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IMPACT OF CORPORATE SOCIAL RESPONSIBILITY ON FINANCIAL PERFORMANCE OF SELECTED BANKS IN INDIA: BASED ON CAMEL MODEL

Khushboo Chaturvedi[1], Shakeb Akhtar[2], Naghma Azhar[3], Mohd Shamshad[4]

[1]Research Scholar, Department of Commerce, Aligarh Muslim University, Aligarh, India
[2] Assistant Professor, School of Business, Galgotias University, Greater Noida, India
[3] Assistant Professor, Department of Commerce, Aligarh Muslim University, Aligarh, India
[4] Assistant Professor, School of Finance and Commerce, Galgotias University, Greater Noida, India

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Abstract: The concept of CSR has been witnessing a sharply rising trend since last decade. From a subject of interest mainly for the academicians, it has now emerged as a strategic corporate practice adopted both by the banking and non-banking institutions. CSR is purely based on the philanthropy on voluntary basis on the part of the organization, aiming to contribute towards the well-being of all its stakeholders, including the environment, to attain sustainable development. India is the first country in the world to render it mandatory for the companies fulfilling specific criteria, to spend a minimal percentage of 2% of their average net profits of last three preceding financial year. Indian commercial banks play a crucial role in contributing towards the growth of Indian economy as a whole. These banks, public and private, both have been incurring expenditure on CSR. Most of the researches are showing that the companies who operate in a socially responsible manner are experiencing better financial results in terms of increased profitability. The present paper is an attempt to examine the impact of CSR on the financial performance of the commercial banks of India, based on CAMEL Model, using Return on Assets (ROA) and Net Interest Margin (NIM) as performance indicators. The sample of 16 banks where considered for seven years period from 2015-2021 and STATA 15 was employed for panel data evaluation. The results show that there exists a positive correlation between the independent variables (CSR, Capital adequacy ratio, Liquid Assets to Total Assets, Total Loan to Total Assets and Total Deposit to Total Assets) and dependent variables (ROA and NIM).

Keywords: CSR, Financial performance, CAMEL Model, Panel data regression, Commercial Banks.

1. Introduction

In this fast paced era of capitalism, there prevails cut throat market competition, where the organizations participating in varied sorts of businesses or economic activities, are met with an indispensable need to perform their operations profitably and sustainably. There are many strategies that are adopted by the economic institutions from time to time to maintain or build their identity in the eyes of the public for their sustained livelihood. Corporate Social Responsibility has been used as one of those strategies which have indeed enabled many of the organizations to successfully capture the markets and command a good enough customer base and loyalty. Its impact can be seen clearly and easily on the financial performance of the companies or organizations. Corporate Social Responsibility is such an approach or practice which does not fail at the front of recognizing and

*** Correspondence Author: Shakeb Akhtar (shakebakhtar.amu@gmail.com)**

honoring the ethics and values; and also aims at benefitting not only the shareholders but all the stakeholders, including the environment and surrounding of which it is the part. Batra & Bahri (2018) brings out a fact that the philosophy behind CSR is based on the principle of Triple Bottom Line, that is the corporates should focus on serving People, serving and being protective of the Planet and Profit earning rather than just being focused on the last one. It is an emerging view that corporate social responsibility has become one of the contributive factors in fostering the financial performance of banking companies. Under CSR, the business attempts to protect the interests of the customers, employees, communities, environment and all other stakeholders, thereby promoting comprehensive social growth and development. India is the first country to have CSR as a mandate wherein the companies qualifying specific criteria are required to spend 2% of their average net profits of last three preceding financial years. The companies, in addition to this compulsory expenditure of 2%, are expected to be socially responsible by being able to perform ethically within the limits and regulations ordained by the law without compromising on their profits. Moreover, the banking sector's performance is the indicator of overall performance of the economy and the concept of corporate social responsibility is not something new for these banks as they mostly support the societies by way of varied philanthropic initiatives under the umbrella of CSR (Singh, et al., 2015). Modern era has successfully witnessed the academicians, practitioners, policy makers and business entrepreneurs showing interest in CSR wherein the organizations attempt at voluntarily integrating the wide spectrum of social concerns in their business policies and day to day operations in dealing with the various stakeholders (Saxena, 2016). Memon et al., (2019) briefs out that the year 1950 witnessed the probable emergence of CSR in context with the area of management, in the U.S. with the philanthropic perspectives in order to contribute towards the societal well-being and it changed its course from being a voluntary activity towards becoming an obligation in 1980s.

2. Conceptual Framework

Conceptual framework is very important in order to become familiar with the key variables used in this study for the purpose of research. It aims at highlighting the various explanations with regards to the terms used in the study named Corporate Social Responsibility and Financial Performance Indicators.

2.1 Corporate Social Responsibility

Corporate Social Responsibility is both will and law driven phenomenon aiming at building a positive and mutually beneficial relationship between the organizations and society. Corporate social responsibility as the cure for the environmental degradation, issue of poverty and any other social harm; along with making the organizations capable of attaining competitive edge of certain level which not only fosters the profits but also adds value to the society (Chikkaveerayyanavar, 2021). Involvement in CSR is an activity that is based on altruistic motives without compromising onto the hard earned profits of the organizations. Social responsibility is basically the businesses' "decisions and actions taken for reasons at least partially beyond the firm's direct economic or technical interest" (Davis, 1960).

"CSR is concerned with treating the stakeholders of the firm ethically or in a responsible manner. 'Ethically or responsible manner' means treating stakeholders in a manner deemed acceptable in civilized societies. Social includes economic responsibility. Stakeholders exist both within a firm and outside. The natural environment is a stakeholder. The wider aim of social responsibility is to create higher and higher standards of living, while preserving the profitability of the corporation, for peoples both within and outside the corporation" (Hopkins, 2004).

Corporate social responsibility is described as "the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life." (Holme & Watts, 2000). "CSR is the concept that an enterprise is accountable for its impact on all relevant stakeholders. It is continuing commitment by business to behave fairly and responsibly and contribute to economic development while improving the quality of life of the workforce and their families as well as of the community and society at large" (Batra & Bahri, 2018).

2.2 Financial performance and its determinants

Financial performance determinants incorporated under the study are CAMEL model based ratios.

Capital Adequacy: Capital adequacy Ratio (CAR)

The Capital Adequacy Ratio (CAR) is also known as Capital to Risk weighted assets ratio indicative of organization's financial health. It is used as a measure of the financial strength of an organization by determining how much capital is available at its disposal in relation to its risk weighted assets. This not only ensures the safety of interests of depositors but also helps in meeting unpredictable losses. The higher the CAR, better it is for the bank to cope with any financial obligations and unforeseen losses safely. The banks face many types of risks like credit risk, interest rate risk, foreign exchange risk, etc. and the ability to deal with all these risks depend upon the adequate amount of capital that it maintains with them (Nagarkar, 2015). The authors has taken log for the calculations.

Asset Quality: Total Loan to Total Assets (TLTA)

This ratio computes the total outstanding loans as a percentage of total assets to examine the asset quality. When the banks are able to minimize their risk of operations and maximize the value of their assets, it reflects good asset quality and it is real challenge that the banks mostly are face to face with. When this ratio is higher, it signifies that the bank has so many liabilities related to the loans to be paid off, thus lowering the level of liquidity and the level of risk is high. On the other hand when the ratio is less, the bank's assets are more than its debt.

Management Efficiency: Business per Employee (BPE) & Profit per Employee (PPE)

Management efficiency also plays a key role in determining the profitability of a bank through different financial ratios like growth in assets, loans, earnings, net operating profit to total income ratio, net operational expense to asset ratio, etc. "Business per employee ratio is related with the employee's productivity. It can be calculated by dividing the total business of the bank by number of employees. Higher the ratio, better it is" (Chaturvedi & Sharma, 2012). Profit per Employee is also called Net Income per Employee (NIPE) and helps in assessing the amount of profit each of the employees are bringing to the business over a period of time. This ratio is also often used to compare the businesses within same industry as the needs and operations differ across the industries. It is computed by dividing the net profits of the bank by number of its employees. As a matter of fact, when this ratio is high, the profitability of the bank is also assumed to be higher. The authors has taken log for both the ratios for the calculations.

Earning Capacity: Return on Assets (ROA) and Net Interest Margin (NIM)

The profitability is measured using Earning Capacity Ratios of the CAMEL Model which helps in assessing the viability and growth of earnings both in the present and future that in turn when good, builds up confidence in the minds of the stakeholders like investors, depositors and customers, paving ways for further rise in income and reputation (Tatuskar, 2016; Azmi et al., 2020). The ratios used here

to determine the profitability are Return on Assets (ROA) and Net Interest Margin (NIM), which are dependent variables.

The idea behind calculating this ratio is to know the amount of profits a bank is able to generate from its assets or in other words, it examines the earning capacity of a bank as the product of its optimum utilization of all of its economic resources present at its disposal. The higher the ratio, the more efficient a bank is considered to be at earning profits from its assets.

NIM is one of the profitability ratios that measure the difference between the interest income and interest expense of a bank, relative to the amount of its assets that are a medium of yielding interest upon them. When its positive, it indicates the presence of profitability as a result of efficient investing while when negative, signifies inefficient investments on the part of the bank. Moreover, it is highly affected by the interest rates in the economy.

Liquidity: Liquid Assets to Total Assets (LATA)

This ratio is indicative of an organization's ability to discharge its financial liabilities as and when they become due, that is its liquidity position. The good amount of liquidity level is the indicator of bank's ability to meet unanticipated claims or demands of funds from the depositors and any kind of deficiency in liquidity position might adversely affect the Profitability and financial performance of the banks (Tatuskar, 2016; Rostami, 2015).

Deposit: Total Deposit to Total Assets (TDTA)

Cheng and Kwan (2000) mention that this ratio measures the extent of assets that have been funded by the total deposits. When deposit base is larger, the cost of funds goes down.

2.3 Corporate Social Responsibility & Financial Performance

The socially responsible economic institutions are claimed to have a positive impact on their financial performance and as a result on their reputation due to the desires and expectations on the part of their customers or public as a whole, to behave ethically and socially (Memon et al., 2019). The organization cannot survive without any positive alignment with the society in terms of the contribution of the former to the latter (Maqbool & Zameer, 2018). The implementation of CSR helps the organizations in building corporate image, exploiting opportunities, shielding themselves from the external unpredictable threats and challenges and to maximize the profits (Barnett, 2019). CSR, owing to its becoming an indispensable part of the operations of the banking sector, should also become one of the parameters (apart from financial parameters) to be judged upon in order to examine the overall performance of the organizations. Bowen has also emphasized that how important it is for the business organizations to be familiar with the ethical values to pave way for sustainable profits and success (Agudelo et al., 2019).

3 Literature Review

There have been a wide range of researches that are being conducted in the area of determining the relationship between the CSR and the financial performance. Some of them depict a positive relationship between these two variables (Barnett and Salomon 2006; Van Dijken, 2007; Galema et al. 2008; Ahamed et al. 2014). In the face of rising challenges and dire competition, CSR proves out to be strategic leading to the improvement of organizational financial performance (Kim et al., 2018).

An assessment of 109 studies was carried out (treating CSR as an independent variable and financial performance as a dependent variable) showing that 54 studies showed the existence of a positive relationship between them two, 20 of them concluded mixed results, 28 of them proved out to be the presence of insignificant relationships and the last 7 studies indicated the negative relationship. But the

researchers attributed the controversial results to the flawed evaluations and deficient model specifications (Margolis and Walsh, 2003).

Latest trends suggest a positively growth trend in the profits of the organizations owing to the adoption and implementation of CSR (Bénabou and Tirole, 2010: Gillan et al., 2010). Dimson et al. (2012) observes that those firms who attempts to undertake CSR, experience sooner or later as a consequence, a value enhancement with relation to the corporate image. CSR is found out to be having a positive association with the financial performance with regards to the Return on Assets, Return on Equity, Net Interest Income and non-interest income (Wu and Shen, 2013).

There exists positive correlation between CSR and the financial performance indicators of the banks (McGuire et al., 1988; Mohammad, 2012). Incorporating the CSR initiatives in business policies contributes positively towards improving financial performance fetching a competitive advantage to the organizations (Smith, 2003).

CSR and Financial Performance both have proved out to be directly proportional both in terms of upward and downward trends. Those companies who focus on financial performance compromising on the CSR initiatives are unable to maintain their image and reputation in the public's perception while those companies whose financial performance goes down are not as willing to contribute towards CSR as they would be in times of better financial performance (Windsor, 2006).

The results derived from an examination of the association between the CSR and financial performance is that some of the indicators show a significant relationship while others showed an insignificant relationship. The results have been drawn out using Content Analysis and Panel data regression upon the data extracted from the annual reports of the companies used for the purpose of the research (Yilmaz, 2013).

Famiyeh (2017) conducted a study in Ghana to investigate the relationship between the CSR, competitive operational activities and comprehensive organizational performance using Structural Equation Modeling (SEM). It was found that when the organization contributed towards CSR, the Return on Investment, sales volume and market share also showed an simultaneous increase.

Some other studies also claim a negative relationship between the CSR and financial performance (Brammer at al. 2006; Aupperle et al., 1985; Moskowitz, 1972). While other studies conclude that there is no relationship between the CSR and financial performance of organizations and no impact of CSR on the financial performance of an organization (McWilliams and Siegel, 2000; Newell and Lee, 2012; Kim and Choi 2013). Chih at al. (2010) found out that there exists no relationship between the CSR and financial performance observing 520 financial organizations from over 30 countries over a period of two consecutive years.

Batra and Bahri (2018) conducted a study on 20 BSE listed banks to study the impact of financial indicators on their CSR expenditure using correlation and multiple regressions and found that Profit after taxes (PAT) positively affects the CSR. This implies that the increase in profits leads to a simultaneous rise in CSR too. It was concluded that the Indian banks perceive CSR to be a medium for not only promoting the goodwill of the banks but also help in fetching the increased customer satisfaction, loyalty on the part of investors and fosters financial growth.

Researches also show that public sector banks are far behind the private sector banks in their respective attempts to meet the mandatory CSR spending of 2% and they also differ in their approach of contributing towards CSR (Singh et al., 2015).

4 Objectives of the Study

1. To study the concept of Corporate Social Responsibility.
2. To analyze the impact of CSR expenditure on the financial performance of commercial banks in India based on CAMEL Model.

5 Research Methodology

This section includes the data genesis, sample selection, econometrics tools and model that are adopted in the current research.

5.1 Data Mining and Sampling

The dataset used in this research are being imported from RBI database and annual report of the bank, which is considered the most common gateway and authenticated source for data collection of all banks operating in India. This database administers 27 public, 26 private and 46 foreign banks. However, this research has taken 6 public and 10 private banks as sample. The sample selection was completely based on working scenario of banks during the sample period. Only those banks considered that was operating during the sample period and having information of CSR expenditure in their annual report. In addition, because of unavailability of data, few more banks was deducted from the final sample. The final list is in **Table 1**. The sample is based on balanced panel data with 112 observations and period of 7 years ranging from 2015-2021. It is evident from past studies that they have also employed balanced panel dataset for evaluating profitability (Curuk et al., 2016; Rashid and Jabeen, 2016; Bougatef, 2017, Akhtar et al., 2020).

Table 1. List of Public and Private Banks

PUBLIC BANKS	PRIVATE BANKS
Bank of Baroda	Axis Bank
Bank of India	Bandhan Bank
Canara Bank	City Union Bank Limited
Indian Bank	Federal Bank
Punjab National Bank	HDFC Bank
State Bank of India	ICICI Bank
	Indusind Bank
	Kotak Mahindra Bank Ltd
	RBL
	Yes Bank Ltd

5.2 Variables

Total ten variables considered in the current study to analyse the impact of CSR expenditure on financial performance. Two of them are dependent variables, namely, return on assets and net interest margin. Rest eight are independent variables, of which, management efficiency, liquidity, asset quality, capital adequacy ratio and deposit are bank-specific variables that are considered as control variables along with capital adequacy ratio. The next is dummy variable for ownership (1 for Private and 0 for Public). The detail of each with formula and acronym is shown in **Table 2**.

5.3 Model and Tools used to measure profitability and liquidity

Panel data is being used in the current study for analysing the impact of CSR expenditure on financial performance of commercial banks in India. A panel regression is different from general time series and cross sectional regression model as it incorporates double subscript. Another important advantage of

using panel regression is that it helps in controlling unobserved variables which changes over time but not among entities. In addition, in panel model estimation time effect is also included which helps in controlling individual heterogeneity, by allowing firm specific random or fixed effect components (Baltagi, 2008). GMM is dynamic panel model and it is used to test the unobserved shocks and endogeneity problem. Hence, in this study there is no problem of endogeneity because all variables seem to follow BLUE estimates.

Table 2. Variables & their proxy measures used in the study

Variables	Proxy Measures	Acronym
Dependent Variables		
Profitability	Return on assets	ROA
	Net Interest Margin	NIM
Independent variable		
Management Efficiency	Business Per Employee	LBPE
	Profit Per Employee	LPPE
Corporate Social Responsibility	Corporate Social Responsibility Expenditure	LCSR
Capital Adequacy	Capital Adequacy Ratio	LCAR
Liquidity	Liquid Assets to Total Assets	LATA
Asset Quality	Total Loan to Total Assets	TLTA
Deposit	Total Deposit to Total Assets	TDTA
Ownership	1 – Private and 0- Public	DUMMY

There are many reasons for employing panel data estimation in current study. Firstly, in panel model firms are contemplated heterogeneous whereas this is not the case in time and cross sectional data series, which results in biases. Therefore, the main reason is the ability in managing for heterogeneity. Secondly, panel data approach provides more variation in datasets, high information data, less multi-collinearity with high efficiency and degree of freedom (Gujrati, 2009). The model used in this research consists of n cross sectional units, n = 1, ….., N observed at each t time period, t = 1, ….., T. The total observation in dataset is n x t. Past researches have constructed a panel data structure (Chowdhury and Rasid, 2017; Brooks, 2014; Akhtar et al., 2020). The following panel regression model uses the same panel dataset structure as designed by above mentioned researchers.

$$y_{nt} = \alpha + \beta x_{nt} + e_{nt} \quad (1)$$

Where, y_{nt} refers to regressand, α refers to intercept term, β is K x 1 vector of parameter to be estimated, and x_{nt} is the n^{th} observations on K regressors which is 1 x k, t = 1, ….., T, n = 1,….., N. The operational form of the above mentioned model is:

$$\text{Profitability} = f(\text{CSR expenditure, bank-specific and ownership variables}) \quad (2)$$

Where, profitability by return on assets and net interest margin. management efficiency, liquidity, asset quality, capital adequacy ratio and deposit are bank-specific variables whereas dummy is created for ownership along with CSR expenditure as main variables. Following two models are developed to analyse the impact of CSR expenditure on financial performance by boarding the proxies used in equation 2.

$$ROA_{nt} = \alpha_n + \beta_1 LBPE_{nt} + \beta_2 LPPE_{nt} + \beta_3 LCSR_{nt} + \beta_4 LCAR_{nt} + \beta_5 LATA_{nt} + \beta_6 TLTA_{nt} + \beta_7 TDTA_{nt} + \beta_8 DUMMY_{nt} + \varepsilon_{nt} \quad (3)$$

$$NIM_{nt} = \alpha_n + \beta_1 LBPE_{nt} + \beta_2 LPPE_{nt} + \beta_3 LCSR_{nt} + \beta_4 LCAR_{nt} + \beta_5 LATA_{nt} + \beta_6 TLTA_{nt} + \beta_7 TDTA_{nt} + \beta_8 DUMMY_{nt} + \varepsilon_{nt} \quad (4)$$

Where:

n- represents individual banks,

t - indicates years,

ε_{nt}- random error term,

α_n- The constant term,

β_n- Co-efficient of independent variables,

And all other variables are defined in **Table 2**.

In addition, the current study have employed Fixed and Random Effects model for estimating panel data equations. Further, Hausman's test is employed for deciding between Random or Fixed Effects; where the null hypothesis is random effects and is an appropriate model.

6. Empirical results and Discussion

This study is an attempt to investigate impact of CSR expenditure on financial performance of commercial banks in India using banks specific variables as control variable through Panel Data regression analysis.

6.1 Descriptive Statistics

Descriptive statistics for different parameters considered for the study were computed and is presented in **Table 3**. Significant variation is observed for the selected variables statistics. Mean ROA (0.723) indicates low profitability for banks through period under study while Standard deviation (1.389) shows high variations from bank to bank. It is further observed that commercial banks in India were able to maintain Capital Adequacy Ratio (LCAR) higher than the prescribed prudential regulation of 9% as the mean value for LCAR is 1.83. The Mean Liquidity Ratio (LATA) was 0.38, which fluctuated and maintained a range of maximum (7.70) to a minimum (0.03). However, the main variable LCSR has mean value (1.35) with a standard deviation of (0.73).

Table 3. Summary of Descriptive Statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
ROA	112	0.7231	1.3896	-6.36	6.59
NIM	112	2.9655	1.1467	15	7.69
LBPE	112	8.0253	0.6626	5.0051	8.9630
LPPE	112	5.9569	0.5348	4.6650	7.5088
LCSR	112	1.3523	0.7327	-1.3675	2.6471
LCAR	112	1.1833	0.1064	0.9294	1.5682
LATA	112	0.3897	0.7034	0.0326	7.7022
TLTA	112	0.1473	0.3049	0.0009	3.0314
TDTA	112	0.8056	0.6760	0.0638	7.7086
DUMMY	112	0.375	0.0862	0	1

Source: Author's calculation (STATA output)

6.2 Pearson Correlation Analysis

The Pearson Correlation Analysis for the selected variables is presented in **Table 4**. The result of correlation indicates that no two variables are highly correlated. Maximum correlation between LBPE and LCAR is -0.73. This is lesser than the threshold value of 0.80 (Hair et al., 1995). Based on

correlation analysis it is further observed that ROA and NIM is positively correlated with LCAR, LCSR, LPPE and TDTA and negative with the rest of the variables.

Table 4. Pairwise Correlation Matrix

	ROA	NIM	LBPE	LPPE	LCSR	LCAR	LATA	TLTA	TDTA	DUMMY
ROA	1.0000									
NIM	0.5826***	1.0000								
LBPE	-0.3197***	-0.6758***	1.0000							
LPPE	0.3492***	0.6799***	-0.6331***	1.0000						
LCSR	0.1842***	0.1337	0.1883**	0.0715	1.0000					
LCAR	0.5691***	0.7149***	-0.7365***	0.6178***	0.0224	1.0000				
LATA	-0.0545	-0.0645	0.0564	-0.2121**	-0.3586***	-0.0859	1.0000			
TLTA	-0.0545	-0.0434	-0.0134	-0.0807	-0.2574***	0.0192	-0.0895***	1.0000		
TDTA	0.0260	0.0500	0.0726	-0.0146	0.1076	-0.0559	-0.0974	-0.1455	1.0000	
DUMMY	-0.4897***	-0.5359***	0.2601***	-0.5450***	-0.3090***	-0.5690***	0.1418	-0.0328	0.0232	1.0000

Source: Author's Calculation (STATA output)

6.3 Analysis of Multicollinearity

Table 5 shows diagnostic of multicollinearity of all variables using variance inflation factor (VIF) and tolerance test. VIF is a multicollinearity test used to measure the relation between all independent variables before running the regression. It's the foremost assumption of panel regression as it estimates the amount of variance in the coefficient due to multicollinearity. The general thumb rule for multicollinearity, is that VIF should be less than 10 (Gujrati, 2009). In this study too, the value for all variables is less than the prescribed limit.

Table 5. VIF Value

VARIABLE	VIF	1/VIF
LBPE	3.20	0.3123
LPPE	2.34	0.4460
LCSR	1.40	0.7121
LCAR	3.29	0.3038
LATA	6.02	0.1659
TLTA	5.62	0.1778
TDTA	1.04	0.9616
DUMMY	2.24	0.4460
Mean VIF	**3.15**	

Source: Author's calculation (STATA output)

6.4 Heteroscedasticity analysis

Heteroscedasticity is a special case in error term where the variances of the error term are not constant (Gujarati, 2009). In economics, variance is used to measure spread and heteroscedasticity is unequal spread. Breusch- pagan (BP-LM) test is employed to test the presence of unequal spread in

the residuals (Greene, 2003). Moreover, to conclude, both the models has the presence of heteroscedasticity, as p-value is less than 0.05, which is shown in **Table 6.**

Table 6. Breusch-Pagan Test for Heteroscedasticity

Variables: ROA and NIM

Models	Chi-square	P-value
Model 1- ROA	chi2(1) = 13.29	Prob > chi2 = 0.0003
Model 1- NIM	chi2(1) = 93.88	Prob > chi2 = 0.0000

Source: Author's calculation (STATA output)

6.5 Auto-Correlation Analysis

The problem of serial correlation arises only when the error term in a different period are correlated with each other. Wooldridge test for autocorrelation is applied to test the presence of serial correlation (Wooldridge, 2002). The null hypothesis is that data has no serial correlation and alternate hypothesis is that data have a serial correlation. **Table 7** depicts the result as, model 1 is free from serial-correlation problem but model 2 has its presence. If the data has the problem of heteroscedasticity and auto correlation then robust standard errors employed to estimate the results.

Table 7. Wooldridge Test for Autocorrelation in Panel Data

Null hypothesis: No first-order autocorrelation,
Alternate hypothesis: Null is not true

Models	F-statistics	P-value
Model 1- ROA	F (1, 15) = 1.903	Prob > F = 0.1879
Model 1- NIM	F (1,15) = 81.812	Prob > F = 0.0000

Source: Author's calculations (STATA Output)

6.6 Static panel regression analysis

In this section, results of panel regression analysis are presented. We have computed fixed effect and random effect model for the dependent variables ROA separately and adopted robust regression technique as the model has the presence of heteroscedasticity. **Table 8** presents the regression result. Firstly, both FEM and REM results are calculated and highlighted in the first two column of the result table. Then, hausman test is conducted to select between FEM and REM. In this case, REM was selected. So finally, robust technique was conducted on REM basis and results are interpreted accordingly. The overall R^2 (0.74) indicates that 74% of the variability in ROA is attributed by selected independent variables. Thus, there is a statistically significant & positive impact of CSR expenditure, capital adequacy and liquidity on ROA of commercial banks in India. However, there is an insignificant positive impact of management efficiency and deposits on the banks' earnings (ROA). It is also observed that asset quality has significantly and negatively impacted banks' earnings through ROA. Whereas, when comes to ownership, public bank are more efficient as DUMMY variable shows negative and significant impact.

Table 9 presents the regression result for analysing the impact of CSR expenditure on financial performance of commercial banks in India. Again after evaluating both FEM and REM models and running hausman test, it concludes to use REM results. However, due to the presence of heteroscedasticity and serial correlation in the model, robust regression technique is employed and results are interpreted accordingly. The overall R^2 (0.70) indicates that 70% of the variability in NIM

is attributed by selected independent variables. Thus, there is a statistically significant & positive impact of management efficiency (LPPE), CSR expenditure, capital adequacy (LCSR) and liquidity (LATA) on NIM. It is also observed that business per employee (LBPE) and asset quality (TLTA) had significantly and negatively impacted NIM whereas, deposit show insignificant impact on NIM. Whereas, when comes to ownership, public bank are more efficient as DUMMY variable shows negative and significant impact.

Table 8. Regression Result – Model 1

Variables (ROA)	**Fixed Effect Model (FEM)**	**Random Effect Model (REM)**	**Robust Regression Model (RRM)**
C	-10.9148*	-8.3416	-7.5970
	(-1.68)	(-1.63)	(-1.61)
LBPE	0.2846	0.1749	0.1345
	(0.35)	(0.58)	(0.54)
LPPE	0.1661	0.0124	-0.0658
	(0.42)	(0.04)	(-0.20)
LCSR	0.1623	0.2446	0.2516*
	(0.59)	(1.32)	(1.84)
LCAR	6.8849***	6.9264***	6.9502***
	(3.10)	(3.86)	(3.50)
LATA	1.1314***	1.0148***	0.9655***
	(2.73)	(2.78)	(3.36)
TLTA	-2.6005***	-2.2655***	-2.1506***
	(-2.68)	(-2.75)	(-3.16)
TDTA	-0.0749	0.0045	0.0442
	(-0.45)	(0.03)	(0.38)
DUMMY	-	-0.7319**	-0.7469***
		(-2.00)	(-2.65)
Overall R^2	0.3589	0.4250	0.4250
Within R^2	0.1865	0.1812	0.1812
Between R^2	0.6094	0.7488	0.7488
Hausman Test	0.5537 (REM is selected)		

Source: Authors Calculation (STATA Output)

Table 9. Regression Result – Model 2

Variables (NIM)	**Fixed Effect Model (FEM)**	**Random Effect Model (REM)**	**Robust Regression Model (RRM)**
C	-3.9780	3.3002	3.3002
	(-1.27)	(1.11)	(1.11)
LBPE	0.9864**	-0.6653***	-0.6653***
	(2.51)	(-3.59)	(-3.59)
LPPE	-0.1075	0.4977***	0.4977***
	(-0.56)	(2.87)	(2.87)
LCSR	0.4876***	0.4113***	0.4113***
	(3.64)	(3.58)	(3.58)
LCAR	-0.9226	1.8006*	1.8006*
	(-0.86)	(1.74)	(1.74)
LATA	0.8855***	1.0351***	1.0351***
	(4.41)	(4.95)	(4.95)
TLTA	-1.7510***	-2.0411***	-2.0411***
	(-3.73)	(-4.27)	(-4.27)
TDTA	0.0161	0.0410	0.0410
	(0.20)	(0.46)	(0.46)
DUMMY	-	-0.5693**	-0.5693**
		(-2.35)	(-2.35)
Overall R^2	0.2983	0.7038	0.7038
Within R^2	0.3888	0.2156	0.2156

Between R^2	0.7115	0.8796	0.8796
Hausman Test	0.2564 (REM is selected)		

Source: Authors Calculation (STATA Output)

7 Conclusion

The study concludes that in case of ROA, 74% change in this variable is attributed to the selected independent variables while in case of NIM, 70% of change in the NIM is the product of selected independent variables. When the banks are taking CSR initiatives, they are able to generate more profits on their assets. The better the ROA; better will be the bank's financial performance as the rate of return is greater which in turn will be enjoyed by the stakeholders. There are many researches nowadays that upon fully incorporating CSR into their business operations are able to get good amount of financial returns on their investments as the customers and all other stakeholders value the organizations for being a catalyst to the societal growth and development. The results have shown that higher the CSR, higher will be the ROA. Dewi et al (2014) and Hastalona (2020) support this finding.

Additionally, when the banks have adequate amount of capital available with them to meet unpredictable losses and have a good liquidity position or easy and ready availability of cash, the ROA also improves. In case of Net Interest Margin (NIM) too, CSR expenditure contributes positively. When the banks spend on CSR, the amount of net interest income earned on the interest bearing assets gets improved.

The CSR expenditure is not all alone responsible for the increased ROA and NIM but the banks should take it into consideration in alignment with other control variables. The positive relationship between CSR and financial performance established in this study is in alignment with the view of Freeman and Evan (1990) that being socially responsible helps in developing a competitive advantage for a bank, improving its financial performance.

8 Limitations and Future Research

This study is confined to impact of CSR expenditure on commercial banks in India. However, a comparative study could be conducted to analyze CSR expenditure impact on other sectors banks in India. Further, impact assessment comparing impact of crisis on Indian and other countries could be also done. Only one variables was primarily being used namely, profitability to assess impact of CSR expenditure on banking sector. Other bank-specific and macro-economic variables can also be included in future research.

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