

DETERMINANTS OF PROFITABILITY OF BANKS IN INDIA A MULTIVARIATE ANALYSIS

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BANKING Sector Reforms have changed the face of Indian banking industry. The reforms have led to the increase in resource productivity, increasing level of deposits, credits and profitability and decrease in non-performing assets. However, the profitability, which is an important criteria to measure the performance of banks in addition to productivity, financial and operational efficiency, has come under pressure because of changing environment of banking. An efficient management of banking operations aimed at ensuring growth in profits and efficiency requires up-to-date knowledge of all those factors on which the bank's profit depends. Accordingly, in this paper we have made an attempt to identify the key determinants of profitability of Public Sector Banks in India. The analysis is based on step-wise multivariate regression model used on temporal data from 1991-92 to 2003-04. The study has brought out that the variables non-interest income, operating expenses, provision and contingencies and spread have significant relationship with net profits.

Introduction

Since the initiation of economic reforms in 1991-92, the banking sector in India has seen numerous developments and policy changes. The more important reforms initiated in the banking sector includes adoption of prudential norms in terms of capital adequacy, assets classification and provisioning, deregulation of interest rates, lowering of Statutory Liquidity Ratio (SLR) and Cash Reserve Ratio (CRR), opening of the sector to private participation, permission to foreign banks to expand their operations through subsidiaries, the introduction of Real Time Gross Settlement (RTGS) and liberalization of FDI norms. The main thrust of the banking sector reforms has been the creation of efficient and stable financial institutions and development of the banking industry. The reforms have been undertaken gradually with mutual consent and wider debate amongst the participants and in a sequential pattern that is reinforcing to the overall economy.

Introduction of banking sector reforms have changed the face of Indian banking industry. The national, institutional and international boundaries are becoming less important. The globalization of operations and development of new technologies are taking place at a rapid pace. A paradigm shift in marketing philosophy of banks is visible from the rising focus towards quality of service for customers. All this has led to the increase in resource productivity, increasing level of deposits, credits and profitability and decrease in non-performing assets (Charan Singh-2005). The statistics on important indicators of the performance of Banking Industry in India as exhibited in Table-1 reflect an appreciable growth of banks. The table also gives a hint that the public sector banks still dominates the scene of banking in India.

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Table 1: A Synoptic View of Indian Banking Sector*(Rs. in crores)*

	Variables	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04
1	Gross Advances						
	Public Sector Banks	325328	379461	442134	509369	577813	661975
	Private Sector Banks	43049	58220	71237	120958	146047	177419
	Foreign Banks	31059	37432	45396	50631	54184	62632
2	Net Advances						
	Public Sector Banks	297789	352714	415207	480681	549351	631383
	Private Sector Banks	39731	56035	68059	116473	138951	145163
	Foreign Banks	29492	35543	43063	48705	52171	60506
3	Gross NPAs						
	Public Sector Banks	51710 (15.9)	53033 (14.0)	54672 (12.4)	56507 (11.1)	54086 (9.4)	51541 (7.8)
	Private Sector Banks	4655 (9.6)	4761 (7.4)	5963 (8.0)	11672 (9.9)	11800 (8.2)	10343 (6.3)
	Foreign Banks	2357 (7.6)	2614 (7)	3106 (6.8)	2726 (5.4)	2829 (5.2)	3013 (4.6)
4	Net NPAs						
	Public Sector Banks	24211 (8.1)	26187 (7.4)	27977 (6.7)	27958 (5.8)	24963 (4.5)	19335 (3)
	Private Sector Banks	2943 (6.7)	3031(5.0)	3700 (5.2)	6668 (6.0)	6883 (5.2)	4178 (3.1)
	Foreign Banks	866 (2)	855 (2.4)	785 (1.8)	920 (1.9)	918 (1.8)	933 (1.5)
5	Loans and Advances						
	Public Sector Banks	325328	354071	414628	480118	549351	632740
	Private Sector Banks	43049	54196	68058	116841	138951	170896
	Foreign Banks	31059	35858	42997	48478	52171	60507
6	Market Share in Advances (%)						
	Public Sector Banks	81.45	79.72	78.87	74.39	74.19	73.22
	Private Sector Banks	10.78	12.20	12.95	18.10	18.77	19.78
	Foreign Banks	7.78	8.07	8.18	7.51	7.05	7
7	Deposits						
	Public Sector Banks	553643	737281	859376	968624	1079394	1226838
	Private Sector Banks	74561	110039	136667	169433	207174	268550
	Foreign Banks	43282	49377	59190	67873	69313	79757
8	Market Share in Deposits (%)						
	Public Sector Banks	82.45	82.22	81.43	80.32	79.61	77.89
	Private Sector Banks	11.10	12.27	12.95	14.05	15.28	17.05
	Foreign Banks	6.45	5.51	5.61	5.63	5.11	5.06
9	Net Profit						
	Public Sector Banks	3258	5116	4317	8301	12295	16546
	Private Sector Banks	708	1161	1141	1779	2958	2035
	Foreign Banks	693	968	945	1492	1824	2243

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10	Priority Sector Lending						
	Public Sector Banks	107200	127807	146546	171185	203095	245672
	Private Sector Banks	14295	18348	21550	21530	36705	52861
	Foreign Banks	8270	9699	11835	13414	14848	18276
11	Total Income						
	Public Sector Banks	78867	90911	103499	117249	128404	137602
	Private Sector Banks	11491	6235	16589	20817	31866	33153
	Foreign Banks	9719	10330	11987	12960	12044	13021
12	Interest Earned						
	Public Sector Banks	69474	79414	91129	100722	107193	109496
	Private Sector Banks	10039	11543	14493	16548	24553	25541
	Foreign Banks	7857	8227	9470	9700	8972	8990
13	Spread						
	Public Sector Banks	21634	24039	29436	31568	37340	43731
	Private Sector Banks	2174	2854	3808	4240	5864	8011
	Foreign Banks	2656	3250	3707	3646	3907	4718
14	Total Branches (No.)						
	Public Sector Banks	45381	45924	46067	46118	46461	46635
	Private Sector Banks	4881	5010	5205	5376	5445	5737
	Foreign Banks	189	186	196	202	213	215
15	Total Banks (No.)						
	Public Sector Banks	27	27	27	27	27	27
	Private Sector Banks	34	31	31	31	30	30
	Foreign Banks	42	41	41	41	32	32
16	Statutory Liquidity Ratio (%)	25	25	25	25	25	25
17	Cash Reserve Ratio (Average)	10.33	9.5	8.25	5.25	4.75	4.5
18	Bank Rate (Average)	9	7	7.5	6.37	6.12	6
19	Interest Rate on Bank Reserves (%)	4	4	4	4	4	6

Source: RBI, Report on Trend and Progress of Banking in India, various issues.

However, the banks are now facing a number of challenges such as frequent changes in technology required for modern banking, stringent prudential norms, increasing competition, worrying level of NPA's, rising customer expectations, increasing pressure on profitability, assets-liability management, liquidity and credit risk management, rising operating expenditure, shrinking size of spread and so on. The reforms in banking sector have also brought the profitability under pressure. RBI's efforts to adopt international banking standards have further forced the banks to shift the focus to profitability for survival. Hence, profitability has become major area of concern for bank's management. Infact, profit is an important criteria to measure the performance of banks in addition to productivity, financial and operational efficiency.

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An efficient management of banking operations aimed at ensuring growth in profits and efficiency requires up to date knowledge of all those factors on which the bank's profit depends. This is only possible through research studies conducted by researchers, economists and analysts.

A lot of research work has so far taken place concerning the views about the role of financial and banking development in economic growth [McKinnon (1973); Shaw (1973); Rajan and Zingales (1998); Levine (2004); Singh (2005)]. Similarly some studies have been undertaken for measuring the productivity and operational efficiency of banks in India. More recent among them includes- Cheema and Agarwal (2002), Ketkar, Noulas and Agarwal (2003), Singh (2003). Insofar as our information is concerned, however, very scanty work has been done with the objective of identifying the determinants of profitability of banks in India. The recent studies of Chandan and Rajput (2002) and Saggar (2005) have examined the factors determining profitability of banks in India. Therefore, the onus of conducting more research studies lies on the researchers so as to identify the determinants of profitability of banks. It is in this context that the present study titled- "*Determinants of Profitability of Banks in India: A Multivariate Analysis*" has been performed.

This paper is divided into four sections. Introduction of the Problem is described in Section I. While the Database and Methodology is presented in Section II, empirical results are reported in Section III. Conclusion is available in the final Section of the paper.

Database and Methodology

The Indian financial system comprises an impressive network of Commercial Banks (CBs), Co-operative banks (CPB), Development Finance Institutions (DFIs) and Non-banking Finance Companies (NBFCs). CBs are the most important segment of the financial system, with financial assets in 2004 accounting for 57 percent of GDP followed by DFIs (23 percent). The commercial banks comprise public sector, private sector and foreign sector banks. Though the number of foreign and private banks operating in India has increased from 21 and 23 in 1991 to 33 and 30, respectively in 2004, the public sector banks dominate the banking industry in terms of branch expansion, market share in deposits and lending etc. (Table 1). Accordingly, the scope of the present study is limited to Public Sector Banks only, as it was not feasible to take simultaneously all the banks operating in India. Therefore, the focus of analysis and discussion in this paper is mainly on the determinants of profitability for the public sector commercial banks. As we know, there are presently 27 banks in public sector in India, the analysis of all of them has been made with the objective of identifying the determinants of profitability.

The variables considered for the present study include Spread (S), Non-Interest Income (NII), Credit/Deposit Ratio (C/D), NPA as percentage to Net Advances (NPA), Provision and Contingencies (P&C), Operating Expenses (OE), Business per Employee (BPE), Profit per Employee (PPE) and Net Profit (NP). The data relating to these variables have been collected from the annual reports of banks, Journal of Indian Banking Association, Reserve Bank of India's Bulletin and Internet (*www.rbi.org.in.*). In this study, the reference period is 13 years from 1991-92 to 2003-04. This period is selected mainly because banking sector of our country resorted to speedy reforms and liberalization, since the beginning of the nineties.

In order to identify the variables that have high explanatory powers and are, therefore, more important in managing the operations of a bank, Multiple Regression Model is applied. To eliminate the problem of multicollinearity, the backward estimation method of regression analysis is used. Mathematically the equation is as follows:

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + u$$

Where,

Y = Net Profit (Profit after Tax),

a = constant term,

b_1 to b_8 = Regression coefficients for the respective variables,

x_1 = Spread,

x_2 = Non-Interest Income (NII),

x_3 = Credit/Deposit Ratio (C/D),

x_4 = NPA as percentage to Net Advances (NPA),

x_5 = Provision and Contingencies (P&C),

x_6 = Operating Expenses (OE),

x_7 = Business Per Employee (BPE),

x_8 = Profit Per Employee (PPE),

u = Error Term.

Here, Y (i.e. Net Profit) is the dependent variable, while the rest x_1 to x_8 are independent variables. At the outset, the test of significance of overall multiple regression model was made through F-test. This test has been used to answer the basic question: Is there a linear relationship between dependent variable and any of the independent variables under consideration? To carry out the F-test the analysis of variance (ANOVA) is performed. Further Multiple Coefficient of Determination (R Square) and Adjusted Multiple Coefficient of Determination (Adjusted R Square) were also compiled to measure the explanatory power of multiple regression model used herein. With the aim of evaluating the significance of individual regression coefficients (b_i), t-test was performed at .01, .05 and .10 levels of significance. Durbin-Watson (D.W) Test has been employed to comment on the presence/absence of the problem of auto-correlation in the time series data employed herein. Moreover, to bring out the explanatory powers of each of the independent variables under study the square of partial correlation coefficient (i.e. Partial coefficient of determination- r_p^2) of each variable have been worked out.

An important problem that may arise in making inferences about individual regression coefficient is 'multicollinearity' - the problem of correlation among the independent variables themselves. Due to this the standard errors of the individual slope estimators become usually high, making the slope coefficient seem statistically not significant. The variables causing multicollinearity were dropped from the model by using 'backward elimination'. The results of the model are shown in Tables 2 and 3. While the former table presents the values of R, R^2 , DW and F statistics, the latter exhibits the regression and partial correlation coefficients. Exhibit 2, which indicates significant regression coefficients, is derived from Table 3 with the aim of making results reader friendly. It also needs to mention that the data collected is processed and analyzed with the help of SPSS software.

Before going to see the outcome of the Multiple Regression Model, let us also give an eye on the nature of relationship expected between the dependent variable (i.e. Net Profit) and any of the independent variables considered for the present study (Exhibit 1):

Results and Discussion

Table 2 reveals that F value is significant at .01 level almost in every year over the last 13 years except in 1991-92. This clearly indicates that the variation caused by independent variables in the net profit is significant and cannot be left to chance factors. It is also noteworthy that there is no problem of serial correlation in the time series data utilized for the study, as the value obtained by Durbin-Watson test, is around two in majority of the years.

The above permits us to proceed further to analyze the results produced by the Multiple Regression Model so as to achieve the goal of identifying the factors influencing profit. The value of Correlation

Exhibit 1 Independent Variables and Expected Relation with Profit

Variable Summary	Expected Relation
● S: Interest Earned – Interest Paid	+
● NII: Total Income – Interest Income	+
● C/D: Total Advances/Total Deposits	+
● NPA: Non-performing Assets as percentage to Net Advances	–
● P&C Provision and Contingencies	–
● OE: Includes establishment expenditure, salary expenditure and expenditure on technology upgradation	–
● BPE: Deposits + Advances/Total Number of Employees	+
● PPE: Net Profit/Total number of Employees	+

Coefficient (R) and Coefficient of Determination (R square and Adjusted R square) of the finally selected model are available in Table 2. The values of correlation coefficient ranges from 0.535, the lowest in the year 1991-92 to 0.999, the highest in 1992-93. While the moderate correlation is found only in two years- 1991-92 and 1997-98, it is very high in the rest of the years. This shows that the independent variables under reference have high degree of correlation with profitability. The same is further confirmed by values of R square and Adjusted R square. From the results of Coefficient of Determination, one can see that the independent variables have explanatory powers above 95 percent in case of 6 years (1992-94, 1995-96 and 2001-04) and between 60 percent and 73 percent in case of 5 years (1994-95, 1996-97 and 1998-2001).

Table-2: Finally* Selected Model Summary and ANOVA (F) Results (1991-92 to 2003-04)

Year	R	R Square	Adjusted R Square	Durbin-Watson	F	Significance
1991-92	0.535	0.286	0.116	2.036	1.684	0.182
1992-93	0.999	0.998	0.998	1.672	2320.084	0.000
1993-94	0.997	0.994	0.993	1.897	920.658	0.000
1994-95	0.828	0.685	0.61	2.104	9.140	0.000
1995-96	0.982	0.964	0.958	2.024	148.4	0.000
1996-97	0.775	0.601	0.495	2.208	5.713	0.002
1997-98	0.68	0.463	0.335	1.710	3.617	0.016
1998-99	0.839	0.704	0.665	1.785	18.216	0.000
1999-00	0.856	0.732	0.634	1.925	7.423	0.000
2000-01	0.836	0.699	0.588	1.540	6.300	0.001
2001-02	0.996	0.993	0.991	2.024	755.91	0.000
2002-03	0.995	0.991	0.990	1.967	863.23	0.000
2003-04	0.992	0.984	0.981	1.993	330.497	0.000

* That model which provides the highest value of R square, i.e. Coefficient of Determination, has been considered.

Table 3, which presents regression coefficients resulting from the application of Multiple Regression Model reveals that in the year 1991-92, five independent variables have exerted influence on profitability of public sector banks. These variables include CD ratio, NII, OE, PC and S. However, only one variable

(OE) turns as significant influencer among them. In 1992-93, the year when Narasimham Committee submitted its report, four variables namely NII, OE, PC and Spread, were found as having significant impact on profitability. Regression coefficient for Spread is found significant at 0.00 level in each year since 1992-93 except 1997-98 and 1998-99. Similarly, the regression coefficient concerning NII is found significant in 9 years out of a total of 13 years (Exhibit 2). The influence of operating expenses and provision and contingencies has resulted as significant in 9 years and 7 years, respectively during 10 years period between 1991-92 and 2000-01. However, these variable turned insignificant during the last three years of the study period. While NPAs, CD ratio and Business Per Employee are found as significant variables only in two years, Profit Per Employee is found so in a period of four years. As expected, OE, P&C and NPA, are found to have negative relationship with profit. However, the relationship is observed positive in case of NII and Spread. The Table 3, further indicates that values of Partial Correlation Coefficient (r_p^2) and its determination for CD ratio are found low in case of most of the years. It means the CD ratio has low influence on net profits. NPAs and BPE are also found having low relation with profits. However, the majority of values of r_p and r_p^2 are either moderate or high in case of rest of the variables. Hence, they have moderate to high degree of relationship with net profits.

Table 3: Regression Coefficients and Partial Correlation Coefficients

Years	Model	Unstandardized Coefficients		Standardized Coefficient	t	Significance	Partial Correlation	
		B	Std. Error	Beta			Partial R	Rp2
1991-92	(Constant)	113145.70	64664.89		1.75	0.10		
	CD	-193736.00	110624.80	-0.39	-1.75	0.09	-0.36	0.13
	NII	494.92	311.05	3.22	1.59	0.13	-0.33	0.11
	OE	-653.93	294.52	-4.72	-2.22	0.04	-0.44	0.19
	PC	-204.39	196.48	-2.31	-1.04	0.31	-0.22	0.05
	SPREAD	248.85	168.08	3.97	1.48	0.15	0.31	0.09
1992-93	(Constant)	-48835.10	188053.90		-0.26	0.80		
	CD	-131153	340609.40	0.00	-0.39	0.70	-0.08	0.01
	NII	9608.90	643.44	1.23	14.93	0.00	0.96	0.91
	OE	-11576.60	472.13	-1.88	-24.52	0.00	-0.98	0.97
	PC	-10231.40	183.94	-1.61	-55.62	0.00	-1.00	0.99
	SPREAD	8252.40	220.96	2.21	37.35	0.00	0.99	0.99
1993-94	(Constant)	-59509.40	63211.18		-0.94	0.36		
	NII	8021.28	1008.56	0.85	7.95	0.00	0.86	0.74
	OE	-12432	689.81	-1.61	-18.02	0.00	-0.97	0.94
	PC	-9459.81	216.80	-1.12	-43.64	0.00	-0.99	0.99
	SPREAD	8161.60	638.46	1.60	12.78	0.00	0.94	0.88
	1994-95	(Constant)	-1323793	411719.30		-3.22	0.00	
CD		2140300	802396.60	0.37	2.67	0.01	0.50	0.25
NII		1435.93	1283.76	1.16	1.12	0.28	0.24	0.06
OE		-3334.88	799.62	-3.53	-4.17	0.00	-0.67	0.45
PC		-3917.47	1208.13	-2.68	-3.24	0.00	-0.58	0.33
SPREAD		3143.56	681.76	5.06	4.61	0.00	0.71	0.50

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Years	Model	Unstandardized Coefficients		Standardized Coefficient	t	Significance	Partial Correlation	
		B	Std. Error	Beta			Partial R	Rp2
1995-96	(Constant)	-303573	175621.20		-1.73	0.10		
	NII	5160.19	1531.22	1.01	3.37	0.00	0.58	0.34
	OE	-6447.74	1121.76	-1.52	-5.75	0.00	-0.78	0.60
	PC	-10438.30	555.33	-1.77	-18.80	0.00	-0.97	0.94
	SPREAD	6425.95	754.85	2.18	8.51	0.00	.87	0.77
1996-97	(Constant)	894299.50	394708.60		2.27	0.04		
	NII	1963.83	1251.94	2.85	1.57	0.13	0.34	0.11
	OE	-5789.89	1173.96	-10.48	-4.93	0.00	-0.75	0.56
	PC	-3315.93	946.36	-3.79	-3.50	0.00	-0.63	0.39
	SPREAD	3899.53	931.57	11.42	4.19	0.00	0.69	0.48
	BPE	-13210.80	5545.84	-0.56	-2.38	0.03	-0.48	0.23
1997-98	(Constant)	2812225	1121050		2.51	0.02		
	CD	-2361711	1739742	-0.27	-1.36	0.19	-0.28	0.08
	NII	4153.80	2013.43	3.30	2.06	0.05	0.41	0.17
	OE	-3345.73	1595.41	-3.32	-2.10	0.05	-0.42	0.17
	BPE	-8921.40	5722.55	-0.29	-1.56	0.13	-0.32	0.10
	NPA	-87182.40	24479.28	-0.60	-3.56	0.00	-0.61	0.38
1998-99	(Constant)	734290.80	268500.50		2.74	0.01		
	NII	1649.87	1598.08	1.31	1.03	0.31	0.21	0.04
	OE	-1370.09	1275.96	-1.36	-1.07	0.29	-0.22	0.05
	NPA	-78863.10	24954.39	-0.54	-3.16	0.00	-0.55	0.30
	(Constant)	235379.30	890710		0.26	0.79		
1999-00	CD	1804497	1727647	0.14	1.04	0.31	0.23	0.05
	NII	4546.90	1642.36	3.66	2.77	0.01	0.54	0.29
	OE	-5292.99	1469.89	-5.35	-3.60	0.00	-0.64	0.41
	PC	-7596.28	1396.07	-3.76	-5.44	0.00	-0.78	0.61
	SPREAD	3428.89	916.37	5.35	3.74	0.00	0.65	0.42
	NPA	-43030	40244.53	-0.17	-1.07	0.30	-0.24	0.06
	PPE	-581395	265668.70	-0.42	-2.19	0.04	-0.45	0.20
	(Constant)	1484298	548205.10		2.71	0.01		
2000-01	NII	2200.93	1312.52	2.27	1.68	0.11	0.36	0.13
	OE	-5327.46	1427.55	-8.23	-3.73	0.00	-0.65	0.42
	PC	-4138.79	1289.39	-2.57	-3.21	0.01	-0.59	0.35
	SPREAD	4002.05	959.15	8.49	4.17	0.00	0.69	0.48
	BPE	-5095.39	2984.88	-0.28	-1.71	0.10	-0.37	0.13
	NPA	-62018.30	40518.59	-0.28	-1.53	0.14	-0.33	0.11
	PPE	-317229	220517	-0.29	-1.44	0.17	-0.31	0.10

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Years	Model	Unstandardized Coefficients		Standardized Coefficient	t	Significance	Partial Correlation	
		B	Std. Error	Beta			Partial R	Rp2
2001-02	(Constant)	-95.97	50.61		-1.90	0.07		
	NPA	-4.71	4.64	-0.03	-1.01	0.32	-0.21	0.04
	NII	0.28	0.06	0.48	5.13	0.00	0.74	0.54
	SPREAD	0.14	0.03	0.51	5.44	0.00	0.76	0.57
	PPE	84.38	20.40	0.12	4.14	0.00	0.66	0.44
2002-03	(Constant)	-129.96	27.34		-4.75	0.00		
	NII	0.33	0.06	0.60	5.75	0.00	0.77	0.59
	PPE	84.06	12.95	0.13	6.49	0.00	0.80	0.65
	SPREAD	0.12	0.03	0.39	3.74	0.00	0.62	0.38
2003-04	(Constant)	-202.03	92.00		-2.20	0.04		
	BPE	0.59	0.53	0.05	1.11	0.28	0.23	0.05
	NII	0.04	0.03	0.09	1.29	0.21	0.27	0.07
	PPE	50.73	28.73	0.08	1.77	0.09	0.35	0.12
	SPREAD	0.30	0.02	0.92	13.01	0.00	0.94	0.88

Exhibit 2: Significant Regression Coefficients

Year	S	NII	C/D	NPA	P&C	OE	BPE	PPE
1991-92			***			**		
1992-93	*	*			*	*		
1993-94	*	*			*	*		
1994-95	*		*		*	*		
1995-96	*	*			*	*		
1996-97	*				*	*	**	
1997-98		**		*		**		
1998-99				*				
1999-2000	*	*			*	*		**
2000-01	*				*	*		
2001-02	*	*						*
2002-03	*	*						*
2003-04	*							***

* Significant at .01 level

** Significant at .05 level

*** Significant at .10 level

Conclusion

In this paper, we have made an attempt to identify the key determinants of profitability of public sector banks in India. The analysis is based on step-wise multivariate regression model used on temporal data from 1991-92 to 2003-04. The study has brought out that the explanatory power of some variables is significantly high. Such variables include NII, OE, P&C and Spread. However, some variables namely CD ratio, NPAs and BPE are found with low explanatory power. Hence, the variables non-interest income, operating expenses, provision and contingencies and spread have a significant relationship with net profit. Among them two variables P&C and OE are found having negative relationship. From the above we can conclude that control over non-performing assets, operating expenses, provision and contingencies are major areas of concern for the management of public sector banks. To strengthen the position further, the public sector banks must strive to greatly enhance efficiency through a control over shrinking spread, increasing non-interest income, and maximizing business per employee and per branch, etc. Technology up gradation, provision of better service quality, inculcating customer driven work culture, mental revolution among the staff of public sector banks, use of modern risk management practices are also the most sought after steps that are needed to ensure the sustainable level of profit and its growth.

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