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The Impact of Capital Budget Decision on Financial Performance of Commercial Banks in India

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Abstract: This study aims to un earth the impact of capital budgeting techniques on commercial bank financial performance. The study not only discusses that capital budgeting decision is imperative for the overall performance of commercial banks, but also discusses how to improve the use of the techniques in making decisions. Qualitative as well as quantitative research methodology has been adopted in this study. A questionnaire was developed to get the opinion of employees working in11 commercial banks in India. The results obtained from 187 employees show that the implementation of the payback period technique in capital budgeting decision is highly correlated with commercial banks performance followed by three other techniques except for the internal rate of return technique that was negative and insignificant in both the correlation and regression results. The suggestions of our results are discussed.

Keywords: Capital Budget Decision, Financial Performance, Commercial Banks, India.

I. INTRODUCTION

The need for capital budgeting decisions in the banking system to enhance performance and to improve profit levels cannot be over emphasized since the sustainability of any economic system is predicated on the viability of the financial system of that country. Banks are established to accomplish their set objectives which includes profit making and for these objectives to be attained capital budgeting decision must play a significant role. It is important to know that due to the present competition amongst banks there is the need for the present day banks to adapt and be involved in sound capital budgeting decisions to give them an edge over other banks in the aspect of continuously improving on their levels of performance. The effect of capital budget decision on financial performance is one of the central questions in both financial management and development. This effect matters not only for the evaluation and design of investment policy, but also for thinking about firm performance. Making a capital budgeting decision is one of the most important policy decisions that a firm makes. A firm that does not invest in long-term investment projects does not maximize stakeholder interests, especially shareholder wealth. Optimal decisions in capital budgeting optimize a firm's main objective – maximizing the shareholders' wealth – and also help the firm to stay competitive as it grows and expands. These decisions are some of the integral parts of overall corporate financial management and corporate governance.

A company grows when it invests in capital projects, such as plant and machinery, to generate future revenues that are worth more than the initial cost (Ross M. 2011; Shapiro 2005). Drury (2004) opined that the investment, financing and dividend decisions are considered by the capital budgeting process as follow: Determining which specific projects a firm should accept, determining the total amount of capital expenditure which the firm should undertake, and determining how the total amount of capital expenditure should be financed From the above, it is clear that the capital budgeting process is crucial for achieving the goal of maximization of shareholders' wealth. In addition, once an investment is undertaken, it is not easily reversible without a great deal of financial loss to the firm or even a severe decline in the growth of the firm. Given the above background, this research sought to investigate the effect of capital budget decision on the financial performance of commercial banks in India and proffer solid policy recommendations that could be applied so as to enhance better performance.

Practically, this study, as a whole, caters to a perceived need of most commercial banks owners/ managers for better capital budgeting practice to improve performance. The findings of this research will provide commercial banks owners/managers with more useful understanding about capital budgeting and participation, i.e. how to apply the budgeting system; how to adjust budget practice within organizations; whether it is useful to apply participation in commercial banks. They may change their attitude and/or behavior concerning capital budgeting activity, and finally enhance the beneficial outcome of performance management. The results will simultaneously contribute to business consultants to better understand financial planning implementation in commercial banks. This study also responds to the fast growth of commercial banks, not only domestically but also globally. As developing countries

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become more industrialized, the implementation of the performance management in developing countries remains an important issue. Commercial banks are quite different from other organizations. Therefore, more empirical studies are expected to be addressing this issue, to investigate how capital budgeting should be suitably applied and covered, which will positively improve their performance. The findings give more evidence on the effectiveness of capital budgeting practice towards commercial banks in India and give suggestions to commercial banks of other developing countries.

II. HYPOTHETICAL FRAMEWORK

The relationship describes the association between the independent variables and the dependent variables (Mugenda, O &Mugenda, B., 2003). The framework presents a suitable model to explore how commercial banks performance measured by return on assets (ROA) in India is affected by capital budget decisions such as Payback period, Net present value, internal rate of return, accounting rate of return and Profitability Index.

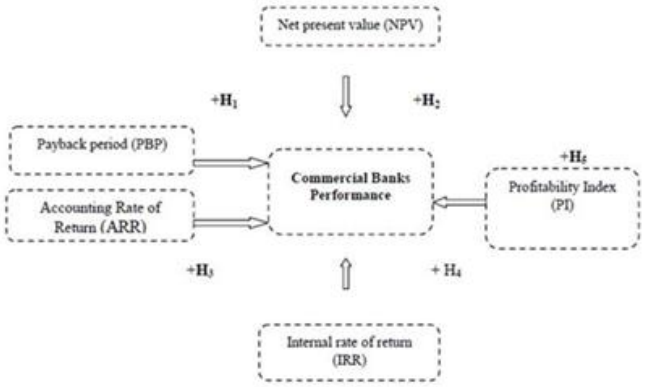

Figure1.Conceptual framework of the hypothesized model illustrating the proposed relationship between the variables.

III. LITERATURE REVIEW

Jain, Jain and Tarde (1995) conducted a study on 64 non-financial companies listed on BSE. They noticed nearly fifty percent companies to rely on traditional non-DCF techniques such Payback period ad ARR. While asking the reason for using traditional methods, the respondents expressed preference for these methods due their simplicity. They observed only 10% of the companies to use DCF techniques like NPV and IRR. Dhankar R S (1995) made a study on a sample 75 Indian companies and investigated the methods used for incorporating risk in project appraisal. The researcher found that the firms used CAPM and Risk Adjusted Discounting rate as tools for handling risk in capital budgeting. The scholar also surveyed methods of making financial appraisal of investments; he found 33% of the firms to rely on traditional Payback and ARR. Only 16% firms were found to use DCF methods.

Babu C P and Sharma A (1995) conducted a study of 73 companies located around Delhi and Chandigarh to examine the techniques used for evaluating capital projects. They found increased percentage (73%) of the companies to use DCF technique in capital budgeting decisions. The responding companies used prime lending rate or WACC for discounting the inflows. The authors note that departments concerned prepared investment proposals; however, the final authority of deciding the investments was vested with other authorities like boards and committees. As tools to handle uncertainty the companies used sensitivity analysis as well as risk adjusted discounting rates.

RaoCherukuri (1996) surveyed of the capital budgeting practice of 74 Indian companies and found that 51% of the companies used IRR as primary project appraisal criteria. The companies used ARR and Payback Period as supplementary decision criteria. 70% of the companies used discounting rate between 14% and 17%; whereas, 35% of the respondents used 'WACC as discount rate'. This study revealed the losing importance of Payback Period and ARR as primary methods of project evaluation. The researcher examined the practice of incorporating risk in investment analysis. Sensitivity analysis was found very popular. In addition to this, companies also used shorter payback period and higher discounting rate as means to handle investment risks.

Bhattacharya (1997), studied 11 companies from India and observed Internal Rate of Return as the most popular method for financial appraisal of projects; 10 out of 11 responding companies reported to have the practice of using IRR. This was followed by NPV (8 companies) and Payback Period (5 companies). Regarding the process of capital investment decision making it was found that investments proposal was conceived by Divisional or Unit Heads. In some companies proposal for new projects were initiated by Strategic & Corporate Planning Groups and finally approved by CEOs or Board of Directors.

IV. METHODOLOGY

The study employs correlation and multiple regression analysis. The dependent variable used was Return on Asset (ROA). ROA was proxies as commercial banks profitability indicator and the five predictors employed were Payback period, Net present value, internal rate of return, accounting rate of return and Profitability Index. The model adopted is:

$$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \varepsilon .. \quad (1)$$

Where;

Y = Commercial banks financial performance (ROA)
X1 = Payback period
X2 = Net present value
X3 = Internal rate of return
X4 = Accounting rate of return X5 = Profitability Index
β0 = Slope coefficient of the model
β1= Beta coefficient of determination
ε= error term 220 self-designed questionnaires were used to gather primary data from the participants. The questionnaire was divided into three parts. The first part comprised of demographic information of the respondents. The second part consisted general information of the banks operating environments, challenges to the performance of the banks. This part consisted of 25 questions of which five belong to each group which were intended to measure performance and

capital budget decisions that influence banks financial performances, using 5-point Likert scale anchored by very great extent to no extent. Out of the three grouped questions, one group requires a 5-point Likert scale while the remaining one was open-ended questions at the end.

V. RESULTS AND DISCUSSION

Following a line of investigation, fundamentally the research makes use of primary data that has been used in generating questionnaire which has been administered to the capital budgeting committees of the 11 commercial banks in India. However, out of the 220 questionnaires administered by the researcher, 187 filled questionnaires were collected translating to 85% response rate. According to Babbie (2002), any response of 50% and above is adequate for analysis and therefore, the response rate of 85% is adequate for analysis of this research.

VI. HYPOTHESIS TESTING

A. Reliability Analysis

Reliability analysis was subsequently done using Cronbach's Alpha which measures the internal consistency by establishing if certain item within a scale measures the same construct. Reliability of the questionnaire was evaluated through Cronbach's Alpha which measures the internal consistency. Cronbach's alpha was calculated by application of SPSS for reliability analysis. The value of the alpha coefficient ranges from 0-1 and may be used to describe the reliability of factors extracted from dichotomous and or multi-point formatted questionnaires or scales.

Table1. Reliability Analysis

Extent	Cronbach's Alpha	Number of Items
Payback period (PBP)	0.93	2
Accounting Rate of Return (ARR)	0.74	2
Internal rate of return (IRR)	0.86	4
Net present value (NPV)	0.77	5
Profitability Index (PI)	0.81	3

The higher the value, the more the reliability of the scale generated. Cooper & Schindler (2008) has indicated 0.7 to be an acceptable reliability coefficient. In the above table Payback period had the highest reliability (α=0.93) followed by Internal rate of return (α=0.86), Profitability Index had (α = 0.81), Net present value had (α=0.77) and Accounting Rate of Return had (α=0.74). This illustrates that all the five scales were reliable as the values of their reliability were above the prescribed cut off point (0.7) proposed by Cooper & Schindler (2008).

B. Correlation Result

Bivariate correlations of the predictor variables with commercial banks performance were statistically significant and in the hypothesized direction except for internal rate of return. As illustrated in Table 2, payback period technique of capital budgeting was positively related to commercial banks performance (r = .734, p <.01). Thus, the first hypothesis (Hypothesis 1) was supported by the study. The accounting rate of return technique was also positively correlated with commercial banks performance and in the hypothesized direction (r = .485, p < .05). Thus the second hypothesis (Hypothesis 2) was also supported. However the third hypothesis (Hypothesis 3) was not supported by the study as the magnitude of relationship between the internal rate of return technique had shown a negative and insignificant result (r = -.364, p > .05). The net present value technique was also positively correlated with commercial banks performance and in the hypothesized direction (r = .559, p < .05). Thus the fourth hypothesis (Hypothesis 4) was also supported by the study. Similarly, the profitability index technique was also positively correlated with commercial banks performance and in the hypothesized direction (r = .548, p < .01). Thus the fifth hypothesis (Hypothesis 5) was also supported.

Table2. Correlation Result

	Y	X_1	X_2	X_3	X_4	X_5
Y	1					
X_1	.734**	1				
X_2	.485*	.432*	1			
X_3	-0.364	0.058	0.101	1		
X_4	.559*	0.311	-0.052	0.113	1	
X_5	.548**	.204**	-.410*	0.215	0.196	1

C. Regression Result

From the table 3 below, R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in the table below there was a strong positive relationship between the study variables as shown by 0.848 at the 1% significance level. The Adjusted R squared is the coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variables, from the findings in the table below the value of adjusted R squared was 0.792 which is an indication that there was variation of 79.2% on commercial banks performance due to changes in Payback period, Accounting Rate of Return, Internal rate of return, Net present value and Profitability Index at 95% confidence interval. This is an indication that 79% of the changes in commercial banks performance could be account for by the independent variables.

Table3. Model Summary

Model	R	R square	Adjusted square	R	Std. error of the estimate	R Square Change	F Change	Sig. F Change
1	.921[a]	0.848	0.792		0.89382	0.848	15.321	0
Predictors: (Constant), X1, X2, X3, X4, X5								

Table4. Regression Coefficients

Model	Unstandardized coefficients		Standardizes coefficient	T	Sig.
	B	Std. Error	Beta		
(Constant)	15.921	6.753		2.358	0.038
X1	0.625	0.18	0.568	3.464	0.002
X2	0.115	0.048	0.163	2.418	0.031
X3	-0.352	0.238	-0.383	-1.481	0.151
X4	0.192	0.06	0.176	3.203	0.007
X5	0.132	0.042	0.371	3.129	0.01

From the regression equation below, it was found that holding all the capital budgeting decision techniques to a constant zero, commercial banks performance will be 15.921 percent, a unit increase in the use of the payback period

technique would lead to increase in commercial banks performance in India by 62.5%, a one percent increase in the use of net present value technique would lead to an increase in commercial banks performance in India by 19.2%, a one percentage increase in the use of profitability index would lead to 13.2% increase in commercial banks performance and a one percentage increase in the use of accounting rate of return would lead to an increase in commercial banks performance by 11.5%. Unfortunately, the internal rate of return technique is not only insignificant for the study but shows a negative effect on commercial banks performance. Had this result been statistically significant, a one percentage increase in the use of internal rate of return technique would have hindered commercial banks performance by 35.2%. Overall, the payback period method had the greatest effect on commercial banks performance in the sample, followed by net present value, profitability index, then accounting rate of return. At 5% level of significance and 95% level of confidence, payback period had a 0.002 level of significance; net present value had a 0.007 level of significance, profitability index had a 0.01 level of significance while accounting rate of return had 0.151 level of significance hence the most significant factor is the payback period technique. All the variables were significant ($p<0.05$) except for internal rate of return. Substituting the estimated results in the empirical model specified in chapter three gives:

$$Y = 15.921 + 0.625X1 + 0.115X2 - 0.352X3 + 0.192X4 + 0.132X5$$

The above equation is our final estimated equation which shows how much each independent variable may impact or influence the dependent variable as already explained in the interpretation and analysis above. The authors have decided to use regression because Regression analysis is one of the most important statistical techniques for financial applications. It's a statistical methodology that helps estimate the strength and direction of the relationship between two or more variables. The financial analyst may use regression analysis to determine the actual relationship between these variables by looking at the use of the capital budgeting decision by commercial banks and the banks performance. The regression results show that this relationship is valid. Regression analysis is an indispensable tool for analyzing relationships between variables. For example, it can:

- Identify the factors that are most responsible for commercial banks performance
- Determine how much a change in capital budgeting technique will impact bank performance
- Develop a forecast of the future value of the bank's performance in terms of their capital budgeting decisions

VII. CONCLUDING REMARKS

This section rounds off this research study. It condenses the findings and results of the research, draws up conclusions and makes recommendations for future improvements or initiative on the issues discussed. The study in essence sought to unearth the impact of capital budgeting decision on banks performance in eleven commercial banks in India. The research contributes to capital budgeting and performance literature by exploring the relationship between capital budgeting decision and commercial banks performance in India context. Theories and literatures were reviewed to develop a suitable model for banks performance and the model was developed based on capital budgeting techniques and firms performance literature that are mostly focused in the US setting. The reliability and validity measurement scales were used to measure the relationship between capital budget techniques and banks performance. Results of testing the model using a correlation and regression analysis discovered some important findings: firstly, all the independents variables have a direct positive relationship with commercial banks performance except for the internal rate of return technique (IRR) which supported the first (hypothesis H1), second (hypothesis H2) fourth (hypothesis H3), and fifth (hypothesis H5) hypotheses of the study.Thus(hypothesis H3) was not supported. Consequently, in a Statistical view point; the findings confirm that increasing the use of the payback period technique in capital budgeting decisions will strongly invoke commercial banks performance. This empirical result is also somewhat consistent and has supported and expanded capital budgeting decisions, and firms' performance research literature mostly published in US settings. In summary, what can be concluded is that all the budgeting techniques have positive impact on commercial banks financial performance except for the IRR technique. The impact which the techniques have on performance can be reinforcing. It is considered that the banks budgeting committees have well managed to take the right budgeting decisions. For this case study banks what can be concluded is that the techniques which they have in use are positively impacting the banks performance as suggested by the regression result. This study has certain limitations as in any research. First and foremost, the research made up of 187 staffs working at the 11 commercial banks in India, the sample might not be adequate for generalization. Secondly, the capital budgeting decision techniques of the banks are sensitive to location. That means, surveys with the same sample in different locations may result in different outcomes. It is suggested that further researchers take the current constraints into consideration and use different measurement scales to measure the connection between the capital budgeting decision and firms' performance.

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