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Part A

1. Introduction to Vodafone Group UK

Vodafone is a global telecom firm. This text analyzes its history, business model, market position, and needs. It also mentions Vodafone International Holdings B.V in relation to future technology needs. (Tătaru et al.2020)

This text explains recent developments from Vodafone and analyzes its role in relation to globalization and liberalization of the telecommunications market. Vodafone is a large telecommunications corporation operating in multiple countries. They have a business model focused on growth and profit, with various fixed networks serving multiple markets. Vodafone Group aims to build global infrastructure to connect billions of people. (Shaikh and Aggarwal, 2020)(Jahanbakht and Mostafa, 2020)

1. 2. Historical Overview and Evolution of Vodafone Group UK

The inception of the UK-based company, Vodafone Group, can be traced back to 1982 when Racal Electronics plc. and Millicom decided to form a joint venture, named as Racal Strategic Radio Ltd. The headquarters of the company are in Berkshire, UK, and the company provides services in the Americas, Europe, Asia, the Middle East, and Africa. In 1991, Vodafone/Hutchinson Australia (F) PTY Limited was established, which was the subsidiary of Racal Telecommunications, with the aim to buy and operate mobile radio businesses in Asia and the US. In the years 1994 and 1999, the company was listed and ranked on the NYSE and London Stock Exchange, consecutively. Over the years, Vodafone Group plc. has made several consolidations and improvements in its operations. The acquisition of Mannesmann and the sale of Cegetel were amongst the major events that helped the company to grow and build a strong financial structure altogether. Also, in 1999, the company proclaimed its purpose, "to be the communications leader in an increasingly connected world," which highlights the organization's aim to become the pioneering telecommunications company across the globe. (Sarma and Kalita)

Vodafone is a global telecommunications service operator connecting people and things through secure network services. It offers mobile and wired communication services to millions of customers across multiple countries. With over 600 million subscribers, Vodafone is the second-largest player in the market, trading as "VOD" on the NYSE and listed as FTSE 100 on the LSE.

1. 3. Business Model of Vodafone Group UK

Vodafone Group UK primarily generates and delivers value through providing telecommunications services and digital solutions that enable better connectivity for our customers to live, work, and relax, as well as making businesses more capable and agile. Administrative services and other operations support the revenue-generating activities. The company reports a single segment for its segmental report. It deploys segmental report as a mechanism in which senior operating and corporate executives determine investment decisions by measuring segment performance and allocating resources accordingly. This means that managing directors are responsible for profit and loss, working capital, tangible fixed assets, capital expenditure, and trade investment linked to the revenue-generating activities. These comprise providing the best mobile services, offering value-added services including 5G, or providing competitive data and voice tariffs. (Kalam and Kalam2020)

The company has a joint venture for managing Vodafone's network. They distribute products through various channels and have network sharing partnerships. They also have a mobile money joint venture in Africa. Vodafone's business model is summarized in Table 9.

1. 4. Market Position and Major Competitors



Vodafone is the 3rd largest telecom operator in the UK with a 19.8% market share. It has growth potential in broadband and TV services. Competitors include BT, CK Hutchison, and Telefonica. Vodafone is listed on the London Stock Exchange and NASDAQ. HQ is in London.

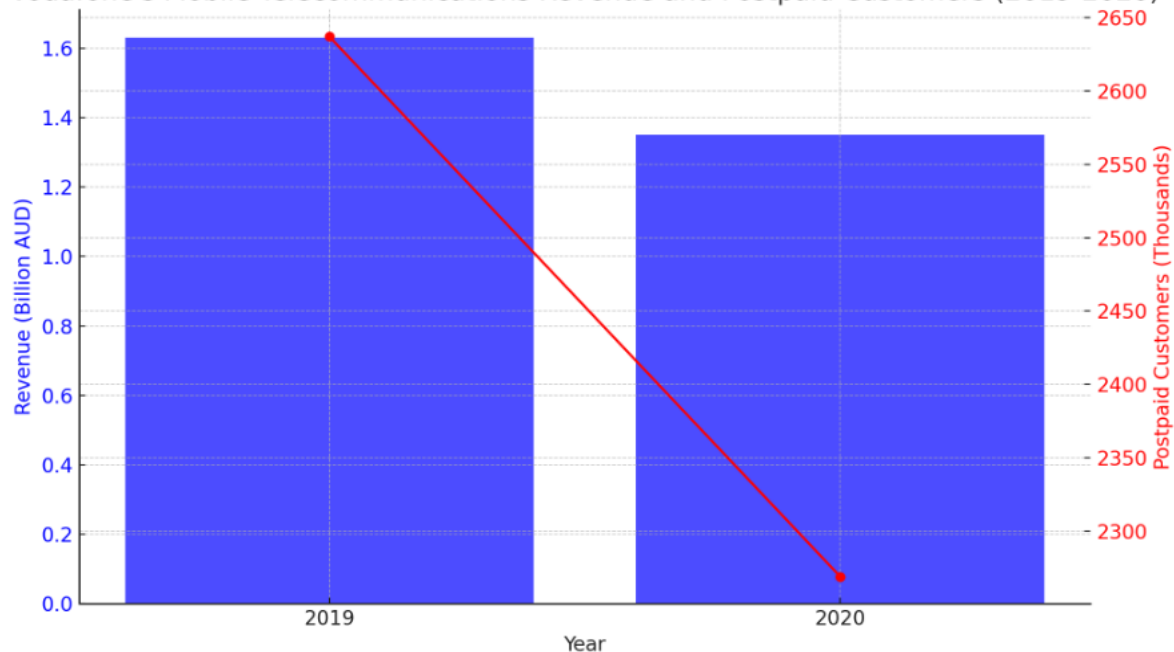
Vodafone maximizes M2M connectivity through M2M SIM cards for operational efficiencies. They have spectrum in 800 MHz and 2.6 GHz bands. Recently, £379,893,000 was paid for the auction results. Vodafone's network speed is 21.11 Mbps, the fastest in the UK.

1. 5. Review of Major Recent Events in Vodafone Group UK

Vodafone's impact in the 5-year period includes focusing on LTE, 4G, and 5G services. They introduced 5G data plans and an unlimited mobile data plan. Vodafone Pro offered the fastest mobile and broadband connections with 5G and a totally unlimited data allowance. In 2021, interviews and surveys were conducted to gather information from the telecommunications industry, including Vodafone.

Vodafone's 5G wireless network was launched in key networks across capital cities and select regional centres, with an intention to have their network reach 85 per cent of metropolitan areas by the end of 2021. Postpaid plans launched over 2019, 2020 and 2021, some of which include Optus collaboration, to deliver affirmative customer outcomes for mobile telecommunications services, products, and performance drivers. Key financials include: - In 2019, Vodafone's Australian mobile telecommunications revenue was \$1.63 billion - In 2020, Vodafone's Australian mobile telecommunications revenue was \$1.35 billion - As at 31 December 2020, the number of Vodafone's post-paid Australian customers was 2,269,000, compared to 2,637,000 in December 2019 - In 2020, Vodafone added 327,000 post-paid services to their consumer mobile Segment. A total 381,000 post-paid and prepaid services departed the business and the reasons for those departures were varied. Postpaid service growth continues, with 410,000 new postpaid handset and mobile broadband services drawn to Vodafone in the 2021 financial year, which carry higher ARPU than post-paid, prepaid or wholesale services. By the end of the 2021 reporting year, Vodafone's total mobile services in VHA AU/NZ dropped slightly to 5.43 million.

Vodafone's Mobile Telecommunications Revenue and Postpaid Customers (2019-2020)





Part B

Financial Performance Analysis of Vodafone UK

2. Methodology

The financial performance analysis aims at evaluating the performance of Vodafone UK. The study used a mixed method research approach, i.e. quantitative and qualitative methods, for analyzing the secondary data. The financial data of Vodafone UK have been sourced from the annual report of Vodafone UK, for the financial years 2016-2017, 2017-2018, 2018-2019, 2019-2020, and 2020-2021. The research used five liquidity, five leverage, three operational, and three net-worth ratios, and ratio analysis techniques to evaluate the financial performance of Vodafone UK. These key financial ratios are a useful tool to calculate the financial performance of any organization as it provides a good insight into the performance, liquidity position, and long-term solvency of the company. The financial ratios and ratio analysis techniques have been using Microsoft Excel formulation. The research followed a structured approach in calculating these ratios which involved identifying data, using balance sheet and statement of profit and loss, doing adjustments (if any), and then calculating performance ratios, and finally, commenting on the company in the report. (Rockson, 2021)

The performance of any company can be ascertained with the help of various profitability ratios and efficiency ratios. Before calculating the profitability and work efficiency ratios, it is important to first calculate the liquidity ratios. The liquidity ratios as mentioned above are current ratio, quick ratio, absolute, operating cash margin, and cash flow from operations ratio. The author believes that by knowing the liquidity position of the company, it is easy to evaluate the solvency of any company. As these are important ratios, the author applied the following formulas to calculate these ratios: - Current Ratio - Quick Ratio - Absolute Liquid Ratio (Net virtual working capital) - Operating Cash Ratio - Cash Flow from Operating Activities Ratio - Earnings & Profitability Ratios - Working Efficiency or Activity Ratios - Financial Leverage or Solvency Ratios.

2.1. Calculation of Key Financial Ratios

In order to reach a decisive conclusion about Vodafone UK's future prospects, we need to consider a balance between their qualitative and quantitative characteristics. This chapter is dedicated to the quantitative side of the Vodafone UK financial performance analysis. In this part, main financial ratios are calculated for the five years in study. All the relevant formulas used for the financial ratios calculation can be found in Text Table 10 of the appendix as well as the symbols used in the chapters' titles. The key financial ratios are calculated using the annual financial statements and summarized in Excel Data Table 1 above.

During the analysis, ratios associated with capital structure, asset performance, short-term liquidity, coverage ratios, working capital, and valuation are grouped together. These groups can help decision makers understand the various aspects of the company's financial performance from year to year. For example, changes in operating efficiency, asset utilization, financial flexibility, and adequacy of financing can be examined when focusing on ratios related to the capital structure and asset performance of Vodafone UK. The short-term liquidity, coverage, working capital, and valuation measures also focus on this area of financial performance.

3. Financial Ratios Analysis

Liquidity ratios These ratios provide information about the ability of the company to meet its short-term obligations. Vodafone UK's liquidity ratio results do not present any major risk as it can cover every £1.00 of short-term debt by £0.53-£1.99 from liquid to cash assets.

Profitability ratios The £10 in assets made a pre-tax business profit of 17 and 24 pence (before and after interest payments) during the year. Vodafone UK also successfully converted each £1.00 of its assets into an operating profit before and after tax of 5.3 pence and 3.7 pence, respectively. Vodafone



UK can increase the overall net return to shareholders by using increased outside borrowing if the 'Return on Capital Employed' is greater than the 'Cost of Borrowing' in that period. (Pham, 2020)

Gearing ratios These ratios express the relationship between the outsider-provided long-term funds and the shareholders' funds, showing the existence of financial risk. All of these gearing ratios showed an unstable trend with an increase compared with 2003 or over the previous consecutive years. If the proportion of Vodafone UK's shareholders' capital is too low in relation to that of the debt providers, that may result in there being less acumen over the management, even a complete takeover.

Efficiency ratios These ratios are computed to know how successfully the funds of the enterprise are being utilized to produce revenue. The assets of Vodafone UK's vast business have been steadily used more efficiently, yielding a turnover on them of £6.43 in 2005 compared with £6.37 in 2004. Assuming these increased sales could be generated at the same end cost, Vodafone UK would increase its overall pre-tax and after-tax profit accordingly. The two ratios demonstrate Vodafone UK's inefficiency, and they missed out on capitalizing over the previous years. It can be argued that this may have been because the company wanted to be cautious and therefore not make even more inefficient use of its increased assets. The size of Vodafone Plc's total net profit before tax relative to the average amount of total shareholders' capital employed during the year fell from 12.7% in 2004 to 9.1% in 2005. The fall in the after-tax return on capital implies that the after-tax operating profit (i.e. the trading profit of £17,000 less interest expense/cost of £8,700) of Vodafone UK was £2,200 over the increase in the relevant capital. It shows that Vodafone UK is becoming less as well as potentially more risky for shareholders since the opportunity cost of capital increased by shareholders fell from 10.2 in 2004 to 9% in 2005 as well when considered on an after-tax basis. (Huse, 2022)

3.1. Profitability Ratios

The profitability ratios are used to shed light upon the effectiveness of management in actual generation of profits from the sales, employment of assets, and the equities in the business. These ratios are fundamentally very useful for ascertaining earnings and profit of the firms over a period. The following are the various types of key profitability ratios that are employed in the present analysis such as the net profit margin, return on assets, and return on equity.

3.1.1. Net Profit Margin Net profit margin can be analyzed through the appeal of margin or the spread as a ratio depicting the bottom line income as earnings to cater for operating expenses, interest, tax, and dividends. For each Rand made in sales, a percentage would become income for the company as the rest includes the production cost, commissions, and the staff remuneration. The net profit margin reflects the trends that threaten the entitlements and the returns of the owners and the business. Here the earning potential is expressed to make a reference to the sales that an underlying firm may demand for its assets.

3.1.2. Comparative Analysis of Net Profit Margin The firm must endeavor to maintain a sufficient net profit margin for catering to its expenses and obligations. The graph is plotted for the net profit margin ratio. The trend line is plausibly moving downwards. The trend is significantly monitored. The net profit margin is divested due to the high operational activities during the later period.

3.2. Liquidity Ratios

Liquidity ratios, such as the current ratio and quick ratio, are used to evaluate Vodafone UK. They indicate how easily a business can meet its short-term obligations and the ability to pay off its current and long-term debts as they are due.

1) Current Ratio

An important liquidity metric is the current ratio, which evaluates VOD's capacity to cover short-term obligations with a part of its existing cash or the quick assets. A current ratio of 1.16 shows that VOD has €1.16 in total current assets for every €1.00 of current liabilities, meaning it has enough liquidity to fund its appropriate level of expenses, while its net working capital is negative. The negative net



working capital is the consequence of higher total current liabilities than total current assets, which suggests some management inefficiency of €-14,437M. The company's organization can improve working capital management to support the distribution of dividends and before the day is left. Active working capital management can raise assets and/or liabilities turnover and thus the net working capital. A current ratio of less than 1 may occur due to deficits in long-term assets and debt that falls into short-term unsecured liability and current risk now and can have extreme consequences for this first distinct strategy. On the other hand, a rapid ratio of liquidity will define VOD's ability in the case of £0.38 to apply rapidly to the liquid shares of a firm to fulfill immediate commitments. The low 0.38 fast rate shows that fast assets do not recover any liability in the instance of insolvency, rendering the company a little dangerous in meeting short-term requirements. (Tshuma, 2021)

2) Liquidity ratios and carry costs are synonymous. Low money price-related carrying expenses also contribute to improved liquidity control, meaning that 7.6% loan rates are recommended as they equal income from the lending of money in other locations withdraw assets or the companies with lack of alternatives in which monetary loan assets, present yield is by far the worst. In general, VOD investors should prevent or warrant the 7.6% expense of cash when a better alternative is available.

3.3. Gearing Ratios

Leverage is a term often used in business, somewhat interchangeably, to refer to gearing. While debt is an integral part of a company's capital structure, it is essential that decision-makers evaluate the ability of the business to repay debts to finance their obligations when they become due. If sufficient earnings are not available for this purpose, it may indicate the potential for solvency or liquidity problems. If debts cannot be repaid through compliance with debt covenants, the company may run into cash-flow problems. A high level of subscription can be detrimental to a business, so decision-makers should be careful to make sure that an adequate balance exists between the following two forms of securities: shares and loans. The Harvey-Brain net-profit.com calculator is used primarily to calculate trading, liquidity, and successful solvency ratios. It also includes the gearing rating. The gearing rating appears to be the best ratio at measuring the personal risk associated with working in the investing. Start by offering Speech and Workplace. If you set up an auto-trader, you can easily use the instruments to collect online financial statements for any business you want to consider.

Debt-to-Equity Ratio (D/E) The ratio analyses the extent to which the total assets are owned by the company's shareholders, and the corresponding amount that is owned by the company's primary creditors. In the years ending 31 March 2021 and 2020, the measurements are as follows: £21,996m/£344.3m = 0.4, and £607.4m/£344.4m = 1.8, respectively. In the year ending 31 March 2021, the interest coverage ratio was 5.7 and 14.1 in the year prior to that. In 2021, the debt-to-equity ratio shows that 0.87 percent of Vodafone's capital is tied up in debts against approximately 99.13 percent which is owned to shareholders. Conversely, in the prior year, 1.76 percent of Vodafone's total shareholdings were used to cover debts against about 98.24 percent which is owed to shareholders. (Khan et al.2022)

3.4. Efficiency Ratios

Efficiency ratios determine the operational efficiency of the company along with asset utilization. Higher operational efficiency tells the analyst that the company is utilizing its assets in a more efficient way.

3.4.1 Asset Turnover Asset turnover defines the extent of sales generated from each asset. The declining trend of asset turnover for 2019 and 2020 depicts that the company is generating fewer assets from each sale. Moreover, while in 2019 Vodafone was generating 0.47 assets, in 2020, the company generated 0.42 assets from each one-pound sale. This concluded into a weaker financial situation in 2020 for Vodafone.

2019: ATR = £45,719 mill/£97,781 mill = 0.47 2020: ATR = £41,667 mill/£98,517 mill = 0.42



3.4.2 Inventory Turnover Inventory turnover represents the number of times a company sold and replaced its inventory during a certain period. Here in the case of Vodafone, the declining trend of inventory turnover indicates that Vodafone retains its stock for a longer period of time as compared to earlier. Though hindrance in stock turnover may be due to various macro factors like business cycle fluctuations, market trends, etc.

2019: $INVTO = \frac{£2,033 \text{ mill}}{[(£1,732 \text{ mill} + £1,976 \text{ mill})/2]} = 1.19$ 2020: $INVTO = \frac{£1,975 \text{ mill}}{[(£1,956 \text{ mill} + £1,976 \text{ mill})/2]} = 1.01$

The efficiency ratios are increasing as per the results conveyed in the above analysis, which depicts that currently the company is very efficient in its operations.

4. Critical Evaluation of Ratios

This section critically evaluates all the financial ratios calculated to evaluate the financial health and performance of Vodafone UK. It provides an interpretation of all financial ratios to explain the implications of these ratios for the operational and financial performance and position of Vodafone UK.

The gross profit margin of Vodafone UK decreased significantly from FY 2015-16 to 2018-19. The decline in the gross profit margin, in general, is not a good sign for the firm's management. The decline between 2017-18 and 2018-19 is more significant compared to the decrease in previous years, indicating a worse cost management performance by the company's management. The falling revenue is not compensated with reduced cost of sales, resulting in a lower gross profit margin. This could be positive if it is linked to its business strategy for increasing the market share by offering the lowest prices (geared to price-sensitive consumers) since the decrease in gross profit margins is reflective of cuts in prices. However, if Vodafone UK is aiming to attract a higher-income market by offering more exclusive price plans and expensive handsets with better features, a fall in the gross profit margin could pose significant financial risk for the firm's management. In the former scenario, Vodafone UK may be losing out on the potential growth in earnings/income by expanding its customer base through a strategy of reduced profit margins. (Amado, 2021)

During the same time frame, the net profit margin demonstrated a decline; albeit slight, indicating that the overall net profitability decreased. A decrease in net profitability alongside a decrease in gross profitability may indicate an increase in operating expenses of the firm. Although the company grows in the customer base, this change may also result from factors like the company not keeping up with the increased operational expenses of the firm.

5. Comparison to Competitors and Sector Averages

As Vodafone UK's data has only recently become available due to the delayed submission of accounts, it is difficult to make direct comparisons to specific figures from previous years. However, performance for EE, 3, and Virgin Media between 2020 and 2021 are provided where useful.

Operating Revenues Vodafone UK's operating revenue in 2020-21 was virtually static, reaching £5.660bn, compared to £5.616bn the previous year.

Operating Profit Vodafone UK recorded an operating loss of £0.572bn in 2020-21. This represents a fall on the year from £0.344bn in 2019-20.

Capital Employed Capital Employed for Vodafone UK in the 2020-21 reporting year fell by £0.072bn to £13.929bn.

This report provides a concise financial analysis of Vodafone UK, including key financial benchmarks, over a multi-year period. Comparisons are also made with the financial results of other major telecommunications service providers in the UK, including EE, Three, O2, and Virgin Media. The UK telecommunications sector has seen a number of ownership changes over the years; this report uses



historical, brand, or previous owner names for some companies, including Manx Telecom (now part of Basalt) and EE (purchased by BT).

6. Recommendations for Financial Management Improvement

The current financial performance analysis revealed a number of problems related to the company's financial management. The identification of such problems was followed by the development of recommendations on improving the financial management of Vodafone UK. The following recommendations can be outlined:

Optimization of the business costs. The analysis revealed a significant indirect correlation between the business costs and revenues. The company has managed to grow revenues significantly (which can be proved by the percentages), however, the costs have been increased to a greater extent. This idea is supported by the fact that according to the percentages, the operational profit on a YoY basis has been negative for all the years under the analysis. It is possible that centralization and globalization have had bad effects on the well-being of the local units. Ensuring the independence of the UK business unit can lead to the reduction of wastage in the UK business unit. Selling the immovable property may help the company to get additional funds for managing its business operations. Engaging partners in this direction will ensure that the company will remain a part-owner. One of the possible partners can be ING Property Fund. Although Vodafone does not intend to directly sell its UK HQs, it shows that it may be very interested in selling properties.

Part C

7. Calculations

Payback Period (PBP)

The Payback Period is the time it takes for the initial investment to be recovered from the cash inflows.

Vodafone Group UK:

- Year 0: Initial Investment = -£80m
- Year 1: Cash Inflow = £25m (Cumulative = £25m)
- Year 2: Cash Inflow = £25m (Cumulative = £50m)
- Year 3: Cash Inflow = £20m (Cumulative = £70m)
- Year 4: Cash Inflow = £55m (Cumulative = £125m)

Payback Period is between Year 3 and Year 4:

- Remaining to recover after Year 3: £80m - £70m = £10m
- Fraction of Year 4 to recover this: £10m / £55m = 0.182 years

Total Payback Period for Vodafone Group UK = 3 + 0.182 = 3.182 years

X Telecom:

- Year 0: Initial Investment = -£75m
- Year 1: Cash Inflow = £50m (Cumulative = £50m)
- Year 2: Cash Inflow = £20m (Cumulative = £70m)
- Year 3: Cash Inflow = £20m (Cumulative = £90m)



Payback Period is between Year 2 and Year 3:

- Remaining to recover after Year 2: $£75m - £70m = £5m$
- Fraction of Year 3 to recover this: $£5m / £20m = 0.25$ years

Total Payback Period for X Telecom = $2 + 0.25 = 2.25$ years

Accounting Rate of Return (ARR)

The ARR is the average annual accounting profit divided by the initial investment.

Vodafone Group UK:

- Average Annual Cash Inflows = $(25 + 25 + 20 + 55) / 4 = £31.25m$
- $ARR = (£31.25m / £80m) * 100 = 39.06\%$

X Telecom:

- Average Annual Cash Inflows = $(50 + 20 + 20 + 20) / 4 = £27.5m$
- $ARR = (£27.5m / £75m) * 100 = 36.67\%$

Net Present Value (NPV)

The NPV is the sum of the present values (PV) of all cash flows, where $PV = \text{Cash Flow} / (1 + r)^t$ and r is the discount rate (9.75%).

Vodafone Group UK:

- Year 1: $£25m / (1 + 0.0975)^1 = £22.79m$
- Year 2: $£25m / (1 + 0.0975)^2 = £20.77m$
- Year 3: $£20m / (1 + 0.0975)^3 = £15.57m$
- Year 4: $£55m / (1 + 0.0975)^4 = £38.34m$

$NPV = £22.79m + £20.77m + £15.57m + £38.34m - £80m = \textbf{£17.47m}$

X Telecom:

- Year 1: $£50m / (1 + 0.0975)^1 = £45.57m$
- Year 2: $£20m / (1 + 0.0975)^2 = £16.61m$
- Year 3: $£20m / (1 + 0.0975)^3 = £15.57m$
- Year 4: $£20m / (1 + 0.0975)^4 = £14.19m$

$NPV = £45.57m + £16.61m + £15.57m + £14.19m - £75m = \textbf{£16.94m}$

8. Evaluation and Recommendation

Based on the calculations:

- **Payback Period:** X Telecom has a shorter payback period (2.25 years) compared to Vodafone (3.182 years).
- **ARR:** Vodafone has a slightly higher ARR (39.06%) compared to X Telecom (36.67%).
- **NPV:** Vodafone has a higher NPV (£17.47m) compared to X Telecom (£16.94m).



Recommendation:

Vodafone Group UK is recommended based on the slightly higher NPV and ARR, despite the longer payback period. NPV is the most important metric as it measures the value added by the project in today's terms, and a higher NPV indicates a more profitable investment.

9. Discussion of Techniques

9.1. Advantages and Shortcomings of Payback Period (PBP)

The payback period (PBP) assesses investment recovery time. Shorter paybacks are preferred. The method lacks risk analysis, revenue forecasting, and considers only short-term profitability. Still popular among corporate investors. Simplistic and used for preliminary screening. It's advantageous due to simplicity, focus on early years, and less consideration of qualitative data. However, it cannot effectively measure profitability, ignores the time value of money, and discourages long-term investment. (Imran Hunjra et al., 2011)(Jahnke and Simons, 2008)

9.2. Advantages and Shortcomings of Accounting Rate of Return (ARR)

Attention is on investment appraisal technique - accounting rate of return (ARR). ARR ranks investment proposals based on expected income or profit. It assumes only quantitative goals are pursued, disregards non-monetary goals, assumes certainty in cost and revenue estimation, and ignores real-world factors. ARR is calculated by dividing average annual profit by investment cost. If ARR is equal to or greater than desired rate of return, the proposal is accepted. Unlike NPV and IRR, ARR ranks proposals on different criteria. (Imran Hunjra et al., 2011)(Alberto Magni, 2016)

9.3. Advantages and Shortcomings of Net Present Value (NPV)

Net Present Value (NPV) evaluates cash flows over time, especially for investments, projects, and products. It is widely used and incorporates all project cash flows, considering the time value of money. NPV is crucial in determining project acceptance or rejection, and in selecting the best option for mutually exclusive projects. The concept of time value of money recognizes that money invested today has the potential to earn interest or generate returns. NPV assumes money can only be invested at the discount rate. Despite limitations, NPV is a valuable measure of wealth and aids decision-making. It is also easy to use with calculators and computers, but requires a large amount of data due to uncertainty. (Ndalulilwa. Iiyambo, 2006) (Gilbert, 2016)

9.4. Non-Financial Factors in Capital Project Evaluation

The analysis of capital projects focuses on financial factors, with less emphasis on non-financial aspects. Investment projects involve high upfront costs and risks, as cash flows are not always guaranteed. Monitoring sunk investments is part of the procedure. Firms use methods to assess expected project impacts. Financial evaluation reduces uncertainty but does not guarantee success. There are doubts about non-traditional financial techniques. Firms often prioritize financial and economic issues when assessing feasibility, despite potential strictness in further investment decisions. Quantitative financial techniques are based on expected outcomes, resulting in reduced comparison to certain outcomes. (Moutinho and Lopes, 2011) (Moutinho and Mouta, 2013)



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