

Analysis of Financial Statements for Prediction of Business Sustainability in Rwanda: A Case of Banque Populaire Du Rwanda Ltd

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Abstract

Banks are the company which serve the society on the financial services. Banque populaire du Rwanda (BPR) is the one in providing such activity in Rwanda. Different means are provided to consider BPR activities. The main aim to this study is to analyze the financial indicators and business sustainability determinant of predicting future outlook of BPR Ltd during the period 2011 to 2015. BPR improves its services if it is aware of the sustainability index and the financial indicators as well as the relationship between financial indicators and factors of BPR business sustainability. After the employment of techniques in collecting both primary and secondary data on the sample of 83 out of 1606 total population, the financial indicators and business sustainability were analyzed using Bank Analysis Fact sheet (BAFs) and Statistical Package for Social Sciences (SPSS).

Index terms— financial statement analysis, predicting, business sustainability, banque populaire du Rwanda. others? because the business sustainability can be detected from its financial analysis. This means that, a sustained success will depend on how well business is performing based on the analysis of financial statements, (Neely et al., 2000).

Financial indicators have long been the foundation for business sustainability measurement and there is a meaningful relationship between analysis of financial indicators and predicting its business performance. ??fley (2003) argues that financial measure of performance is very crucial as it serves as a tool of financial management, a major objective of a business organization, and a mechanism for motivation and control within an organization. The main difficulty is that many companies do not carry out their financial statements, or others do not analyze it. The problem associated with this, is that business strategies drawn by the decision makers are based on the poor measurement of financial indicators. The companies fail to perform due to the fact that they do not pay attention to the company financial statements for forecasting its business performance, (Chartered Institute of Management ??ccountants, 2008).

A financial institution like BPR Ltd has to analyse its financial statements, to be able to monitor and control their specific activities; to predict future internal and external states; to monitor state and behaviour relative to its goals; to make decisions within needed time frames; and to alter the firm's overall orientation and/or behaviour.

According to BNR (2013), BPR is ranked on the second by assets, second by deposit and 3 by loans portfolios. It is also a leading retail bank in Rwanda, but this is not the case for the sustainability of its business. Because, having reviewed the BPR financial statements which are prepared in accordance with International Financial Reporting Standards and Law No. 7/2009 relating to companies, since 2008 while BPR became a commercial bank, it didn't divided the dividends to the shareholders anymore. In addition to, it's net incomes are yet below to those of other commercial banks which has lower assets, loans, and deposits than the BPR Ltd. This has been affected the BPR business strategies while planned the recapitalization scenario in 2014. According to

44 prior-study made by the research to the BPR, this bank has been suspended to loan in the ended 2013. It was
45 subjected a number of customers to run out of the BPR. Add that, a prior survey on the BPR financial report
46 revealed that the company is counting three (3) years without making a profit, nor distributing dividend to the
47 shareholders. Prior survey showed that BPR is not adequately capitalized to meet its obligations. According
48 to the CEO's declaration through the BPR strategic plan, stated that in 2008, BPR had 25% Rwanda's market
49 share in loans and local currency deposits. But due to the adequately capitalized bank such as BK, due also to the
50 new entrants into market competitively experienced bank including KCB and Equity Bank (both from Kenya),
51 again from the introduction of a new cooperatives umbrella of SACCOs which targeting SMEs and individuals
52 which have been traditionally BPR core markets, that market share has shrunk down to 14% (as at 30 June
53 2013), and it is still dropping down (TURAHIRWA, 2014). Many of BPR branches are located far away from
54 business areas, hence BPR has also been losing customers through poor service delivery that fails to meet their
55 expectations.

56 Those are the serious issues affect negatively the performance of a business. It could also lead the BPR to
57 run out the banking business, also to the inadequate resources allocation which the final results being the poor
58 performance of the Business organization. In these state of affairs, it is suspicious to ensure on BPR outlook of
59 its business performance. Analysis and interpretation of financial statements is an important tool in assessing
60 the prediction of business performance in BPR. This research will assess whether there is a relationship between
61 financial indicators and the determinants of predicting business sustainability in BPR Ltd. The study is focused
62 on the following hypothesis: a. Profitability ratios, Liquidity Ratios, efficiency ratios, leverage ratios and market
63 value ratios are the indicators of financial analysis of BPR Ltd. b. Payout ratio, retention ratio, internal growth
64 rate and sustainable growth rate are the factors of the BPR business sustainability. c. The financial analysis
65 indicators explain positively the prediction of business sustainability determinants in BPR Ltd.

66 1 II.

67 2 Objectives

68 In general, the research is to analyze the financial statement for prediction of business sustainability in Rwanda.
69 The study will emphasis and ensure that the highlighting specific objectives are achieved. 1. To determine the
70 financial analysis indicators of the BPR Ltd; 2. To analyze the determinants of the business sustainability of
71 BPR Ltd;

72 3. To measure the relationship between financial indicators and business sustainability determinants of the
73 BPR.

74 3 III.

75 4 Literature Review

76 Financial indicators are statistics extensively used to monitor the soundness, stability and performance of various
77 sectors of the economy, (Jane et al., 2008). Their usefulness lies in their ability to provide insight into the
78 relationships among economic and financial statistics such as debt, assets, liabilities, net worth, incomes and
79 output, in other words, enhancing the analytical content of these statistics taken individual.

80 A financial statement is a written report which quantitatively describes the financial health, strength,
81 performance and liquidity of a company. Bashir (1999), defines a financial statement (or financial report) as
82 a formal record of the financial activities and position of a business, person, or other entity. Relevant financial
83 information is presented in a structured manner and in a form easy to understand. A balance sheet, also referred
84 to as a statement of financial position, reports on a company's assets, liabilities, and owners' equity at a given
85 point in time, (Gibson & Charles, 2013). This includes a statement of comprehensive income, referred to
86 as a statement of profit or loss, and often also includes a statement cash flow and a statement of changes in
87 equity. Financial Statements reflect the financial effects of business data, transactions and events on the entity,
88 (Muchemi, 2012).

89 Financial data consists of pieces or sets of information related to the financial health of a business. The pieces
90 of data are used by internal management to analyse business performance and determine whether tactics and
91 strategies must be altered, (Gibson & Charles, 2013).

92 Financial statement analysis (or financial analysis) is the process of reviewing and analysing a company's
93 financial statements to make better economic decisions. Financial statement analysis is likely to evaluate the
94 financial status of a company. An accountant will perform several duties, like profit and loss analysis, oversee
95 management practices, and prepare financial statements, (Gaurav, 2011).

96 A financial ratio or accounting ratio is a relative magnitude of two selected numerical values taken from an
97 enterprise's financial statements. Financial ratios are mathematical comparisons of financial statement accounts
98 or categories, (Audrey J., 2011). These relationships between the financial statement accounts help investors,
99 creditors, and internal company management understand how well a business is performing and areas of needing
100 improvement (Audrey J., 2011). According to Wozniowska, G. (2008), Ratio analysis is a useful management
101 tool that will improve your understanding of financial results and trends over time, and provide key indicators
102 of organizational performance. The following are the types of financial ratios analysis:

103 5 Profitability

104 Bhole & Jitendra (2010) a profitability ratio is a measure of profitability, which is a way to measure a company's
105 performance. Common profitability measures include the Net Income Margin (NIM), which is the ratio of net
106 income to sales, and Gross Profit Margin (GPM), which is the ratio of gross profit to sales. Others profitability
107 ratios used in analysing a company's financial include gross operating margin (OM), return on assets (ROA),
108 return on equity (ROE), return on sales (ROS) and return on investment (ROI).

109 6 Liquidity

110 In accounting, the term liquidity is defined as the ability of a company to meet its financial obligations as they
111 come due, Bhole & Jitendra (2010). Liquidity refers to an enterprise's ability to pay short-term obligations;
112 the term also refers to its capability to sell assets quickly to raise cash. On other hand, Solvency refers to an
113 enterprise's capacity to meet its long-term financial commitments. Moreover, the solvency ratio quantifies the
114 size of a company's after tax income, not counting non-cash depreciation expenses, as contrasted to the total
115 debt obligations of the firm.

116 7 Efficiency

117 Gibson & Charles (2013) the efficiency ratio, a ratio that typically applies to banks, in simple terms is defined
118 as expenses as a percentage of revenue (expenses / revenue), with a few variations. The most common efficiency
119 ratios include: Total Asset Turnover and Inventory Turnover (BNR, 2013).

120 8 Leverage

121 Robinson (2001), states a leverage ratio as any one of several financial measurements that look at how much
122 capital comes in the form of debt (loans), or assesses the ability of a company to meet financial obligations. The
123 most common leverage ratios include; Debt Ratio, and Debt to Equity Ratio ??Abbas, et al., 2012).

124 9 Market value

125 According to Abbas et al., (2012), Market value ratios are used to evaluate the current share price of a publicly-
126 held company's stock. Market ratios allow the analyst to understand how other investors feel about owning a
127 share of a company's stock According to Hakensen (2010), Business sustainability is often defined as managing
128 the triple bottom line, as a process by which companies manage their financial, social and environmental risks,
129 obligations and opportunities. These three impacts are sometimes referred to as profits, people and planet.
130 Sustainability is broadly defined as meeting the needs of the present generation without compromising the ability
131 of future generations to meet their own needs.

132 10 Pay-out ratio

133 The payout ratio is the percentage of net income that a company pays out as dividends to common shareholders
134 ??Fischer et al. 2013).

135 11 Retention ratio

136 According to BNR, (2013), the retention ratio refers to the percentage of net income that is retained to grow the
137 business, rather than being paid out as dividends.

138 12 Internal growth rate

139 An economist James Tobin (1918), of Yale University states that an internal growth rate is the highest level of
140 growth achievable for a business without obtaining outside financing, and a firm's maximum internal growth rate
141 is the level of business operations that can continue to fund and grow the company.

142 13 Sustainable growth rate

143 According to James Tobin (1918), Sustainable growth is defined as the annual percentage of increase in sales
144 that is consistent with a defined financial policy. Various studies have been carried out on financial indicators
145 and determinants for predicting business sustainability; here is some review of them.

146 Saleem & Rehman (2011), sought to reveal the relationship between financial indicators and sustainability
147 for long run. He has acquired the Liquidity ratios and Profitability ratios calculated from financial statement
148 as independent variable and dividend pay out to the shareholder as dependent variable. The main results of
149 the study demonstrate that each ratio (variable) has a significant effect on the sustainability of business with
150 differing amounts and that along with the liquidity ratios in the first place. He has concluded that Liquidity and
151 Profitability ratios play an important role for forecasting the sustainability of a business.

152 Al-Tamimi & Obeidat (2013) identified the most important variables which affect the Capital Adequacy of
153 Commercial Banks of Jordan in Amman Stock Exchange for the period from 2000 -2008. The study shows
154 that there is a statistically significant positive correlation between the degree of capital adequacy in commercial

155 banks and the factors of internal growth, and the return on share, and there is an inverse relationship not
156 statistically significant between the degree of capital adequacy in commercial banks and factors of the capital
157 risk, credit risk, and the rate of force-revenue. In his conclusion, he stated that the size of capital contribute
158 on the sustainability of business in current and in future. Almazari (2011) in his study attempted basically to
159 predicting the sustainability of business of seven Jordanian commercial banks on the basis of financial information
160 of the period of 2005-2009, by using simple

161 14 Year ()

162 regression in order to estimate the impact of independent variable represented by; the deposits, credits, assets,
163 profit and operational efficiency and took dependent variable as sustainability growth and internal growth
164 calculated from net income. It was found that banks with higher the deposits, credits, assets, profit are mostly
165 sustainable in business, than bank with low the deposits, credits, assets, profit. Also found that there exists
166 a positive correlation between financial ratio and its sustainability on market and competition, which was also
167 confirmed with regression analysis that sustainability of bank is greatly influenced by these independent factors.

168 By this time, this study would concentrated financial line for analysis of financial statements for predicting
169 business sustainability in Rwanda, with empirical study of BPR Ltd, 2011-2015. With support from financial
170 line sustainability measures and majority of previous empirical findings, we hypothesize that: Ceteris paribus,
171 there is a positive relationship between ?financial statements and financial indicators for predicting business
172 sustainability of BPR Ltd.

173 15 IV.

174 16 Methodology

175 The research is exploratory and explanatory in nature. The methology regarding this study is based on different
176 method, qualitative and quantitative methods, among which various sources of information on financial statement
177 and and financial indicators for predicting the business sustainability were compared and analyzed. Both primary
178 and secondary data were collected and then analyzed through BAFs and SPSS. A structured questionnaire were
179 designed for 83 from 1606 total population under this study.

180 17 a) Data collection and analysis

181 Data was collected from a field using questionnaires, semi structured interviews, observation and documentation
182 by 83 personnel and board of director's members of BPR. The total population under this study is 1606 where
183 a sample of 83 personnel of BPR Ltd was calculated using Alain Bouchard formula as cited by Sabiti. F (2004).

184 18 b) Instruments

185 The collected data was used to achieve the research purpose. Data was changed into meaningful information
186 for easy interpretation and understanding. It was done through various forms such as texts, tables, and figures.
187 The different techniques were used such as editing, coding, tabulation. The main techniques to be used are
188 the techniques of financial statements analysis for, such as Ratio Analysis, Trend Percentages; common-size
189 statements, mathematic data comparison as vertical and horizontal analysis. Company financial statement is
190 analyzed to assess if the is any relationship between financial soundness indicators of BPR and its business
191 performance. The variables have to be analyzed as well to test the hypothesis. The detailed definitions and the
192 expected signs of their impact are given in literature review. The data collected have been checked for any errors
193 and omissions. After the checking, the data have been coded and analyzed using Bank Analysis Factsheet (BAFs)
194 and Statistical Package for Social Sciences (SPSS). The indicators of financial analysis of BPR were Profitability
195 ratios, Liquidity Ratios; efficiency ratios, leverage ratios and market value ratios. The regression analysis was used
196 in this study to measure the relationship between financial indicators and business sustainability of BPR Ltd.
197 The correlation matrix was extracted using SPSS version 18.0 to show the correlation between roles of financial
198 statement to forecasting sustainability of BPR Ltd as its determinants were shown in the conceptual framework.
199 The regression analysis was used to establish the relationship between the variables of the study. The following
200 regression model was used: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \epsilon$ where Y represents the dependent
201 variable means Business sustainability deteminants such as Payout ratio, retention ratio, internal growth rate
202 and sustainable growth rate, and β_0 is the constant term represent the model parameters of coefficients β_1 is
203 the profitability ratios, liquidity ratios, efficiency ratios, leverage and β_5 market value ratio and epsilon is the
204 error terms.

205 V.

206 19 Data Analysis, Presentation and Interpretation

207 The personnel under BPR Ltd financial sector is predominated by male with the percentage of 77% while
208 female has only 23% of ownership of 83 respondent including employees daily involving in finance, Executive
209 Management Team and board members' shareholders representatives (as owners) selected from the Banque
210 Populaire du Rwanda Limited according to table 18 above.

20 a) The role of analysing financial statement for forecasting sustainability of BPR Ltd

In the literature, for predicting sustainable business requires effective and deep analysis of financial management. The BPR Ratio analysis is a useful management tool that will improve shareholders and staff understanding of financial results and trends over time, and provide key indicators of business sustainability. Decision makers should use ratio analysis to pinpoint strengths and weaknesses from which strategies for forecasting BPR sustainability. Shareholders and investors may use ratio analysis to anticipate their earning and its shares' growth in the future. Thus, to further ascertain the role of analyzing financial statement for forecasting sustainability of BPR Ltd, respondents were asked to indicate the role of analyzing financial indicators for BPR sustainability determinants.

The major reasons for why analyzing financial statement in forecasting sustainability, the respondents were to determine dividend to be distributed (89%) Improve Sustainable Growth (88%), Determine Retention on market price per share (81%), Improve Internal Growth /self-financing (75%) and Supporting in decision making and goal realization (64%), attracting current and new potential investors (64%), Efficiency utilization of resource to generate Profit (61%) ,and Effective planning (47%) as asserted by different literatures in every organization the overall aim is to make profit (Salemi 2012; chary, 2008).

21 b) Financial indicators analysis of BPR Ltd

Financial indicators which were analyzed in this research was to evaluate various aspects of BPR's operating and financial performance such as its profitability, liquidity, profitability, efficiency, Leverage and market value ratio.

22 i. Profitability ratios

Profitability ratios indicate the ability of the BPR Ltd to earn a profit. It is a measure of profitability, which is a way to measure a company's performance. Secondary data was used for the period of 4 years ended 31 December 2015 for analyzing the profitability ratios of the BPR Ltd. In computing Operating Margin ratio, tabulated data above shows a positive results. On Gross Margin, the tabulated data shows a negative results, especially in year 2015, 2013 and 2012, where ratios are -6.01%, -42.02%, and -1.16% respectively. This means that BPR Ltd was recognized gross loss for these years. On Return on Assets, the tabulated data shows a negative results, especially in year 2015, 2013 and 2012. This means that, there were no any return recognized on the Assets, hence loss for these years. Return on Equity, the tabulated data 23 above shows a negative results, especially in year 2015, 2013 and 2012, where ratios are -11.97%, -33.77% and -4.98% respectively. This means that, there were no any return recognized on the Shareholder's Equity, hence loss for these years. For other remaining years of 2014 and 2011, the table revealed that a positive Gross Margin was recognized by BPR respectively as 5.55 % and 10.74 %.

ii. Liquidity Ratios Liquidity Ratios indicate BPR's ability to pay short-term obligations; the term also refers to its capability to sell assets quickly to raise cash. A normal and BNR required rate are: maximum 80% on Total Loans to Deposit Ratio, and minimum of 20% for Liquid Assets to Total Deposit Ratio, (BNR, 2013).

iii. Efficiency ratios Efficiency ratios indicate the company's ability to use its assets and manage its liabilities effectively. Expenses as a percentage of revenue (expenses / revenue), with a few variations. A normal and BNR required rate is a maximum of 75% on the total expenses to revenues (BNR, 2013). By Business sustainability is often determined by as managing the triple bottom line a process by which companies manage their financial, social and environmental risks, obligations and opportunities. These three impacts are sometimes referred to as profits, people and planet. To analysis the BPR business sustainability in line of how company manages its financial opportunities, we focused on: Dividend Pay-out Ratio, Retention Rate or plowback ratio, Internal Growth Rate and Sustainable Growth Rate. From the table above, the results revealed that ddividends Pay-out Ratio for BPR were 0% as no any dividend was distributed to the customer. In additional to, the result BPR Retention Ratio were negative as at -1.00% for year 2015, 2013 and 2012, this indicated the percentage of a BPR's loss that are incurred in share value. For year 2014 and 2011, retention Ratio were 1.00%.The results also showed that BPR internal growth rate were (7.62), 1.36, (1.44), 0.88 and (20.63) respectively for year 2015, 2014, 2013, 2012 and 2011 as the ratio expressing the maximum growth rate a firm can achieve without resorting to external financing. Sustainable growth for BPR as the annual percentage of increase in revenue that are inconsistent in accordance with a BPR defined financial policy.

According to the BPR sustainable growth rate as per research results were in (11.97), 5.51, (33.77), (4.98) and 10.74 respectively for year 2015, 2014, 2013, 2012 and 2011 as a determinant of the BPR's maximum growth rate in revenue using internal financial resources and without having to increase debt or issue new equity. About 60% of the scope under study, the BPR has recognized losses. The shareholders does not earn dividends anymore. The calculated sustainability growth for BPR is critically and need other advance strategies to improve this situation and safeguard BPR public image such as capital adjustment and found other external resources.

23 c) Analysis of Financial indicators and sustainability determinants of BPR

The efforts in this space are looked to scientific and statistically sound methods to demonstrate correlations between financial indicators for predicting sustainability determinants of BPR. With this, the analysis began with correlation testing of financial indicators against sustainability determinants followed by statistical hypothesis testing to see if we can definitively point to the most appropriate indicators.

The F-test was carried out to test the significance of the regression model in predicting the dependent variable (business sustainability). From the results, it was found that the five independent variables (Profitability ratios, Liquidity Ratios; Efficiency ratios, Leverage ratios and Market value ratios) as financial indicators of BPR Ltd (adjusted R squared = .726). That means the model explains 72.6% the variance in the business sustainability of BPR Ltd (27.4%) of variations are brought about by factors not captured in the objectives. Therefore, further research should be conducted to analyze the other factors (27.4%) that affect prediction of business sustainability of the BPR Ltd. The regression equation appears to be very useful for making predictions since the value of R² is close to 1.

The findings shows that the linear regression Ftest results (F = 8.741; and 5df) are significant at p < 0.05, therefore, the hypothesis was positive for the researcher. But counting that BPR is earning, instead of a complete positive relationship, there are indications that the positive relationship is only true for low and moderate sustainability of business. Therefore, the hypothesis concluded that the regression model linearly explains the determinants for prediction of business sustainability of the BPR Ltd. Therefore, the study accepted the alternative hypothesis.

Profitability ratios, Liquidity Ratios; efficiency ratios, leverage ratios and market value ratios are the indicators of financial analysis of BPR.

and sustainable growth rate are the factors of the BPR business sustainability. The financial indicators explain positively the prediction of business sustainability in BPR Ltd.

The study conducted a multiple regression analysis so as to determine the regression coefficients (β) which shows that β₀ = 1.238 and which means that all the independent variables such as Profitability ratios (β₁), Liquidity Ratios (β₂); Efficiency ratios (β₃), Leverage ratios (β₄) and Market value ratios (β₅) have an a significant contribution in prediction of business sustainability even if the x variable equal to zero means Y = 1.238 and the model equation become Y = 1.238 + 0.258β₁ + 0.367β₂ + 0.423β₃ + 0.157β₄ + 0.345β₅.

Hence, β₀ = Constant term (1-5) = represent the model parameters or coefficients; 0.258 as contribution of profitability ratios, .367 as contribution from Liquidity Ratios, .423 contribution of Efficiency ratios, .157 contribution of Leverage ratios and .345 as Market value ratios contribution.

24 d) Prediction of financial statement of BPR Ltd for three years (2016-2018)

The BPR Ltd has started to re-capitalize its Share capital for competitiveness with other commercial bank, and some change in management and shareholders structure was made, (BPR, 2013). While developing the financial predictions, the following was the considered rationale for the predictions: 1. The key driver of the growth will be the deposits.

The bank endeavours to grow its deposit annually initially by 10% and stabilise at 12.5% by 2018. 2. The deposits should make available funds that are key to the growth of the loan portfolio. These will be based on the assumption of a stable economic growth averaging 7.5% and a steady inflation rate of 7.5% and/or below throughout the plan period. The BPR Ltd also should recognize the total liabilities and equity of Frw219,910,083 in 2016, Frw239,778,902 in 2017, and Frw265,496,753 as well as the same figure for total asset as the financial position might balance. The liquidity and leverage ratios might be improved from the new injected capital, as well as new management. Now, the BPR has recapitalized from frw16,491,238 to Frw43,519,181 after injecting the new investor "Atalamar", the prediction was done with assumption that the share capital is constant. The BPR Ltd should recognize the Total liabilities and equity of Frw3,942,067 in 2016, Frw6,696,205 in 2017, and Frw10,758,302 for 2018. The upgrading of reserves may positively impact the BPR internal growth and sustainability growth.

Pay-out ratio, retention ratio, internal growth rate

25 VI. Conclusion and Recommendations a) Conclusions

The analysis done so far has been related to the financial statement for prediction of business sustainability in Rwanda with a case of Banquepopulaire du Rwanda (BPR). BPR is the bank whose target market is the grassroots and maintains the lead in the segment. The bank was transformed to a commercial bank in 2008 with a vision "To be the leading retail bank in Rwanda". It is in competition with other commercial banks which have more than 30 year in this sector of commercial bank. The findings from analysis of financial statements for prediction of business sustainability of BPR Ltd were concentrated on Profitability ratios, Liquidity Ratios; efficiency ratios, leverage ratios and market value ratios as indicators of financial analysis of BPR; Pay-out ratio, retention ratio,

326 internal growth rate and sustainable growth rate as determinants of the BPR business sustainability. The financial
327 analysis indicators explain positively the prediction of business sustainability determinants in BPR Ltd.

328 The profitability ratios have indicated that the ability of BPR to earn profit is on low level where 3 to 5
329 years with 60% BPR made a loss. BPR to pay short term obligations are not sufficient comparing the minimum
330 and maximum requirements rate of BNR. BPR Ltd was sometimes unable to use its assets and manage its
331 liabilities effectively. The ability of BPR to meet financial obligations, both long-term and short-term creditors
332 are insignificant, the NPL rate of over rate 5% obliged by the BNR and finally the Market value ratios were
333 indicated an adverse relationship between the price per share and its earnings, growth and assets for the BPR
334 Ltd. The Capital Adequacy of BPR cannot absorb a reasonable amount of loss and is not complied with statutory
335 capital requirements by the BNR. The result revealed that BPR is exposed on the risks from taking excess leverage
336 and becoming insolvent in the process.

337 The results revealed that dividends Pay-out Ratio for BPR were 0% as no any dividend was distributed to
338 the customer. In additional to, the result BPR Retention Ratio were negative as at -1.00% for year 2015, 2013
339 and 2012, this indicated the percentage of a BPR's loss that are incurred in share value. For year 2014 and 2011,
340 retention Ratio were 1.00%.The results also showed that BPR internal growth rate were (7.62), 1.36, (1.44), 0.88
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342 rate a firm can achieve without resorting to external financing. Sustainable growth for BPR as the annual
343 percentage of increase in revenue that are inconsistent in accordance with a BPR defined financial policy.

344 According to the BPR sustainable growth rate as per research results were in (11.97), 5.51, (33.77), (4.98) and
345 10.74 respectively for year 2015, 2014, 2013, 2012 and 2011 as a determinant of the BPR's maximum growth rate
346 in revenue using internal financial resources and without having to increase debt or issue new equity. About 60%
347 of the scope under study, the BPR has recognized losses. The shareholders does not earn dividends anymore. The
348 calculated sustainability growth for BPR is critically and need other advance strategies to improve this situation
349 and safeguard BPR public image such as capital adjustment and found other external resources.

350 To measure the relationship between financial indicators for prediction sustainability, the hypothesis was
351 positive for the researcher. Therefore, the hypothesis concluded that the regression model linearly explains the
352 determinants for prediction of business sustainability of the BPR Ltd. The alternative hypothesis was accepted.

353 To summarize, financial statement analysis was concerned with analysing the financial position and the income
354 statement of the BPR to interpret the business and financial ratios of a business for financial representations,
355 business evaluation, and give a recommendation for forecasting its business sustainability.

356 **26 b) Recommendations**

357 From the above analysis it is recommended that BPR should start the recapitalization processes from
358 Frw15,300billion to Frw16,491 billion, and now Frw43.519 billion. But till now this capital is not yet adequate
359 for competing with other commercial bank with a total Shareholders' equity more than 60.3 billion, such as BK,
360 KCB, and others with more than Frw45 billion such as GT-Bank and I&M Bank. It is better for recapitalization
361 of BPR Ltd Frw43.519 billion to Frw63.519 billion from potential local and/or foreign investors who share the
362 same vision with BPR. Cost cutoff of unnecessary expenses and reduce high fixed costs related to extensive
363 network. BPR has to centralise management of loans recovery to enhance efficiency.

364 BPR must grow in net revenues from loans and advances to customer, Net assets and profits. Continuing
365 growth means increasing loan portfolio quality and therefore taking advantage to reduce per unit cost thereby
366 increasing profits. Revamping the IT systems to better serve its mass customers on high satisfactory level and
367 for better management and controls; Developing new competitive products to for customer need and profit
368 realization; To continue growing its channels such growth in the Agency Banking, ATMs, internet and mobile
369 banking channels; Restoration its public image by constructing a new head office, refurbishing rundown branches
370 and relocating branches that are far from business areas and outside strategic business areas.

371 BPR should extend its reach to mass market through strategic partnerships with telecommunications
372 companies, electronic transfer agencies. It should introduce mobile powered products in the market in order
373 to tap into the power of the more than 6 million mobile phone users in the Rwandan market. Partnership with
374 Government/Development partners that focus on the bottom of the pyramid. BPR should attract, develop and
375 retain the best talent staff in the market for quality service delivery; and controls and operational efficiency by
376 fully automation of payment processes. BPR's product lines have real growth potential and our strategy is to
377 concentrate the available resources on growth both in reach and depth of BPR operations to ensure that they
378 continue to be successful

379 The Government of Rwanda through BNR as financial regulator should conduct a continuous assessment of
380 potential systemic risks to the Rwandan financial system and the development of policies to mitigate those risks.
381 Government of Rwanda should be directly involved to help eliminate the financing gap faced by BPR through
382 direct government interventions through public banks, credit guarantee schemes and other forms of subsidized
383 financing.

384 The BNR should enhance a stable financial system which creates a favourable environment for savers and
385 investors, encourages efficient financial intermediation and the effective functioning of markets, and hence,
386 promotes investment and economic growth.

387 Further research should look on other variables rather than financial indicators and the business sustainability

388 determinants. In addition, a researcher should put emphasis on analysis of financial statements for all financial system stability in Rwanda. ^{1 2 3}

1

INDICATORS OF FINANCIAL ANALYSIS OF BPR		
Financial Indicators	Significant of determinant	Formula
1 Profitability ratios	The ability of a business to earn a profit. It is a measure of profitability, which is a way to measure a company's performance	1. Gross Margin = $\frac{\text{Gross Profit}}{\text{Net Sales}} * 100$ $GM = \frac{GP}{NS} * 100$ 2. Operating Margin = $\frac{\text{Operating Profit}}{\text{Net Sales}} * 100$ $OM = \frac{OP}{NS} * 100$ 3. Return on Assets = $\frac{\text{Net Income}}{\text{Assets}} * 100$ $ROA = \frac{NI}{A} * 100$ 4. Return on Equity = $\frac{\text{Net Income}}{\text{Shareholder Investment}} * 100$ $ROE = \frac{NI}{SI} * 100$
2 Liquidity Ratio	Enterprise's ability to pay short-term obligations; the term also refers to its capability to sell assets quickly to raise cash	1. Current Ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$ $CR = \frac{CA}{CL} * 100$ 2. Acid Ratio = $\frac{\text{Cash \& Cash Equivalents} + \text{Short-Term Investments} + \text{Accounts Receivable}}{\text{Current Liabilities}}$ $AR = \frac{CCE + STI + AR}{CL} * 100$ 3. Total loans to Total Asset Ratio (TLTA) = $\frac{\text{Total Loans}}{\text{Total Assets}}$ $TLTA = \frac{\text{Total Loans}}{\text{Total Assets}}$ 4. Liquid Assets to Total Deposit Ratio (LATD) = $\frac{\text{Liquid Assets}}{\text{Total Deposits}}$ $LATD = \frac{\text{Liquid Assets}}{\text{Total Deposits}}$

Figure 1: Table 1 :

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2

Business sustainability determinant		BPR BUSINESS sustainability DETERMINANTS	
		Significant of determinant	
		The percentage of net income	
1	Dividend Pay-out Ratio	that a company pays out as dividends to common shareholders	Preferred) per Share)/(Earnings per Share)
2	RetentionRate plow-back ratio	or does	The percentage that a company reinvests into its own operations. In other words, it is the percentage of net income t notpay-out
3	Internal Growth Rate	dividends.	(Dividend / Share)
		Internal Growth Rate (IGR) is	
		the highest growth rate a firm	
		can	achieve
		considering or taking in to	
		account of any external	

Figure 2: Table 2 :

3

Profitability ratios	Formula	2015	2014	2013	2012	2011
Operating Margin	$OM = OP / NS * 100$	122.58	124.58	126.63	129.23	136.45
Gross Margin	$GM = GP / NS * 100$	(6.01)	9.19	(42.02)	(1.16)	12.78
Return on Assets	$ROA = NI/A * 100$	(1.15)	0.58	(3.28)	(0.47)	1.05
Return on Equity	$ROE = NI / SI * 100$	(11.97)	5.51	(33.77)	(4.98)	10.74

[Note: Source: BPR, Annual financial report 2011-2015, November 2016]

Figure 3: Table 3 :

4

Liquidity Ratios	Formula	2015	2014	2013	2012	2011
Current Ratio	$CR = CA/CL * 100$	24.31	26.00	33.71	22.41	31.84
Acid Ratio	$AR = (CCE + STI + AR) / CL * 100$	98.94	100.0	98.33	103.4	103.3
Total loans to Total Asset Ratio (TLTA)	$TLTA = \frac{\text{Total Loans}}{\text{Total Assets}}$	69.83	68.18	63.74	74.49	65.38
Liquid Assets to Total Deposit Ratio (LATD)	$LATD = \frac{\text{Liquid Asset}}{\text{Customer Deposit}}$	28.35	29.31	38.45	26.13	35.58
Total Loans to Deposit	$TLTD = \frac{\text{Total Loans}}{\text{customer Deposit}}$	88.59	85.47	79.67	98.26	83.66

[Note: Source: BPR, Annual financial report 2011-2015, November 2016]

Figure 4: Table 4 :

<p>Efficiency ratios Efficiency Ratio Net Interest Income Net Fee and Commission Income Accounts Payable Turnover Total Asset Turnover Accounts Receivable Turnover</p> <p>iv. Leverage ratios Analysis of Leverage ratio for BPR Ltd is to Formula Total operating expenses/ Total operational income Interest Expenses /InterestIncome Fee and Commission Expense/ Fee and Commission Income Interest Expenses/Average Accounts Payable Revenue (R) /Average Total Assets (ATA) Revenue / (Average Accounts Receivable)</p> <p>Source: BPR, Annual financial report 2011-2015, November 2016 2015 2014 2013 2012 2011 81.88 67.85 91.43 83.34 85.66 16.35 18.29 18.58 12.68 5.37 27.66 34.88 44.84 29.70 32.28 1.83 1.94 2.24 2.30 2.89 (0.01) 0.01 (0.03) (0.00) 0.01 (0.09) 0.05 (0.16) (0.04) 0.05</p> <p>assess its ability to meet financial obligations, both long-term and short-term creditors are concerned. It indicates the firm's risk exposure in meeting its debt obligations. A normal and BNR required rate is a maximum of 5% on Non-Performing Loans ratio (BNR, 2013)</p>	<p>Year Volume XVII Issue I Ver- sion I () Global Jour- nal of Man- age- ment and Busi- ness Re- search</p>
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Figure 5: Table 4 :

6

<p>Market value ratios</p> <p>Price-Earnings Ratio (P/E Ratio)</p> <p>Market-to-Book Ratio</p>	<p>Formula</p> <p>Price per share or Market Value Price per share/ Earnings per Whereas, (Earnings per share = Net Income/ Number of Shares Outstanding)</p> <p>Price per share or Market Value Price per share/ Book Value</p> <p>Whereas, Book Value per share = Total Owners' Equity/ Number of Shares Outstanding</p>	<p>2015 2014</p> <p>share</p> <p>(8.35)</p> <p>share</p> <p>1.19</p>
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Source: BPR Ltd, Annual financial report 2011-2015,

vi. Capital adjustments ratios

The BNR as regulators track a bank's Capital Adequacy to ensure that it can absorb a reasonable amount of loss and complies with statutory Capital requirements. It is decided by central banks and bank regulators to prevent commercial banks from taking

excess l
The cri
i. Regu
weighte
ii. Core

Figure 6: Table 6 :

8

Ratios		Computation	BNR Requirement	2015	2014	2013	2012	2011
Capital Adequacy Ratio		Total capital / weighted assets	Min 15%	2.96%	1.57%	1.13%	2.05%	4.36%
Core capital to risk weighted (RWA)	assets	Core capital / weighted assets	Min 10%	3.52%	1.64%	1.25%	1.65%	3.37%

[Note: Source: BPR, Annual financial report 2011-2015, November 2016]

Figure 7: Table 8 :

5

Leverage ratios	Formula	2015	2014	2013	2012	2011
Debt Ratio (DR)	Total Liabilities (TL) / Total	0.92				

Figure 8: Table 5 :

9

2015	2014	2013	2012	2011
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[Note: Source: BPR, Annual financial report 2011-2015, November 2016]

Figure 9: Table 9 :

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