DETERMINANTS OF PROFITABILITY OF PRIVATE COMMERCIAL BANKS IN BANGLADESH: AN EMPIRICAL STUDY

Presented by

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Agenda

> **Introduction & Research Objectives**

> **Overview of Banking Sector in Bangladesh**

> **Literature Review and a proposed model & hypotheses**

> **Sample & Data**

> **Results**

> **Conclusions and areas for further research**

Objectives of the project paper

❑ **Provide an overview of banking sector in Bangladesh with a focus on the growth of PCBs.**

❑ **Compare performance of PCBs and other categories of banks such as SCBs, DFIs and FCBs.**

❑ **Analyze the determinants of PCBs' profitability.**

Overview
Banking Sector in Bangladesh

Banking structure in Bangladesh

Bank Types	Number of Banks	Number of Branches	% of Branches	Total Assets (Crore Tk.)	% of Industry Assets	Deposits (Crore Tk.)	% of Deposits
SCBs	4	3,447	44.60%	135,929.28	28.06%	101,357.14	27.80%
DFIs	4	1,382	17.88%	29,091.57	6.01%	18,408.22	5.05%
PCBs	30	2,828	36.59%	287,416.75	59.34%	222,182.25	60.93%
FCBs	9	72	0.93%	31,942.40	6.59%	22,677.42	6.22%
Total	47	7,729	100%	484,380.00	100%	364,625.03	100%

PCBs occupy more than half of total industry assets and total industry deposits

Source: Bangladesh Bank

Overview

Growth of selected variables of PCBs & other categories of banks

(Figures in crore, CAGR during 2001-10)

| Category of Banks	CAGR, Mean & Std Dev of Deposit	CAGR, Mean & Std Dev of Advance	CAGR, Mean & Std Dev of Asset	CAGR, Mean & Std Dev of Equity	CAGR, Mean & Std Dev of Net Income
Private Commercial Banks	22.28% 101,091.1 (65,396.7)	22.59% 88,122.6 (59,529.4)	20.39% 128,298.4 (79,693.5)	26.83% 9,811.8 (7,816.7)	16.78% 1,934.1 (1,635.0)
State owned Commercial Banks	8.24% 68,316.4 (18,018.8)	8.43% 47,207.7 (12,479.3)	8.87% 85,708.9 (25,883.1)	20.68% 2,636.4 (2,847.2)	19.62% 655.1 (560.4)
Development Financial Institutes	14.07% 10,263.7 (4,352.6)	6.54% 13,014.3 (3,321.2)	6.96% 19,845.8 (4,573.0)	0.40% 1,095.5 (532.4)	-1.61% 19.8 (68.2)
Foreign Commercial Banks	13.43% 13,780.0 (6,207.7)	16.31% 10,530.8 (5,080.2)	13.83% 18,877.7 (8,327.6)	20.35% 2,757.9 (1,513.5)	6.76% 633.4 (215.2)

Source: Bangladesh Bank

PCBs are in dominating position in respect of all these variables and their CAGR.

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Overview

ROA & ROE of PCBs & those of SCBs, DFIs & FCBs

(CAGR during 2001-10)

Category of Banks	CAGR, Mean & Std Dev of ROA	CAGR, Mean & Std Dev of ROE
Private Commercial Banks	-3.00% 1.4% (0.6%)	-7.93% 21.6% (10.9%)
State owned Commercial Banks	9.87% 0.7% (0.6%)	-0.87% -22.0% (217.6%)
Development Financial Institutes	-8.01% 0.1% (0.4%)	-2.00% -14.8% (54.4%)
Foreign Commercial Banks	-6.20% 3.7% (1.6%)	-11.29% 29.3% (18.8%)
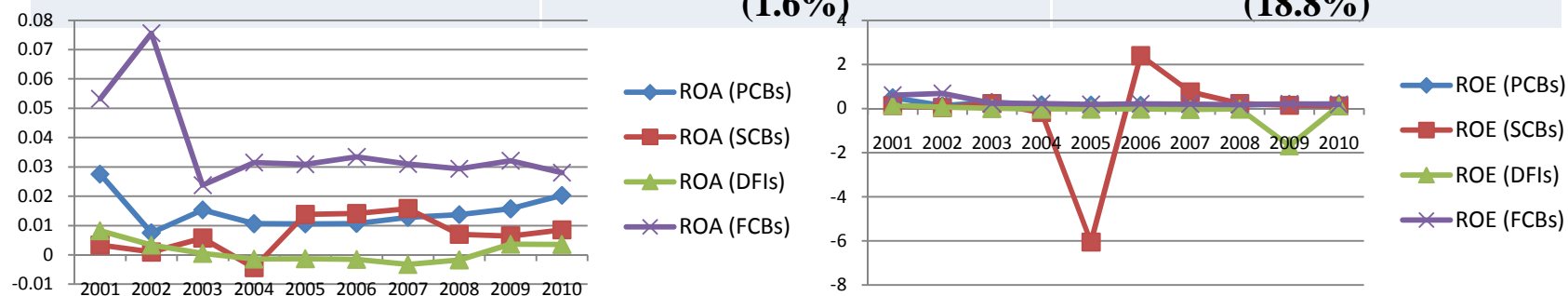
FCBs are best in respect of ROA & ROE and PCBs stand next to FCBs

Source: Bangladesh Bank

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Research Methodology

❑ **Sample Design**

4 category wise schedule banks in Bangladesh, especially focusing on all 30 Privatized Commercial Banks.

❑ **Time Reference**

The time reference of the study was 2001-2010

❑ **Data Analysis**

– Trend analysis

– Mean, Median, Stdev & CAGR

– Correlation and Regression

Research Methodology

Hypothesis of the Study
H_1: Profitability (Net Income, Return on Asset and Return on Equity) of a PCB is positively and significantly related to its advance/deposit ratio.
H_2: Profitability (Net Income, Return on Asset and Return on Equity) of a PCB is positively and significantly related to its total assets.
H_3: Profitability (Net Income, Return on Asset and Return on Equity) of a PCB is positively and significantly related to its equity/total asset.
H_4: Profitability (Net Income, Return on Asset and Return on Equity) of a PCB is positively and significantly related to its number of branches.
H_5: Profitability (Net Income, Return on Asset and Return on Equity) of a PCB is negatively and significantly related to its NPL/Advance ratio.
H_6: Profitability (Net Income, Return on Asset and Return on Equity) of a PCB is positively and significantly related to its Business per Employee (BPE) calculated as Deposit + Advances/ Number of Employees.

Literature Review

- **Internal determinants**
  - **Liquidity** [Slovin and Sushka (1984) found that relationship between bank liquidity and profitability would depend on the interest rate elasticity of demand for loans]
  - **Bank Size and Economies of Scale** [Athanasoglou P., Delis M. and Staikouras C. (2006) indicated as a result of gaining market share, a bank would increase its earnings which would increase its profitability]

- **External determinants**
  - **Regulation** [Gilbert (1984) recognized regulation as one of the bank profitability determinants]
  - **Market Share** [Heggested and Mingo (1976) found the greater the market share, the greater will be its control over its prices and services it offers, ultimately affect on profitability]
  - **Market Growth** [Heggestad (1977), Rhoades (1980), Smirlock (1985), Bourke (1989) and Molyneux and Thornton (1992) found market growth as an external determinant of bank profitability assuming that an expanding market would produce greater potentials for banks to achieve higher profits]

Literature Review

- **Determinants of Profitability used in developing economies of Asia**

  - Bodla B.S. & Verma Richa (2007) found Spread, Non-Interest Income, Credit/Deposit Ratio, NPA as percentage to Advances, Provision and Contingencies, Operating Expenses, Business per Employee, Profit per Employee and Net Profit as determinants of profitability of banks in India.

  - Sufian Fadzlan, Habibullah Muzafar Shah (2009) found bank specific variables - total loans/total assets, log of total assets, loans loss provisions/total loans, non-interest income/total assets, total overhead expenses/total assets, log of total deposits, and stockholders' equity/total assets as Internal determinants and natural log of GDP, annual inflation rate, and money supply growth as External determinants of Chinese banks' profitability.

Literature Review

- **Determinants of Profitability used in developing economies of Asia**

  - Sufian Fadzlan, Habibullah Muzafar Shah (2010) found bank-specific variables log of total assets, loans loss provisions/total loans, non-interest income/total assets, total overhead expenses/total assets, log of total deposits, and stockholders' equity/total assets and external determinants - natural log of GDP, three largest banks' asset concentration ratio for Indonesian banks' profitability

  - Md. Safiullah (2010) judged profitability of banks of Bangladesh by the following criteria-Return on asset (ROA), Return on equity (ROE), Profit expense ratio (PER), Profit growth and EPS.

DETERMINANTS OF PCBS' PROFITABILITY – A PROPOSED MODEL

Bank Profitability

- Profitability of a bank is the efficiency of a bank in generating earnings. It can be measured in several ways-

  - Net income of a bank expresses the volume of profit in a year
  - ROA indicates how profitable a bank is relative to its total assets. ROA provides an idea that how efficient management is at using its assets in generating earnings
  - ROE is the amount of net income returned as a percentage of shareholders equity. It measures a bank's profitability revealing how much profit it generates with the money shareholders have invested. ROE is calculated by dividing a bank's net income by the shareholder's Equity

- Net Income, Return on Asset (ROA) and Return on equity (ROE) have been considered as measures of PCBs' profitability in empirical studies.

DETERMINANTS OF PCBS' PROFITABILITY – A PROPOSED MODEL

❑ To identify the prominent variables that affect the profitability of PCBs, Multiple Regression Model has been applied.

❑ Cross sectional regressions for each year have been done.

❑ Mathematically the equation is as follows:

$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + \mu$, where,

Y= Log of Net Income (Income after Tax), Return on Asset (ROA) and Return on Equity (ROE)

a= constant term,

b_1 to b_6 = Regression coefficients for the respective variables,

Independent Variables	Expected Relation
x_1 = Log of Advance/Deposit (A/D)	+
x_2 = Log of Total Asset (TA)	+
x_3 = Log of Equity/Total Asset (E/TA)	+
x_4 = Log of Non Performing Loan/Total Advance (NPL/A)	-
x_5 = Log of Business Per Employee (BPE) calculated as Deposit + Advances/ Number of Employees	+
x_6 = Log of Number of Bank Branches (NBB)	+

μ = Error Term.

[These independent variables are selected as they are independent of each-other. They are not highly correlated. The log of the variables are taken as these data are not normally distributed]

Results-Profitability Determinants
Model Summary and ANOVA (F) Results considering NI as dependent variable

Year	R	R Square	Adjusted R Square	F	Significance
2001	.936	.875	.834	21.050	.000
2002	.703	.494	.325	2.930	.036
2003	.892	.795	.737	13.580	.000
2004	.699	.488	.342	3.342	.018
2005	.789	.622	.514	5.759	.001
2006	.811	.658	.560	6.725	.000
2007	.823	.677	.585	7.345	.000
2008	.817	.667	.576	7.347	.000
2009	.944	.891	.861	30.023	.000
2010	.824	.680	.592	7.783	.000

✓The values of correlation coefficient ranges from .699, the lowest in the year 2004 to .944, the highest in 2009. Almost every year, the found correlation is very high.

✓The independent variables have explanatory powers above 80 percent in case of 7 years (2001, 2003, 2006-10) and between 69.9 percent and 78.9 percent in case of rest of the years (2002, 2004-05). This shows that the independent variables under reference have high degree of correlation with profitability (Net Income).

Results

Profitability Determinants

Model Summary and ANOVA (F) Results considering ROA as dependent variable

Year	R	R Square	Adjusted R Square	F	Significance
2001	.812	.659	.545	5.799	.002
2002	.691	.478	.304	2.749	.045
2003	.678	.460	.305	2.976	.029
2004	.621	.386	.210	2.197	.084
2005	.770	.593	.477	5.103	.002
2006	.803	.645	.543	6.354	.001
2007	.668	.446	.287	2.815	.036
2008	.792	.627	.525	6.161	.001
2009	.742	.550	.428	4.487	.004
2010	.453	.206	-.011	.949	.481

✓The values of correlation coefficient ranges from .453, the lowest in the year 2010 to .812, the highest in 2001. Almost every year, the found correlation is high except 2010.

✓The independent variables have explanatory powers above 65 percent in case of 8 years (2001-03, 2005-09). This shows that the independent variables under reference have high degree of correlation with ROA.

Results
Profitability Determinants
Model Summary and ANOVA (F) Results considering ROE as dependent variable

Year	R	R Square	Adjusted R Square	F	Significance
2001	.895	.801	.735	12.074	.000
2002	.649	.421	.228	2.179	.094
2003	.755	.570	.447	4.641	.004
2004	.567	.322	.128	1.661	.180
2005	.779	.607	.494	5.395	.002
2006	.808	.653	.554	6.598	.000
2007	.545	.297	.097	1.482	.233
2008	.797	.635	.536	6.384	.001
2009	.709	.503	.367	3.710	.011
2010	.492	.242	.035	1.171	.357

✓The values of correlation coefficient ranges from .492, the lowest in the year 2010 to .895, the highest in 2001. Almost every year, the found correlation is high except 2010.

✓The independent variables have explanatory powers above 70 percent in case of 6 years (2001, 2003, 2005-06, 2008-09). This shows that the independent variables under reference have high degree of correlation with ROE.

Results

Significant Regression Coefficients (NI dependent variable)

Year	Advance /Deposit	Total Asset	Equity/ Total Asset	NPL/A	BPE	NBB
2001	*	*				
2002			***	***		
2003					*	*
2004				*		
2005			**	*	*	***
2006		*	**			*
2007		*	***			
2008		***	**	*		
2009		*	*	***		
2010		**				

❑ **Significant Regression coefficient**

✓ TA and E/TA are found significant for 6 years

✓ NPL/A for 5 years

✓ NBB for 3 years

✓ BPE for 2 years

✓ A/D for only 1 year out of a total of 10 years

* Significant at .01 level, ** Significant at .05 level, *** Significant at .10 level

Results

Significant Regression Coefficients (ROA as dependent variable)

Year	Advance / Deposit	Total Asset	Equity/ Total Asset	NPL/A	BPE	NBB
2001	*	**				
2002			***	***		
2003		*			*	*
2004				*		
2005			**	*	*	***
2006		*	*			*
2007			***			
2008			**	*		
2009			*	***		
2010						

❑**Significant Regression coefficient**

✓E/TA are found significant for 6 years

✓NPL/A for 5 years

✓NBB and TA for 3 years

✓BPE for 2 years A/D for only 1 year out of a total of 10 years

* Significant at .01 level, ** Significant at .05 level, *** Significant at .10 level

Results

Significant Regression Coefficients (ROE as dependent variable)

Year	Advance /Deposit	Total Asset	Equity/ Total Asset	NPL/A	BPE	NBB
2001	*	**	*			
2002				***		
2003		*	**		*	*
2004				*		
2005			*	*	*	***
2006		*	*			*
2007						
2008			**	*		
2009				***		
2010						

❑ **Significant Regression coefficient**

✓ E/TA and NPL/A are found significant for 5 years

✓ NBB and TA for 3 years

✓ BPE for 2 years

✓ A/D for only 1 year out of a total of 10 years

* Significant at .01 level, ** Significant at .05 level, *** Significant at .10 level

Results

❑ **Expected & observed relationship (NI as dependent variable)**

– As expected TA, NBB, BPE are found to have positive and NPL/A has negative relationship with net income in all (in case of TA and NPL/A) or in maximum cases (in case of NBB and BPE)

– In case of E/TA, among 6 significant results, it has been found to have positive impact for three times and negative impact for remaining three times

– Contrary to the expectation, the relationship is observed negative in case of A/D in 2001. During the remaining years, A/D has not been found to have significant impact on Net Income

❑ **Expected & observed relationship (ROA as dependent variable)**

– As expected, TA, NBB, BPE are found to have positive and NPL/A has negative relationship with ROA in all (in case of TA, BPE and NPL/A) or in maximum cases (in case of NBB)

– In case of E/TA, among 6 significant results, it has been found to have positive impact for three times and negative impact for remaining three times

– Contrary to the expectation, the relationship is observed negative in case of A/D in 2001. During the remaining years, A/D has not been found to have significant impact on ROA

❑ **Expected & observed relationship (ROA as dependent variable)**

– As expected, TA, NBB, BPE are found to have positive and NPL/A has negative relationship with ROA in all (in case of BPE and NPL/A) or in maximum cases (in case of TA, NBB)

– Contrary to the expectation, the relationship is observed negative in case of A/D (in 2001) and E/TA are found to be negative (2001, 2003, 2005-06)

Analysis

- Advance/Deposit, total asset, equity/total asset, No. of Branches, Business per Employee and non-performing loan as percentage of total advance are found as the determinants of profitability

- As expected, total asset, Business per Employee and No. of Branches are found to have positive and significant impact and non performing loan as percentage of total advance is found to have negative and significant impact on profitability.

- **Total asset** can be considered to measure the size of a bank. Big banks can provide services to their customers in cheaper rate than small ones. As total asset increases, a bank can attain more competitive advantages that can help to earn more profit.

- Through increasing **number of branches**, a bank can get scope to expand its business. This expansion of business increases profitability.

- There is a close relationship between customer satisfaction and bank profitability. If the employees of a bank can satisfy the customers more than its competitors, it will get more business that can earn more profit. So it is found as **Business per Employee** increases, profitability of the bank also increases.

- As **non-performing loan as percentage of total advance** is an important determinant of profitability, managing them efficiently becomes very essential. NPL reduces the loan able fund of a bank that ultimately affects the income source. Through reducing NPL, a bank can increase its profitability.

- It is expected that **equity/total asset** will have positive and significant impact on profitability. But in some cases, positive coefficients are found and in other cases, negative coefficients are found. The reason is that Equity-Total asset ratio should be justified and only this well justified Equity-Total asset ratio can enhance profitability.

- Contrary to the expectation, **Advance/Deposit ratio** is found to have negative impact on profitability. Advance – Deposit ratio of a bank should be such that can ensure required liquidity as well as can ensure adequate utilization of funds without keeping idle fund. This ratio should also be justified; otherwise it can affect profitability adversely.

Advance/Deposit Ratio (2001-2010)

Sl. No.	Name of PCBs	Mean	Median	Maximum	Minimum
1	The City Bank Ltd	0.78	0.76	0.90	0.66
2	U.C.B.L.	0.80	0.81	0.90	0.71
3	A.B. Bank Ltd.	0.82	0.84	0.94	0.60
4	IFIC Bank Ltd	0.96	0.95	1.11	0.78
5	National Bank Ltd.	0.84	0.84	0.93	0.78
6	Uttara Bank Ltd	0.69	0.68	0.86	0.55
7	Pubali Bank Ltd	0.78	0.77	0.92	0.66
8	Eastern Bank Ltd	1.04	1.04	1.21	0.79
9	NCCBL	0.93	0.93	1.03	0.86
10	Dhaka Bank Ltd	0.88	0.89	1.00	0.71
11	Southeast Bank	0.89	0.91	0.97	0.79
12	Prime Bank	0.83	0.84	0.91	0.69
13	Dutch Bangla	0.77	0.74	0.92	0.68
14	Mercantile	0.88	0.89	0.98	0.74
15	One bank	0.86	0.86	0.98	0.76
16	Exim Bank	0.94	0.94	1.01	0.91
17	Premier Bank	0.88	0.88	0.95	0.79
18	Standard Bank	0.93	0.92	1.05	0.83
19	First Security Bank	0.90	0.93	1.02	0.76
20	Commerce Bank	1.19	0.95	2.01	0.68
21	Mutual Trust Bank	0.88	0.88	0.97	0.81
22	The Trust Bank	0.75	0.71	1.03	0.64
23	Bank Asia	0.91	0.91	0.96	0.84
24	Al-Arafa Bank	0.95	0.96	1.08	0.80
25	ICB Islami Bank Ltd	0.97	1.00	1.17	0.71
26	Islami Bank	0.90	0.90	0.95	0.83
27	Social Investment	0.91	0.90	1.31	0.66
28	BRAC Bank	0.80	0.81	0.99	0.60
29	Jamuna Bank	0.75	0.77	0.85	0.57
30	Shahjalal Bank	0.88	0.93	1.01	0.40

Source: Bangladesh Bank

The mean varies from 0.69 to 1.19 and median varies from 0.68 to 1.04.

The mean is highest in case of Commerce Bank Ltd. and lowest in case of Uttara Bank Ltd.

Total Asset (2001-2010) (Figures in crore)

Sl. No.	Name of PCBs	Mean	Median	Maximum	Minimum
1	The City Bank Ltd	4500	4129	9090	2073
2	U.C.B.L.	4935	3540	12977	1835
3	A.B. Bank	5910	4003	13299	2841
4	IFIC Bank Ltd	3959	3314	7084	2552
5	National Bank Ltd.	5953	4937	13475	3166
6	Uttara Bank Ltd	5312	5005	8145	3591
7	Pubali Bank Ltd	6952	5909	12846	3907
8	Eastern Bank Ltd	4045	3569	8249	1813
9	NCCBL	3908	3001	8355	1609
10	Dhaka Bank Ltd	4668	4083	9014	1910
11	Southeast Bank	5829	4975	13178	1447
12	Prime Bank	6637	5134	15280	1574
13	Dutch Bangla	4471	3922	10078	1346
14	Mercantile	3960	3362	8714	1308
15	One bank	2492	2229	5870	743
16	Exim Bank	4551	3775	11305	804
17	Premier Bank	2601	2047	6676	345
18	Standard Bank	2306	1566	6660	404
19	First Security Bank	2498	2035	6362	446
20	Commerce Bank	753	734	1558	332
21	Mutual Trust Bank	2636	2276	5825	439
22	The Trust Bank	2454	1806	5828	315
23	Bank Asia	3656	2693	10520	472
24	Al-Arafa Bank	2686	1835	7401	876
25	ICB Islami Bank	2096	1961	2918	1480
26	Islami Bank	16589	14604	33079	4955
27	Social Investment	2603	2188	5467	1130
28	BRAC Bank	4158	3078	12280	36
29	Jamuna Bank	2484	1851	7106	421
30	Shahjalal Bank	2697	1829	7880	162

The mean varies from 753 crore to 16,589 crore and median varies from 734 crore to 14,604 crore.

The mean is highest in case of Islami Bank Ltd. and lowest in case of Commerce Bank Ltd.

Source: Bangladesh Bank

Equity/Total Asset (2001-2010)

Sl. No.	Name of PCBs	Mean	Median	Maximum	Minimum
1	The City Bank Ltd	0.061	0.058	0.127	0.029
2	U.C.B.L.	0.059	0.061	0.076	0.042
3	A.B. Bank	0.065	0.056	0.104	0.036
4	IFIC Bank Ltd	0.063	0.058	0.084	0.046
5	National Bank Ltd.	0.076	0.066	0.142	0.039
6	Uttara Bank Ltd	0.057	0.049	0.106	0.029
7	Pubali Bank Ltd	0.066	0.066	0.112	0.033
8	Eastern Bank Ltd	0.111	0.114	0.149	0.075
9	NCCBL	0.077	0.075	0.112	0.048
10	Dhaka Bank Ltd	0.063	0.064	0.074	0.044
11	Southeast Bank	0.078	0.076	0.130	0.050
12	Prime Bank	0.082	0.077	0.110	0.070
13	Dutch Bangla	0.060	0.059	0.077	0.049
14	Mercantile	0.069	0.068	0.092	0.046
15	One bank	0.067	0.068	0.083	0.042
16	Exim Bank	0.073	0.073	0.110	0.046
17	Premier Bank	0.085	0.087	0.099	0.063
18	Standard Bank	0.101	0.106	0.147	0.061
19	First Security Bank	0.059	0.058	0.092	0.045
20	Commerce Bank	0.161	0.138	0.250	0.108
21	Mutual Trust Bank	0.078	0.075	0.114	0.053
22	The Trust Bank	0.081	0.079	0.128	0.037
23	Bank Asia	0.069	0.072	0.078	0.051
24	Al-Arafa Bank	0.079	0.079	0.130	0.042
25	ICB Islami Bank	-0.002	0.026	0.343	-0.311
26	Islami Bank	0.066	0.064	0.077	0.056
27	Social Investment	0.061	0.055	0.089	0.044
28	BRAC Bank	0.141	0.086	0.690	0.032
29	Jamuna Bank	0.073	0.077	0.093	0.046
30	Shahjalal Bank	0.085	0.085	0.129	0.055

The mean varies from -0.002 to 0.16 and median varies from 0.03 to 0.14.

The mean is highest in case of Commerce Bank Ltd. and lowest in case of ICB Islami Bank Ltd.

Source: Bangladesh Bank

NPL as % of Total Advances (2001-2010)

Sl. No.	Name of PCBs	Mean	Median	Maximum	Minimum
1	The City Bank Ltd	12.32%	7.39%	31.49%	4.42%
2	U.C.B.L.	10.22%	4.33%	27.33%	1.20%
3	A.B. Bank	9.82%	6.42%	25.09%	2.10%
4	IFIC Bank Ltd	14.96%	9.18%	34.95%	4.38%
5	National Bank Ltd.	13.44%	6.62%	29.45%	3.96%
6	Uttara Bank Ltd	17.66%	15.81%	32.29%	5.50%
7	Pubali Bank Ltd	15.31%	11.75%	35.37%	2.04%
8	Eastern Bank Ltd	6.50%	4.91%	13.67%	1.99%
9	NCCBL	5.90%	4.88%	9.84%	2.10%
10	Dhaka Bank Ltd	2.81%	2.78%	5.57%	1.16%
11	Southeast Bank	3.40%	3.48%	4.98%	2.00%
12	Prime Bank	1.25%	1.26%	1.77%	0.82%
13	Dutch Bangla	1.82%	1.83%	4.24%	0.16%
14	Mercantile	2.39%	2.68%	4.17%	0.08%
15	One bank	3.27%	3.41%	7.40%	0.39%
16	Exim Bank	1.65%	1.86%	2.68%	0.00%
17	Premier Bank	2.98%	2.86%	6.00%	0.37%
18	Standard Bank	1.09%	0.90%	1.96%	0.43%
19	First Security Bank	8.05%	7.05%	16.84%	2.14%
20	Commerce Bank	31.77%	29.22%	67.85%	12.92%
21	Mutual Trust Bank	1.33%	0.52%	5.10%	0.00%
22	The Trust Bank	2.08%	2.21%	3.18%	1.30%
23	Bank Asia	2.00%	2.02%	3.31%	0.01%
24	Al-Arafa Bank	4.43%	3.46%	12.22%	0.28%
25	ICB Islami Bank	42.25%	43.58%	86.78%	2.28%
26	Islami Bank	4.68%	3.20%	8.40%	1.78%
27	Social Investment	5.80%	4.85%	11.41%	3.19%
28	BRAC Bank	2.94%	2.70%	6.04%	0.00%
29	Jamuna Bank	1.68%	1.14%	5.04%	0.00%
30	Shahjalal Bank	0.51%	0.43%	1.91%	0.00%

The mean varies from 0.51% to 42% and median varies from 0.43% to 44%.

The mean is highest in case of ICB Islami Bank Ltd. and lowest in case of Shahjalal Bank Ltd.

Source: Bangladesh Bank

Business Per Employee (2001-2010)

Sl. No.	Name of PCBs	Mean	Median	Maximum	Minimum
1	The City Bank Ltd	2.98	3.06	4.73	1.59
2	U.C.B.L.	3.36	2.66	7.45	1.38
3	A.B. Bank	4.55	3.57	9.09	2.11
4	IFIC Bank Ltd	2.74	2.41	4.47	1.89
5	National Bank Ltd.	3.23	2.94	5.59	1.99
6	Uttara Bank Ltd	2.07	1.75	3.46	1.53
7	Pubali Bank Ltd	1.98	1.58	3.30	1.10
8	Eastern Bank Ltd	7.59	7.67	11.62	4.08
9	NCCBL	4.59	4.45	6.98	3.07
10	Dhaka Bank Ltd	8.20	8.50	12.09	4.13
11	Southeast Bank	7.85	8.04	12.39	3.27
12	Prime Bank	7.34	7.46	10.90	3.59
13	Dutch Bangla	7.04	7.00	9.66	4.63
14	Mercantile	6.62	6.80	9.09	3.72
15	One bank	6.45	6.65	7.42	5.43
16	Exim Bank	6.49	6.33	11.18	2.98
17	Premier Bank	6.12	6.36	10.14	2.57
18	Standard Bank	5.50	4.70	10.75	1.92
19	First Security Bank	6.92	8.02	11.62	1.77
20	Commerce Bank	2.06	1.92	3.70	0.80
21	Mutual Trust Bank	7.43	8.05	9.50	4.09
22	The Trust Bank	4.84	5.23	6.38	2.95
23	Bank Asia	8.53	9.04	13.22	4.47
24	Al-Arafa Bank	3.66	3.27	6.47	1.61
25	ICB Islami Bank	4.53	4.46	6.12	2.82
26	Islami Bank	3.81	3.65	5.32	2.58
27	Social Investment	4.75	4.90	6.42	2.68
28	BRAC Bank	1.86	1.92	3.87	0.25
29	Jamuna Bank	4.02	4.28	7.26	0.81
30	Shahjalal Bank	5.87	6.96	8.71	0.88

Source: Bangladesh Bank

The mean varies from 1.86% to 8.53% and median varies from 1.58% to 9.04%.

The mean is highest in case of Bank Asia Ltd. and lowest in case of Brac Bank Ltd.

Number of Bank Branches (NBB) (2001-2010)

Sl. No.	Name of PCBs	Mean	Median	Maximum	Minimum
1	The City Bank Ltd	80	78	88	76
2	U.C.B.L.	86	83	107	79
3	A.B. Bank	70	70	81	63
4	IFIC Bank Ltd	69	65	95	54
5	National Bank Ltd.	94	84	145	75
6	Uttara Bank Ltd	203	200	211	198
7	Pubali Bank Ltd	362	353	399	349
8	Eastern Bank Ltd	29	24	49	22
9	NCCBL	46	44	70	29
10	Dhaka Bank Ltd	33	31	56	17
11	Southeast Bank	36	31	76	13
12	Prime Bank	52	44	94	26
13	Dutch Bangla	41	32	96	11
14	Mercantile	33	30	65	14
15	One bank	23	20	50	5
16	Exim Bank	31	28	59	10
17	Premier Bank	25	24	52	7
18	Standard Bank	26	23	58	10
19	First Security Bank	24	14	66	8
20	Commerce Bank	25	25	25	24
21	Mutual Trust Bank	27	22	67	7
22	The Trust Bank	26	21	59	11
23	Bank Asia	25	22	49	7
24	Al-Arafa Bank	48	43	78	40
25	ICB Islami Bank	32	32	34	30
26	Islami Bank	165	157	281	117
27	Social Investment	29	24	64	15
28	BRAC Bank	35	20	127	1
29	Jamuna Bank	28	24	65	3
30	Shahjalal Bank	24	17	63	2

Source: Bangladesh Bank

The mean varies from 23 to 362 and median varies from 14 to 353.

The mean is highest in case of Pubali Bank Ltd. and lowest in case of One Bank Ltd.

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Profitability Determinants
Selected variables of PCBs and those of SCBs, DFIs & FCBs

(Figures other than percentage and ratio are in crore, CAGR during 2001-10)

Category of Banks	CAGR, Mean & Std Dev of A/D	CAGR, Mean & Std Dev of TA	CAGR, Mean & Std Dev of E/TA	CAGR, Mean & Std Dev of NPL/A	CAGR, Mean & Std Dev of BPE	CAGR, Mean & Std Dev of NBB
Private Commercial Banks	0.25% 0.861 (0.039)	20.39% 128,298 (79,693)	5.35% 0.069 (0.013)	-15.42% 8.0% (5.1%)	12.27% 3.989 (1.454)	7.83% 1825 (467.5)
State owned Commercial Banks	0.18% 0.692 (0.039)	8.87% 85,709 (25,883)	10.84% 0.027 (0.020)	-8.23% 26.3% (6.5%)	10.54% 2.144 (0.723)	-0.46% 3428 (73.1)
Development Financial Institutes	-6.60% 1.382 (0.378)	6.96% 19,846 (4,573)	-6.14% 0.058 (0.026)	-9.06% 37.1% (13.1%)	10.88% 1.504 (0.554)	0.63% 1340 (28.1)
Foreign Commercial Banks	2.54% 0.756 (0.061)	13.83% 18,878 (8,328)	5.73% 0.138 (0.028)	-1.01% 1.8% (1.0%)	5.95% 10.335 (1.580)	7.79% 48 (13.4)

Source: Bangladesh Bank

PCBs are in best position in respect of these variables

Conclusion & Recommendation

- Profitability of a PCB is positively and significantly related to its TA, NBB, BPE
  - Increasing assets, a PCB can be more competitive
  - Opening new branches at appropriate locations, a PCB can expect to spread new avenues of businesses & expand volume of customers
  - Increasing business per employee (BPE), a PCB can enhance its profitability

- Profitability of a PCB is negatively and significantly related to its NPL/A
  - Borrowers' credit-worthiness should be judged and Post lending regular monitoring should be rigorous

- Advance – Deposit ratio should be such that ensure required liquidity and adequate utilization of funds simultaneously

- Equity-Total asset ratio also should be justified and only well justified Equity-Total asset ratio can enhance profitability.

Areas for further research

❑ **What the appropriate ratio of Advance/Deposit and Equity/Total asset at what context should be to ensure maximum profitability – can be an issue of further research.**

❑ **Moreover, further comprehensive research work can be initiated to find out various pros and cons of each category of banks as well as of the entire banking sector of Bangladesh.**

Thank you