



# The Causality Relationship between Financial Parameters & Corporate Reputation: Evidence from the Indian Banking Sector

Jaineel Shah, Dharmesh Shah

Assistant Professor, Professor

Faculty of Management, GLS University

Ahmedabad, India

## Abstract

**Purpose:** This Paper investigates the Cause and effect relationship between Financial Parameters and Corporate Reputation in India from 2015 to 2019 for the top 10 BSE listed Banks.

**Methodology:** Granger Causality test is performed for examining the cause and effect relationship between Financial Parameters like Credit Deposit Ratio (CD), Deposit to Total Assets Ratio (DTA), Return on Equity Ratio (ROE), Interest Expenses to Interest Earned Ratio (IEIE), Profit Margin Ratio (PM), Equity Multiplier Ratio (EM), Net Interest Margin Ratio (NIM), NPA to Advance Ratio (NPAA) and Corporate Reputation, which indicates the difference between the market value and the book value of the selected Banks.

**Findings:** CD, DTA, EM, having significant cause and effect on Corporate Reputation while ROE, IEIE, PM, NIM, NPAA does not have significant cause on Corporate Reputation. Corporate Reputation does not have significant cause on NIM, NPAA Financial Parameters. Corporate Reputation significantly causes CD, DTA, EM.

**Research limitations:** The findings are specific to Top 10 BSE Listed Banks by market capitalization. To introduce the cause and effect relationship, eight Financial Parameters are selected for the period 2015 to 2019.

**Practical implications:** This study attempts to investigate the cause and effect of Corporate Reputation on financial performance, which contributes to the existing literature by providing the effect of Corporate Reputation that helps banks in taking strategic decisions regarding building and maintaining its Corporate Reputation.

**Keywords:** Corporate Reputation, CD, DTA, ROE, IEIE, PM, EM, NIM, NPAA, Granger Causality Test

## I. INTRODUCTION

Reputation is seen by many reviewers as an imperious asset, which could be used as a competitive benefit and as a source of financial performance. Reputation is known as an Intangible asset for the Organisation, which provides the organization competitive advantage and, which is very hard to reproduce (Hall, 1993) (Barney, 1991). Many researchers explain its association with financial performance and Organisational Reputation (as a valuable resource) (Roberts, 2002) (Eberl, 2005).

Good Reputation leads to Higher customer retention rates, which help to increase sales and product selling prices (Shapiro, 1983), and also helps to reduce operating costs (Podony, 1993). How the benefits of Corporate Reputation are realized financially (Eberl M. S., 2005) and the direction of the Reputation-performance relationship, about the adequacy of the Reputation, construct (Gotsi, 2001) these questions continue to be raised.

This study examines Indian data to ascertain any causality relationship between the Reputation and financial performance of the selected banks. The paper originates with a review of the extant literature on Reputation, its definition, measurement, and association with financial performance. The researchers then describe the method and data sources used in the study, followed by an analysis and summary of the results. Lastly, the researchers concluded by discussing the implications of the research.

## II. LITERATURE REVIEW

Many works of literature defined Corporate Reputation in a different manner, which states the Reputation construct, the way in which Reputation is operationalized, and contribution to organizational success. Concepts – image, prestige, goodwill – associated with a Corporate Reputation in various disciplines, e.g., marketing, economics and accounting (Shenkar, 1997), Several differences, which distinguish disciplinary approaches are identified, including the unit of analysis (individual, brand, firm), the point in time at which Reputation is considered (past, present, future) and constituencies (range of stakeholders or “validating groups” (Perrow, 1961).

However, significantly more debate about Identification, diversity of Views on perceived Reputation is developed. (Wartick, 2002) Applying weightings to the Reputation perceptions of a range of stakeholder groups (community, owners, customers, suppliers, employees), also highlights the different effects and shortcomings that may result from applying weightings to the Reputation emphasizes “how important the construction of the definition is for measurement purposes.”

(Çalışkan, 2011) examined the relationship between Corporate Reputation and Financial performance for survey data from Capital’s TMAC list, Turkey, for the period of 2000 to 2010. The result shows that there is no causal relation between Financial Performance and Corporate Reputation; they also state that Corporate Reputation does not affect ROE.

(Tomak, 2014) examined the effect of Reputation on the firm’s performance from of 2008 to 2012 for Bosra Istanbul 30 Index. The result shows there is no significant relationship between performance and Reputable and non-reputable companies.

(Kandil Göker, 2017) observed the unidirectional effect from Corporate Reputation to financial performance like, they compared the portfolio return and the market return of the companies listed in Capital’s survey for 2008-2014, Which showed Corporate Reputation affects Financial performance positively.

There are two approaches that allow us to explore the effect of Corporate Reputation on the economic-financial performance of organizations. The other approach is based on the performance appraisal of the shares traded in stock exchanges. The second approach must prevail over the first since the valuation of the shares is directly related to market perception (from stakeholders) about the Reputation of a particular company, which explains the difference between the book value and the market value of organizations nowadays (Lev, 2005) (Gök, 2011) (Perez, 2006).

(U, 2005) conducted a study on stock returns, inflation, and real activity in Turkey, they used data from 1986 to 2002. HPE, unit root test, and Granger causality test was employed. In all tests, results showed that expected inflation and real returns are not correlated.

In examining the stock returns-inflation relation in (C, 2004) used Granger (1969) causality test. The study explored monthly values of consumer price index and Athens Stock Exchange index for the period from 1988 to 2002 and showed no causality between stock returns and inflation.

(S, 2002) examined five ASEAN countries, Indonesia, Malaysia, Philippines, Singapore, and Thailand, particularly in the context of the financial crisis of 1997. A Granger causality test was applied to monthly data. The result found the significant cause and effect relation between the price index and a few macroeconomic variables.

### III. RESEARCH METHODOLOGY

This study examines the relationship between Corporate Reputation and Financial Performance. Researchers collect the data of Financial Parameters like: Credit Deposit Ratio (CD), Deposit to Total Assets Ratio (DTA), Return on Equity Ratio (ROE), Interest Expenses to Interest Earned Ratio (IEIE), Profit Margin Ratio (PM), Equity Multiplier Ratio (EM), Net Interest Margin Ratio (NIM), NPA to Advance Ratio (NPAA) for the Selected and BSE Listed Banks in India from 2015 to 2019. Selected Banks are Kotak Mahindra Bank, HDFC, State Bank of India, ICICI, Axis Bank, IndusInd Bank, Bank of Baroda, Punjab national bank, Bank of India, RBL bank.

To examine the causal links between Financial Parameters and Corporate Reputation from 2015 to 2019, the top 10 BSE listed Banks are selected, and Granger (1969) causality test is employed.

Granger Causality test traditionally, to test for a causal relationship between two variables, the standard Granger test has been employed in the relevant literature. This test indicates that, if values of a variable Y significantly contribute to estimating the value of another variable  $X_{t+1}$ , then Y is said to Granger cause X and vice versa. The test is based on the following two regressions:

$$Y_t = \beta_0 + \sum_{k=1}^M \beta_k Y_{t-k} + \sum_{l=1}^N \alpha_l X_{t-l} + u_t \dots \dots \dots 1$$

$$X_t = \gamma_0 + \sum_{k=1}^M \gamma_k X_{t-k} + \sum_{l=1}^N \delta_l Y_{t-l} + v_t \dots \dots \dots 2$$

where  $Y_t$  and  $X_t$  are the variables to be tested,  $u_t$  and  $v_t$  are mutually uncorrelated white noise errors,  $t$  denotes the period, and  $k$  and  $l$  are the numbers of lags. The null hypothesis is  $\alpha_1 = \delta_1 = 0$  for all  $l$ 's versus the alternative hypothesis that  $\alpha_1 \neq 0$  and  $\delta_1 \neq 0$  for at least some  $l$ 's. If the coefficient  $\alpha_1$ 's are statistically significant but  $\delta_1$ 's are not, then X causes Y. In the reverse case, Y causes X. But if both  $\alpha_1$  and  $\delta_1$  are significant then causality runs in both ways. According to (J, 1987) the test is valid if the variables are not cointegrated. The results of Granger causality are susceptible to the selection of lag length. If the lag length is less than the true lag length, the oversight of relevant lags can cause bias in the result. If the chosen lag length is more, the immaterial lags in the equation cause the evaluations to be inefficient. To deal with this problem, (C H. , 1981) developed a systematic autoregressive method for choosing an optimal lag length for each variable in an equation. This method combines Granger causality.

### IV. ANALYSIS & RESULT

There is a possibility of unidirectional or bidirectional or no causality between any pair of variables. Therefore, Granger causality is carried out in the present study to understand the relation between Corporate Reputation and Financial Performance. For this purpose, the VAR lag order selection method is used.

Pairwise Granger Causality Tests  
Date: 12/18/19 Time: 10:58  
Sample: 1 45  
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
CREDIT_DEPOSIT_RATIO does not Granger Cause CR	40	5.84870	0.0206
CR does not Granger Cause CREDIT_DEPOSIT_RATIO		0.89332	0.3507

Figure-1 Credit Deposit Ratio & Corporate Reputation

F-statistics between CD and Corporate Reputation is 5.84870 with 0.0206 probability, while Corporate Reputation granger cause CD with F -statistics 0.89332 with 0.3507 probability.

Pairwise Granger Causality Tests  
Date: 12/18/19 Time: 10:59  
Sample: 1 45  
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
DEPOSITE_TO_TOTAL_ASSET does not Granger Cause CR	40	7.81790	0.0082
CR does not Granger Cause DEPOSITE_TO_TOTAL_ASSET		1.04302	0.3138

Figure-2 Deposite to Total Asset & Corporate Reputation

F-statistics between DTA and Corporate Reputation is 7.81790 with 0.0082 probability while Corporate Reputation granger cause DTA with F -statistics 1.04302 with 0.3138 probability.

Pairwise Granger Causality Tests  
Date: 12/18/19 Time: 11:00  
Sample: 1 45  
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
EQUITY_MULTIPLIER_RATIO does not Granger Cause CR	40	7.35515	0.0101
CR does not Granger Cause EQUITY_MULTIPLIER_RATIO		6.33359	0.0163

Figure-3 Equity Multiplier & Corporate Reputation

F-statistics between EM and Corporate Reputation is 7.35515 with 0.0101 probability, while the Corporate Reputation granger causes EM with F -statistics 6.33359 with 0.0163 probability.

Pairwise Granger Causality Tests  
Date: 12/18/19 Time: 11:00  
Sample: 1 45  
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
CR does not Granger Cause I_EXP_TO_I_EARNED	40	0.62807	0.4331
I_EXP_TO_I_EARNED does not Granger Cause CR		0.31209	0.5798

Figure-4 Interest Expense to Interest Earned & Corporate Reputation

F-statistics between EM and Corporate Reputation is 7.35515 with 0.0101 probability, while Corporate Reputation granger cause EM with F -statistics 6.33359 with 0.0163 probability.

Pairwise Granger Causality Tests  
Date: 12/18/19 Time: 11:01  
Sample: 1 45  
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
NET_INTEREST_MARGIN_X_ does not Granger Cause CR	40	0.09044	0.7653
CR does not Granger Cause NET_INTEREST_MARGIN_X_		6.82995	0.0129

Figure-5 Interest Margin & Corporate Reputation

F-statistics between NIM and Corporate Reputation is 0.09044 with 0.7653 probability while Corporate Reputation granger cause EM with F -statistics 6.82995 with 0.0129 Probability.

Pairwise Granger Causality Tests  
Date: 12/18/19 Time: 11:03  
Sample: 1 45  
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
NET_PROFIT_MARGIN___ does not Granger Cause CR	40	0.02557	0.8738
CR does not Granger Cause NET_PROFIT_MARGIN___		1.22597	0.2753

Figure-6 Net Profit Margin & Corporate Reputation

F-statistics between NPM and Corporate Reputation is 0.02557 with 0.8738 probability, while Corporate Reputation granger cause NPM with F -statistics 1.22597 with 0.2753 probability.

Pairwise Granger Causality Tests  
Date: 12/18/19 Time: 11:04  
Sample: 1 45  
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
NPA_TO_ADVANCE does not Granger Cause CR	40	0.38161	0.5405
CR does not Granger Cause NPA_TO_ADVANCE		0.04876	0.8264

Figure-7 NPA to Advance & Corporate Reputation

F-statistics between NPAA and Corporate Reputation is 0.38161 with 0.5405 probability, while Corporate Reputation granger cause NPAA with F -statistics 0.04876 with 0.8264 probability.

Pairwise Granger Causality Tests  
Date: 12/18/19 Time: 11:05  
Sample: 1 45  
Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
ROE does not Granger Cause CR	40	0.06412	0.8015
CR does not Granger Cause ROE		0.01616	0.8995

Figure-8 ROE & Corporate Reputation

F-statistics between ROE and Corporate Reputation is 0.06412 with 0.8015 probability, while Corporate Reputation granger causes ROE with F -statistics 0.01616 with 0.8995 probability.

Table-1 Financial Parameters Cause Corporate Reputation			
Null Hypothesis	F-Statistics	Probability	Inference
Credit Deposit Ratio does not cause Corporate Reputation	5.85	0.02	Rejected
Deposit to Total Asset Ratio does not cause Corporate Reputation	7.82	0.01	Rejected
Equity Multiplier Ratio does not cause Corporate Reputation	7.36	0.01	Rejected
Interest Expense to Interest Earned Ratio does not cause Corporate Reputation	0.31	0.58	Accepted
Net Interest Margin Ratio does not cause Corporate Reputation	0.09	0.77	Accepted
Net Profit Margin Ratio does not cause Corporate Reputation	0.03	0.87	Accepted
NPA to Advance does not cause Corporate Reputation	0.38	0.54	Accepted
ROE does not cause Corporate Reputation	0.06	0.80	Accepted

For CD, DTA, EM financial parameters, F-statistics is significant and rejected the null hypothesis of no causal relation. Thus, Granger Causality test result suggests that CD, DTA, EM, and Corporate Reputation for the top 9 Banks in India are not Independent and CD, DTA, EM has significant cause and effect on Corporate Reputation.

For IEIE, NPAA, PM, ROE, NIM financial parameters, F-statistics is insignificant and fails to reject the null hypothesis of no causal relation. Here it suggests that ROE, IEIE, NPAA, PM, NIM, and Corporate Reputation are Independent and ROE, IEIE, NPAA, PM, NIM does not have significant cause and effect on Corporate Reputation.

**Table-2 Financial Parameters Cause Corporate Reputation**

Null Hypothesis	F-Statistics	Probability	Inference
Corporate Reputation Does not cause Credit Deposit	0.89	0.35	Accepted
Corporate Reputation Does not cause Deposit to Total Asset Ratio	1.04	0.31	Accepted
Corporate Reputation Does not cause Equity Multiplier Ratio	6.33	0.02	Rejected
Corporate Reputation Does not cause Interest Expense to Interest earned ratio	0.63	0.43	Accepted
Corporate Reputation Does not cause Net Interest Margin Ratio	6.83	0.01	Rejected
Corporate Reputation Does not cause Net Profit Margin Ratio	1.23	0.28	Accepted
Corporate Reputation Does not cause NPA to Advance	0.05	0.83	Accepted
Corporate Reputation Does not cause ROE	0.02	0.90	Accepted

Further, as per the granger causality test, Corporate Reputation does not have significant cause and effect on CD, DTA, IEIE, NPM, NPAA, ROE financial parameters as it shows insignificant F-statistics and fails to reject the null hypothesis, while Corporate Reputation has significant cause and effect on EM and NIM.

## Conclusion

To examine the causality relationship between financial performance and Corporate Reputation of 10 BSE listed Banks are selected, this study was used Granger causality for the selected eight financial parameters and Corporate Reputation.

This study concludes that the Credit Deposit Ratio, Deposit to Asset ratio, Equity Multiplier ratio, causes Corporate Reputation. While Interest expense to Interest earned ratio, NPA to Advance ratio, Profit Margin ratio, return on equity, Net interest Margin ratio does not cause Corporate Reputation. This study also observed that Corporate Reputation causes only Equity multiplier ratio, Net interest margin ratio, while it does not cause any other selected financial parameters, which helps to the banks in taking strategic decisions regarding building and maintaining its Corporate Reputation with respect to the selected financial parameters.

## References

- [1] Barney, J. (1991). Firm resources and sustainable competitive advantage. *Journal of Management*, 17, 99-120.
- [2] C, F. (2004). Stock Returns and Inflation in Greece. *Applied Econometrics and International Development*, Vol. 4, pp. 12-25. .
- [3] C, H. (1981). Autoregressive Modelling and Money-Income Causality Detection. *Journal of Monetary Economics*, pp. 85-106.
- [4] Çalışkan, E. N. (2011). Corporate Reputation and financial performance: Evidence from Turkey. *Research Journal of International Studies*, 18, 61-72.
- [5] Eberl, M. a. (2005). Corporate Reputation: disentangling the effects on financial performance. . *European Journal of Marketing*, 39, 7/8, 838-854.
- [6] Eberl, M. S. (2005). Corporate Reputation: disentangling the effects on financial performance. *European Journal of Marketing*, 39, 7/8, 838-854.

- [7] Gök, O. a. (2011). "Does Corporate Reputation improve stock performance in an emerging economy? Evidence from Turkey". *Corporate Reputation Review*, Vol. 14 No. 1, pp. 53-61.
- [8] Gotsi, M. a. (2001). Corporate Reputation: Seeking a definition. *Corporate Communications*, 6, 1, 24-30. .
- [9] Hall, R. (1993). A framework linking intangible resources and capabilities to sustainable competitive advantage. *Strategic Management Journal*, 14, 607-618 .
- [10] J, E. R. (1987). Co-integration and Error Correction: Representation, Estimation and Testing. *Econometrica*, Vol. 55, pp. 251-276.
- [11] Kandil Göker, İ. E. (2017). Kurumsal itibar kavramı ve hisse senedi fiyatlarına etkisi: Türkiye örneği. . *Muhasebe ve Finansman Dergisi*, 74, 133-156.
- [12] Lev, B. (2005). "Intangible assets: concepts and measurements". *Encyclopedia of Social Measurement*, pp. 299-306.
- [13] Perez, M. a. (2006). "Ativos Intangíveis e o Desempenho Empresarial". *Revista Contabilidade & Finanças*, Vol. 17 No. 40, pp. 7-24.
- [14] Perrow, C. (1961). Organizational prestige: Some functions and dysfunctions. *American Journal of Sociology*, 66, 335-341.
- [15] Podony, J. (1993). A status-based model of market competition. . *American Journal of Sociology*, 98, 4, 829-872.
- [16] Roberts, P. a. (2002). Corporate Reputation and sustained superior financial performance. *Strategic Management Journal*, 23, 1077-1093.
- [17] S, A. A. (2002). The Granger Causality Tests for the Five ASEAN Countries' Stock Markets and Macroeconomic Variables During and Post the 1997 Asian Financial Crisis. *Journal Manajemen & Kewirausahaan*, Vol. 7, No. 1, pp. 1-21.
- [18] Shapiro, C. (1983). Premiums for high quality products as returns to Reputations. *Quarterly Journal of Economics*, 98, 4, 659-679.
- [19] Shenkar, O. a.-Y. (1997). Reputation, image, prestige, and goodwill: an interdisciplinary approach to organizational standing. *Human Relations*, 50, 11, 1361-1381.
- [20] Tomak, S. (2014). Corporate Reputation and financial performance of firms in Turkey. . *Niğde Üniversitesi İİBF Dergisi*, 7(1), 289-303.
- [21] U, S. R. (2005). Inflation, Stock Returns, and Real Activity in Turkey. *The Empirical Letters*, Vol. 4, pp. 181-192.
- [22] Wartick, S. (2002). Measuring Corporate Reputation. *Business and Society*, 41, 4, 371-392.