Thesis Paper

On

Capital Budgeting practices: A study on some selected Private Commercial banks in Bangladesh

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Subject: Submission of Project Report on “Capital Budgeting practices: A study on some selected Private commercial banks in Bangladesh”.

Dear Sir,

It is my incommensurate honor for me to submit the Project Report on “Capital Budgeting practices: A study on some selected Private commercial banks in Bangladesh”. In my learning curve, this report helped me to gain insight into the core fact of Capital Budgeting as partial fulfillment of Bachelor and Business Administration. I have tried my best to follow your instructions to make this report realistic and informative enough.

I would like to thank you for your friendly co-ordination and the University for giving me a better opportunity to enlighten my knowledge by preparing the report successfully.

Sincerely Yours

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Capital Budgeting practices: A study on some selected Private commercial banks in Bangladesh

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Abstract

Purpose: The purpose of the study is to examine the current uses of Capital Budgeting practices (Capital budgeting techniques, an estimate of a discount rate, methods to calculate the cost of capital, and risk assessment methods) in some commercial banks in Bangladesh.

Design/Methodology/Approach: The target population was Banking Industry in Bangladesh and the listed 42 Private Commercial Banks (PCBs) are use as sample. The questionnaires were sent via e-mail to the PCBs listed banks.

Findings: The response rate was 35.71% and it is identified that the PCBs in Bangladesh prefer DFC methods to calculate their capital budgeting techniques and Net Present Value is more favorable. They also like the Weighted Average cost of capital to calculate the cost of capital and they prefer Interest rate as their discount rate.

Limitation: This study is focused on only limited aspects of capital budgeting and did not represent the whole banking industry.

Originality/Value: This is the first study conduct on PCBs in Bangladesh. It is highlighting the uses of Capital Budgeting Practices.

Keywords: Capital Budgeting, Cost of capital, Discount rate, Risk assessment.

1. Introduction

The target of a sound management is sustainability in the long run. In this competitive era to sustain in the long run, strategic decisions are required. The efficiency also has the necessity to enhance for utilization of limited funds for greater output and utilization of limited resources are demanded to divide into existing and new projects. (Maroyi and Poll, 2012). Most of the developing country provides more power to the financial manager than others. So, they run the firm as their autonomy which makes them worthy of deep thinking and makes the best decisions.

Though a firm needs to increase the shareholders' value and for that they need to recognize the conception of a new project, evaluate it, and after that choose the project which gives more value which will help to survive, sustainability, and long-term growth. The procedure of identifying, selecting, evaluating, and investing in fixed assets or projects, which provide the highest return for more than a year is called capital budgeting (Fabozzi and Peterson,2002). The process of capital budgeting is principally associated with the purchase and replacement of fixed assets, business expansion or it can be a new product. (Emery et al., 2007). It is also associated with modernization and the addition of fixed assets, product diversification, new projects, etc.

Financial management is made of three pillars which are investment decisions, financing decisions, and lastly dividend decisions (Freeman and Hobbes, 1991). Investment decisions covered the capital budgeting decision which is used to increase the value of the firm (Slagmulder et al., 1995). Among the decision, investment decisions are the core decisions (Nurullah and Kengatharan, 2015).

In capital budgeting, the DFC method is very reliable but the non-DFC method also has been adopted in numerous firms. The difference between DFC and non-DFC is, in the DFC method, it considers the time value of money while evaluating a project but in the non-DFC method it doesn't consider (Haka et al., 1985). Before an investment, many alternatives arise and financial managers are using the DFC and non-DFC techniques to evaluate a project.

Many prior researchers have shown the result that, developed counties are adopted the capital budgeting techniques. In UK (Sangster, 1993); Central and Eastern Europe (CEE) (Andor et al., 2015); UK, Netherland, Germany, and France (Brounen et al., 2004), and Italy (Rossi, 2015) are using the methods and get positive feedback. Not only the developed county but also developing and non-developed countries are also fond of these tools. In Bangladesh, the GPD (Gross Domestic Product) is increasing day by day. In 2001-2005 the GDP growth rate is 5.2 which turns into 6.2 in 2006-2010. (Manni and Afzal, 2012). Capital Budgeting is a factor which may influenced the growth of a firm and also ensures productivity.

A couple of researchers have been discussed capital budgeting practices in Bangladesh, Shelly (2016); Yasmin (2015) and Islam and sultana, (2019) have shown the uses of capital budgeting techniques in DSE (Dhaka Stock Exchange) included companies, including 56 companies in the different industry sector and Islamic banks. My research will provide the uses of these techniques in some selected Private Commercial Banks (PCBs) in Bangladesh.

The objectives which will be discussed in this paper are:

- The most common technique to evaluate different kinds of projects (size, method complexity, industry, etc.) by using Capital Budgeting.
- Discount and Non-Discount rate for risk management in Capital Budgeting.
- The method of assessing the Cost of Capital.

2. Literature Review

2.1Concept of Capital Budgeting

Suzette and Howard, (2011) pointed out that, Capital Budgeting is the process of long-term investment, which helps to fund cash for capital, investment, and expenditure. In the long-term and short-term both investments are needed to do capital budgeting which will ensure the sustainability and future benefit of a company. The future benefit like, survive in the competitive market, control the expenditure, and assure profitability. Though capital budgeting is often used for a large amount of expenditure which also helps to repay it for a long-term commitment and since the interest rate is directly influenced by the cost of capital, the firm should pay more consideration in the financial market (Pandey, 2010). On the other hand, cash flow is also can be affected by the investment where risks are associated. The investment is surrounded by financial performance. That's why firms need to evaluate capital budgeting decisions critically. Capital budgeting is a systematic process but the future is unpredictable but it is also consolation that it helps to show the path of success (Dakito and Jaladi, 2017). In this competitive era, sustainability is getting tough. To increase the shareholders wealth, the company is using the capital budgeting for proper uses of the limited fund (Shim and Siegel, 2008).

Capital Budgeting is mainly used to purchase and replacement of fixed assets to increase the efficiency of the business activity. (Emery et al., 2007). It is proved that maximum companies use capital budgeting techniques for taking decisions. For example: In Sierra Leone, research shows a positive impact of capital budgeting on the banking sector. Eleven commercial banks were investigated to find out the actual result. By using correlation and regression analysis methods the results were found and it says that in capital budgeting - the payback period has a great impact on ta the performance of non-commercial banks. All the techniques have a positive impact on these banks except the internal rate of return technique (IRR) (Samuel, 2019). But rarely, in contrast, in 2012 where the Kenyan corporations in the viewpoint of maximizing shareholders wealth, the capital budgeting techniques were also applied but none of the techniques shows any positive result (Olum, 2012). Similarly, another research conduct with 400 CEOs in ten countries of Central and Eastern Europe (CEE). All the large, medium, and small firms are included. The research shows that the practice of capital budgeting is affected by the culture, size of the firm, environment, management, etc. Among the firms, 56% of large firms and 44% of small firms are using capital budgeting techniques but the interesting findings are, though the projects are showing positive results on capital budgeting techniques, the management still rejects it. (Andor et al., 2015)

Another investigation on Poland surveys 100 companies, where the researcher tried to show the company follow textbooks to determine capital budgeting selection and also dost the company size, capital expenditure and budget affect the result. The result shows, NPV (Net Present Value), Scenario Analysis, Sensitivity Analysis, and formalization of investment appraisal are mostly used techniques. And some of the companies use WACC (Weighted Average Cost of Capital), post-investment audit, and monitoring investment during implementation. The actual results show that Poland is using all the techniques that are using in developed countries (Tomasz, 2014).

2.2 Capital Budgeting in Islamic Banking

From the last period, Islamic banking is taking a strong root and spreader rapidly. In this dynamic world three countries (Pakistan, Iran, and Sudan) are taking Islamic banking to the state level. To serve the Muslim customer some western banks also provide Islamic banking services. The actual banking practices are surrounded in three parts of the world, the Middle East, Southeast Asia, and South Asia. The difference between Islamic banking and other banking is, Islamic bank doesn't include the interest in their cash flow and so that, they have to overcome challenges. The challenges are, following Islamic law and earn profit to maximize the shareholders value (Khan and Bhatti, (2008). Almost all Islamic county have Islamic banking in their territory. In Pakistan, interpreting 5 largest Islamic banks to analyze the capital budgeting practices. Among the 5 banks, only one company didn't use the DFC technique. NPV, IRR (Internal Rate of Return), and MIRR (Modified Internal Rate of Return) are more preferable and among them, NPV is superior to MIRR and IRR. Where NPV is used by 57.7 % and IRR by 42.3 %. The result shows that still Islamic banks are using simple capital budgeting techniques and the banks need to improve their administrative process and recruit skilled manpower (Asif and Imran, 2013).

2.3 Capital Budgeting Process

To process an investment, capital budgeting is used and the opportunities for the investment in long-term assets will provide a return in a long time period (Peterson and Fabozzi, 2002). Capital Budgeting is helped to a selection of projects from many investment alternatives. It is multifaceted activity and capital budgeting is called its backbone (Nurullah and Kengatharan, 2015).

2.4 Capital Budgeting Techniques

The most common techniques in capital budgeting are NPV, IRR, ARR (Average Rate of Return), PBP (Pay Back Period), etc. Maximum of the countries are using these techniques like in UK, Netherland, Germany and France (Brounen et al., 2004);Central and Eastern European (CEE) (Andor et al., 2015); Italy (Rossi, 2015);South Africa (Maroyi and Poll, 2012);Argentina (Pereiro, 2006);Pakistan (Zubairi,2008); Jordan (Khamees et al.,2010); Tokyo (Shinoda (2010); Bahrain (Al Ajmi et al.,2011), all of the countries are using these four techniques.

2.4.1 NPV

According to I M Pandey, Net Present Value is a DFC technique to evaluate projects which consider the TVM (Time Value of Money). To calculate NPV the future cash flows need to forecast which is should be based on realistic assumption. And also need to clearly identify a discount rate which will calculate as the opportunity cost of capital. Kadondi (2002), said that the opportunity cost of capital is known as, the discount rate which is the same as the required rate of return on the next best alternatives similar risk. The project will be accepted when the present value of cash inflow will be greater than the present value of cash outflow (I M Pandey, 2015).

2.4.2 IRR

Internal Rate of Return (IRR) is also a method of DFC technique that consider the magnitude and timing of cash flows. IRR is the discount rate of an initial investment which makes the difference between cash inflow and cash outflow equates to zero. (Horne and Wachowicz, 2005). IM Pandey said that, generally the results are connected to NPV. If the IRR is Greater than the required rate of return the project will be accepted (Mao, 1970). I M Pandey also added that greater IRR is used to help to increase shareholders wealth (I M Pandey, 2015).

2.4.3 PBP

The Payback Period is the most commonly used and easiest method to evaluate a project. (Suzette Vivers, Howard Cohen, 2011). The payback period used to know the number of years needs to recover a projects initial investment. It is more cost-effective than other projects and by identifying a shorter time period of a project the risk can be forecasted (I M Pandey, 2015).

2.4.4 ARR

The Accounting Rate of Return is also known as Return on Investment (ROI) because it measures the profitability of an investment. It is simple to use because it ignores cash flow and the time value of money (I M Pandey, 2015).

According to (Munyao, 2010), ARR is the result of average income divided by average investment and it is a non-DFC method.

2.5 Prior Research on Capital Budgeting Around the Glove

The techniques of Capital Budgeting are used all over the glove. Small to Large companies are using the techniques nowadays. In this manuscript, the investigation from the 90's to 20's can be seen. To see the availability of uses of Capital Budgeting Techniques (CBTs) this study has been divided into four Continents to show the view of usages of this capital budgeting techniques. The Four Continents are Europe, South Africa, South America, and Asia. The first Continent which is Europe, the investigation belongs to UK (Jones, 1986); UK (Pike, 1988); UK (Mills, 1988); UK (Sangster, 1993); UK, Netherland, Germany, and France (Brounen et al., 2004); UK (Alkaraan and Northcott, 2006); Central and Eastern European (CEE) (Andor

et al., 2015); Italy (Rossi, 2015); Serbia (Barjaktarovic et al., 2016). Secondly, Under South Africa the research papers are South Africa (Correia and Cramer, 2008); South Africa (Hall and Millard, 2010); South Africa (Maroyi and Poll, 2012)Thirdly, in the South American continent, Argentina (Pereiro, 2006); Brazil (Souza and Lunkes, 2016)And lastly, Asia which is the largest and populated continent, Malaysia (Kwong, 1986); Indonesia (Leon et al., 2008); Pakistan (Zubairi, 2008); Jordan (Khamees et al.,2010); Qatar (Mustafa and Hindi,2010); Tokyo (Shinoda, 2010); Bahrain (Al Ajami et al.,2011); India (Singh et al.,2012); Sri Lanka (Nurullah and Kengatharan,2015); Pakistan (Mubashar and Tariq,2019); Bahrain (Al Ajmi et al.,2011).The researched manuscripts are shown in the table:

(i) Prior Researches on Capital Budgeting

S no.	**Continent**	**Authors name and year of publication**	**The population of the study**	**Famous Capital Budgeting Techniques**	**Least used capital budgeting techniques**	**Cost of capital estimation & Techniques of risk assessment**
1.	Europe	Jones, (1986)	UK firms	PB and ARR	-	-
2.	Europe	Pike, (1988)	208 largest firms in the UK	IRR, NPV, and PB	-	Discount rate commensurate, Sensitivity analysis.
3.	Europe	Mills, (1988)	UK firms	NPV and IRR	-	PB
4.	Europe	Sangster, (1993)	500 Scottish companies in the UK	IRR, NPV, and ARR	-	-
5.	Europe	Brounen et al., (2004)	313 CFOs of European countries	NPV	Standard firm cost of capital	CAPM, Risk-matched discount rates
6.	Europe	Alkaraan and Northcott, (2006)	320 UK firms	NPV and IRR	ARR and CAPM	sensitivity/scenario analysis

S no.	Continent	Authors name and year of publication	The population of the study	Famous Capital Budgeting Techniques	Least used capital budgeting techniques	Cost of capital estimation & Techniques of risk assessment
7.	Europe	Andor et al., (2015)	400 CEOs of central and Eastern European Countries	NPV and IRR	CAPM, Sensitivity analysis, Real options analysis	-
8.	Europe	Rossi, (2015)	71 Southern Italian firms	NPV	No recent experience to calculate the cost of capital	ARR
9.	Europe	Barjaktarovic et al., (2016)	Serbian firms	NPV, PI, and PP	SA,DPP,ARR,CAPM	-
10.	South Africa	Correia and Cramer, (2008)	22 JSE listed firms in South Africa	NPV and IRR	PI, APV, Real option, MIRR	WACC with the target value of weights
11.	South Africa	Hall and Millard, (2010)	JSE listed firms in South Africa	ROI, NPV, and PB	IRR	-
12.	South Africa	Maroyi and Poll, (2012)	JSE listed firms in South Africa	NPV, IRR, and PB	-	-
13.	South America	Pereiro,(2006)	55 respondents in Argentina	PBP, IRR, and NPV	Real options	CAPM

S no.	Continent	Authors name and year of publication	The population of the study	Famous Capital Budgeting Techniques	Least used capital budgeting techniques	Cost of capital estimation & Techniques of risk assessment
14.	South America	Souza and Lunkes, (2016)	51 firms in Brazil	IRR, PBP, and NPV	ARR, MIRR, and real options	WACC and Sensitivity analysis
15.	Asia	Kwong, (1986)	70 listed firms in Malaysia	PBP and IRR	PI, Net future value	-
16.	Asia	Leon et al., (2008)	Indonesia among JSX listed 108 Companies	NPV, IRR, and PI	CAPM	Scenario analysis, Sensitivity analysis
17.	Asia	Zubairi, (2008)	35 listed firms in KSE	IRR, NPV, and PBP	-	-
18.	Asia	Khamees et al., (2010)	JIC in Jordan	PB and PI	WACC	CAPM, Total risk
19.	Asia	Mustafa and Hindi, (2010)	LCD in Qatar	NPV, IRR, and PB	-	-
20.	Asia	Shinoda, (2010)	222 listed firms in TSE	PBP and NPV	DPBP	-
21.	Asia	Al Ajami et al., (2011)	39 institution in Bahrain	NPV and IRR	-	CAPM
22.	Asia	Singh et al., (2012)	166 non-financial listed firms in BSE	IRR, NPV, and PB	PI	Sensitivity Analysis

S no.	Continent	Authors name and year of publication	The population of the study	Famous Capital Budgeting Techniques	Least used capital budgeting techniques	Cost of capital estimation & Techniques of risk assessment
23.	Asia	Nurullah and Kengatharan, (2015)	28 firms in Sri Lanka	NPV	WACC, Sensitivity Analysis	ARR and MIRR
24.	Asia	Mubashar and Tariq, (2019)	200 PSX listed firms in Pakistan	NPV, IRR, MIRR, and PBP	DDM	WACC
25.	Asia	Al Ajami et al., (2011)	39 institution in Bahrain	NPV and IRR	-	CAPM

(i) Prior Research-es on Capital Budgeting

3. Methodology

For this experimental survey, the questionnaires were made to collect the primary data to fulfill the required objectives. This study aimed to collect all listed Privet Commercial Banks (PBCs) in Bangladesh and it has been selected as target the population. The question pattern was selected to modify questionaries' which was used by Graham and Harvey (2001) and Verma et al., (2009).

The target population is the banking industry in Bangladesh and more specifically among the listed banks, 42 Private Commercial Banks have been chosen as sample and the email was sent to all of the banks and only got 20 responses, among them 15 prepones are useable. The majority of the firms don't respond to e-mails. The response rate is 35.71%.

All the questionnaires were written in English and the information of any respondents was not required which can identify their company. The whole procedures were done by using personalized email and the reminder messages were sent in case they failed to respond. The questionnaire was structured as an open-ended question and closed-ended question where 40 questions were asked. The part of the questions was divided into three sections where the first part represents, the demographical characteristics of the company which can help to understand the overview of the company and its nature, also CFOs' information for better understand. In the second part it was focused on Financial Operation where it can show the information about its investment nature and in the third part inquired about the most used capital budgeting process and most favorable techniques, the uses of discounted /non-discounted risk-adjusted techniques, most used methods to calculate the cost of capital, areas of investment, what are the effect of using capital budgeting techniques and the factors influencing investment decisions.

To measure the standard of using techniques the category scale has been used which is proposed by Graham and Harvey (2001), on Likert scale 1 to 5 were, "0 = Never, 1= rarely, 2 = Sometimes, 3 = almost always and 4 = Always. In this research primary information has been used. This information helps to conduct the paper more informative.

4. Result and Discussion

The collected data will be analyzed by showing its percentage and Likert Scale, this analysis will be applied in Company (Bank) Overview (Age of the company, Education and Experience level of CFOs), Investment procedure (Purpose of investment), and capital budgeting practices in the Banks.

4.1 Discussion about the characteristics of the company and CFOs:

The first table (i) is showing the age group of the banks where they are classified into 5 age groups and maximum companies lie under (11 – 15) and (16 – 20) age sector. Among the banks five are included in (11-15) age group. The percentage rate is 33.3% and the other five banks are included under (16-20) age group and the percentage are same as the previous one. 20% of banks (n=3) are the oldest banks and the rest of the banks (13.3%) are counted as a junior bank.

The second part of the table (ii) shows the education level of the CFOs of the 15 banks where, 47% CFOs have completed their Doctor of Philosophy, 20% are graduate in Master's Degree and other 20 are graduated with within Masters of Philosophy and lastly, 13% are counted as professional education.

And, the last chart (iii) is shown as the experience level of the CFOs. In this survey, 47% CFOs are highly experienced (< 20) and 33.3% CFOs have the second-highest experience level, and the last but not least experience level holds 20% CFOs.

Age of the Bank	**Number of Bank**	**Percentage**
< 5	0	0%
6– 10	2	13.4%
11 – 15	5	33.3%
16 – 20	5	33.3%
>21	3	20%
Total	15	100%

(i)Age group of the firms

Note: Respondents were asked: “What is the age of your Bank?”

Education Level of CFOs	Number of Bank	Percentage
Bachelor's Degree	0	0%
Master's Degree	3	20%
Masters of Philosophy	3	20%
Doctor of Philosophy	7	47%
Professional Education	2	13%
Total	15	100%

(ii) Education level of Chief Financial Officer.

Note: Respondents were asked: "What is the education level of your current CFO?"

Experience Level of CFOs	Number of Bank	Percentage
< 10	3	20%
11 – 20	5	33.3%
< 20	7	46.7%
Total	15	100%

(iii) Experience level of Chief Financial Officer.

Note: Respondents were asked: "What is the experience level of your current CFO?"

4.2 Financial operation:

This assessment is done to check the rate of investment occurrence in bank which helps to find the uses rate of the Capital Budgeting Practices. These following table (iv) named as the sector of investment has been asked individually to check the percentage of investment verities and check how often the investment is occurring in their operation. 33.3% of banks sometimes invest in New Business Expansion and 33.3% of Banks almost always use their capital in new business expansion. The other four and only one bank doesn't invest usually. In New Business Diversification, the highest rate is 40% and in Expansion into existing Business, the highest rate is 46.7% among them the highest investment is used in Equipment purchase/ addition/ replacement/ modernization which is 53.3% and none of the banks found who doesn't invest in this section.

Investment (evaluate by capital budgeting)	Never	Rarely	Sometimes	Almost always	Always
New Business Expansion	6.7%	26.7%	33.3%	33.3 %	0%
New Business Diversification	20%	26.7%	40%	6.7%	6.7%
Expansion into existing Business	6.7%	20%	46.7%	26.7 %	0%
Equipment purchase/ addition/ replacement/ modernization	0%	13.3%	53.3%	20%	13.3%

(iv) Types of invest-ment in the banks

-Note: Respondents were asked: "What kind of investment are evaluated by using Capital Budgeting Techniques?"

4.3 Capital Budgeting Practices

The table of (v) shows the most interesting findings which is, all of the banks responded that they use Cash Flows to calculate the CBTs

The (vi) table displays the process to choose the best alternative to investment where Idea Generation is the first and most important step which is called as, search the alternatives for investment. 'Almost always' 46.7% of banks and the rest of the banks 'Always' use this technique to Generate investment ideas. Evaluating projects is also mostly used by 40% of banks, 'Always' used by 33.3% of banks, and 'Sometimes' used by 26.7% of banks. The 'Most Rarely' used steps are Monitoring projects and Project implication review.53.3% of banks sometimes take the advice of consultants but Planning of the annual capital holds the highest uses rate. On the other hand, Consideration of project alternatives also doesn't show any effective result.

The banks were asked several questions about the uses of capital budgeting techniques which is shown in the (vii) table .Net present value is the most preferable technique (n=8) and the second preferable technique is the Internal rate of return (n=4). Not a single bank is supported to use the Profitability index but only two banks use the Payback period and the last one bank uses the Accounting rate of return.

Employing CBTs	Yes	Percentage	No	Percentage
Cash Flow	15	100%	0	0
Total	15	100%	0	0

(v) Employing cash flow for CBTs

Note: Respondents were asked: “Do you use Cash-flow for employing Capital Budgeting Techniques?”

Procedures of Capital Budgeting	Never	Rarely	Sometimes	Almost always	Always
Idea generation	0%	0%	0%	46.7%	53.3%
Evaluating projects	0%	0%	26.7%	40%	33.3%
Project monitoring	20%	33.3%	13.3%	20%	13.3%
Project Implementation review	40%	13.3%	0%	33.3%	13.3%
Consultants of advisor	0%	20%	53.3%	20%	6.7%
Planning of annual capital	0%	0%	26.7%	20%	53.3%
Consider project alternatives	20%	26.7%	33.3%	13.3%	6.7%

(vi) Process of Capital Budgeting

Note: Respondents were asked: "What are the procedures adopt by your company to evaluate a project?

The favorable method in Capital Budgeting	Number of Bank	Percentage
Net Present Value (NPV)	8	53.3%
Internal Rate of Return (IRR)	4	26.7%
Profitability Index (PI)	0	0%
Payback Period (PP)	2	13.3%
Accounting Rate of Return (ARR)	1	6.7%
Total	15	100%

(vii) Favorable methods in CBTs

Note: Respondents were asked: “what is the favorable method used in Capital Budgeting techniques?”

To identify the most used discount rate the questionnaires carries question about the Discounted/non-Discounted rates for risk measure in table (viii), the survey shows that the banks highly prefer Interest Rate Risk because it is so common to identify and evaluate it. The percentage is 46.7% and seven banks adopt the techniques to calculate capital budgeting methods. They also prefer Unexpected Inflation risk (46.7%), Distress risk (26.7%).and only two banks prefer Business Cycle risk (6.7%).

It also has been asked in table (ix) about the other factors that also can be the cause of increasing or decreasing the discount rate. To ensure the percentage the survey wants to explore the reason but the majority doesn't respond specifically. Three company was marked as Political Risk (13.3%) Agency Problem (6.7%).

The last question (x) was asked about the calculation methods of the cost of capital. The majority haven't answered the question but 46.6% prefer WACC and only 13.3% of banks prefer the CAPM model.

Discounted/non-discounted rates	Number of Bank	Percentage
Interest rate risk	7	46.7%
Unexpected inflation risk	4	26.6%
Business Cycle risk	1	6.7%
Commodity price risk	1	6.7%
Distress risk	2	13.3%
Total	15	100%

(viii) Discounted/non-discounted rates in CBTs

Note: Respondents were asked: “What is the method used for risk measurement?”

Factors influence capital budgeting risk	Number of Bank	Percentage
Agency problem	1	6.7%
Political risk	2	13.3%
Others	0	0%

Total	3	20%	(ix) Factors that influence capital budgeting risk

Note: Respondents were asked: “What kind of factors affecting the Risk?”

Mostly used to measure the cost of capital	Number of Bank	Percentage	
WACC	7	46.7%	
CAPM	1	6.7%	
Cost of equity	0	0%	
Cost of debt	0	0%	
Total	8	56.4%	(x) Mostly used to measure the cost of capital

Note: Respondents were asked: "What is the most used method to calculate the cost of capital?"

5. Conclusion:

The motive of this study is to explore and record the tendency of using Capital Budgeting techniques. The estimation method for calculating the cost of capital and risk measurement is also included in this study. All the Private Commercial Banks (PCBs) in Bangladesh was the target population. The questionnaires were sent to all of the 42 banks but the response rate was too poor. Among the PCBs 47.62% (20 banks) response was collected from the questionnaires but only 35.71% (15 banks) information was useable. Bangladesh PCBs are more preferring DFC techniques more than Non-DCF techniques. Maximum PCBs prefer NPV more than IRR. NPV holds 53.3% uses to rate and the uses rate of IRR is 26.7% . In the contrast, PBP is used by only 13.3% of banks, and ARR is used by 6.7% of banks. No uses of PI are found. A most interesting finding has been found that 100% of the banks use cash flows to estimate the CBTs.

WACC is the most preferred technique to estimate the cost of capital. 46.7% of banks are using this technique where CAPM uses rate is only 6.7%. To calculate the CBTs the discount rates also need and the uses of Discounted/non-Discounted rates for risk measures also have been measured. The Interest rate is mostly used for risk measurement. The uses rate of Interest rate is 46.7%. Some companies also prefer unexpected inflation risk but the rate is lower than the Interest rate.

6. Limitation of the study:

The following limitation is existing in this study

- This study is limited to expose the whole Banking industry.

- This study is only focused on limited aspects of Capital Budgeting.
- This study is based on the traditional survey method. Interview and telephonic methods can be used to collect the data.
- The collected data can be biased.

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