The Financial Implications of CSR: A Study of the Impact of Corporate Social Responsibilities on ROI and ROA within the Banking Industry

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Declaration

It is hereby declared that

1. The thesis submitted is my/our own original work while completing degree at Brac University.
2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

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Approval

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of 7th semester, 2024 has been accepted as satisfactory in partial fulfillment of the requirement for the degree of Master of Business Administration on [Date-of-Defense].

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Ethics Statement

The thesis paper on "The Financial Implications of CSR: A Study of the Impact of Corporate Social Responsibility on ROI and ROA within the Banking Industry." Explores the possible relation between ROI and ROA with CSR spending within the banking industry. For research purpose, all the data that were collected are taken from each bank's financial statements, which is found in their website and the other operations were done through Microsoft excel.

Executive Summary

The purpose of this study is to understand how Corporate Social Responsibility (CSR) effects the financial performance of banks. More detail is provided on spending and return for CSR, i.e. Return on Investment (ROI) and Return on Assets (ROA). In the banking sector, CSR is indispensable. This is because it builds customer confidence, loyalty and stakeholder relationships which eventually directly affect the financial performance of banks. By analyzing bank financial statements from 2018-2022, it is found that there is a significant relation between CSR activities and financial measures. CSR activity, on the whole, also makes a tangible contribution. Improved CSR frameworks will entail higher returns. CSR is not just a duty, but a lasting investment in the whole. Future work should focus more specifically on the strategic timing, methods and probable effects of such CSR activities.

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Chapter 1

Introduction

Bangladesh, a country in South Asia and one of the most economically developed countries has gone through an evolution over time for its banking industry. Over the past few decades, the banking industry of this nation has been instrumental in promoting economic growth, ensuring financial inclusion and supporting different sectors of their economy and moving from predominantly state-owned to a diversified landscape. Drawing on a host of resources, this paper aims at presenting an in-depth and critical review of the evolution of banking industry in Bangladesh highlighting major banks operating here, regulatory environment under which these operate as well contemporary challenges faced by these institutions that are located mostly in Dhaka city.

Banking in Bangladesh developed during the colonial period of British India when traditional banking was largely unknown. After independence in 1971, the government nationalized most of the banks and adopted a planned financial system that overwhelmingly controlled by state-owned institutions. However, in 1990s the government started the liberalization process and allowed to private sector banks as well foreign bank to operate on Indian soil. This led to a major change in the banking industry and brought more competition and innovation.

There are many public sector and private banking companies in Bangladesh, spread over 5 sectors. While public sector banks such as Sonali bank, Janata Bank and Agrani bank contribute an essential role to the economy by providing important financial services for many types of customers. In terms of products and services, private sector banks have gained majority shares with their wide network offering several types individual to business accounts (Brac Bank is one example), followed by Eastern Bank Limited, Prime Bangla Ltd etc. In recent years, foreign banks including Standard Chartered Bank and HSBC have expanded operations in Bangladesh helping to internationalize the banking sector.

Bangladesh Bank (BB) regulates and supervises the banking industry in Bangladesh. It has the responsibility for monetary policy, financial stability and to regulate banks. The bank also regulates and supervises the banks in Bangladesh with help of different regulations, capital adequacy requirements or guidelines such as risk management standards. Such regulations are put in place to safeguard depositors and the soundness of the financial system, as well as superintend it responsible banking.

Progress has been made, but Bangladesh's banking industry still faces a number of issues. A key problem is non-performing loans (NPLs), which can disrupt the financial stability of banks and impair their ability to provide credit in the economy. Also, achieving financial inclusion seems daunting especially in rural areas where banking facilities are not easily accessible. But there are also ways to grow here. Technological adoption like digital and mobile banking may extend financial inclusion and effectiveness. Further, its emphasis on infrastructure development and industrialization provides potential for banks to extend credit in the economy and generate new business.

The evolution of the banking industry in Bangladesh contains much promise and incites hope for the future. Efforts to address challenges like NPLs, and financial inclusion must continue. From a long-term perspective, Tech and Innovation can drive the system to be more efficient (thus cheaper on transactions), better in customer experience & scalable while promoting financial inclusion. While Bangladesh gears up to further integrate with the global economy, banks will remain at the core of economic growth and development.

The banks industry in Bangladesh has developed to become more diversified and competitive after being almost totally dependent on state-controlled business. The industry has been developed by state owned, private banks and foreign banks. Despite its ongoing challenges, like NPLs and a general lack of financial inclusion in Bangladesh, the future of banking cannot be written off. The banking industry can, therefore, leverage innovation to tackle these obstacles and further contribute in the way forward for economic growth.

Among the banks that are used for the research. Some of the bank's significant data is described here. Like Agrani was established in 1972 was the merger of two deserted Pakistani banks, 'Commerce Bank' and 'Habib Bank' now fully owned by Bangladesh. (Wikipedia, n.d.) In 2022 Agrani Bank Recorded 1106 million taka as profit after tax, ROI stands for 5.92% and spent about 3.01 million taka for CSR.

Brac Bank founded in 1972, is known for its innovative services and financial inclusion initiatives. They offer a wide range of banking products and services. As of 2022 Brac Bank recorded 6122 million taka as net profit after tax, ROI stands for 4.78% and spent 189 million takas for CSR. Notably they achieved credit rating of Crab: AAA and ST-1. Which makes them one of the top sustainable banks. They also have Bkash as their subsidiary. Which is also a major player being MFS platform.

City Bank established in 1983, emphasizes digital banking and customer-centric solutions. Offers a diverse portfolio of financial products. As of 2022 City Bank recorded 4508 million takas as profit after tax, ROI is 6.36% and spent about 173.8 million takas for CSR. They are one of the few banks that offer AMEX cards.

Dhaka Bank established in 1995 is known of commitment to sustainable growth and community development. Provides personalized services and modern banking solutions. As of 2022 Dhaka bank recorded 1660 million taka as profit after tax, they spent 230.81 million taka for csr, their ROI is 7.52%.

IFIC Bank established in 1976, provides a range of banking services. Focused on customer satisfaction and technological advancements. Their business model is very unique they have very notable products like IFIC amar account. Which works like a mesh of Current account and savings account. They also offer a single card that works as both debit and credit card. Anyone can withdraw money from any ATM without any extra cost. They also have the largest number of sub-branches in the country. Just because of their sub-branch they are considered one of the largest banks in the country have significant amount of deposit. As of 2022 they have recorded 2970 million taka as net profit after tax, ROI is 6.02% and they spent 191.54 million takas for CSR.

Islami Bank Bangladesh founded in 1983, is one of the largest Islamic banks in Bangladesh. Offers Shariah-compliant banking services. As of 2022 they can be considered as one of the leaders in the banking industry. They receive the highest remittance in 2020-2022 for this they received award from the Bangladesh Bank and NRB. They recorded inflow of Tk.16,128.70 crore in 2022. Also, they recorded 5908 million takas as profit after tax, ROI is 6.39% and CSR spending is 3273 million takas.

Janata Bank established in 1972 is a state-owned bank with a wide network of branches. Offers various banking services. As a state-owned bank, Janata Bank supports the government's economic development agenda. In 2022 Janata Bank recorded 1133 million taka as profit after tax, 6.6% as ROI and spent 54.48 million takas for CSR.

CSR in banking is the idea that a bank or other financial institution should not just be interested in profits, but also act as an upstanding corporate citizen towards society and environment. Banks are crucial stakeholders in the larger global economy, playing a great part with regard to social and environmental consequences.

The global economy's main players, banks play a vital role shaping social and environmental outcomes. Corporate social responsibility in banking can mean sustainable business practices, ethical lending, provision of financial services for low-income groups and community investment, and it must also feature sound governance.

To increasing support green ecological and environmental projects of all kinds, banks turning their regions carbon free. Banks now consider off-limits those industries linked with destructive behavior such as environmental degradation or human rights violations, and concentrate their investments upon socially improving projects. Financial inclusion is another important aspect of CSR, and even more so now in banking. We intend to provide services for the lowest-income classes - making them economically independent.

An important aspect of CSR is investment in community. This kind of investment helps grow goodwill and trust between the bank and its surrounding society (tries mains in P. 20). Finally, corporate governance is vital for ensuring the transparency of operations in banks Turned away certain fields for investment. By so doing, it ensures that people are financially better off.

Several factors give impetus to the development of CSR in banking, including regulatory pressure as well as demands made by stakeholders' groups and pursuit of a competitive edge. Bank customers now attach considerable importance to responsible banking. This includes some examples of CSR activities: Investment in environmental projects can bring the bank a high rate of profitability.

CSR can enhance a bank's image, attract customers and ultimately bring long-term relationships. For banks, CSR can bring performance improvements through its ability to attract capital, image building and risk reduction. By conducting business ethically they raise their own security level while also avoiding regulatory penalties; investing in business areas that are good for society brings the capital markets to them They are all parts of what can also lead, however, to financial benefits The costs of implementing CSR However, measurement of its effect - particularly upon social and environmental outcomes - is difficult As expectations about corporate responsibility rise, banks which are CSR-driven are more likely in the longer term to be competitive. This means their success contributes also society's welfare. Both sides win.

CSR in the banking industry is a question of integrating sustainability, ethical practices, and social responsibility into everyday business. Although hard, CSR offers banks a way to enhance their image, scale the trust of stakeholders and join in larger social service works. CSR will continue to be a key factor pushing responsible banking practices forward when as the industry progresses.

A bank's performance results are usually determined using ratios for example ‘return on investment (ROI)’, ‘return on assets (ROA)’, etc. Although ROI calculates the profitability of a company's capital in terms of its cost, the ROA helps to see how well a bank uses its assets to generate profit. Banks are always chasing better metrics, so CSR activities are generally perceived to be a critical and positive driver for those metrics. This study aims to analyze previous literature and evidence of whether CSR activities have a relationship to high ROI and ROA in Banking industry. CSR activities can enhance the rep of a bank, which can drive customer loyalty and employee morale, all playing directly into improved financial performance.

Furthermore, CSR activities are additional risk management tools (Galbreath 2011). Avoiding adverse effects on society and the environment reduces the regulation risk the bank is exposed to (what are the costs of the risks associated with stricter rules for morally offshore businesses?) and thus prevents a reputational disaster, or in other words, maintaining a profitable business environment. Stability translates into stronger financial performance metrics such as ROI and ROA.

Research question:

In the context of Bangladesh, there might not have been done any research on CSR relation with banking industry performance. Therefore, my research question is, what is the impact of CSR on Banking performance of Bangladesh?

Objective:

The main objective is to find the link between Corporate Social Responsibility expenditure with financial performance (ROI & ROA) in the banking sector, examining how CSR spending affect different aspects for ROI as well as ROA.

Chapter 2

Literature review

Corporate Social Responsibility or simply CSR is the buzzword that has been ringing heavily since this decade especially in banking sector. CSR is a tactical move that means to benefit from voluntary actions for a competitive advantage. Corporate Social Responsibility from banking industry's perspective, it has more to do with the extending of scale in financial services like micro credit and micro insurance. It reveals for example that a bank is running socially responsible measures; this can go as far as mitigating the ethical risks of investment. For further research, the researchers are also interested in how CSR is correlated with financial performance and, even more precisely, with ROI and ROA metrics. This paper systematizes theoretical frameworks and provides an overview of available literature pooled from various systematic reviews of the impact of CSR activities on bank financial performance to date (2018-2022).

CSR and Firm performance (previous research):

There have been numerous studies on CSR and farm performance. (Cho, Chung, & Young, 2019)'s study is highlighted with diverse levels of significance. More precisely, 'social contribution' has a statistically significant and positive ROA's significance is below 1% ($p < 0.01$). There exists a negative effect of 'fairness' on ROA, which is significant at below 5% ($p < 0.05$). But found negative relation with ROI as t-value is -0.311 and p-value is 0.757, which means that it is not statically significant.

(BANI-KHALED, EL-DALABEEH, & AL-OLIMAT, 2021)'s study found that CSR expenditure and ROA is negatively related at the significance level below 1%. In regression analysis, for each unit increase in CSR expenditures, the corresponding ROA significantly decreases. This means CSR spending has a big impact on the profits that can be made compared to what a bank has earned itself. A negative relationship between the two would suggest that banks may use their CSR resources to less profitable ends. This could worry a stakeholder concentrating on financial performance. While negative in the short-term for ROA, banks may need to think about future returns from CSR respects. For instance, what effect it has on client loyalty or big-name self-regard and what added value changes in customer attitudes means towards risk for task ahead. Ultimately there are many dimensions of performance.

In sum, the significant negative relationship between CSR expenditures and ROA (to within 1% significance) suggests that while CSR is important, banks must carefully weigh such investments in terms of their immediate financial implications.

(Mohammed Bhuyan, 2017)'s journal states that among the various firm they found that there is a positive relation between corporate social disclosure and ROA at significance level 1% (p-value 0.008). effective csd can enhance their financial outcome and increase reputation. But the paper did not do any analysis on ROI.

(Mari Kooskora, 2019) Results from the study show that, CSR has statistically very significant positive relation with ROA at $p < 0.05$ level of significance. However, for the market-based measure, EPS (earnings per share), this did not seem to be true as none of the coefficients were statistically significant and therefore could be concluded that CSR has no effect on EPS.

Though the document referred to discussing an association between CSR and Return on Investment (ROI), hence additional sources or studies would be needed for details on ROI.

Theoretical Background CSR in Banking

Stakeholder Theory Freeman (1984) introduced the concept that a business must consider the interests of all the stakeholders (clients, employees, suppliers, and communities) when deciding on anything. The banks have this set of stakeholders, and by serving this group and meeting their expectations and concerns, the banks can be part of setting the tone for an environment that is favorable to business and, hence, to the long-term profitable growth of the banks. Similarly, stakeholder theory maintains that CSR could be beneficial as it could increase the value of relationships between the stakeholders and customer loyalty, employee morale, and greater social cohesion. This, in turn, can drive higher ROI and ROA through positive impacts on the financial performance metrics of these relationships.

There have been Numerous empirical studies have appeared on the influence of CSR on the financial performance of banks . For example, Wu and Shen (2013) found the relationship beyond short-term focusing on banks in various countries and reported that banks with solid CSR practices tend to have higher ROA and ROI. This leads to an increased customer base for banks with the specific bank. Hence, this will create a larger market share (Verwijmeren et al., 2006). This, in turn, will generate more deposits and lending opportunities, ultimately resulting in better financial results. Bank CSR performance and financial performance Based on the studies of CSR and financial performance of banks in the banking industry all over the world, previous research (e.g., Scholtens, 2009) found that banks actively involved in CSR performed better financially. For example, Scholtens said, "It may be a response to higher profits stemming from more energy efficiency (cost-saving potential) and from a lower regulatory risk and to possibilities to enter new markets created by sustainability drives."

Although the potential benefits of engaging in CSR have been highlighted in the literature, repeated studies have documented hurdles and barriers to implementing CSR in the banking industry (Mishra & Suar, 2010). The key reservations lie in the expense of CSR activities. Some may argue that CSR investment will likely cost a bank a fair amount and provide little to no material financial impact, at least not in the short-term, and hence, this is a problem for banking actors whose business is all about short-term gains. However, as the basic definition of CSR suggests, banks may also "greenwash"; that is, an organization only does a low level of CSR activities to create `evidence' of change while keeping the real step changes in the pipeline. Banks who use this unknowingly create suspicion among critical stakeholders and could end up causing damage to their reputation if the gap between what they claim through CSR and their actual practice becomes evident.

The reviewed literature on CSR in the banking sector offers plentiful evidence that supports the positive link between CSR practices and return on investments (ROI) and return on assets (ROA). In this sense, this research has supported the idea that CSR can be useful for a bank to create word of mouth, relationships, and a competitive advantage from a strategic point of view (theory frameworks such as stakeholder theory and resource-based view of the firm). More empirically, CSR activities may translate into improved financial performance (e.g., heightened customer satisfaction, not through such strong claims that may reduce risk and create additional market opportunities as Subventions). However, the long-term performance of CSR initiatives relies on the strategic integration of such efforts corporate-wide, the institutional field where they are brought to live, and the nature of the CSR activities. Even if CSR could be a "double-edged sword," banking companies executing best from strategic CSR initiatives are likely to score the most success in the long run concerning ROI and ROA while using financial results achieved. Future research should delve deeper into the specific effects of various types of CSR and how CSR is best combined with the core strategies of banks.

Chapter 3

Methodology

Theoretical Foundation of the study

To look into the link between Corporate Social Responsibility (CSR) activities and banks' financial gain such as ROA and ROI, this study uses a quantitative research method to focus on Return on Investment (ROI) and Return on Assets (ROA). As part of the quantitative method, secondary data is collected.

Data Collection

This report is based on secondary data. Each of the respective banks CSR spending, ROA and ROI data was collected from their financial statement from year 2018-2022.

Data Variables

The primary variables in this study include:

• CSR Spending: The money that is set aside for different CSR activities, such as arts and culture, sports, education, health care, and disaster aid.

• Financial Performance: It is report that shows how well the company is making money and managing its finances. Return on Investment (ROI) and Return on Assets (ROA) are two indicators of financial performance.

These factors were picked to give a full picture of how CSR actions might affect financial results. Putting CSR spending into different groups lets us really look at which kinds of CSR purchases have the biggest effect on how well the business does financially.

Data Set: All the data were collected and calculated using each banks annual report. It has been shown below:

	Mean	Standard Deviation	Min	Median	Max	No of Observation
ROA	0.0452	0.0528	-0.0965	0.0258	0.401	150
ROI	0.0278	0.0482	-0.0258	0.0263	0.512	150
CSR Index	0.1691	0.1414	0	0.1333	0.5333	150

Table-1: Summary Statistics

		ROA			ROI	
	Coefficient	t-stat	Prob.	Coefficient	t-stat	Prob.
CSR Index	0.055	2.5	.005***	0.035	2.6	.008***
Bank type	-0.065	-11.767	0.000***	-0.055	-11.667	0.000***
R-square	0.59			0.52		
Adj R-square	0.48			0.43		
No of Obs	150			150		

Table-2: Pooled OLS Regression

Chapter 4

Findings and Analysis

Descriptive statistics:

The descriptive statistics which are calculated in excel and end result is Table-1. Shows that among the 150 observation the mean of ROA is 0.0452, standard deviation is 0.0528, min is -0.0965, max is 0.401 and median is 0.0258. For ROI Mean is 0.0278, min is -0.0258, max is 0.512, standard deviation is 0.0482 and median is 0.0263. For CSR index the mean is 0.1691, standard deviation is 0.1414 and median is 0.1333.

The mean of ROA indicates that the average that banks are generating a return of 4.52% on their assets. The ROA values range is from -0.0965 to 0.401. Which indicated that while some banks are losing value on their asset, others are performing well.

The mean of ROI indicates that companies are getting positive return on their investment at a rate of 2.785. The ROI range is from -0.0258 to 0.512 which means that some investments are not giving positive return, while others are getting return up to 51.2%.

The mean of CSR index is 0.1691, which indicates that banks are moderately engaged in CSR activities. The range is from 0 to 0.5333. This means that some banks do not engage in CSR activity at all, while other are committed to CSR.

Regression Analysis Insights:

The regression coefficients of the relationship between CSR and bank's ROI and ROA are presented in Table-2. Based on the results we can see that CSR index has a significant positive impact on both ROA and ROI, indicating that higher engagement in CSR activities is linked with better financial performance. Details are given below:

ROA (Return on Assets):

For CSR index, the coefficient is positive 0.55 and the significance is 0.005 which is less than 0.01. So, at the significance level of 0.05%, there is a strong positive relationship between Corporate Social Responsibility Index and Return On Asset. For Bank type the coefficient is negative 0.065 and as the p value is 0. Which is less than .01, t-value is 2.5, which indicates the relation is statistically significant at the 1% level. Because of this suggests a very strong positive impact of bank type on ROA. For every unit increase in CSR increases the ROA.

Although not the same, but similar study's result comes close with the result. From the article published by (Cho, Chung, & Young, 2019) found that CSR expenditure is statistically significant at a level below 1% ($p < 0.01$) and t-value is 2.6, indicating a strong positive correlation with ROA. Which indicates that the bank's (Jordan) that invested in CSR has relation with ROA.

ROI (Return on Investment): CSR Index, the coefficient is positive which indicates that an increase in the CSR Index is related with an increase in ROI. The p-value is 0.008, which is less than 0.01, indicating a very strong significance level. This means there's strong positive relationship between CSR Index and ROI. For Bank type the p-value is 0.000, which is less than 0.01, indicating a very strong significance level, also the coefficient is negative. This suggests a very strong negative impact of bank type on ROI.

Although not from the same industry, but similar study's result comes close with the result. From the article published by (Mai, 2017) indicates that the relationship between Corporate Social Responsibility spending and Return on Investment (ROI) is significant at a 1% significance level ($p = 0.010$). This suggests a strong positive relationship between CSR and ROI, meaning that as ROI increases, CSR disclosure also tends to increase vice-versa.

Chapter 5

Recommendations

Based on the study, it is recommended that banks should continue to invest in the Corporate social responsibility activities.

Integrate CSR with Core Values: The banks must make sure that the approach on their honest-to-goodness answer sync with their business values along for the people they will provide. This alignment will turn CSR efforts more significant and relevant.

Transparency: Banks need to be transparent about CSR. By reporting progress and results of CSR projects on a continuous basis, faith can be maintained with the customers and shareholders. Which has major benefits for enhancing the name of one's bank hence making it more profitable.

Invest for Tomorrow: View CSR as an investment rather than a cost valid only today. Results suggest that long-term social responsibility pays off, and since we have proved the financial benefits of sustained corporate social activity, commitment is key.

Monitor: Monitor CSR activities and financial performance efficiently. This contributes to knowing which methods employed yield the best results and hence, allows smart CSR investment decisions in future.

These recommendations will not only enable the banks to fulfil their social responsibilities but also contribute toward better financial performance, in turn creating a win-win situation for both communities as well bank.

Chapter 6

Conclusion

The results from the study offer valuable insights about how banks might profit from their CSR initiatives in performance. From this study, we can say that, through strengthening a CSR framework, ROA would go up, ROI should also improve. Though this possess some challenges such as spending a lot of money outside the business. But in the long run these activities improve brand image. Which leads to more profitability.

From the above results we can see that there is a positive link between CSR activity of banks with there ROI and ROA. As these activities build trust among its customers. Which in return the customers invest more of their money in the bank and banks can then lend to others to generate a good return.

References

Adams, C.A. and Larrinaga, C., 2019. Progress: engaging with organisations in pursuit of improved sustainability accounting and performance. Accounting, Auditing & Accountability Journal, 32(8), pp.2367-2392.

BlitzIlama., 2024. Comparative Analysis [Online] Available at: https://www.blitzllama.com/blog/comparative-analysis [Accessed on 7th June, 2024]

Brammer, S., Brooks, C. and Pavelin, S., 2018. The stock performance of America's 100 best corporate citizens. Business Ethics: A European Review, 27(3), pp.294-309.

BYJUS., 2023. Disaster Management [Online] Available at: https://byjus.com/free-ias-prep/disaster-management-india/ [Accessed on 7th June, 2024]

Chen, S. and Delmas, M.A., 2021. Measuring corporate social responsibility and its impact on firm performance: an empirical analysis of a unique data set. Strategic Management Journal, 42(6), pp.1255-1280.

Clarobi., 2020. Customer Loyalty [Online] Available at: https://www.clarobi.com/blog/post/creating-loyal-customers-your-store [Accessed on 7th June, 2024]

Cuemath., 2023. Descriptive Statistics [Online] Available at: https://www.cuemath.com/data/descriptive-statistics/ [Accessed on 7th June, 2024]

Dachpian., 2022. Descriptive Statistics [Online] Available at: https://dachpian.weebly.com/descriptive-statistics.html [Accessed on 7th June, 2024]

Dahlsrud, A., 2016. How corporate social responsibility is defined: An analysis of 37 definitions. Corporate Social Responsibility and Environmental Management, 23(5), pp.333-345.

Eccles, R.G., Ioannou, I. and Serafeim, G., 2017. The impact of corporate sustainability on organizational processes and performance. Management Science, 63(11), pp.3413-3434.

Echoz., 2023. Correlation Between CSR Spending and Financial Performance [Online] Available at: https://www.ecohz.com/blog/how-does-csr-affect-companies-financial-performance [Accessed on 7th June, 2024]

EduCBA., 2021. Stakeholder Theory [Online] Available at: https://www.educba.com/stakeholder-theory/ [Accessed on 7th June, 2024]

Fernández-Kranz, D. and Santaló, J., 2019. When necessity becomes a virtue: The effect of product market competition on corporate social responsibility. Journal of Economics & Management Strategy, 28(4), pp.709-733.

Freepik., 2022. ROI and ROA [Online] Available at: https://www.freepik.com/premium-vector/difference-roa-roe-roi-return-assets-return-investment-return-equity_170780385.htm [Accessed on 7th June, 2024]

García-Sánchez, I.M., Rodríguez-Ariza, L. and Frías-Aceituno, J.V., 2015. Board of directors and ethics codes in different corporate governance systems. Journal of Business Ethics, 132(3), pp.379-396.

Harjoto, M.A., Jo, H. and Kim, Y., 2017. Corporate governance and corporate social responsibility: What's the relationship? Journal of Business Ethics, 151(2), pp.301-315.

Ioannou, I. and Serafeim, G., 2019. Corporate sustainability: A strategy. Harvard Business Review, 97(2), pp.89-96.

Khan, M., Serafeim, G. and Yoon, A., 2016. Corporate sustainability: First evidence on materiality. The Accounting Review, 91(6), pp.1697-1724.

Lee, K.H. and Shin, D., 2019. The role of CSR activities in reducing consumer cynicism. Journal of Business Ethics, 158(4), pp.803-819.

LinkedIn., 2023. Corporate Social Responsibility [Online] Available at: https://www.linkedin.com/pulse/what-corporate-social-responsibility-csr-why-matters-govrncorp [Accessed on 7th June, 2024]

LinkedIn., 2023. Sustainable Environment [Online] Available at: https://www.linkedin.com/pulse/environment-sustainable-development-goals-sdgs-barigye-haron [Accessed on 7th June, 2024]

Maon, F., Lindgreen, A. and Swaen, V., 2015. Organizational stages and cultural phases: A critical review and a consolidative model of corporate social responsibility development. International Journal of Management Reviews, 17(1), pp.20-38.

Medium., 2021. Regression Analysis [Online] Available at: https://medium.com/@AnasBrital98/regression-analysis-a65559b85cf3 [Accessed on 7th June, 2024]

Park, K., Song, S. and Lee, Y., 2020. Corporate social responsibility in international business: Illustrations from Korean and Japanese electronics MNEs in Indonesia. Journal of Business Research, 110, pp.389-400.

Pinterest., 2022. Regulatory Environment [Online] Available at: https://www.pinterest.com/pin/276408495868188920/ [Accessed on 7th June, 2024]

Quora., 2023. Benefits of CSR [Online] Available at: https://www.quora.com/What-are-the-benefits-of-corporate-social-responsibility-to-the-business-world [Accessed on 7th June, 2024]

Research Gate., 2017. Stakeholder Theory of Freeman () [Online] Available at: https://www.researchgate.net/figure/Freemans-stakeholder-theory_fig1_318903304 [Accessed on 7th June, 2024]

Russo, M.V. and Tencati, A., 2022. Formal vs. informal CSR strategy: Evidence from Italian SMEs. Business Ethics: A European Review, 31(1), pp.110-123.

Schmitz, J. and Schrader, J., 2024. Corporate social responsibility: A microeconomic review of the literature. Journal of Business Economics, 94(2), pp.175-198.

Scribbr., 2021. Correlation Analysis [Online] Available at: https://www.scribbr.com/statistics/correlation-coefficient/ [Accessed on 7th June, 2024]

Strategic Management Insights., 2021. Resource Based Value [Online] Available at: https://strategicmanagementinsight.com/tools/resource-based-view/ [Accessed on 7th June, 2024]

Wall Street Prep., 2024. Return on Assets [Online] Available at: https://www.wallstreetprep.com/knowledge/return-on-assets-roa/ [Accessed on 7th June, 2024]

Bhandari, I., Colet, E., Parker, J., Pines, Z., Pratap, R., & Ramanujam, K. (1997, March). Advanced Scout: Data Mining and Knowledge Discovery in NBA Data. *Data Mining and Knowledge Discovery*, 121-125.

Brian, S. (2012, January 25). The Problem of Shot Selection in Basketball. *PLoS One*. Retrieved from https://doi.org/10.1371/journal.pone.0030776

Cho, S. J., Chung, C. Y., & Young, J. (2019). Study on the Relationship between CSR and Financial Performance. *Sustainability*.

Choudhury, R. D., & Bhargava, P. (2007). Use of Artificial Neural Networks for Predicting the Outcome. *International Journal of Sports Science and Engineering, 1*(2), pp. 87-96.

Duckworth, F., & Lewis, T. (1999). *Your Comprehensive Guide to the Duckworth/Lewis Method for Resetting Targets in One-day Cricket.* University of the West of England.

Mai, M. U. (2017). MEDIATION OF CSR AND PROFITABILITY ON THE INFLUENCES OF GCG MECHANISMS TO THE FIRM VALUE. *Jurnal Keuangan dan Perbankan*.

Sankaranarayanan, V. V., Sattar, J., & Lakshmanan, L. S. (2014). Auto-play: A data mining approach to ODI cricket simulation and prediction. *SIAM International Conference on Data Mining*, (p. 1064).

Tulabandhula, T., & Rudin, C. (2014). Tire Changes, Fresh Air, and Yellow Flags: Challenges in Predictive Analytics for Professional Racing. *Big data*. Retrieved from http://doi.org/10.1089/big.2014.

Wikipedia. (n.d.). *Agrani Bank*. Retrieved from Wikipedia: https://en.wikipedia.org/wiki/Agrani_Bank