2020 Final Exam

Final Case study -Pre-seen case study

Introduction

The Royal ltd is a publisher of a daily newspapers based in **Gauteng, South Africa**. It also provides web Media to the world wide audience. It has been listed on the Johannesburg stock exchange since 1994. The Royal has three distinct divisions, that is, the Newspapers, Advertising and the web divisions. The divisions are discussed below as follows:

The Newspaper division

This division has two printing sites and three offices. The royal publishes one Sunday Newspaper and three daily Newspapers in South Africa. The three offices edit the Sunday Newspaper and the three daily Newspapers. The Newspaper division owns two subsidiary companies namely; **Chronicle** and **Herald**. **Chronicle** and **Herald** are involved in publishing. **Chronicle** is based in Botswana within the SADC region and Herald is based in Ghana which is outside the SADC region. All printing for the division's publications is done at the two printing sites, except for the publications produced by **Chronicle** and **Herald**. The two subsidiaries have their own printing sites.

The Web division

This division owns 200 websites which it maintains and develops. The development and maintenance of web material has become an important part of the business for "**The Royal ltd**". During the past 10 years the division developed online versions of all the newspapers produced by the Newspaper division. Some websites are more popular than others. This is measured by the number of hits they receive.

The Advertising Division

This division handles the sale of advertising space for the whole company (The Royal ltd). That is, the advertisements that appear in the print media and web pages produced by the Newspaper division and the web division are all handled by the Advertising division.

Headquarters of the Group

The Royal ltd has a head office that is based in Sandton. This is in addition to the three operating divisions that it has. The board of directors sits at the head office in Sandton. The headquarters deal with the group's corporate affairs. The headquarters also administers and develops the group's policies and procedures.

Mission statement

In 2015, The Royal established the following mission statement "To be the leading news media organization in Africa that provides quality reporting and information on African and World-wide news".

The strategic objectives

In 2015 the board of directors established the following objectives:

1. To provide reliable and well informed news that meets the needs of the readers
2. To reach as many potential website and Newspapers as possible
3. To increase advertising income so that the group moves towards offering as many news titles as possible free of charge to the public.

Financial Objectives

1. Revenue and operating income to grow by 4% per year
2. To have a steady growth in dividends per share
3. To maintain a gearing below 40%

Forecast revenue and operating profit

	Year ended 31 December 2021
Forecast revenue	R2 800 000 000
Forecast operating income	R 730 000 000

The figures were extracted from the forecast income statement for the year ended 31 December 2021

Divisional performance information

The following financial information is available for each division for the past three years:

The Newspaper Division	**Year ended**	**Year ended**	**Forecasted**
	31/12/2019	31/12/2020	31/12/2021
External Revenue	R 910 000 000	R940 000 000	R940 000 000
Revenue from internal transfers	R 900 000 000	R 910 000 000	R960 000 000
Net operating income	R 450 000 000	R 460 000 000	R480 000 000
Fixed assets	R4 200 000 000	R4 900 000 000	R 5 480 000 000

Net Current Assets	R 40 000 000	R 80 000 000	(R100 000 000)

The Web Division	**Year ended**	**Year ended**	**Forecasted**
	31/12/2019	31/12/2020	31/12/2021
Internal transfers	R 550 000 000	R 600 000 000	R660 000 000
Net operating income	R 100 000 000	R 130 000 000	R160 000 000
Fixed assets	R370 000 000	R400 000 000	R 430 000 000
Net Current Assets	R 10 000 000	R 10 000 000	(R20 000 000)

The Advertising Division	**Year ended**	**Year ended**	**Forecasted**
	31/12/2019	31/12/2020	31/12/2021
External Revenue	R 1 620 000 000	R1 800 000 000	R1 860 000 000
Internal transfers	(R 1 450 000 000)	(R 1 510 000 000)	(R1 620 000 000)
Net operating income	R 100 000 000	R 180 000 000	R190 000 000
Fixed assets	R30 000 000	R60 000 000	R 70 000 000
Net Current Assets	R 10 000 000	R 10 000 000	(R20 000 000)

Head office	**Year ended**	**Year ended**	**Forecasted**
	31/12/2019	31/12/2020	31/12/2021
Net operating costs	R 80 000 000	R 90 000 000	R100 000 000
Fixed assets	R370 000 000	R390 000 000	R 430 000 000
Net Current Assets	R 10 000 000	R 10 000 000	(R10 000 000)

Notes:

1. The advertising division remits advertising revenue to both the Newspapers and the Web divisions
2. All of the web division’s revenue comes from advertising

3. The newspaper division's revenue and operating income include those earned by **Herald** and **Chronicle**. The forecasted revenue for the year ending 31 December 2021 for **Chronicle** is R200 000 000 and for Herald is R40 000 000

Additional information:

Newspapers Division

Chronicle is a wholly owned subsidiary. It was acquired in 2015. The financial statements of **Chronicle** are translated into South African Rands. These are consolidated into Royal ltd group financial statements. The financial statements are included in the newspaper division's financial statements for the purposes of reporting. A month after **chronicle** was acquired by Royal ltd, it launched a weekly newspaper called the pan-African. It is produced in Botswana and distributed throughout Africa. The board believed that the newspaper would become popular as it provided weekly African news. However, sales have been disappointing.

Herald publishes local newspapers in Ghana. It is also part of the Newspapers division. It is 80% owned by the Newspaper division. It was purchased in 2013. Herald is very profitable. It is produced at low cost.

The journalists used by the Newspaper division incur very high costs to carry out their duties. These costs have risen significantly during the previous years.

There has been significant capital investment in the Newspaper division since 2016. The division has modernised the printing press. This has improved the quality of the output and efficiency of the printing process. The customers have indicated that they are very satisfied with the product. The increased mechanisation and efficiency has reduced costs. It has also led to the reduction in the number of employees operating in the printing press. Consequently, some staff in the division have expressed dissatisfaction. However, employees in other divisions have not been affected.

Web Division

The revenues from the web division are generated through advertising. This is revenue is generated from sales of advertising space in the web pages by the Advertising Division. Currently, there is no charge to access the newspapers. The newspapers are shorter versions of the printed newspapers. The comments from the public about the websites have been very positive. The division is currently undertaking a review of all its costs, particularly the costs relating to employees and website development.

Advertising Division

This division pays advertising revenue to both the Newspaper division and the web division. The payment is done after the advertising division has deducted its commission from the advertising revenue. This division also offers advertising services to corporate clients. The advertising services include television and radio. The advertising division provides pop up advertising on websites.

Extracts from Royal ltd forecast group financial statements

Group forecast Income statement for the year ending 31 December 2021

Revenue	R 2 800 000 000
Operating costs	R 2 070 000 000
Net operating profit	R 730 000 000
Interest income	R 10 000 000
Interest expense	(R110 000 000)
Taxation	(R 190 000 000)
Forecasted profit	R440 000 000

Forecasted Balance Sheet (Statement of financial position) as at 31 December 2021

Assets	
Fixed Assets	R6 410 000 000
Current Assets	
Inventory	R 20 000 000
Debtors	R270 000 000
Cash and Cash equivalents	R20 000 000
Total Assets	R 6 720 000 000
Liabilities	
Long term liabilities	R2 500 000 000
Current liabilities	
Payables	R460 000 000

Total liabilities	R2 960 000 000

Equity

Share capital	R1 400 000 000
Share premium	R 350 000 000
Retained income	R 1 850 000 000
Non- controlling interest	R 160 000 000
Total equity	R 3 760 000 000

Notes:

1. Assume taxation is 30%
2. Shares issued are 140 million at R10 each
3. The long term borrowing include R830 000 000 of loan capital which is due for repayment on 1 January 2022 and the remainder is due for repayment on 1 January 2029

End of Pre-seen Material

Unseen Material

Suppose today is 1 September 2021. The Royal ltd has 140 million R10 ordinary shares in issue. On 31 August 2021 the shares were trading at R28.30 cents ex-dividend. The dividends for royal ltd for the year ended 31 December 2021 are expected to be R2.20 per share. The company maintains the 4% increase in dividends that has been achieved in recent years. The declared dividends are paid on 31 December each year.

Investment opportunity

The Newspaper division has identified an investment opportunity. They would print an African wide sports only Magazine. The Magazine would be called the African sports fan. It will be commenced on 1 January 2022. The Magazine would be in English and it would report on a range of popular African sports. The proposal for the project has been under consideration since December 2020.

The project is expected to be initially launched in South Africa. It will then be extended to other African countries over time. The new printing facilities will be added to Chronicle ltd 's site to support the investment in this project. The project will be evaluated over six years beginning 1 January 2022. The net operating cash flows of the project have been estimated as follows:

Year	Rand	Pula
1	30 000 000	-10 000 000
2	80 000 000	110 000 000
3	130 000 000	190 000 000
4-6	150 000 000	230 000 000

Assume that all cash flows arise on 31 December each year. You must also assume that annual cash flows are paid across to South Africa on the final day of each year.

The cost of the initial investment in plant and equipment at the beginning of January 2022 is P900 000 000. The plant and equipment is depreciated at 5% per annum using the straight line method. An amount of P50 000 000 would be required to finance working capital at the beginning of January 2022.

In addition to the cash flows above, the company hopes to develop mobile phone apps. This would generate further revenue, which could add up to 5% of the net operating cash flows from year 4 of the project. The estimates are based on the “gut feeling” of the sales director. The gut feeling has not been verified though.

Exchange rates

At 1 January 2022 the spot exchange rate is expected to be R1/P1.1 (that is R1=P1.1). The Pula is expected to weaken against the Rand. This is in line with the differential in the long term interest rates between the two countries over the life of the project. The interest rates are expected to remain stable at 0.5% per annum in South Africa and 1.5% per annum in Botswana for the foreseeable future.

Funding the project

The initial investment of P950 000 000 will be funded by a rights issue at the beginning of January 2022. The realisable value for the plant and equipment is estimated at P630 000 000. This amount will be repaid in full to South Africa. In December 2021 the Royal ltd announced a rights issue of 1 for 4 to fund the proposed P950 000 000 capital investment project. The proposal for the new Magazine was accepted a week ago. Royal ltd would like to proceed without delay. The company will temporarily reduce the dividend growth rates during the development stage of the project.

Investment criteria

Criterion 1

T Royal ltd assesses international projects using the NPV criterion. A risk adjusted discount rate of 12% is used.

Criterion 2

The royal requires international projects to generate an accounting rate of return of at least 25% per year. ARR is defined as follows:

Average accounting profit before interest and taxes /average annual investment

Ignore taxes in your calculations

Required:

a) Discuss the reasons for the volatile movements in Royal's share price **(no calculations required) [5 marks]**
b) Discuss the risks that should be considered by Royal in evaluating the project**(show calculations where necessary) [7 marks]**
c) Determine the fair market price of the shares after acceptance of the project and after the rights issue [**7 marks**]
d) Determine the impact of the project on Royal's financial objectives**[6 marks]**
e) Evaluate the project using the NPV criterion **[10 marks]**
f) Evaluate the project using the ARR criterion**[5 marks]**

Section B: Short Cases [60 marks]

1. Suppose that an investor selects companies; **A** and **B** from the Johannesburg stock exchange. He observes that for the past ten years company **A** yielded an average investment return that is twice that of **B**. Explain whether this contradicts the efficient market hypothesis. **[3 marks]**

2. John is a sophomore (second year student) at the North West University business school. He has just finished lectures on investment management in his financial management module. He borrowed R500 000 from the bank and invested in a portfolio of equities listed on the Johannesburg stock exchange. He believes that his investment in the portfolio of shares should be actively managed otherwise he will suffer great losses. Explain whether his belief is justifiable according to the efficient market hypothesis **[3 marks]**

3. Are there any advantages that can be obtained from insider trading if the market is strong form efficient? Explain **[2 marks]**

4. In South Africa the national lottery is run weekly. In this lottery the purchaser of a ticket selects six different numbers from 1 to 50 inclusive. If those same six numbers are then drawn randomly from a hat on live television, the ticket holder wins a share of a large cash sum equal in value to the total ticket sales. Explain whether the South African market for lottery tickets is weak form efficient. **[4 marks]**

5. During the MBA study school at the North West University last summer, four students decided to form an investment club. They made the following proposals for the new equity investment for the club:

   I. **George** proposes that they buy shares in South32 ltd because it has performed poorly during the past two years and so they are due for an upturn.
   II. **Grace** wants to invest in Sibanye Gold ltd. There is a rumour that they have appointed the head of marketing. This new employee is believed to have had success at other companies. So Grace felt that this new employee will have a positive effect at Sibanye Gold ltd.
   III. **Tshepo** believes in selecting shares at random. He recommended that they buy shares in FNB ltd.
   IV. **Peter** wants to buy shares in Dischem ltd. His brother works for Discovery health ltd and has insider information that Dischem ltd's shares will rise sharply in the near future when it is announced that Discovery health ltd has appointed Dischem ltd as its pharmacy of choice.

Describe how the share selection strategy of each member would work in strongly efficient, semi-strongly efficient, weakly efficient and inefficient markets **[12 marks]**

6. An investor can invest in only two risky assets A and B. Asset A has an expected rate of return of 10% and a standard deviation of 20%. Asset B has an expected rate of return of 15% and a standard deviation of 30%. The correlation coefficient between the returns of asset A and the returns of asset B is 0.6.
   I. Calculate the expected rate of return if 20% of an investor's wealth is invested in Asset A and the remainder is invested in asset B. **[2 marks]**
   II. Calculate the standard deviation of return on the portfolio if 20% of an investor's wealth is invested in asset A and the remainder in asset B.[**3 marks]**
   III. Explain why an investor who invests 20% of his wealth in Asset A and the remainder in asset B is risk averse. **[3marks]**

7. Consider a security A, which has a standard deviation of investment returns of 4%. If:
   - the standard deviation of the market return is 5%;
   - the correlation between A's return and that of the Market is 0.75;
   - the risk free rate is 5%;
   - and the expected return on the market is 10%;

then calculate:

- **I.** the beta of security A **[3 marks]**
- II. security A's expected return. **[3 marks]**

8. A woman who has won a prize is offered either:
   - a lump sum of $100 000 to invest now, or
   - $55 000 to invest in one year's time and another $55 000 to invest in two years' time.

   If all investments are assumed to earn interest at a rate of 7% pa effective, determine which option she should choose if she intends to withdraw the money after:

   I. 4 years **[4 marks]**
   II. 2 years **[3 marks]**

9. Calculate the effective annual interest rate for:
   I. a transaction in which R200 is invested 18 months to give R350 **[3 marks]**
   II. a transaction in which R100 is invested for 24 months and another R100 is invested for 12 months (starting 12 months after the first investment) to give a total of R350 **[4 marks]**

10. A treasury bill, redeemable at $100, was purchased for $96.50 at the time of issue and later sold to another investor for $98 who held it to maturity. The rate of return received by the initial purchaser was 4% per annum effective.
    I. Calculate the length of time in days for which the initial purchaser held the bill **[4 marks]**
    II. Calculate the annual effective rate of return achieved by the second investor. **[4 marks]**