Adwe, the company's Chief Executive was recently quoted at a recent management conference of pursuing a limited growth or "dull is beautiful" strategy.

The following audited accounts for the year ended 31<sup>st</sup> December 2007 were presented to shareholders at an AGM on 21<sup>st</sup> February 2008.

<b>Kingbrew Ltd</b>		
<b>Balance Sheet as at 31<sup>st</sup> December 2007</b>		
	2006	2007
	RWF '000 m	RWF '000 m
<b>Non Current Assets at NBV</b>		
Property and Plant	220	240
Other Assets	30	40
<b>Total Non-Current Assets</b>	250	280
<b>Current Assets</b>		
Inventories	30	30
Trade Receivables	25	30
Cash & Cash Equivalents	45	20
<b>Total Current Assets</b>	100	80
<b>Total Assets</b>	350	360



<b>Kingbrew Ltd</b>		
<b>Balance Sheet as at 31<sup>st</sup> December 2007</b>		
	2006	2007
	RWF '000 m	RWF '000 m
<b>Equity &amp; Liabilities</b>		
<b>Equity Attributable to Equity Holders</b>		
Ordinary Share Capital (50m shares at RWF5,000)	250	250
Other Reserves	50	60
	300	310
<b>Non Current Liabilities</b>		
<b>Current Liabilities</b>		
Trade payables	20	20
Dividend payable	10	10
Short Term Borrowings	0	10
Current portion of long term borrowings	20	10
<b>Total Current Liabilities</b>	50	50
<b>Total Liabilities</b>	350	360

Kingbrew Ltd shares are currently trading at RWF3,200 cum div.

A dividend of RWF200 per share was declared for the year ended 31<sup>st</sup> December 2007. It is expected that dividends will increase by 5% each year hereafter (as has been the case since flotation).

The AGM ended with a vociferous reaction from Kingbrew Ltd's shareholder community. A summary of the comments received were as follows:

“management of Kingbrew Ltd are far too prudent”

“Kingbrew needs to get aggressive in the marketplace”

“Kingbrew has not subscribed to the drink responsibly campaign and is suffering as a result”

“the company has not embraced the opportunity that is corporate social responsibility”

“why has Kingbrew lost key staff members to competitors?”

“it is clear to see that customer loyalty has been impaired over the last two years”

“has Kingbrew Ltd any discernible strategy other than sticking its head in the proverbial sand”

### **Proposed Strategy**

Ken and his Board colleagues have been surprised by the reaction and arranged a strategy weekend away for the senior staff and stakeholder groups. During the weekend a strategic planning process was worked through. A summary of the weekend's outputs were:

### **Mission Statement**

**“To achieve increased shareholder wealth through the pursuit of a growth strategy of product and market development employing both organic and acquisitive methods in a socially responsible manner”**

### **Strategic Objectives:**

- To acquire beer brands which deliver a positive net present value in four years when discounted at the company's after-tax cost of capital of 12%
- To enter international markets offering high future growth potential
- To sell off any under-performing subsidiaries
- To invest annually RWF5,000 million on socially responsible projects
- To raise RWF100,000 million for the purposes of pursuing an aggressive growth strategy

Following the communication of the mission statement and strategic objectives throughout the organisation Kingbrew Ltd's development team have spent significant time researching potential marketplace opportunities. Their findings are as follows:

### **Product Development**

The development team are of the view that the local beer market could best be penetrated selling original Chinese Beers. To that end they have identified two potential investment options pertaining to the sale of Chinese Beer. These are detailed as follows:

### **Organic Growth**

Purchase an exclusive four-year licence to brew a Chinese Beer brand 'Ting-Ting' at a one-off cost of RWF4,000 million, plus a royalty payment of RWF100 per litre brewed.

Kingbrew Ltd would have to adapt its Kigali brewery at a capital cost of RWF2 billion to facilitate the production of the beer.

Projected annual sales of 'Ting-Ting' beer are as follows;

<b>Ting Ting – Projected Sales</b>					
<b>Product</b>	<b>Volume</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Cases	20 * 500ml bottles	40,000	60,000	100,000	100,000
Keg	10 Litres	20,000	30,000	50,000	50,000

Kingbrew's marketing department expect that the above projected volumes could be achieved if RWF1,000 million was spent immediately on an advertising campaign, supported by an annual RWF500 million campaign thereafter ending in year three.

Each Keg will sell for RWF20,000 and each bottle for RWF2,000 in 2009 and 2010; thereafter a 20% annual price increase is anticipated.

The average expected distribution costs will be RWF15,000 for each keg and RWF9,000 for each case. These costs are expected to remain fixed over the next four years.

The variable cost of producing a litre of this beer is RWF200. This is expected to increase by 50% in 2012.

### **Acquisitive Growth**

Kingbrew Ltd has the option to buy CHST Limited, a private company that distributes a Chinese beer called 'Great Wall' The company has held the distribution rights for the last six years and has recently purchased the perpetual right to distribute this beer locally.

The company's most recent Balance Sheet reads as follows:

<b>CHST Limited</b>	
<b>Balance Sheet as at 31<sup>st</sup> December 2007</b>	
	2007
	RWF m
<b>Non Current Assets at NBV</b>	
Property and Plant	2,500
Other Investments	600
<b>Total Non-Current Assets</b>	3,100
<b>Current Assets</b>	
Inventories	400
Trade Receivables	200
Cash & Cash Equivalents	100
<b>Total Current Assets</b>	700
<b>Total Assets</b>	3,800
<b>Equity &amp; Liabilities</b>	
<b>Equity Attributable to Equity Holders</b>	
Share Capital (@ RWF2 each)	200
Other Reserves	2,700
	2,900
<b>Non Current Liabilities</b>	
Long term borrowings	400
<b>Current Liabilities</b>	
Trade payables	300
Short Term Borrowings	100
Current portion of long term borrowings	100
<b>Total Current Liabilities</b>	500
<b>Total Liabilities</b>	3,800

Kingbrew Ltd's Financial Controller has asked for your assistance in valuing CHST Limited. Discussions with Kingbrew Ltd's staff have revealed the following:

**Financial Director**

- A recent independent expert valuation of CHST Limited's property and plant stands at RWF1,500 million.
- Other investments in CHST Limited's Balance Sheet represents a 30% stake in a French brewing company. CHST Limited recently received an offer of RWF800 m for these shares. It rejected this offer as this company is likely to be floated shortly with an indicative market capitalisation of RWF10,000 million.
- Kingbrew Ltd will not assume any of CHST Limited's borrowings (long term or short term) or cash holdings.

**Due Diligence by Auditors**

- Inventories valued at RWF50m in CHST Limited's Balance Sheet as at 31/12/2007 are obsolete and of no economic value.
- Trade receivables reported as at 31/12/2007 include RWF40m which is considered to be uncollectible.
- CHST Limited's average annual post tax profits for the last five years have been confirmed at RWF500m. This average level of profitability is expected to recur annually hereafter

**Development Director**

- If CHST Limited was acquired, Kingbrew Ltd plans to close the company's distribution centre at a cost (before tax relief) of RWF6,000 million. This will generate annual post tax savings of RWF240m.

Corporation Tax is paid at 10%.

For the purpose of arriving at an indicative cost of the company a simple average of an asset based and earnings based valuation (using a price earnings multiple of 14 times) will be applied.

The Board of Kingbrew Ltd has agreed that it will invest in only one Chinese beer.

## Market Development

Kingbrew Ltd considers The United Arab Emirates a market offering significant growth opportunity. Kingbrew Ltd's Development Director has identified a UAE based fruit juice distributor called Paul Limited as a potential takeover target. Paul Limited has lucrative long term contracts with hotel chains throughout the Emirates. Whilst Paul Limited has made losses for the last two years, the Development Director is confident that this trend could be reversed if managed with Kingbrew Ltd's expertise in distribution.

Kingbrew Ltd's Financial Controller has recently met with representatives of Paul Limited who have indicated their general agreement to a proposed takeover.

They have indicated that they will sell the company for a cash consideration of 500 Million UAE Dirhams (AED), with Kingbrew Ltd assuming legal responsibility for all contingent/outstanding legal claims against the company. This price is considered acceptable and it is planned for the takeover to be concluded in three month's time, on 1<sup>st</sup> December 2008.

Kingbrew Ltd's accountants, lawyers, bankers and corporate finance advisors have been working on the proposed takeover and a summary of progress to date is as follows:

## Due Diligence Audit

The company's auditors have compiled a report on the takeover target. Salient extracts from their report read as follows:

### (a) Summary Balance Sheet

<b>PAUL</b>	
<b>Projected Balance Sheet as at 1st December 2008</b>	
	<b>AED m</b>
Non Current Assets	800
Current Assets	200
Current Liabilities	-100
Contingent Liabilities	-400
<b>Net Assets to be Acquired</b>	<b>500</b>

### (b) Financial Forecasts

Based on Kingbrew Ltd's plans for Paul Limited, the company will achieve breakeven in the first two years following acquisition. During this time, the company's Balance Sheet will not change significantly. For a number of years thereafter modest profits are expected to be achieved.

### (c) Contingent Liabilities

"A review of the contingent liabilities included in the projected Balance Sheet of Paul as at 1<sup>st</sup> December 2008 raises significant concerns insofar as the ultimate liability cannot at the time of writing this report be accurately assessed. We will need to carry out significant additional work to establish an accurate assessment of the contingent liabilities likely to exist as at 1<sup>st</sup> December 2008. This report will take some two months

to produce. We would respectfully advise our client to proceed with the proposed takeover with caution until this report can be finalised.”

### **Financing Plans**

- The company’s plans to finance the acquisition by borrowing in RWF (its domestic currency).
- In order to preserve the new Division’s cash reserves it has agreed with its bankers to make interest only repayments on this loan for the next two years.
- The company plans to remove any foreign currency transaction risk by **immediately** entering into a Forward Exchange Contract to buy 500 Million UAE Dirham.

### **Exchange Rates**

The company’s bankers have quoted the following exchange rates to apply to transactions relating to the purchase of the UAE Dirham (using RWFs):

- Spot rate: 4.8 - 4.9 AED (UAE Dirham) for RWF 1,000
- Three month forward rate: 5 - 5.2 AED for RWF1,000

The RWF is expected to strengthen against most international currencies over the next five years. The projected exchange rates between the RWF and AED for the next fifteen months are as follows:

1<sup>st</sup> December 2008 – RWF1,000 = 5 UAE Dirham *or* RWF200.00 = AED1

1<sup>st</sup> December 2009 - RWF1,000 = 6 UAE Dirham *or* RWF166.67 = AED1

(Assume it is now 1<sup>st</sup> September 2008)

### **Financing the Strategy**

Kingbrew Ltd plans to raise RWF100B to fund its aggressive growth strategy. The Financial Director has identified two possible options for raising the necessary finance. Details are as follows:

#### **Option 1**

Make a one for four rights issue at a price of RWF2,400 per share.

#### **Option 2**

Issue RWF100,000 Million 10% irredeemable bonds at par.

### **Corporate Social Responsibility (CSR)**

Ken Adwe has decided to further the implementation of the company's strategic investment of RWF5,000 million annually on CSR initiatives. To that end he has agreed to chair a working committee that has been charged with considering the implementation of a CSR investment strategy. However, he is not particularly aware of the concept of CSR, and the implications of the CSR investment which has been agreed as a strategic objective.

### **Exercise 1-1 (Compulsory) (50 Marks)**

Prepare a report for the Board of Directors that:

- (a) Computes the net present value of the proposal to buy the 'Ting-Ting' licence.  
(15 marks)
  
- (b) Ascertain an assets based and earnings based valuation of CHST Limited and compute the NPV associated with that investment.  
(15 Marks)
  
- (c) Assesses the strategic issues relating to both the organic growth and acquisitive growth options identified.  
(15 Marks)
  
- (d) Concludes whether the proposed organic or acquisitive strategy should be pursued.  
(5 marks)

**Total: 50 Marks]**

### **Exercise 1-2**

Prepare a briefing note for The Board of Directors of Kingbrew Ltd that:

- (a) Computes the value of the RWF loan to be raised if a forward exchange contract is entered into for the purchase of the UAE company.  
(5 Marks)
  
- (b) Considers the appropriateness of a forward exchange contract to manage the foreign exchange transaction risk associated with the proposed takeover.  
(5 Marks)
  
- (c) Describes and illustrates clearly the Foreign Currency Translation Risk that the company may be exposed to if the takeover progresses as planned.  
(8 Marks)
  
- (d) Describes and illustrates what steps management could take to eliminate the potential for such foreign currency translation risk.  
(7 Marks)

**[Total: 25 Marks]**



### **Exercise 1-3**

#### **Required:**

At the request of Ken Adwe of Kingbrew Ltd, prepare a presentation in advance of the first meeting of the Corporate Social Responsibility (CSR) committee, that:

- (a) Describes the meaning of CSR (providing examples of same).  
(5 Marks)
- (b) Evaluates the potential financial risks and rewards associated with the strategic investment of RWF5 Million per year.  
(10 Marks)
- (c) Examines the relevance/impact of the proposed CSR strategy to the financial results of Kingbrew Ltd.  
(5 Marks)
- (d) Provides guidance on the implementation of the CSR strategy.  
(5 Marks)

**[Total: 25 Marks]**

### **Exercise 1-4**

Prepare a briefing advising Kingbrew Ltd in respect of each of the following financing options:

#### **OPTION A - A Rights Issue is made**

- (a) Compute the value of the rights attaching to each ordinary share.  
(5 Marks)
- (b) Compute the market value of an ordinary share if a rights issue is made and fully subscribed  
(5 Marks)
- (c) Evaluate from the company's perspective, how important the pricing of the rights issue is likely to be.  
(5 Marks)

#### **OPTION B - Irredeemable Bonds are issued**

- (a) Compute the company's WACC if the bonds are issued and discuss the significance for the existing equity investors of raising the proposed RWF100 Million as debt finance.  
(10 Marks)

**[Total: 25 Marks]**

**TOTAL 100 Marks**

## ***Exercise 2 Objectives of Financial Management***

- a. You have been summoned to a meeting with your new managing director. He states that as maximisation of the company's share price depends upon the level of earnings per share that is achieved, it is vital to improve profits next year. He gives you a list of suggested ways to achieve this. The list includes:
- (i) Minimise capital investment to reduce depreciation charges.
  - (ii) Increase wages and salaries by less than the level of inflation and sell the land that is currently used as a staff sports field.
  - (iii) Reduce overdraft charges by delaying payments to creditors.
  - (iv) Delay expenditure on new equipment that will reduce pollution levels from the company's factory.

### **REQUIREMENT:**

Prepare a memo to the managing director discussing the possible effects on relevant stakeholders of the managing director's suggestions and whether or not they are likely to result in an increased share price.

- b. 'During recessionary times the key objective of the executive directors of companies that are listed on the Stock Exchange is to ensure that their company survives so that they may keep their jobs.'

### **REQUIREMENT:**

Discuss the validity of this statement and explain what financial or other factors are likely to influence executive directors' objectives.

- c. Discuss whether or not the objectives of directors of a quoted company are likely to conflict with those of the company's shareholders.
- d. Discuss the importance and limitations of ESOP's (executive share option plans) to the achievement of goal congruence within an organisation
- e. (a) 'Managers and owners of businesses may not have the same objectives.' Explain this statement, illustrating your answer with examples of possible conflicts of interest.
- (b) In what respects can it be argued, that companies need to exercise corporate social responsibility?

- (c) Explain the meaning of the term 'Value for Money' in relation to the management of publicly owned services/utilities.

### Exercise 3

The management of **Easy Limited** are reviewing the company's capital investment options for the coming year, and are considering 6 projects.

Project A would cost RWF29,000 now, and would earn the following cash profits:

1 <sup>st</sup> Year	RWF8,000	3 <sup>rd</sup> Year	RWF10,000
2 <sup>nd</sup> Year	RWF12,000	4 <sup>th</sup> Year	RWF6,000

The capital equipment purchased at the start of the project could be resold for RWF5,000 at the start of year 5.

Project B would involve a current outlay of RWF44,000 on capital equipment and RWF20,000 on working capital. The profits from the project would be as follows:

Year	Sales RWF	Variable Costs RWF	Contribution RWF	Fixed Costs RWF	Profit RWF
1	75,000	50,000	25,000	10,000	15,000
2	90,000	60,000	30,000	10,000	20,000
3	42,000	28,000	14,000	8,000	6,000

Fixed costs include an annual charge of RWF4,000 for depreciation. At the end of year 3 the equipment would be sold for RWF5,000.

Project C would involve a current outlay of RWF50,000 on equipment and RWF15,000 on working capital. The investment in working capital would be increased to RWF21,000 at the end of the first year. Annual cash profits would be RWF18,000 per annum for 5 years.

Project D would involve an outlay of RWF20,000 now and a further outlay of RWF20,000 after one year. Cash profits thereafter would be as follows:

Year 2	RWF15,000	Year 3	RWF12,000	Years 4 – 8	RWF8,000 pa
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Project E is a long-term project, involving an immediate outlay of RWF32,000 and annual cash profits of RWF4,500 pa in perpetuity.

Project F is another long-term project, involving an immediate outlay of RWF20,000 and annual cash profits as follows:

Year 1 – 5	RWF5,000	Year 6 – 10	RWF4,000	Year 11 in	RWF3,000
	0			perpetuity	

The company discounts all projects of 10 years' duration or less at a cost of capital of 12% and all longer projects at a cost of capital of 15%.

Ignore taxation and uncertainty in the forecasts of cash flows.

**REQUIREMENT:**

- (a) Calculate the NPV of each project and determine which should be undertaken by the company.
- (b) Calculate the IRR of projects A and C.

4. **Teleco plc**, a telecommunications company, is proposing to introduce a new broadband service to complement its existing services. It is expected that the service will be taken up by many existing customers but will also be attractive to new customers. It is estimated that the project will last for five years from the start of 20X4 to the end of 20X8 when it will then have to be replaced by a more advanced product.

You have been presented with the following information:

1. A feasibility study costing RWF100,000 was completed and paid for last year. The study recommended that the company buys new equipment costing RWF10m to be paid at the start of the project. This equipment would be depreciated at 20% of cost per annum and sold for RWF1m, at the end of the project. The company will finance this capital expenditure by means of a five year loan at an interest rate of 8% per annum.
2. As a result of the new investment some old equipment could be sold for cash at the start of the project for its book value of RWF250,000. This machine had been scheduled to be sold for cash at the end of 20X5 for its book value of RWF50,000.
3. The sales director hired a company to undertake market research and this has indicated that demand for the product in 20X4 will be from 50,000 users and that this should increase at the rate of 20% per annum over the life of the project. The cost of the research is RWF150,000 and this will be paid in 20X4. The price which Teleco

will initially charge for the service is RWF100 and the Regulator is unlikely to sanction any increase in this over the life of the project.

4. The variable costs of providing the new service, which include administration and billing, are estimated at RWF40 per annum, per user. This cost will rise by 5% per annum.
5. On introduction of the new service Teleco will suffer a reduction in demand for some of its existing services. The lost contribution from the existing services is estimated at RWF80,000 in 20X4 and to reduce by RWF10,000 per annum thereafter.
6. Three employees currently working in another department and earning RWF30,000 each would be transferred to work on the new product and a supervisor currently earning RWF40,000 would be promoted to work on the new project at a salary of RWF50,000. Agreement has been reached with the trade union for wages and salaries to be increased by 5% each year from the start of 20X5.
7. As a result of introducing the new product four employees in another department currently earning RWF25,000 each would have to be made redundant at the end of 20X4 and paid redundancy pay of RWF50,000 each.
8. The management accountant has indicated that existing central administration charges amounting to RWF30,000 per annum will be allocated to the project.
9. The marketing department has advised that advertising and marketing costs will amount to RWF200,000 for the first two years, reducing to RWF100,000 for the next two years and zero in 20X8.
10. The project team will be accommodated in a presently empty building for which an offer of RWF2m has recently been received from another company. If the building is retained, it is expected that property price inflation will increase its value to RWF3m after five years.
11. Working capital requirements are estimated at RWF200,000. This will be required at the commencement of the project, at the start of 20X4.
12. The company is subject to Corporation Tax at 20% and the tax accountant has computed the tax payable at RWF20,000 on the first year's profits (due to the impact of capital allowances) and RWF500,000 each year thereafter. Taxation payments are delayed one year.
13. The company's weighted average cost of capital is estimated at 10%.

Assume that all cash flows occur at year-end, unless otherwise indicated.

**REQUIREMENT:**

It is now 31<sup>st</sup> December 20X3. Prepare and present a cash flow budget for this project and calculate the Net Present Value and the Discounted Payback Period.

What other factors should be taken into account?

## Exercise 5

### 5.

An **estate agency** business has been researching for some time the potential of providing prospective buyers with a web-based/virtual tour camera of the properties they are interested in. This will be achieved by placing a web-Cam in each property they hope to sell.

The indicative revenues and costs associated with the project are as follows:

- The software system to enable the technology will cost RWF 150,000,000 at the outset of the project. Due to expected technological advancements it will have no value at the end of the project. This cost is treated as capital expenditure for tax purposes.
- An annual software licensing and upgrade fee of RWF 1,500,000 is payable for as long as the software is being used. This cost is treated as revenue expenditure for tax purposes.
- A sub-contractor has been engaged to install the web camera in each residence at a cost of RWF 15,000 per installation. This fee has been fixed for three years.
- The estate agents will charge an average of 3% commission for each house sold, using the web cam technology.
- The average price of houses sold by the agency will be RWF 90,000,000 for the starting year of the project. House price inflation is expected to rise at 10% each year thereafter.
- Given the innovative but new nature of the technology, it is expected that 30% of houses advertised using this medium would be sold. If a property remains unsold after a number of weeks it will be removed by the vendor from the estate agent. The same applies to houses being sold using conventional methods. The business normally achieves a 50% sale rate for properties sold in the conventional manner.
- 5% commission is charged for houses sold in the conventional manner.
- The web site will need to be constantly monitored and administered at a cost of RWF 15,000,000 per annum. This is expected to rise by 5% per annum.
- As a result of the use of this new technology it is estimated that the estate agency will achieve 400 clients per annum, rising by 100 clients in the second year. As the competition grows and the technology ages, it is expected that the third year's trading volumes will reduce by 60%.
- It is expected that the above numbers will include 100 residences transferring each year from the present conventional selling methods. This is because of the attraction of the lower commissions for property sellers.
- Industry experts advise that at the end of three years that the technology will have been surpassed, at which stage it will become redundant and have no economic value.
- Corporation tax on profits currently stands at 20%, payable in the year in which the profits are derived. Capital allowances are allowed at 20% straight line. Balancing charges/allowances are allowed in the year following the sale/cessation of use of assets.
- On receipt of a detailed report on the progress of the initiative, The Institute of Auctioneers has agreed to contribute RWF 24,000,000 in year 3 towards the cost of the project.

- The agency's real cost of funds is 8% p.a., which will apply for the full period of the project. As a real rate, it does not need to be adjusted for inflation.

**Requirement:**

Prepare a brief report to potential investors which includes the following:

- (a) A financial appraisal of the proposal, (17 Marks)
- (b) A consideration of the wider factors relevant to the decision to invest in the proposal. (8 Marks)

**[Total: 25 Marks]**

**6.** Laserlabs, a medical practice wishes to develop a facility for eye laser surgery.

They have researched the options at a recent trade fair and are interested in a Florida based company's technology. The financial proposal offered by the company seems to be more flexible and cost effective than its nearest rivals. Whilst the technology is cutting edge it remains untested in the marketplace.

Laserlabs have met with the company's European representative and have drafted an outline contract as follows:

**Legal Form and Duration:** Purchase a three year licence at a one off cost of RWF600,000

**Equipment Cost:** the initial capital cost to purchase the hardware and operating software will be RWF500,000. The software and hardware will have no expected resale value at the end of the three years.

**Annual Software Licence:** the annual licensing fee will be RWF50,000.

**Royalty Payments:** A royalty fee of RWF150 per eye treated must be paid.

**Volume Permitted:** 10,000 eye surgery episodes per year.

**Consumables:** Laserlabs must purchase the surgical consumables from the Florida based supplier at a cost of RWF100 per eye treated.

Laserlabs have researched their internal costs associated with providing the surgery. Their findings were as follows.

**Staffing**

A surgical ophthalmologist will be employed at a base salary of RWF150,000. The ophthalmologist will be paid an annual bonus of RWF50,000 in any year that the number of eyes surgery episodes exceeds 8,500.

A locum ophthalmologist will be employed for the four weeks that the full time surgeon is on annual leave. This will cost RWF10,000 per week.

A nurse will be employed at an annual cost of RWF35,000.

All permanent staff's basic salary costs are expected to rise by 8% per annum commencing in year 3 of the project.

A contract has been agreed with a full time cleaning/maintenance firm. The quarterly cost will total RWF20,000 with a 5% annual uplift commencing in year 2 of the project.

Laserlabs has researched the income potential of the venture. Its sales projections are as follows:

**Private patients**

The forecast private patient referrals are as follows:

Year 1 = 2,000

Year 2 = 3,000

Year 3 = 4,000

The charge per eye correction will be RWF750 which will remain fixed for the next three years.

**Public Patients**

The district health board has indicated that it would be willing to enter into a three year contract for its patients, once the capability of the technology has been demonstrated. The health board intends to buy a block contract of 6,000 eye corrections at a fixed annual price of RWF1,000,000 with no inflation uplift over the three years.

**Other Information**

Laserlabs assesses potential investments based on a combination of the following criteria:

Payback Period minimum of 3 years.

Delivers a positive Net Present Value (NPV)

Laserlabs Limited has a cost of capital of 10%.

Ignore Taxation

**REQUIREMENT:**

Prepare a report for the Board of Laserlabs Limited which:

Recommends whether or not to sign the draft contract based on a financial assessment.

(18 Marks)

Considers three qualitative factors the management of Laserlabs should consider prior to making a final decision whether or not to sign the draft contract

(6 Marks)

Presentation mark

(1 Mark)

**Pilot Paper - [Total: 25 Marks]**



## *Suggested answers*

### **SOLUTION 1 -1**

#### Report

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To: Board of Directors, Kingbrew Ltd

From: Corporate Finance Manager

Date: 1<sup>st</sup> September 2008

Subject: Evaluation of Proposed Investment in Chinese Beer

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#### **Introduction**

This briefing note reports on the financial results of the two options identified to penetrate the Rwandan beer market. The two options are to:

- 1) Purchase the exclusive four year licence to brew ‘Ting-Ting’
- 2) Purchase CHST Limited with the perpetual distribution rights for ‘Great Wall’

#### **Approach**

The value of the Ting-Ting proposal has been derived by computing the Net Present Value of the indicative cash flows of the option over a four year period. The discount rate used is Kingbrew’s after tax cost of capital of 12%.

The value of the proposed purchase of CHST Limited was derived by comparing the average value of the company (using both an assets and earnings based approach) with the present value of the perpetual earnings.

#### **Findings**

A summary of the findings of both proposals are as follows:

Net Present Value - Comparison	RWF m
Licence for Ting-Ting	146.67
Purchase CHST Limited	1,331.67

The NPV for the purchase of CHST Limited delivers a net present value of RWF1,185m greater than the Ting-Ting option.

Detailed workings can be found as follows:

- Appendix A – Determination of NPV of Ting-Ting proposal.
- Appendix B – Determination of indicative valuation of CHST Limited and the NPV of the proposal.

## Consideration of Strategic Factors

### Purchase Licence for Ting-Ting

- What will happen with the licence after four years, especially if the brand is successful?
- Can the licence be revoked with a financial claw-back if unsuccessful?
- We are investing significantly more with increased financial risk
- Have we the skills and ingredients to brew the Chinese beer properly?
- How will the taste of the beer be received by Rwandan customers?
- Would it be possible to acquire further international licences?
- How will its sales impact on the company's present sales?

### Purchase of CHST Limited

- We are buying an established brand with an established track record
- Will Kingbrew Ltd be able to merge Great Wall effectively into its present distribution network?
- Would it be possible to acquire further international licences?
- Will its sales cause any displacement effects for Kingbrew's existing products ?

## Conclusion

The purchase of the Ting-Ting licence poses increased financial risks to Kingbrew Ltd as it will commit RWF7 Million immediately.

The lower business risk profile of the proposition to buy CHST Limited along with its lower financial risk and higher indicative NPV would strongly suggest that the preferable option is to purchase CHST Limited.

## Appendix A

Ting-Ting - Net Present Value Analysis			RWF m	RWF m	RWF m	RWF m
Cash Flow	Not e	Year 0	2009	2010	2011	2012
Sales Revenues	1		2,000	3,000	6,000	7,200
Direct Materials Cost	2		-120	-180	-300	-450
Distribution Costs	3		-660	-990	-1,650	-1,650
Royalty payment @ RWF.10 per litre			-60	-90	-150	-150
Advertising		-1,000	-500	-500	-500	
Licence Purchase		-400				
Factory Renovations		-2,000				
Net Annual Cash flow		-7,000	660	1,240	3,400	4,950
Discount Factor @ 12%	4	1	0.893	0.797	0.712	0.636
Discounted Cash flows		-7,000	589.38	988.28	2,420.8	3,148.2
<b>Net Present Value</b>						<b>146.67</b>

	RWF m	RWF m	RWF m	RWF m
<b>Note 1 - Sales Revenues</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Cases Sold	40	60	100	100
Price per case	40	40	48	57.6
Total Revenue Cases	1,600	2,400	4,800	5,760
Kegs Sold	20	30	50	50
Price per keg	20	20	24	28.8
Total Revenue Kegs	400	600	1200	1440
<b>Total Sales Revenues</b>	<b>2,000</b>	<b>3,000</b>	<b>6,000</b>	<b>7,200</b>

	RWF m	RWF m	RWF m	RWF m
<b>Note 2 - Direct Materials Cost</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Cases Sold	40	60	100	100
Litres Per Case	10	10	10	10
Total Litres Cases	400	600	1000	1000
Kegs Sold	20	30	50	50
Litres per keg	10	10	10	10
Total Litres Kegs	200	300	500	500
<b>Total Litres Produced</b>	<b>600</b>	<b>900</b>	<b>1,500</b>	<b>1,500</b>
Variable Cost Per Litre	0.2	0.2	0.2	0.3
<b>Total Litres Produced</b>	<b>120</b>	<b>180</b>	<b>300</b>	<b>450</b>

	RWF m	RWF m	RWF m	RWF m
<b>Note 3 - Distribution Cost</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Cases Sold	40	60	100	100
Distribution Cost Per Case	9	9	9	9
Total Distribution Costs - Cases	360	540	900	900
Kegs Sold	20	30	50	50
Distribution Cost Per Keg	15	15	15	15
Total Distribution Costs - Keg	300	450	750	750
<b>Total Distribution Cost</b>	<b>660</b>	<b>990</b>	<b>1,650</b>	<b>1,650</b>

<b>Note 4 Cost of Capital (Equity) - (Gordon's Growth Model)</b>
$[\frac{.20 \times (1 + .05)}{(3.2 - .20)}] + .05 =$ 12.00%

## Appendix B

<b>CHST Limited - Asset Valuation</b>	<b>RWF m</b>
Property at recent valuation	1,500
Other Investments (30% of RWF10M)	3,000
Inventories (400-50)	350
Trade receivables (200-40)	160
Trade payables	-300
<b>Indicative Net Assets Valuation</b>	<b>4,710</b>

<b>CHST Limited - Earnings Based Valuation</b>	<b>RWF m</b>
Recurrent annual post tax profits	500
Annual closure savings	240
Annual Recurrent Profits	740
Price earnings multiple	14
Company Valuation	10,360
Less: After tax closure costs	-5,400
<b>Indicative Earnings Valuation</b>	<b>4,960</b>

<b>Net Present Value Calculation</b>	<b>RWF m</b>
Indicative Net Assets Valuation	4,710
Indicative Earnings Valuation	4,960
Averaged valuation - Year 0 Cost	-4,835
PV of Perpetual After Tax Profits = RWF740 m/.12	6,166.67
<b>Net Present Value of Proposal</b>	<b>1,331.67</b>

## SOLUTION 1-2

### Briefing Note

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To: Board of Directors, Kingbrew Ltd  
From: Corporate Finance Manager  
Date: 1<sup>st</sup> September 2008  
Subject: Proposed Takeover of UAE Company

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### Introduction

This briefing note advises management of the foreign currency risks associated with the proposed takeover of Paul Limited.

### Foreign Currency Transaction Risk - Forward Exchange Contract

If you wish to avoid the risk that the cost of the proposed takeover will increase as a result of the UAE Dirham strengthening against the RWF between today's date and the 1<sup>st</sup> December 2008 you could enter into a forward exchange contract.

This would involve entering a legally binding contract now to purchase 500 Million UAE Dirhams at a pre-agreed rate in three month's time to be used to pay the shareholders the agreed consideration of 500 Million UAE Dirhams on the planned date of completing the proposed takeover.

The transaction can be summarised as follows:

<b>Forward Exchange Contract</b>	RWF m
Purchase 500 Million AED (UAE Dirhams) at RWF1,000 = AED5 (AED500/5)	100,000

Thus, the company would cost a **guaranteed** RWF100,000 Million.

### Suitability of Forward Exchange Contract

As your auditors have expressed significant concern regarding the assessment of the contingent liabilities of the company, I would advise against entering a forward exchange contract. This is because if the takeover does not proceed due to any further difficulties that may emerge you will still be bound by the contract to buy AED 500 Million on 1<sup>st</sup> December 2008. Whilst such a commitment could be resolved by selling the AED 500m spot rates on 1<sup>st</sup> December 2008, it may prove to be extremely expensive to do so, particularly if the RWF strengthens over the next three months.

A preferable method of minimising the transaction risk would be to buy a foreign currency option to buy AED 500 Million at an agreed rate any time between now and ("say") six months from now. This provides the flexibility to let the option lapse in the event that the takeover does not occur.

### Foreign Currency Translation Risk

If, as would be the case if you acquired the UAE company, an organisation owns companies in foreign economies with a currency different from its domestic currency it will have to

include the value of such investments in its year-end balance sheet. For the purposes of inclusion it will convert the value of the foreign investment into its domestic currency at the exchange rate prevailing at each balance sheet date. Where such investments are held for more than one year there is a risk that the value of the investment (for inclusion in Balance Sheet) may suffer a diminution in value if the foreign currency has weakened viz. the domestic currency between year-end dates. This is known as foreign currency translation risk.

### Illustration of Potential Foreign Currency Translation Risk

If Kingbrew Ltd purchases Paul Limited for 500 Million AED at (“say”) an exchange rate of RWF1,000=AED5 (*RWF200 = AED1*) you will require a loan of RWF100,000 million for the purchase.

On 1<sup>st</sup> December 2008 the net assets of the UAE company will be worth RWF100,000 Million.

Thus, on 1<sup>st</sup> December 2008 the value of the net assets acquired would equal the loan used to finance the acquisition (at the expected year end closing rate of RWF200 =AED1

If, as forecast the RWF strengthens against the AED during the year ended 1st December 2009, the assets acquired (UAE AED assets) will be valued at RWF83,335 m when consolidated onto your company’s balance sheet as at that date. These net assets will be compared to the RWF100,000m AED loan used to finance the acquisition. Thus, during the year your balance sheet will have suffered a diminution in value of RWF17,7000m as a result of the change in currency rates that occurred during the year. The following schedule sets out the details.

PAUL LIMITED	Net Assets 1/12/2008 Acquired	Balance Sheet as at	
		1/12/2008 RWF200=AED 1	1/12/2009 RWF167= AED1
	AED m	RWF'000 m	RWF '000 m
Net Assets to be Consolidated	500	100	83.335
RWF Loan to Finance Acquisition	100	100	100
Loss in Balance Sheet Value as at 1st December 2009.			-16..665

### Management of Currency Translation Risk

An effective method used to eliminate foreign currency translation risk is to finance the foreign investment with a loan denominated in that foreign currency.

In your case a 500 Million UAE Dirham loan could be raised to finance the takeover. As this loan would also have to be translated at your Balance Sheet date it would increase or decrease as the RWF strengthens or weakens against the UAE Dirham. The effect on the Balance Sheet would be to cancel out the changes in the value of the net assets as a result of exchange rate changes. The following illustration explains:

PAUL LIMITED	Net Assets 1/12/2008 Acquired	Balance Sheet As at 1/12/2008 (RWF200=AED1 )	Balance Sheet As at 1/12/2009 (RWF167=AED1 )
	AED m	RWF 000 m	RWF '000 m
Net Assets to be Consolidated	500	100.000	83.335
AED Loan to Finance Acquisition	500	100.000	83.335
Loss in Balance Sheet Value as at 1st December 2009.			0.000

### Conclusion

I trust that this briefing note helps you understand and manage effectively the foreign currency risks associated with the proposed takeover of the UAE company.

## **SOLUTION 1-3**

### **Slides for Presentation**

#### **Slide 1**

**Heading: Kingbrew Ltd – Corporate Social Responsibility**

**Sub: Defining CSR**

#### **Detail**

- **Acting as a ‘responsible corporate citizen**
- **Adopting a view of responsibilities wider than the strict economic view**
- **No universal understanding**
- **No legal prescription – a voluntary code**
- **Increasingly common practice**

#### **Slide 2**

**Heading: Kingbrew Ltd – Corporate Social Responsibility**

**Sub: Examples of Corporate Social Responsibility**

#### **Detail**

- **KPMG – Use of renewable energy resources**
- **Protecting health & safety of employees and customers**
- **Transparency of product information**

#### **Slide 3**

**Heading: Kingbrew Ltd – Corporate Social Responsibility**

**Sub: Relevance of CSR to Kingbrew Ltd’s Strategic Financial Objectives  
Impact of neglecting CSR**

#### **Detail**

- **Damage to brand name and value**
- **Loss of customer goodwill, market share, margin and profitability**
- **Increasing costs of defending legal action and costs of damages**
- **Reduced staff motivation and productivity**
- **May lose certain shareholder loyalty**
- **Loss of staff – recruitment, training and development costs higher**

#### **Slide 4**

**Heading: Kingbrew Ltd – Corporate Social Responsibility**

**Sub: Risks of CSR investment**

#### **Detail**

- **Significant investment and commitment**



- **Will require perseverance**
- **May become a financial black-hole**
- **Difficult to measure benefits**
- **May lose shareholder confidence**

**Slide 5**

**Heading: Kingbrew Ltd – Corporate Social Responsibility**

**Sub: Rewards from investment in CSR**

**Detail**

- **Brand recognition**
- **Positive public relations**
- **Customer attraction and retention**
- **Staff attraction and retention**
- **Keeps within the Law**

**Slide 6**

**Heading: Kingbrew Ltd – Corporate Social Responsibility**

**Sub: Implementation of CSR Strategy**

**Detail**

- **Must have clear responsibility and accountability of spend**
- **Zero base budgeting could be applied to determine priorities**
- **Must measure the benefits in financial terms**
- **Investment must be reviewed annually**

## SOLUTION 1-4

### Briefing Note

**To: Board of Directors, Kingbrew Ltd**

**From: Corporate Finance Manager**

**Date: 1<sup>st</sup> September 2008**

**Subject: Financing Options**

### Introduction

This note considers relevant issues relating to the choice of the two (separate) sources of finance proposed to raise the RWF100,000 Million funds required to finance Kingbrew Ltd's growth strategy.

### Rights Issues

**The rights attaching to each share stand at RWF110. This is calculated as follows:**

<b>Theoretical Ex-Rights Price (TERP)</b>		RWF
Present Holding	4 shares @ RWF3,000	12,000
Rights Share	1 share at RWF2,400	2,400
	<b>5 shares</b>	<b>14,400</b>
TERP	$\frac{14,400}{5}$	= 2,880 Per share
<b>Value of Rights Per Share</b>		
TERP (above)	2,880	
Cost of Share	-2,400	
Value of Rights	440	
Original Shares	4	
<b>Value of Rights Per Original Share</b>		<b>110 Per share</b>

### Importance of Rights Issue Pricing

The price at which a rights issue is offered to existing shareholders is not of critical importance. This is because, if the rights issue was fully subscribed then, ultimately the proportion of the assets to which each shareholder is entitled remains the same. It is only the number of shares held by each shareholder that effectively changes.

However, it is important to ensure that the price of the rights issue is below the market value in order to encourage shareholders to subscribe.

### Bond Issue

#### Weighted Average cost of Capital

If Kingbrew Ltd was to raise RWF100,000M finance using irredeemable bonds it would reduce the company's cost of funds from 12% to 10.8%. Detailed calculations are appended at Appendix A to this report. A significant reason for this reduction is that the company can avail of 10% tax relief on the interest payment, thus reducing the effective cost of the debt finance to 9%.

This would have significant implications for the company including:

- The increased financial risk the company would be under in order to meet the annual interest payment of RWF10,000 Million
- The increased financial risk associated with raising the bond may depress the equity share price
- Investment proposals would now be discounted at 10.8% rather than 12% which would make them potentially more attractive

## Appendix A

WACC	Note	MV (RWFm)	% Cost	Weighting	% Weight	Weighted
Ordinary Shares (ex div)	1	150,000	12.00%	150/250	60.00%	7.20%
Irredeemable Debt at MV	2	100,000	9.00%	100/250	40.00%	3.60%
<b>Weighted Average Cost of Capital</b>		<b>250,000</b>			<b>100.00%</b>	<b>10.80%</b>

<b>Note 1) Cost of Equity (Gordon's Growth Model)</b>
$[\frac{.20 * (1 + .05)}{(3.2 - .20)} + .05 =$
12.00%

<b>Note 2) Cost of Irredeemable Debt</b>
(Interest Payable - Tax Saving) / Ex Interest Market value
$= (10 - 10%) / 100 * 100 =$
9.00%

## Solution 2

### a. Memo

Whilst I agree that it is important to ensure that our share price is maximised, share price maximisation is dependent upon maximising the present value of future cash flows, not on maximising earnings per share (EPS) or profits. There is, of course, a correlation between EPS, profit and share price, but, as long as the stock market is efficient, short-term accounting measures are not the most important influence on share price. If the stock market is **not** efficient then short-term accounting measures might influence the company's share price. In an efficient market, in order to maximise share price the company should concentrate on undertaking capital investments with a positive net present value. Some of your suggestions might upset stakeholders and result in a reduction in share price. For example:

- (i) Minimising capital investment to produce a short-term increase in accounting profit takes a short-term perspective and could mean ignoring excellent investment projects which would increase the value of the organisation. Shareholder wealth could be reduced as a result of such actions and employee remuneration could be lower than would be achievable with further investment.
- (ii) Increasing wages and salaries by less than inflation could increase profits, but the detrimental effect on workforce morale might produce the opposite effect because of reduced efficiency. Conflict with trade unions could occur and some employees might seek employment elsewhere.

Disposal of the sports field could produce a very hostile response from staff.

- (iii) There might be some scope for delaying payment to creditors but if this delay is significant, relations with creditors might be harmed and the company might face more stringent credit terms from suppliers when new orders are placed. Additionally, such a move could result in a lower credit rating and possibly higher costs of finance.
- (iv) The company might have some flexibility to delay expenditure on pollution control equipment but we must ensure that we can still meet all government standards for pollution. There might be significant social costs. Delay might harm our reputation in the local community and with environmental pressure groups. The effect of adverse publicity could outweigh any savings from delaying expenditure.

I hope that this indicates some of the potential problems. I would be happy to discuss alternative ways of increasing the company's share price.

- b. In recessionary periods, with high levels of corporate failure, executive directors will normally strive to ensure that their company survives, and that they keep their jobs but this should not be their prime objective. In most listed companies the executive directors only own a small minority of the company's shares. Directors, as agents of the owners of the companies (primarily non-director shareholders -NDS), should act in the best interest of such shareholders. There may be conflicts of objectives between NDS and directors. NDS will normally seek to maximise their wealth, often subject to satisfying secondary objectives such as environmental standards and social provision. Executive directors may have many objectives, including keeping their jobs, maximising salary or 'perks,' maximising prestige, pensions or compensation agreements should they lose their positions.

Directors' objectives are influenced and constrained by many factors including:

- (i) The provisions in the Articles of Association and any additional legal restrictions agreed between shareholders and directors.
- (ii) Restrictive covenants imposed by providers of debt.
- (iii) Stock Exchange regulations.
- (iv) Restrictions on directors' loans and other financial transactions with the company.
- (v) Internal & external auditors; audit committees chaired by non-executive directors.
- (vi) Limited term appointments of directors.

Ensuring corporate survival may satisfy the majority of shareholders of companies that are in financial distress, but for profitable going concerns it might mean that relatively safe decisions are taken, which although maintaining corporate survival, do not maximise expected net present value or shareholder wealth. Remuneration schemes may be devised that reward directors according to corporate performance, especially share price linked performance. This is an attempt to ensure that goal congruence (goals consistent with the maximisation of shareholders' wealth) exists between directors and NDS. If directors are going to personally benefit from good share price performance, e.g. through share option schemes, they are likely to be motivated to take decisions that will maximise share price. There have, however, been criticisms that many recent share option schemes have been too generous to directors.

If the market is efficient, or almost efficient, the decisions of directors, including investment decisions will be known to the market and share prices will move according to how market analysts and NDS regard the decisions. A decision that is sub-optimal, and is not using the company's resources in the most efficient way is likely to result in a fall in share price. This may increase the probability of takeover by a company that is perceived to have more efficient directors and managers. The fear of takeover is believed to be an incentive for managers to try and take the decisions that maximise shareholder wealth.

- c. The main objective of shareholders is often assumed to be to seek the maximisation of their wealth, subject to taking an acceptable amount of risk. In practice shareholders may have multiple objectives which include social and environmental issues.

The objectives of directors do not automatically correspond with those of the shareholders. Directors may seek to maximise their own income and/or wealth, which could be at the expense of shareholders, to increase work related benefits such as cars and pension schemes, to increase power and prestige, or to generate job security. The amount of risk that directors are prepared to take may significantly differ from the desired risk of shareholders, especially shareholders who own a well diversified portfolio.

To some extent the actions of directors should correspond to the objectives of shareholders who, at least in theory, have the right to replace directors if they are not satisfied with the directors' performance. In practice, unless major shareholders act in unison the removal of directors may not be easy. Directors may, however, be influenced by market forces to take actions that result in a high quality performance of the company. If they do not, and if the market in which they operate is at least semi-strong form efficient, the share price of the company will fall and the company will be more exposed to takeover bids, which could result in the directors losing their positions. If the market is not efficient, poor or self-motivated decision-making by directors may not feed quickly and accurately into changes in market price.

Shareholders may try to encourage the objectives of directors to correspond to their own through a variety of incentive schemes, such as performance related remuneration, or share option schemes. The idea is that the directors will benefit from the same positive corporate performance as the shareholders and, thus, have the incentive to take decisions which lead to the best possible performance.

- d. Goal congruence refers to the situation where the goals of different groups coincide. In many companies there are potential conflicts of objectives between the owners of the company, the shareholders, and their agents, the managers of the company. Other interest groups such as creditors, the government, employees and the local community might also have conflicting objectives to the company's shareholders. One way by which managers, and sometimes employees in general, might be motivated to take decisions/engage in actions which are consistent with the goals of the shareholders is through ESOP's. ESOP's, however, will not assist in encouraging goal congruence between other interest groups and the shareholders and managers.

ESOP's allow managers to purchase a company's shares at a fixed price during a specified period of time in the future, usually a period of years. They are aimed at encouraging managers to take decisions which will result in high NPV projects, which will lead to an increase in share price and shareholder wealth. The managers are believed to seek high NPV investments as they, as shareholders, will participate in the benefits as share prices increase.

There is, however, little evidence of a positive correlation between share option schemes and the creation of extra share value. There is no guarantee that ESOP's will achieve goal congruence. Share options will only be part of the total remuneration package and may not be the major influence on managerial decisions. If share prices fall managers do not have to purchase the shares and the value of the option to buy

shares becomes worthless or very small. This means that managers face less risk than shareholders as they have an option which may be exercised if things go well but may be ignored if things go badly. Shareholders have to face both circumstances.

Managers may be rewarded when share prices increase due to factors that have nothing to do with their managerial skills. Additionally, ESOP schemes often base reward in part upon earnings per share, an accounting ratio which, at least in the short term, is subject to manipulation by managers to their advantage.

Although ESOP's may assist in the achievement of goal congruence they are by no means a perfect solution.

- e. (a) It may be argued that managers and owners of a business may not have the same interests because of the divorce between ownership and control. In many organisations, the shareholders will have very little influence over the day to day operations and management of a business. Managers will be aware of the need to seek to maximise the wealth of their shareholders, but at the same time they may be equally concerned to serve their own needs/interests. For example, shareholders may be highly risk averse, looking only for one reasonable and steady income from their investment. By contrast, a manager may by nature be more of a risk taker, because he considers that his career may progress faster if he is successful in the risks taken. In such a scenario, if the manager follows his instincts in selecting business opportunities, then the shareholders' objectives are not being met. The reverse situation may be equally true, whereby shareholders believe that management are excessively cautious in their selection of business opportunities, but management are wary of taking risks as they wish to avoid any large scale losses which might threaten their personal position. In both instances there is a gulf between the objectives of the managers and owners.

Another example of where objectives might conflict is in the case of mergers and take-overs. If a company has been reporting poor results, and becomes the victim of a take-over bid, the shareholders are likely to be pleased as they will see an increase in the value of their investment. In contrast, the managers of the victim company may well be very unhappy, as they sense the risk of redundancy. Williamson suggested that many of the aims of managers actually work in direct conflict with those of owners, because managers look for perquisites and self-aggrandisement, which add to company costs. Shareholders may be happy if managers owned Honda Civics for the company cars. The managers may well seek to have Mercedes instead! Similarly, having a large office and many staff to supervise is good for a manager's self-esteem, but they may not be essential to the efficient running of the business: owners may be better off without them.

One key area where owner-manager objectives may conflict is in terms of the time horizon used to judge success. Owners are often looking long-term in setting their objectives, whereas a manager may need to have short-term successes in order to further his/her career prospects.

- (b) Corporate social responsibility can be defined in a number of ways, but the term refers, in general, to the ways in which a privately owned company needs to be aware of and respect the needs of the wider community. The responsibility to shareholders is reasonably clearly defined and monitored by the financial markets and company reporting systems. Corporate responsibilities to customers, employees, and the community at large are less likely defined. A company may be regarded as having responsibilities to its customers in terms of providing them with a quality product, at an appropriate price, which is supplied in a timely and efficient manner. The duty to the general public involves a responsibility not to endanger the public in any way, to respect the environment, and to support the local community where possible. Social responsibility also extends to creditors, who should expect to be paid accurately and promptly. In the UK there have been calls for legislation to restrict the period of credit which can be claimed from small companies.

National and local government are also affected by the activities of businesses and hence come under the remit of areas of social responsibility. Companies have a duty to pay their taxes as due, and comply with national and local laws e.g. planning/health and safety regulations. Lastly companies have a responsibility to take care of their employees, ensuring a safe working environment, and paying fair wages.

In conclusion it is no longer sufficient for a company to think that it need only serve the interests of its shareholders. It is now regarded as good practice to look to the needs of the broader stakeholder group, and so take on a wider social responsibility.

- (c) At its simplest. 'Value for Money' (VFM) means getting the best possible service at the least possible cost. Public services are funded by the taxpayers and in seeking value for money, the needs of the taxpayer are being served, insofar as resources are being used in the best manner to provide essential services.

It is important to note that VFM does not mean lowest cost per se: it assesses cost in relation to the service provided. Three aspects of VFM are of relevance: efficiency, economy and effectiveness. Efficiency relates to the level of output generated by a given input. Reducing the input: output ratio is an indication of increased efficiency. Economy measures the cost of obtaining the required quality of inputs needed to produce the service. The aim is to acquire the necessary inputs at the lowest possible cost. Effectiveness measures the extent to which the service meets its declared objectives. For example, a refuse collection service is only effective if it meets its target of, say, weekly collections from domestic premises. The service is economic if it is able to minimise the cost per weekly collection, and not suffer from wasted use of resources. The service is increasing its efficiency if it is able to raise the number of collections per vehicle per week.



## Solutions 3

### Easy Ltd

(a) (i) Project A

Year	Cash Flow RWF	Discount Factor 12%	Present Value RWF
0	(29,000)	1.000	(29,000)
1	8,000	0.893	7,144
2	12,000	0.797	9,566
3	10,000	0.712	7,120
4	11,000	0.636	6,996
	<b>Net Present Value</b>		<b>+1,826</b>

(ii) Project B

Year	Equipment RWF	Working Capital RWF	Cash Profit RWF	Net Cash Flow RWF	Discount Factor 12%	Present Value RWF
0	(44,000)	(20,000)		(64,000)	1.000	(64,000)
1			19,000	19,000	0.893	16,967
2			24,000	24,000	0.797	19,128
3	5,000	20,000	10,000	35,000	0.712	24,920
				<b>Net Present Value</b>		<b>(2,985)</b>

(iii) Project C

Year	Initial Investment RWF	Working Capital RWF	Cash Flow RWF	Discount Factor 12%	Present Value RWF
0	(15,000)	(6,000)	(65,000)	1.000	(65,000)
1			(6,000)	0.893	(5,358)
2			18,000	0.797	14,347
3		21,000	21,000	0.712	14,957
			<b>Value</b>		<b>+ 6,439</b>

(iv) Project D

Year	Cash Flow RWF	Discount Factor 12%	Present Value RWF
0	(20,000)	1.000	(20,000)
1	(20,000)	0.893	(17,860)
2	15,000	0.797	11,958
3	12,000	0.712	8,544
4 – 8	8,000	2.566	20,528
	<b>Net Present Value</b>		<b>+ 3,170</b>

Annuity Factor at 12% years 1 to 8

4.968

Less Annuity Factor at 12%, years 1 to 3	2.402
Annuity Factor at 12%, years 4 to 8	<u>2.566</u>

(v) Project E

PV	$\frac{a}{i} = \frac{4,500}{.15} =$	30,000
Less Cost		<u>(32,000)</u>
<b>Net Present Value</b>		<b><u>(2,000)</u></b>

(vi) Project F

Years 11 ->

PV	$\frac{a}{i} = \frac{RWF3,000}{.15} =$	RWF20,000 (year 10 value)
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Present Value is RWF20,000 x .247 (year 10 D.F. @15%) = RWF4,940

Years 6-10

Annuity factor at 15%, years 1 to 10	5.019
Less annuity factor at 15%, years 1 to 5	<u>3.352</u>
Annuity factor at 15%, years 6 – 10	<u>1.667</u>

Year	Net Cash Flows RWF	Discount Factor 15%	Present Value RWF
0	(20,000)	1.000	(20,000)
1 – 5	5,000	3.352	16,760
6 – 10	4,000	1.667	6,668
11 –	3,000	See above	4,940
	<b>Net Present Value</b>		<b><u>+ 8,368</u></b>

(b) (i) The IRR of project A is above 12% (see (a) above where the NPV is RWF1,826). We will calculate the NPV at 15%.

Year	Cash Flow RWF	Discount Factor 15%	Present Value RWF
0	(29,000)	1,000	(29,000)
1	8,000	0.870	6,960
2	12,000	0.756	9,072
3	10,000	0.658	6,580
4	11,000	0.572	6,292
	<b>Net Present Value</b>		<b><u>(96)</u></b>

The IRR is between 12% and 15%. By interpolation, we can estimate the IRR as:

$$12\% + \frac{1,826}{1,826 + 96} \times (15\% - 12\%) = 14.85\%$$

(ii) The IRR of project C is above 12%, where the NPV is RWF6,439. Try 20%.

Year	Net Cash Flow RWF	Discount Factor 20%	Present Value RWF
0	(65,000)	1.000	(65,000)
1	(6,000)	0.833	(4,998)
1 – 5	18,000	2.991	53,838
5	21,000	0.402	8,442
<b>Net Present Value</b>			<b><u>(7,718)</u></b>

The IRR is approximately 12% +  $\frac{6,439}{6,439 + 7,718} \times (20\% - 12\%) = 15.6\%$

## Solution 4

Teleco Ltd

<u>RWF'000</u>	<u>20X3</u>	<u>20X4</u>	<u>20X5</u>	<u>20X6</u>	<u>20X7</u>	<u>20X8</u>	<u>20X9</u>
Equipment	-10,000					1,000	
Existing Equipment	250		-50				
Sales Revenue (+20% p.a.)		5,000	6,000	7,200	8,640	10,368	
Variable Costs (+5% p.a.)		-2,000	-2,520	-3,175	-4,000	-5,040	
Lost Contribution		-80	-70	-60	-50	-40	
Supervisor (+ 5% p.a.)		-10	-11	-11	-12	-12	
Redundancy Cost		-200					
Salaries Saved (+ 5% p.a.)			105	110	116	121	
Advertising & Marketing		-200	-200	-100	-100		
Buildings	-2,000					3,000	
Corporation Tax			-20	-500	-500	-500	-500
Working Capital	-200					200	
<b>Net Cash Flow</b>	<b>-11,950</b>	<b>2,510</b>	<b>3,234</b>	<b>3,464</b>	<b>4,094</b>	<b>9,097</b>	<b>-500</b>
Discount Factors - 10%	1.000	0.909	0.826	0.751	0.683	0.621	0.564
Present Value	-11,950	2,282	2,671	2,601	2,796	5,649	-282
Discounted Payback	-11,950	-9,668	-6,997	-4,396	-1,599	4,050	3,768
	<b>4 years</b>	<b>+1599/5649 x 12 mnth = 4 years 3 months</b>					
<b>Net Present Value</b>	<b>3,768</b>						

**Other Factors**

- Impact of Inflation
- Technology
- Ability to Cross-sell
- Impact on staff morale – redundancies
- Choice of Discount Rate
- Accuracy of Cash Flow estimates
- Reaction of Competitors
- Has Teleco the necessary “know-how”?

## **Solution 5.**

### **Report**

**To:** Management Team, **Estate Agency**  
**From:** Jerry Blogs, Consultant Accountant  
**Date:** 20th June 2006  
**Subject:** Financial Assessment Web-Cam Proposal

### **Introduction**

This report looks at the potential financial results and the wider considerations in relation to your proposal to offer virtual viewing facilities to potential house buyers:

### **Financial Analysis**

#### **Approach**

As the investment in the technology spans four years I have employed the technique of discounting to allow for the time value of money over the four years. I have set out all the relevant cash-flows relating to the project and discounted each year's net cash-flow progressively at 8%, (your company's cost of funds) to arrive at the Net Present Value (NPV) of the proposal. Detailed workings and supporting notes can be found at Appendix 1 to this report.

#### **Results**

The project delivers a Net Present Value of + RWF 3,241,200.  
The project has a payback period of 1 year and seven months.

#### **Analysis**

Whilst the NPV is positive it is not a significantly large surplus. This indicates that the financial risk of the project running into a negative Net Present value is high. A slight adverse change in any of the financial variables could easily turn this project into a loss maker.

#### **Other Considerations**

- Will property vendors be happy to have web cam technology mounted in their property, particularly in relation to concerns relating to privacy and security
- Will the agency be in position to replace the technology in three years' time, or will we, our customers and buyers be left 'high and dry'?
- What is the percentage usage of the internet in the target customer group/s
- Is the technology proven and reliable
- What is to stop property vendors creating their own websites?
- How will the agency advertise to online customers?
- To what extent and how freely available is competitor software available on the market?
- Can the technology be patent/protected/licensed in any way to ensure it is not made available to competitors?
- Is the use of this virtual system likely to enhance or damage the agency's present market perception

- Have we the skills to support this technological advance?
- Has the agency considered international marketing?
- There is little doubt that the internet will continue to grow exponentially as a means of improving and enhancing business to customer relationships in the services sector

### Conclusion

Whilst the Net Present Value of the proposal is positive it is quite a sensitive and risky financial proposition. However, there may be significant latent potential for the development of such technology in the sector.

The investment must be carefully considered before being decided upon.

### Appendix 1

NPV Schedule	Note	Year 0	Year 1	Year 2	Year 3	Year 4
		RWF '000	RWF '000	RWF '000	RWF '000	RWF '000
Cash Flows						
Software Licensing Fees			-1,500	-1,500	-1,500	
Sales Commissions	1		324,000	445,500	196,020	
Sales Commissions Foregone	2		-225,000	-247,500	-272,250	
Annual Admin Cost (5% inflation)			-15,000	-15,750	-16,538	
Sub Contractors' Cost	3		-6,000	-7,500	-3,000	
Annual Incremental Trading Profits			76,500	173,250	-97,268	0
Receipt from Auctioneer's Institute					24,000	
Software Purchase and Installation		-150,000				
Taxation	4		-9,300	-28,650	20,654	12,000
Net Annual Cash flows		-150,000	67,200	144,600	-52,614	12,000
After Tax Discount Factor at 8%		1.0000	0.9259	0.8573	0.7938	0.7350
Present Value		-150,000	62,220	123,966	-41,765	8,820
<b>Net Present Value of Option</b>						<b>3,241.2</b>

	Year 0	Year 1	Year 2	Year 3	Year 4
	RWF '000	RWF '000	RWF '000	RWF '000	RWF '000
Cumulative Cash flows	-150,000	-82,800	61,800	9,186	21,186
Payback period	1 Year and 7 Months				

Note 1: Sales Commissions	Note	Year 1	Year 2	Year 3
Units Advertised		400	500	200
% Units Sold		30%	30%	30%
Units Sold		120	150	60
Average House Price (Increase 10% pa)	RWF'000	90,000	99,000	108,900
Gross Sales	RWF'000	10,800,000	14,850,000	6,534,000
Commission @ 3% Rate	RWF'000	324,000	445,500	196,020

Note 2: Sales Commissions Forgone	Note	Year 1 RWF s	Year 2 RWF s	Year 3 RWF s
Units Advertised		100	100	100
% Units Sold		50%	50%	50%
Units Sold		50	50	50
Average House Price (Increase 10% pa)	RWF'000	90,000	99,000	108,900
Gross Sales	RWF'000	4,500,000	4,950,000	5,445,000
Commission @ 5% Rate	RWF'000	225,000	247,500	272,250

Note 3: Web Cam Installation Costs	Note	Year 1 RWF s	Year 2 RWF s	Year 3 RWF s
Units Advertised		400	500	200
Cost per Unit		15,000	15,000	15,000
Total Subcontractor Costs		6,000,000	7,500,000	3,000,000

	Note	Year 1 RWF'000	Year 2 RWF'000	Year 3 RWF'000	Year 4 RWF'000
Annual Incremental Trading Profits		76,500	173,250	-97,268	
Less: Writing Down Allowance	5	-30,000	-30,000	-30,000	
Receipt from Auctioneer's Institute				24,000,000	
Balancing Allowance	6				-60,000
Taxable Profits		46,500	143,250	23,872,733	-60,000
Tax liability for year @ 20%		9,300	28,650	4,774,547	-12,000

Note 5) Annual Writing Down Allowance = RWF 150,000,000 at 20% = RWF 30,000,000.

Note 6) Balancing allowance = Net proceeds RWF Nil less tax wdv RWF 60,000,000 = RWF 60,000,000



## **Solution 6**

### **Report**

**To: Board of Directors, Laserlabs Limited**

**From: Accountant**

**Date: 20th June 2007**

**Subject: Financial Assessment – Laser Eye Surgery Proposal**

### **Introduction**

This report considers the potential financial results and the non-financial factors to be considered relating to your proposal to enter the eye laser surgery market.

### **Financial Analysis**

#### **Approach**

As the proposed licence lasts for three years I have used the technique of discounting to allow for the time value of money over the five years. I have discounted each year's net cash-flows at 10%, your company's cost of funds, to arrive at the Net Present Value (NPV) of each proposal. Detailed workings and supporting notes can be found at Appendix 1 to this report.

I have also determined the year in which the proposal pays back its initial investment.

#### **Results and Conclusion**

The proposal delivers a positive Net Present Value of RWF325,616 and achieves a payback period within the required three years. Thus, on financial grounds the contract should be signed.

#### **Other Considerations**

- Can Laserlabs attract the staff and capability to carry out and support such surgery?
- When will the technology be tested and licensed?
- How long will the district health team require to prove the efficacy of the technology
- Can Laserlabs agree an early exit clause in the event that the anticipated sales volume does not materialise?
- Can Laserlabs increase the permitted volume in the event that demand is higher than anticipated?
- What will be the potential to extend the licence beyond the three year initial duration?
- Can we buy an option to extend the licence and/or extend the annual volume?

## Appendix 1

### Net Present Value - Eye Laser Surgery Proposal

Details	Year 0	Year 1	Year 2	Year 3
Initial Licence Cost	-600,000			
Hardware & Software Cost	-500,000			
Annual Software Licence		-50,000	-50,000	-50,000
Royalty Payment (See Notes to Financial Projections)		-1,200,000	-1,350,000	-1,500,000
Consumable Costs (See Notes)		-800,000	-900,000	-1,000,000
Ophthalmologist Cost		-150,000	-150,000	-162,000
Ophthalmologist Bonus			-50,000	-50,000
Nurse Salary		-35,000	-35,000	-37,800
Locum Ophthalmologist		-40,000	-40,000	-40,000
Cleaning Contract		-80,000	-84,000	-88,200
Income – Private Patients (See Notes)		1,500,000	2,250,000	3,000,000
Income – District Health Team Contract		1,000,000	1,000,000	1,000,000
Net Annual Cash Flows	-1,100,000	145,000	591,000	1,072,000

### Investment Criterion – Net Present Value (NPV)

Net Annual Cash Flows	-1,100,000	145,000	591,000	1,072,000
Discount Factor @ 10%	1	0.9091	0.8264	0.7513
Present Values	-1,100,000	131,820	488,402	805,394
<b>Net Present Value</b>				<b>325,616</b>

Net Annual Cash Flows	-1,100,000	145,000	591,000	1,072,000
Cumulative Net Annual Cash Flows	-1,100,000	-955,000	-364,000	708,000
<b>Payback Period</b>				<b>3<sup>rd</sup> Year</b>

### Notes to Financial Projections

	Year 1	Year 2	Year 3
Forecast Unit Sales			
Private Patients	2,000	3,000	4,000
District Health Team Block Contract	6,000	6,000	6,000
<b>Total Eye Surgeries</b>	<b>8,000</b>	<b>9,000</b>	<b>10,000</b>
Royalty Payment (RWF150 per episode)	1,200,000	1,350,000	1,500,000
Consumable Cost (RWF100 per episode)	800,000	900,000	1,000,000
Notes to Financial Projections	Year 1	Year 2	Year 3
Forecast Unit Sales			
Private Patients	2,000	3,000	4,000
Cost Per Eye Surgery	750	750	750
<b>Total Eye Surgeries</b>	<b>1,500,000</b>	<b>2,250,000</b>	<b>3,000,000</b>

### Present Value Table

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

Where  $r$  = discount rate

$n$  = number of periods until payment

Periods (n)	Discount rates (r)										
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	1
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	2
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	3
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683	4
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	5
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	6
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	7
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	8
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424	9
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386	10
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	11
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	12
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	13
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	14
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	15
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833	1
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694	2
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579	3
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482	4
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402	5
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335	6
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279	7
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233	8
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194	9
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162	10
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135	11
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112	12
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093	13
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078	14
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065	15

### Annuity Table

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

Where  $r$  = discount rate  
 $n$  = number of periods until payment

Periods (n)	Discount rates (r)										
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	1
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736	2
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487	3
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170	4
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791	5
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355	6
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868	7
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335	8
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759	9
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145	10
11	10.37	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495	11
12	11.26	10.58	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814	12
13	12.13	11.35	10.63	9.986	9.394	8.853	8.358	7.904	7.487	7.103	13
14	13.00	12.11	11.30	10.56	9.899	9.295	8.745	8.244	7.786	7.367	14
15	13.87	12.85	11.94	11.12	10.38	9.712	9.108	8.559	8.061	7.606	15
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833	1
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528	2
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106	3
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589	4
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991	5
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326	6
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605	7
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837	8
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031	9
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192	10
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327	11
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439	12
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533	13
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611	14
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675	15