Corporate Social Responsibility Practices of Jammu and Kashmir Bank after the Reconstruction Phase: A Time Series Forecasting Study

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Abstract

Purpose: The primary objective of this study is to utilize time series forecasting to identify and analyze the trend pattern of the corporate social responsibility of Jammu & Kashmir Bank.

Design/Methodology/approach: The research utilized Time Series Analysis as the chosen methodology, complemented by the application of the ARIMA model. Secondary data was sourced from the official website of Jammu and Kashmir Bank, encompassing a seven-year period from 2016 to 2022 to derive the study's outcomes.

Findings: This finding focuses on the projections indicating a downward trajectory in CSR Budget and CSR Expenditure, while a steady trend is observed in Net Profit for the upcoming years. The analysis reveals a negative fluctuation in the Net Profit series, whereas the models for CSR Budget and CSR Expenditure account for 46.8% and 80.7% of the variation in their respective series.

Novelty: The research introduces a novel approach by utilizing time series analysis and the ARIMA model to evaluate the overall performance of the Jammu and Kashmir Bank in implementing corporate social responsibility.

Keywords: Corporate Social Responsibility, Time Series Analysis, ARIMA Model, SPSS, Jammu & Kashmir Bank

JEL Code: C53, G21, M14

Introduction

Corporate Social Responsibility (CSR) refers to a business initiative of societal, sustainability and surrounding issues via way of means agencies of their commercial enterprises' operations as well as in interactions with their stakeholders (Chaudhury et al., 2012) to provide positively to the society. Sheehy (2015) defines CSR as the regulation of worldwide private businesses that addresses a crucial need and offers a cohesive framework." On the contrary, Jones et al. (2017) consider CSR meaningless or intangible, and subsuming it into the objective of an agency is injudicious. Similarly, Hack et al. (2014) explain that CSR operations may help corporate businesses classify their CSR subscriptions and brace research and development changes for its continuation. CSR requires voluntary devotion, ethical behavior, transparency and accountability, sustainable methods, stakeholder respect, risk minimization, and adaptability. LEGO Group, a Danish company, earmarked $400 million in 2020 for three years of social responsibility and environmental activities.   Stitch Fix, an online personal styling service, plans to source all of its private-label materials sustainably as part of its corporate social responsibility efforts. These illustrations show the dependency between CSR and enterprise practices on social responsibility and sustainability efforts. Researchers have recognized environmental, ethical/human rights, charitable, and economic CSR. COVID-19, surging inflation, labor unrest, geopolitical instability, and harsh weather highlighted policy

complexity and weaknesses in multiple sectors in the present market environment. These policy uncertainties created dynamic socio-economic landscapes and burgeoning global interconnectivity. Several companies, including Costco, Vodafone, L'Oréal, and LVMH, have made commitments to support various stakeholders. These commitments include boosting the hourly rate for employees by $2, providing customers with unlimited mobile data, expediting payments to suppliers, and making hand sanitizer for the general community. On the contrary, Marriott International and similar companies implemented labor reductions, either through layoffs or furloughs, so placing employees' healthcare benefits at risk during a time when they are arguably most essential. Marriott International's choice to implement furloughs appears to be incongruous with their membership in the Business Roundtable, as it seemingly contradicts their commitment to prioritise the welfare of all stakeholders, including their employees. These tales demonstrate the ongoing ambiguity surrounding the extent to which CSR practices can be seen as credible investments that enhance value in order to meet stakeholders' expectations for CSR. Therefore, the role of corporations transcends conventional profit-centric paradigms.

CSR emerges as a pivotal construct in the contemporary banking landscape, characterized by a confluence of financial prowess and social responsibility. Once primarily evaluated on their balance sheets and economic indicators, banks are now equally scrutinized for their contributions to societal welfare. This fundamental change underscores the pertinence of analyzing the multifaceted impact of CSR initiatives within this pivotal sector. Numerous researchers have focused on CSR in the banking sector (Mesta-Cabrejos et al., 2023; Chen, 2023; Madah Marzuki et al., 2023; Wu et al., 2023) in Latin America (Mesta-Cabrejos et al., 2023), Malaysia (Madah Marzuki et al., 2023), China (Wu et al., 2023), Bangladesh (Hassan et al., 2023), and Saudi Arabia (Pinto, 2023) and India (George et al., 2023; Bhatter & Chhatoi, 2023). The majority of existing studies on CSR in the banking sector tend to adopt a comparative approach, analyzing multiple banks in relatively stable economic environments. There is a lack of studies focusing on the in-depth examination of the bank's CSR initiatives and their implications in a region characterized by complex geo-political dynamics. Moreover, research on CSR in banking often lacks specificity for banks operating in post-conflict or reconstruction phases. Therefore, this study embarks on a discerning exploration of the post-reconstruction phase of the Jammu and Kashmir Bank, scrutinizing the tangible and intangible impacts of its CSR practices through the lens of time series forecasting. The Jammu and Kashmir Bank in India, an emblematic financial institution of the region, stands at the intersection of financial empowerment and community development. Emerging from a phase of significant infrastructural refurbishment and strategic reorientation, this venerable institution finds itself poised to play a transformative role in the socio-economic narrative of the region (Bieszk-Stolorz & Dmytrów, 2023). Various corporate houses, banks, and different financial institutions in Jammu & Kashmir, may be worried in an attempt to attend to the segments of society due to political and policy uncertainty. The Jammu and Kashmir Bank has been conscious and worried about its CSR endeavors.

In this context, an analytical examination of its CSR initiatives is paramount, providing empirical insights into the efficacy and sustainability of its socially responsible endeavors. This study is structured to unravel the complex interplay between the Jammu and Kashmir Bank's CSR undertakings and the broader developmental trajectory of the region. Employing rigorous time series forecasting techniques, we aim to distil actionable intelligence from an amalgamation of historical data, discerning patterns, and projecting future trends. Through this empirical journey, we seek to offer a nuanced understanding of how conscientious corporate practices interlace with regional development post-reconstruction. In pursuit of this elucidation, this research adopts a multi-dimensional approach, encompassing a spectrum of socio-economic indicators, stakeholder perceptions, and financial performance metrics. This research demonstrates how CSR practices have catalyzed positive change within Jammu and Kashmir Bank and the wider community it serves. This study aspires to enrich scholarly discourse and furnish practical insights for corporate leaders, policy-makers, and stakeholders invested in the sustainable growth and well-being of regions emerging from the reconstruction phases.

1.   Analysis Of Existing Literature

If an organization's vision is characterized by social and economic responsibility, it can be achieved through good CSR policy. A good CSR policy focuses on underprivileged sections of society and the needs of society and the

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environment. According to Hopkins (2003), a good CSR policy involves continuous assessment of a corporation's ethical and social duties to its internal and external stakeholders. The main objective is to enhance and accelerate living conditions while ensuring the organization's profitability to all stakeholders. Researchers and academicians have identified the role of CSR in building financial prowess and social responsibility. For instance, Dhingra & Mittal (2014) identified CSR as the deliberate actions taken by corporations to carry out their operations in an ethical manner that is good to society and contributes to community development. According to Dekoulou et al. (2023), CSR should not be viewed solely as an immediate obligation but as a dynamic venture to enhance organizational effectiveness, sustainability, and resilience. Favorable employee perspectives on CSR have the potential to foster staff empowerment, thereby exerting an indirect influence on job performance in the banking industry. Additionally, Mahmuda and Muktedir (2022) examined the relationship between CSR disclosures and the financial performance of Islamic banks. Their findings revealed an inverse correlation between CSR filings and financial performance. The research also examined the significance of the extension of CSR practices/communicative reporting by Islamic banks concerning their ethical identity concerning stakeholders and society. Vo et al. (2023) have established a positive correlation between corporate governance, CSR, and intellectual capital. Furthermore, the concept of intellectual capital plays a pivotal role in mediating the complex interaction between corporate governance and CSR. Chan et al. (2023) investigated the impact of CSR perception on competitive advantage. They found that CSR reporting and communication are beneficial in this relationship. Additionally, their research revealed that CSR reporting and communication mediate the correlation between perceived CSR and competitive advantage. According to Pinto (2023), the study demonstrated that implementing CSR initiatives had a beneficial influence on various aspects of organizational performance, including company reputation, employee engagement, customer loyalty and customer satisfaction. Yang et al. (2023) examined the absence of any discernible influence of CSR practices on the co-creation of customer value within the digital landscape of the banking business in Taiwan. Bhatter and Chhatoi (2023) examined the influence of financial inclusion metrics and legal CSR as a moderating factor on the financial performance of banks. Fatma and Khan (2023) analyzed the significant influence of CSR on consumer trust, good word of mouth, and purchase intentions within the banking business. Nguyen et al. (2023) directed a study to investigate the involvement of CSR initiatives in developing green brand equity within the banking sector of Vietnam. The researchers examined the influence of satisfaction, trust and green brand association on creating this equity. Konalingam et al. (2023) observed that implementing strategic and stakeholder-driven CSR practices in the banking sector has a favorable impact on customer loyalty. A recent study conducted by Tosun & Köylüoğlu, (2023) found that local brands' CSR practices generated more favorable attitudes, perceptions of CSR, and higher levels of customer-based brand equity and supporting communication intent compared to international banks. Prabhavathi and Dinesh (2023) established a correlation between the yearly CSR expenditure of a firm and its net profits after tax in the following year. According to Zheng and Zhang (2023), the bank's involvement in shadow banking activities has had a detrimental effect on sustainability, particularly for city commercial banks and unlisted banks subject to less regulation and lacking CSR. Li et al. (2023) surveyed the impact of environmental and social activities on enhancing social capital at the business level. They specifically focused on a bank and investigated how these activities contribute to establishing a stakeholder-centered culture. Their research findings indicate that such efforts play a crucial role in establishing community confidence and social trust in the bank's risk oversight. In light of prevailing short-termism, environmental and social activities serve as constraints on hostile and excessive risk-bearing by banks during periods of turbulence. Researchers and academicians have identified a plethora of recommendations, guidelines and recommendations for the execution of CSR techniques in the Indian banking industry (Bhatter & Chhatoi, 2023; Aggarwal & Saxena, 2023; Jha, 2023; Kumar et al., 2023; Mishra & Sant, 2023; Fatma & Khan, 2023; Sharma & Sathish, 2022; Roy, 2022; Choubey & Sharma, 2022) with prime focus on CSR with financial inclusion (Bhatter & Chhatoi, 2023), corporate reputation (Aggarwal & Saxena, 2023), social identity theory and theory of social exchange (Kumar et al., 2023), intensity of environmental, social and governance disclosure (Mishra & Sant, 2023), brand loyalty (Fatma & Khan, 2023), customer citizenship behaviors (Fatma et al., 2022), corporate social identity and corporate branding effect (Pratihari & Uzma, 2018). However, researchers have utilized the annual reports of the banking institutions to provide a macro-perceptive of the financial domain. For instance, Maqbool & Zameer (2018) analyzed the relationship between Financial

Performance and CSR using the twenty-eight Indian commercial banks from 2007 to 2016. The result showed that CSR exerts a fine effect on the economic overall operation of the Indian Banks. The locating of observing affords extraordinary perception for management to combine the CSR with techniques caused of the commercial enterprise and renovate their commercial enterprise philosophy from conventional earnings orientated to a socially accountable approach. Similarly, another survey research explored the nature and volume of CSR reporting practices in the banking region of Kazakhstan (Orazalin, 2019). The data was manually accumulated from yearly reviews of all the commercial banks indexed inside the Kazakhstan Stock Exchange (KASE) for 2010-16, and economic records were acquired from audited financial statements to be had on financial institution websites of the National Bank of Kazakhstan. The findings revealed that board has a fine impact on CSR reporting, whilst board length and independence do not affect the extent of CSR disclosures. Additionally, banks with a percentage of overseas possession divulge more enormous and obvious statistics on CSR activities than banks owned via way of means of state-owned. Similarly, Jizi et al. (2014) explored the influence of the role of board of direction, the quality of CSR disclosure and corporate governance in United States (US) listed banks. In this study, from 2009 to 2011, large US commercial banks were taken as samples, and reports of audit committee, meeting frequency and profitability of US commercial banks were collected, which found evidence of board independence and size. The findings proved that CSR disclosure leads to an independent board that promotes both shareholders' and stakeholders' interests. Also, CEO duality positively impacts CSR disclosure. This suggests that if transparency has to be promoted, CEOs should be given powers. In sum, social responsibility is the sole obligation of corporations. Banks, by making some portions in the CSR, can lead to a better world, and top management influence is important while framing policies of CSR. By Section 135 of the Companies Act 2013 (MCA, 2019), it is clear that a minimum of 2 per-cent of average-net profits should be made in implementing CSR policy during a financial year.

2.   Methodology And Data

Time series forecasting is an imperative part of projecting future values based on prior observations of the same variable. It entails gathering and analyzing historical data in order to create a model that describes the underlying link. This method is especially useful when there is little understanding about the data creation process or when there is no adequate explanatory model to relate the prediction variable to other variables (Zhang, 2003). Over the last few decades, significant efforts have been made to advance and refine time series forecasting models.

The "Autoregressive Integrated Moving Average (ARIMA)" model is well-known and commonly used in time series forecasting. ARIMA models provide support for employing various exponential smoothing techniques. Although ARIMA models are very versatile and capable of expressing several forms of time series, including pure Autoregressive (AR), pure Moving average (MA), and Moving Average (ARMA), they are constrained by the model's assumption of a linear shape (Zhang, 2003). As a result, the ARIMA model is incapable of capturing non-linear patterns in the data. The employment of linear models to represent complicated real-world processes is not always successful.

The secondary data has been obtained from Jammu and Kashmir Bank official website. The past seven years data from the annual reports of Jammu and Kashmir Bank has been considered to get the results. The *Table 1* presented below provides the financial performance of Jammu and Kashmir Bank, notably highlighting the net profit figures and the corresponding CSR budget and expenditure from 2016 to 2022. Each row in the table represents a separate year, while the "Net Profit (In Crores)" column shows the bank's annual earnings in Crores. The column labeled "CSR Budget (In Crores)" demonstrates the specific cash allocation intended for CSR undertakings, highlighting the bank's dedication to social and environmental objectives. Furthermore, the column labeled "CSR Expenditure (In Crores)" represents the actual amount of money spent on CSR activities, indicating how much of the allocated CSR budget has been utilized.

Table 1: Net Profit, CSR Budget and CSR Expenditure

Year	Net Profit (In Crores)	CSR Budget (In Crores)	CSR Expenditure (In Crores)
2016	1366.26	27.33	28.48
2017	1087.95	21.76	21.87
2018	2	0.4	31.71
2019	-151.72	0*	12.46
2020	-162.37	0*	2.41
2021	-27.06	0*	NIL
2022	0.63	0.13	0.63

Source: Jammu and Kashmir Bank annual report from 2016-2022

Note: (*) There is no profit in the years 2019, 2020 and 2021, therefore no CSR budget allocated.

(NIL) This represents that in the year 2021 Jammu and Kashmir Bank has no CSR expenditure.

Although to analyze, we propose Expert Modeler of SPSS to time series forecasting to anchor the research's computational framework. The advantage of this software is that it takes care of the nature of data and select appropriate model. The information in *Table 2* examines different model types and their respective datasets. The "Model Type" column serves to classify the different models being examined, indicating the study's core reliance on models. Each "Model ID" functions as a distinct identifier for particular models, guaranteeing distinction and traceability in the research process. The "NET_PROFIT" represents a significant financial measure. This column is expected to contain important net profit data that is relevant to each model being analyzed. Therefore, "Simple Model" is the main model being assessed, which is defined by its clear and basic characteristics.   The "CSR_BUD" column contains data related to the allocation of budget for CSR and the "CSR_EXP" column provides valuable information on how CSR expenditures are allocated across different models. Hence, in consideration "Holt Model" for time series forecasting may be used in the research framework.

Table 2: Model Report

			Model Type
Model ID	NET_PROFIT	Model_1	Simple
	CSR_BUD	Model_2	Holt
	CSR_EXP	Model_3	Holt

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Source: SPSS Expert Modeler

3.   Results

Model fit is determined by factors such as, "R squared (R2), root mean squared error (RMSE), mean absolute percentage error (MAPE), and mean absolute error (MAE)." Generally, a lesser value indicates a ameliorate fit, with the exception of R squared (Edre, Za, & Jamalludin, 2020). The outcomes are organized in Table 3 presented below.

Table 3: Model Fit

Fit-Statistic	Mean	SE	Minimum	Maximum
Stationary R-squared	.320	.575	-.314	.807
R-squared	.600	.138	.472	.746
RMSE	160.465	264.080	7.464	465.397
MAPE	3530.402	4373.031	171.955	8475.207
MaxAPE	.320	.575	-.314	.807
MAE	84.107	136.448	5.089	241.663
MaxAE	371.605	618.647	11.984	1085.952
Normalized BIC	7.328	4.536	4.576	12.564
Source: SPSS Expert Modeler				

3.1.   Time Series Analysis

The time series plot revealed typical seasonal fluctuations as well as the general movement in the data. The expert modeler, using SPSS version 21, suggested that the Simple and Holt models would be the best options for conducting the time series analysis. The Net Profit, CSR Budget, and CSR Expenditure, as well as their linear trends, are presented in Figures 1, 2, and 3, respectively. These figures help determine whether or not the particular model is conforming to the data. According to the projections of the expert modeler, the Simple and Holt method would be useful for analyzing time series that have a linear trend and a constant (additive) seasonal variability (Kumar, Singh, Adhikary, Daral, Khokhar & Singh., 2014; Taylor, 2010).

When seasonal fluctuations are somewhat consistent all the way through the time series, the "Additive Technique" is utilized. It is largely acknowledged as the most effective strategy for making predictions or forecasts (Kumar et al. 2014). In addition, in the level equation, the seasonal component of the series is removed in order to perform seasonal adjustment.

The goodness of fit may be evaluated using any one of a number of different statistics inside the time series modeler framework. On the other hand, we based our statistical analysis on the stationary-squared value for this inquiry. This statistic determines the percentage of the total variation in the series that can be accounted for by the

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model, particularly in cases when there is evidence of trend patterns. A better fit is indicated by a higher value of the stationary-squared parameter, which can reach a maximum value of 1 (Kumar et al. 2014). The models for CSR Budget and CSR Expenditure explain 46.8% and 80.7% of the variance in the series, respectively, but the values that were returned from the study for Net Profit reflect a negative fluctuation in the series.

The comparable methodology has been used to estimate the annual Net Profit, CSR Budget, and CSR Expenditure for the future. Figure 4 forecast that the rate of growth of CSR budget and CSR expenditure has been slower than that of net profit. The trend line for net profit suggests that the company is expected to continue to generate a healthy profit margin in the future. However, the slope of the trend line for CSR budget and CSR Expenditure is lower than the slope of the trend line for net profit, suggesting that the CSR budget and CSR expenditure is expected to grow at a slower rate than net profit in the future. This could be due to the bank's planning to invest more of its profits in expanding its business.

Overall, despite the slower rate of growth, the CSR budget and CSR expenditure are still expected to increase in the future as well as the projection also suggests that the bank is expected to continue to generate favourable profit in the future. This shows that the bank is committed to social responsibility and is planning to invest more in its CSR programs.

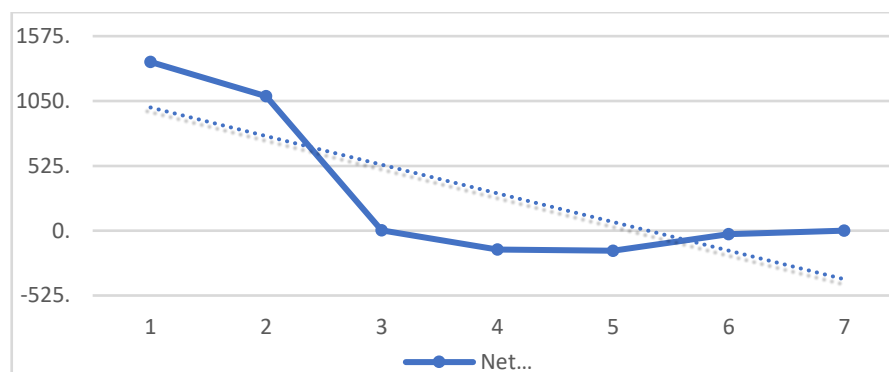*Figure 1: Actual Average Net Profit with Liner trend line*
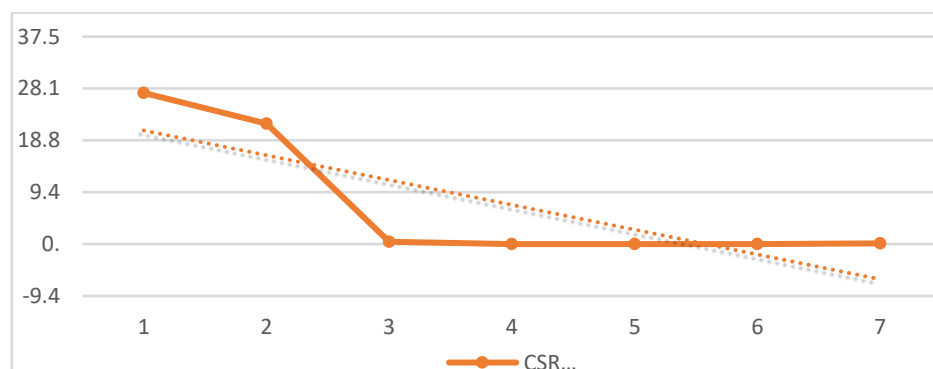

Figure 2: Actual CSR Budget with Liner trend line

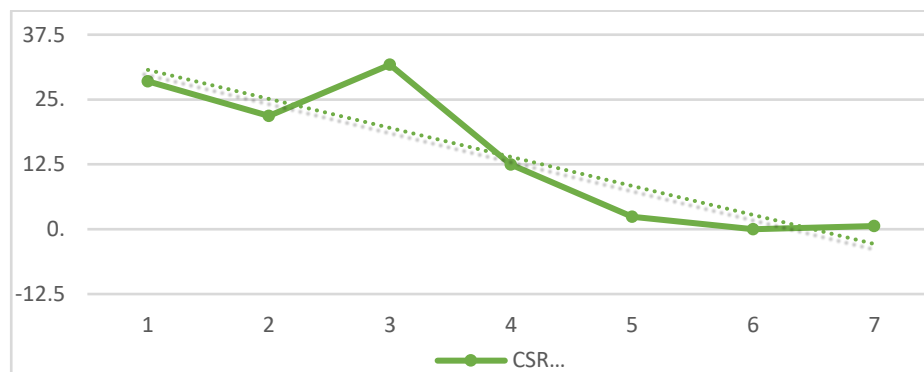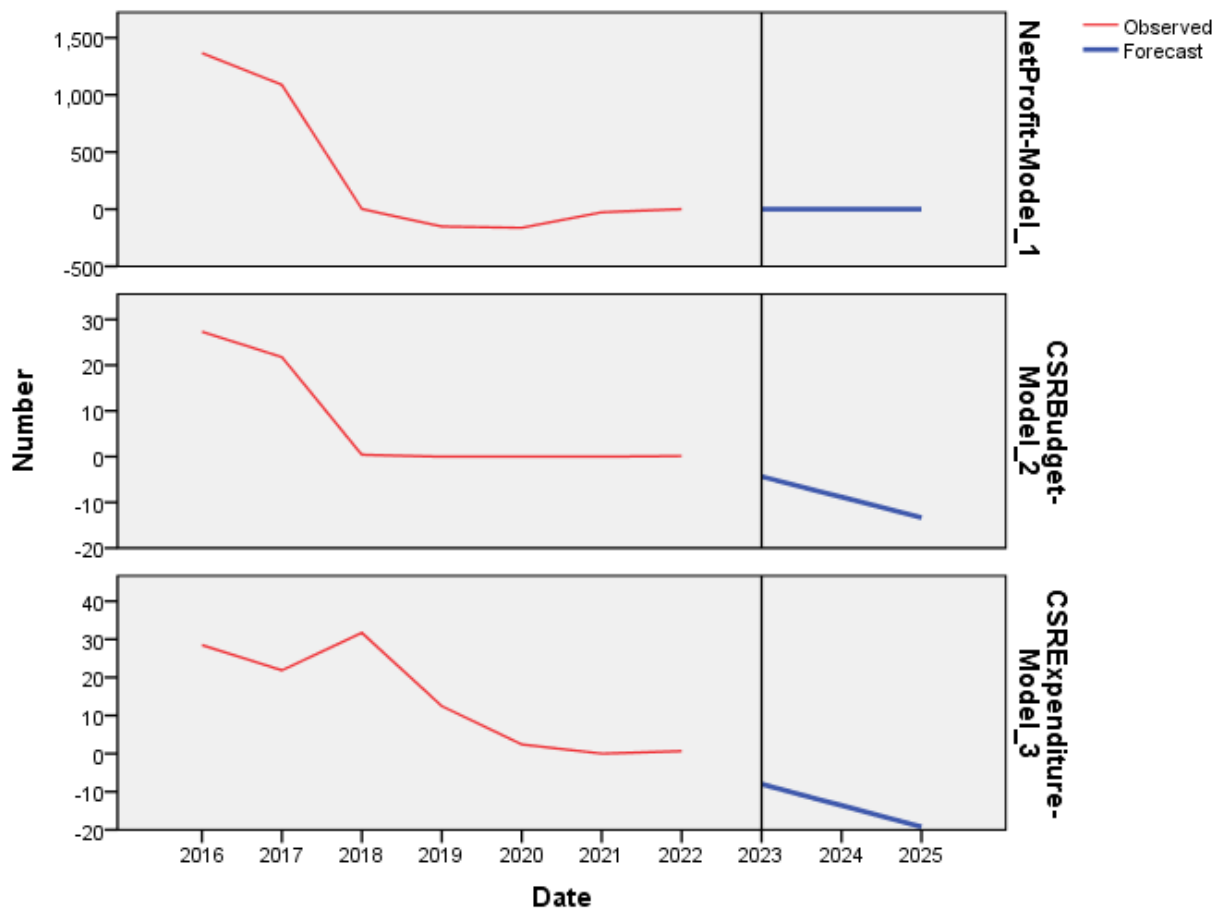*Figure 3: Actual CSR Expenditure with Liner trend line*

Figure 4: Actual and Forecasted trend of Net Profit, CSR Budget and CSR Expenditure

(Source: SPSS Expert Modeler)

4.   Discussion And Conclusion

In accordance with Section 135 of the Companies Act, 2013 (MCA, 2019), Jammu and Kashmir Bank retains 2% of its average net earnings and distributes the money so that it can have the greatest impact on the most disadvantaged segments of the population. The primary areas in which the Jammu and Kashmir bank is required to incur costs are healthcare, community development projects, the promotion of education and skill development, the preservation of ecology, environment, and history, and the development of skilled labor. According to this

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research, the seasonality pattern of Net Profit and CSR Budget initially reached its highest point, after which it tended to head in the other direction (as seen in Fig. 4). The reason for this is because the Jammu and Kashmir bank is now in the process of undergoing renovation. Following 2019, the bank has suffered three consecutive losses, which has had a detrimental impression on the CSR budget. On the other hand, the bank has always put out very respectable efforts in terms of its CSR spending. According to the findings of the study, throughout the year 2018, prior to the significant drop, Jammu and Kashmir bank made significant investments in CSR projects. The bank has finished meeting its responsibilities to the larger community as a whole.

Table 4 shows the forecast for net profit, CSR budget, and CSR expenditure from 2023 to 2025 using statistical models. The forecast is based on historical data, and the Lower Confidence Limits (LCL) and Upper Confidence Limit (UCL) indicate the range of values within which the actual values are likely to fall. The forecast for net profit is relatively stable, with a constant from 6.3 million in 2023 to 6.3 million in 2025. Whereas, the forecast for CSR budget and CSR Expenditure shows a steady decline, indicating that there is a high degree of ambiguity associated with the forecast. This uncertainty is likely due to a number of factors, such as the global economic outlook, industry trends, and competitive pressures. Overall, the forecast for net profit, CSR budget, and CSR expenditure is uncertain and there is a high probability that the actual values will fall outside of the forecasted range.

Table 4: Forecast

Model		2023	2024	2025
NetProfit-Model_1	Forecast (In Crore)	.63	.63	.63
	UCL	1139.42	1611.11	1973.06
	LCL	-1138.16	-1609.85	-1971.80
CSRBudget-Model_2	Forecast (In Crore)	-4.36	-8.84	-13.32
	UCL	17.58	22.17	24.65
	LCL	-26.30	-39.85	-51.30
CSRExpenditure-Model_3	Forecast (In Crore)	-8.03	-13.62	-19.21
	UCL	11.16	5.94	.72
	LCL	-27.21	-33.18	-39.14
Source: SPSS Expert Modeler				

It has been noted that the CSR of the Jammu and Kashmir Bank follows a seasonal pattern with varied amplitudes of drop. These observations raise questions, and the bank ought to concentrate on the rules and procedures they have in place. It is generally accepted that if there is a profit, there will be a CSR budget, and the bank will be able to make expenditures in CSR activities when there is a CSR budget. As a result, it is necessary for the Jammu

and Kashmir bank to concentrate on their rules and devise policies that contribute to the increase of earnings; only then can the budget be distributed to the society. In addition, the administration and administrators of the organization might utilize this information to their advantage in order to provide extra attention to the operations and provide additional facilities in the years to come.

REFERENCES

[1] Aggarwal, A., & Saxena, N. (2023). Examining the relationship between corporate social responsibility, corporate reputation and brand equity in Indian banking industry. *Journal of Public Affairs*, *23*(1), e2838.

[2] Aggarwal, A., & Saxena, N. (2023). Examining the relationship between corporate social responsibility, corporate reputation and brand equity in Indian banking industry. *Journal of Public Affairs*, *23*(1), e2838.

[3] Bhatter, H. K., & Chhatoi, B. P. (2023). Knowledge mapping in the area of corporate social responsibility and financial performance: a bibliometric and visualisation analysis. *International Journal of Accounting, Auditing and Performance Evaluation*, *19*(1), 53-70.

[4] Bhatter, H. K., & Chhatoi, B. P. (2023). Knowledge mapping in the area of corporate social responsibility and financial performance: a bibliometric and visualisation analysis. *International Journal of Accounting, Auditing and Performance Evaluation*, *19*(1), 53-70.

[5] Bhatter, H. K., & Chhatoi, B. P. (2023). Knowledge mapping in the area of corporate social responsibility and financial performance: a bibliometric and visualisation analysis. *International Journal of Accounting, Auditing and Performance Evaluation*, *19*(1), 53-70.

[6] Bhatter, H. K., & Chhatoi, B. P. (2023). Knowledge mapping in the area of corporate social responsibility and financial performance: a bibliometric and visualisation analysis. *International Journal of Accounting, Auditing and Performance Evaluation*, *19*(1), 53-70.

[7] Bieszk-Stolorz, B., & Dmytrów, K. (2023). Application of multivariate statistical analysis to assess the implementation of Sustainable Development Goal 8 in European Union countries. Wiadomości Statystyczne. The Polish Statistician, 2023(3), 22–43. DOI: https://doi.org/10.59139/ws.2023.03.2

[8] Bieszk-Stolorz, B., & Dmytrów, K. (2023). Decent Work and Economic Growth in EU Countries—Static and Dynamic Analyses of Sustainable Development Goal 8. *Sustainability*, *15*(18), 13327.

[9] Chan, T. J., Huam, H. T., & Hasan, N. A. M. (2023). Does Corporate Social Responsibility Reporting/Communication Matter? Employees' Perception of the Corporate Social Responsibility and Competitive Advantage of Banking Corporations. *Journal of Content, Community & Communication*, *17*(9), 80-96.

[10] Chaudhury, S. K., Das, S. K., & Sahoo, P. K. (2012). Practices of corporate social responsibility (CSR) in banking sector in India: An assessment. *Research Journal of Economics, Business and ICT*, *4*. ISSN: 2045-3345

[11] Chen, X., Liang, X., & Wu, H. (2023). Cross-border mergers and acquisitions and CSR performance: Evidence from China. *Journal of Business Ethics*, *183*(1), 255-288.

[12] Choubey, A., & Sharma, M. (2022). Green banking: the case of the commercial banking sector in Delhi NCR. *Journal of Environmental Planning and Management*, *65*(11), 1975-1998.

[13] Dekoulou, P., Anastasopoulou, A., & Trivellas, P. (2023). Employee Performance Implications of CSR for Organizational Resilience in the Banking Industry: The Mediation Role of Psychological Empowerment. *Sustainability*, *15*(15), 11946.

[14] Dhingra, D., & Mittal, R. (2014). CSR practices in Indian banking sector. *Global Journal of Finance and Management*, *6*(9), 853-862. ISSN: 0975-6477

[15]   Edre, M. A., Za, M. A., & Jamalludin, A. R. (2020). Forecasting Malaysia COVID-19 incidence based on movement control order using ARIMA and expert modeler. *IIUM Medical Journal Malaysia*, *19*(2). DOI: https://doi.org/10.31436/imjm.v19i2.1606

[16]   Fatma, M., & Khan, I. (2023). How Do Bank Customers' Perceptions of CSR Influence Marketing Outcomes: Their Trust, Identification, and Commitment?. *Sustainability*, *15*(7), 6000.

[17]   Fatma, M., & Khan, I. (2023). How Do Bank Customers' Perceptions of CSR Influence Marketing Outcomes: Their Trust, Identification, and Commitment?. *Sustainability*, *15*(7), 6000.

[18]   Fatma, M., Khan, I., Kumar, V., & Shrivastava, A. K. (2022). Corporate social responsibility and customer-citizenship behaviors: The role of customer–company identification. *European Business Review*, *34*(6), 858-875.

[19]   George, A. K., Kayal, P., & Maiti, M. (2023). Nexus of Corporate Social Responsibility Expenditure (CSR) and Financial Performance: Indian Banks. *The Quarterly Review of Economics and Finance*.

[20]   Hack, L., Kenyon, A. J., & Wood, E. H. (2014). A critical corporate social responsibility (CSR) timeline: How should it be understood now. *International Journal of Management Cases*, *16*(4), 46-55. ISSN: 1741-6264

[21]   Hassan, M. K., Rabbani, M. R., Brodmann, J., Bashar, A., & Grewal, H. (2023). Bibliometric and Scientometric analysis on CSR practices in the banking sector. *Review of Financial Economics*, *41*(2), 177-196.

[22]   Hopkins, M. (2003). The planetary bargain: Corporate social responsibility matters earthscan publications ltd.

[23]   Jha, A. (2023). Relevance of CSR for building affective commitment of employees: a multilevel approach. *Journal of Global Responsibility*, *14*(1), 135-154.

[24]   Jizi, M. I., Salama, A., Dixon, R., & Stratling, R. (2014). Corporate governance and corporate social responsibility disclosure: Evidence from the US banking sector. *Journal of business ethics*, *125*, 601-615. DOI: 10.1007/s10551-013-1929-2

[25]   Jones, P., Wynn, M., Hillier, D., & Comfort, D. (2017). The sustainable development goals and information and communication technologies. *Indonesian Journal of Sustainability Accounting and Management*, *1*(1), 1â-15. DOI: https://doi.org/10.28992/ijsam.v1i1.22

[26]   Konalingam, K., Sivapalan, A., Ratnam, U., & Sivapiragasam, S. (2022, December 5). Consumer attributions for corporate social responsibility: causes and consequences. *Society and Business Review*, *18*(2), 321–344. https://doi.org/10.1108/sbr-05-2022-0137

[27]   Kumar, S., Pandey, N., & Kaur, J. (2023). Fifteen years of the Social Responsibility Journal: a retrospective using bibliometric analysis. *Social Responsibility Journal*, *19*(2), 377-397.

[28]   Kumar, V., Singh, A., Adhikary, M., Daral, S., Khokhar, A., & Singh, S. (2014). Seasonality of tuberculosis in Delhi, India: a time series analysis. *Tuberculosis research and treatment*, *2014*. DOI: https://doi.org/10.1155/2014/514093

[29]   Li, W., Zhang, J. Z., & Ding, R. (2023). Impact of Directors' Network on Corporate Social Responsibility Disclosure: Evidence from China. *Journal of Business Ethics*, *183*(2), 551-583.

[30]   Mahmuda, N., & Muktadir-al-Mukit, D. (2022). Corporate social responsibility disclosures and profitability of Islamic banks: an empirical study. Social Responsibility Journal. https://doi.org/10.1108/srj-10-2020-0401.

[31] Maqbool, S., & Zameer, M. N. (2018). Corporate social responsibility and financial performance: An empirical analysis of Indian banks. *Future Business Journal*, *4*(1), 84-93. DOI: https://doi.org/10.1016/j.fbj.2017.12.002

[32] Maqbool, S., & Zameer, M. N. (2018). Corporate social responsibility and financial performance: An empirical analysis of Indian banks. *Future Business Journal*, *4*(1), 84-93.

[33] Marzuki, M. M., Majid, W. Z. N. A., & Rosman, R. (2023). Corporate social responsibility and Islamic social finance impact on banking sustainability post-COVID-19 pandemic. *Heliyon*, *9*(10).

[34] *MCA*. (2019). Invitation for Public Comments for High Level Committee on Corporate Social Responsibility-2018. https://www.mca.gov.in/Ministry/pdf/InvitationOfPublicCommentsHLC_18012019.pdf

[35] Mesta-Cabrejos, V. F., Huertas-Vilca, K. S., Wong-Aitken, H. G., & Cordova-Buiza, F. (2023). Corporate social responsibility in the banking sector: a focus on Latin America and the Caribbean. *Humanities and Social Sciences Communications*, *10*(1), 1-6.

[36] Mishra, P., & Sant, T. G. (2023). Examine the level of environmental, social and governance disclosure in sustainability report–a study of the Indian banking sector. *International Journal of Innovation Science*.

[37] Nguyen, T. H. N., Tran, N. K. H., & Do, K. (2023). An empirical research of corporate social responsibility on creating the green brand equity: An exploratory of Vietnamese consumers' perception in the bank industry. *Corporate Social Responsibility and Environmental Management*, *30*(3), 1292-1299.

[38] Orazalin, N. (2019). Corporate governance and corporate social responsibility (CSR) disclosure in an emerging economy: evidence from commercial banks of Kazakhstan. *Corporate Governance: The International Journal of Business in Society*. DOI: https://doi.org/10.1108/CG-09-2018-0290

[39] Pinto, L. (2023). A Qualitative Analysis of Corporate Social Responsibility in Saudi Arabia's Service Sector-Practices and Company Performance. *Sustainability*, *15*(12), 9284.

[40] Prabhavathi, K., & Dinesh, G. P. (2023). Performance of Social Goods in the Indian Banking sector and its Impact. *Prabandhan: Indian Journal of Management*, *16*(4), 28-45.

[41] Pratihari, S. K., & Uzma, S. H. (2018). CSR and corporate branding effect on brand loyalty: A study on Indian banking industry. *Journal of Product & Brand Management*, *27*(1), 57-78.

[42] Roy, T. (2022). "We do care": the effects of perceived CSR on employee identification-empirical findings from a developing country. *Society and Business Review*.

[43] Sharma, E., & Sathish, M. (2022). "CSR leads to economic growth or not": An evidence-based study to link corporate social responsibility (CSR) activities of the Indian banking sector with economic growth of India. *Asian Journal of Business Ethics*, *11*(1), 67-103.

[44] Sheehy, B. (2015). Defining CSR: Problems and solutions. *Journal of business ethics*, *131*, 625-648. DOI: https://doi.org/10.1007/s10551-014-2281-x

[45] Singla, C., Sarangi, P. K., Singh, S., & Sahoo, A. K. (2019). Modeling Consumer Price Index: An Empirical Analysis Using Expert Modeler. *Journal of Technology Management for Growing Economies*, *10*(1), 43-50. DOI: https://doi.org/10.15415/jtmge.2019.101004

[46] Taylor, J. W. (2010). Exponentially weighted methods for forecasting intraday time series with multiple seasonal cycles. *International Journal of Forecasting*, *26*(4), 627-646. DOI: https://doi.org/10.1016/j.ijforecast.2010.02.009

_____

[47] Tosun, P., & Köylüoğlu, A. (2023). The impact of brand origin and CSR actions on consumer perceptions in retail banking during a crisis. *International Journal of Bank Marketing*. https://doi.org/10.1108/ijbm-03-2022-0137.

[48] Vo, D. H., Van, L. T. H., Hoang, H. T. T., & Tran, N. P. (2023). The interrelationship between intellectual capital, corporate governance and corporate social responsibility. *Social Responsibility Journal*, *19*(6), 1023-1036.

[49] Wu, F., Wu, R., Tao, Y., & Chen, Y. (2023). The Impact of ESG Information Disclosure Mechanism on the Green Development of China's Banking Industry:--Micro Data from China's Four Major Banks. *Journal of Innovation and Development*, *3*(1), 86-90.

[50] Yang, Y., & Jiang, Y. (2023). Buyer-supplier CSR alignment and firm performance: A contingency theory perspective. *Journal of Business Research*, *154*, 113340.

[51] Zhang, G. P. (2003). Time series forecasting using a hybrid ARIMA and neural network model. *Neurocomputing*, *50*, 159–175. DOI: https://doi.org/10.1016/S0925-2312(01)00702-0

[52] Zheng, Y., & Zhang, Q. (2023). Digital transformation, corporate social responsibility and green technology innovation-based on empirical evidence of listed companies in China. *Journal of Cleaner Production*, *424*, 138805.