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Governance and Performance of Scheduled Urban Cooperative Banks in India

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Abstract: This paper examined the relationship of governance and financial parameters for scheduled urban cooperative banks in India. Governance related parameters such as participation in annual general meetings, low or nil presence of family members in boards, training of staff, etc. were found to have significant, though not strong, positive correlations with Net Interest Margins, Return on Assets, and Return on Equity (ROE). The democratic structure of cooperative banks, beyond a threshold, and the quality of their professional management contributed to the quality of the overall governance at an increasing rate. Aspects such as educational qualifications of CEOs, qualifications and training of directors, training of staff, etc., were assessed as significant differentiators of the quality of governance. Improved quality of professional management contributed to about 32 basis points rise in the Net Interest Income, and the banks with very high governance scores enjoyed a higher ROE by 366 basis points.

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1. Introduction

Banking, due to its inherently risky nature and built-in jeopardy relating to high leverage, fiduciary responsibility, and asset-liability mismatches, demands the highest level of governance standards and regulatory oversight. Flannery (1998) pointed out that excessive risk-taking by banks can create significant negative externalities and systemic risk, which is one of the reasons that the banking system is heavily regulated. However, notwithstanding the regulations, the quality of governance at the level of banking institutions plays a significant role in their stability and financial soundness. Boyd and Runkle (1993) argued that banking supervisors fear the failure of bigger banks much more than the failure of smaller banks as the former is more likely to result in macroeconomic instability. This dichotomy often results in a perceived de facto sovereign guarantee for large banks but the same might not be available in the case of smaller banks. Therefore, while governance remains a cornerstone for all banks, any vulnerabilities in the governance structure could be far more damaging for smaller banks. This paper is an attempt to examine the quality of governance and its relationship with the financial performance of Scheduled Urban Cooperative Banks (UCBs) in India.

The structure of banking in India comprises several categories of banks. Amongst these, the Primary Cooperative Banks, also known as Urban Cooperative Banks (UCBs) in India are registered as cooperative societies under the provisions of either the State Cooperative Societies Act(s) of the state concerned or the Multi-State Cooperative Societies Act, 2002. These are essentially cooperative societies, licensed by the Reserve Bank of India for conducting banking business. In terms of business, as on March 31, 2019, there were 1544 UCBs with an aggregate asset size of ₹ 599213.72 Crore (₹ 5992.14 billion, Table 1). To put it in perspective, this was about 3.61% of the aggregate asset size of scheduled commercial banks in India. Therefore, in terms of the size of the business, UCBs in India are comparatively small but they are of socio-economic importance. Within the UCBs, the scheduled[1] banks, despite being only 3.5% of the total number of UCBs, controlled about 48% of the total assets of the UCB sector as on March 31, 2019 (Figure 1). In the case of UCBs, there have been concerns about their financial soundness and quality of

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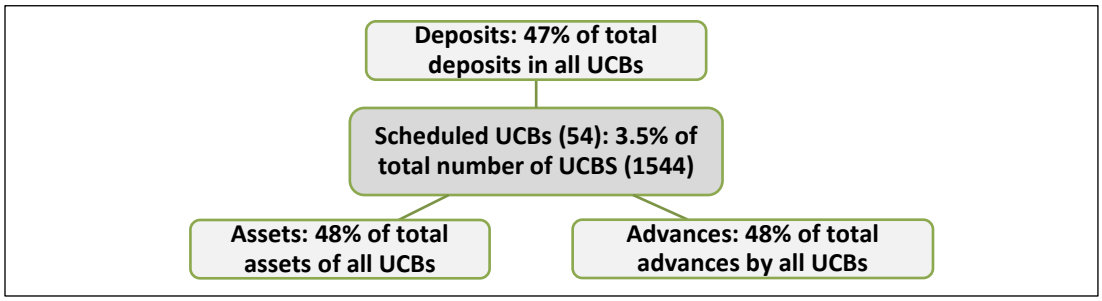
governance. Kumar and Srivastava (2020) analyzed the reasons for the failure of UCBs in India and concluded that the manifestation of governance and managerial malpractices in poor asset quality, liquidity constraints, and ill-preparedness to tackle business and environmental upheavals, caused their failure. A sound governance structure portends the trust of depositors in the bank's ability to safely keep their funds and honour its liabilities. Several UCBs have faced problems due to governance deficiencies and therefore, it is quite pertinent to evaluate the quality of governance in UCBs and its relationship with their key financial parameters. Scheduled UCBs with a sizeable presence in the UCB sector provide ample scope for the study.

Figure 1: Contribution of Scheduled UCBs in the entire UCB Sector

Table 1: Financial Position of UCBs (₹ Crores, 1 Billion = 100 Crore)						
	Scheduled UCBs			All UCBs		
	2017	2018	2019	2017	2018	2019
Number of UCBs	54	54	54	1562	1551	1544
Deposits	207,247.26	212,041.12	225,687.51	443,468.85	456,506.84	484,315.85
Advances	129,182.41	136,822.38	146,571.55	261,201.91	280,459.59	303,017.76
Total Assets	254,338.89	264,757.71	284,928.72	539,924.23	563,251.51	599,213.72



[Source (Table 1/ Figure 1) – Report on Trend and Progress of Banking in India, RBI, 2017-18/ 2018-19]

The rest of the paper is organized as follows. Section 2 deals with the governance in UCBs. Section 3 provides a discussion about governance and financial performance. Section 4 presents a review of relevant literature, followed by Section 5 containing the objectives, sample, and methodology of the paper. Section 6 presents a detailed data analysis using regression, correlation, and hypotheses testing, followed by a summary of findings in Section 7 and the conclusion in Section 8. References and endnotes are followed by the appendix, which contains the questionnaire used. The words, Governance, and Corporate Governance have been used interchangeably in this paper.

2. Governance in Urban Cooperative Banks

Governance is a system by which organizations are managed and controlled in accordance with transparent published rules and regulations, both ethical and legal, in pursuit of the Urban Cooperative Banks' purposes. It is concerned with how organizations are run generally and in particular with the relationship between the management of an organization and its stakeholders. A sound system of governance helps implement effective and efficient management practices and align the incentives of the board of directors and senior managers with those of other stakeholders. All Cooperative Banks, being highly leveraged organizations and repositories of public trust, require a robust governance framework. Moreover, in the context of developing economies, banks usually have a dominant role in the financial system and have a significant impact on the growth of the real economy (Levine, 1997). Further, Caprio and Levine (2002) pointed out that corporate governance at cooperative banks assumes greater significance on account of two factors: first, opacity in banking due to their inherent nature and consequent greater information asymmetries between insiders and other stakeholders; and second, intense banking regulations tend to impede organic corporate governance and control mechanisms. In this connection, Das and Ghosh (2004) argued that banking regulations, for instance, an effective deposit insurance scheme, reduce monitoring by insured

depositors and thereby increase incentives for rent-seeking and shifting bank assets to more risky investments by the management. They also opined that regulatory restrictions on the concentration of ownership generally interfere with one of the main mechanisms for exerting corporate governance through interested ownership. However, in the case of cooperative banking institutions, regulation and supervision must not only co-exist with the corporate governance standards but these should reinforce each other. This necessitates that banking supervisors should closely monitor the quality of corporate governance in banks as an essential element for their safe and sound functioning, as any governance lapses may adversely affect the bank's risk profile. Well-governed banks provide comfort to supervisors by reducing the need for supervisory intervention, as supervisors can place more reliance on the bank's internal processes. On the contrary, poor governance standards at banks make the job of supervisors more onerous and create distrust between the supervisor and supervised entity.

While the importance of corporate governance for banks cannot be overemphasized, in the case of UCBs, the corporate governance has come into sharp focus as serious governance problems in some UCBs have threatened the profile and identity of the entire cooperative banking system in India (Vishwanathan, 2018). The case of UCBs is a little different from commercial banks because an inherent governance conflict exists in their structure. The prime objective of a cooperative is to look after the interests of its members, and hence, in a cooperative bank, it is quite natural to have a tussle between the interests of members (most of them may be borrowers), and those of depositors (several may be non-members). Therefore, Vishwanathan (2018) advocated that it is necessary to ensure proper segregation of the governance roles between adherence to the cooperative principles by the UCB and the operations of the entity as a bank funded by public deposits.

Implementation of good governance in banks goes much beyond adherence to prudential regulations to establish best practices and sound systems and controls. The Cadbury's code[2] in the United Kingdom was the starting point, which led to many other codes. Effective corporate governance depends upon the commitment of the key people in the organization. The first and foremost is the commitment of the management to the principle of integrity and transparency in business operations. The second is the legal and administrative frameworks created by the government and the third is an effective system of market discipline and 360-degree supervisory oversight. Moreover, the board of directors should be ultimately responsible for the operations and financial soundness of a bank. Besides, banks should have an adequate number of directors who, as a whole, are capable of exercising judgment independently of the views of the management, or external interests. Therefore, the board must also include independent members with specialized skill sets. Participation of independent, professional directors in various board-level committees is also expected to ensure adherence to the highest standards of governance standards. Such guidelines for banks are in place in India taking a cue from the Bank for International Settlements (BIS) guidelines for corporate governance in banks, which provide a well-designed architecture for effective corporate governance in banks. The BIS guidelines place overall responsibility of governance on the boards of banks and lay thrust on requisite qualifications. They require banks to put in place an appropriate governance structure and delineation of senior management's responsibility, besides deciding the risk appetite, remuneration, and other policies. The guidelines also emphasize transparency, internal audit, independent risk management, and supervisory guidance3. This paper has made use of most of such criteria for the assessment of the quality of Governance in scheduled UCBs and its relationship with their financial performance.

3. Governance and Financial Performance of UCBs

Good governance systems, professional management, and sound internal control systems are meant to ensure efficiency and integrity in operations, which in a medium to long term should boost financial and structural soundness of the UCBs. Accordingly, a better quality of governance in UCBs is expected to positively nudge their financial performance. One of the important governance functions is that the board must keep a watch on bank's financial performance by seeking periodic detailed reports from the senior management. Being a cooperative and democratic organization, active participation of members in the governance of UCBs, through the election of the Board and Annual General Meetings, is one of the cardinal principles of their corporate governance. In a similar setting, Branch and Baker (1998) concluded that member ownership and control is key to the success of credit unions. Therefore, it is expected that a high-quality governance structure should have a two-way favourable impact on the financial performance of UCBs. First, good governance standards shall ensure adoption of best business

practices and integrity in operations, which will help plug leakages through a robust system of checks and balances. The second-round positive impact on financial performance is expected to come from the vigilant monitoring of operations and financial performance by senior management and the board. Thirdly, Cooperative Banks need a management culture committed to cooperative values and purposes. This paper leveraged the body of work already undertaken in this area and attempted to make a further contribution in the context of scheduled UCBs in India.

4. Review of Literature

A large number of studies have examined the relationship between governance and firm performance. Though not many studies examined this relationship specifically in the context of cooperative banks, some of the notable contributions brought out several relevant issues which have been built upon by this paper in the context of scheduled urban cooperative banks in India.

Bhagat and Bolton (2013) in their efforts to measure director ownership in boards of US companies found a significant negative relationship between board independence and operating performance during the pre-2002 period, but a positive and significant relationship post-2002. The distinguishing factor between the pre- and post-2002 periods was the enactment of the Sarbanes-Oxley Act of 2002 in the USA, which mandated that all members of a listed firm's audit committee must be independent. In the case of credit unions, Mugennyi (2010) contended that despite the rapid growth and the importance attached to credit unions in the microfinance sector, their biggest challenge remained the corporate governance mechanism. The corporate governance indicators used in the study of credit unions by Nkwati and Akame (2017) were chiefly (i) board role and composition; (ii) transparency and disclosure; (iii) auditing and compliance; and (iv) risk. They argued that just as is the case of other indicators of financial performance, such as loans and liquidity, the profitability indicators are also influenced positively by the above four governance indicators. The authors found that good corporate governance functioned as a veritable tool to enhance the financial performance of microfinance institutions as a whole and the credit unions in particular. However, business advisory and funding support services, for instance, lending by UK Industrial Common Ownership Finance Limited to cooperative start-ups that could not raise their capital, also played a key role in the success of small cooperatives.

To determine the impact of governance on the performance of banks, Ali (2011) undertook an empirical study of a sample of 10 Tunisian banks for the period 1997-2007, which showed a positive association between external administrators and performance. The study also indicated that managers lacked control while the board of directors seemed to exert a lot of power. Results also revealed a negative association between the presence of a group of dominant shareholders and bank performance.

Based on a sample of 14 banks listed on Jordan's Amman Stock Exchange, during 1997 to 2006, Tomar and Bino (2012) investigated the influence of corporate governance (namely, ownership structure, board composition, and board size) on the bank performance. The results showed that ownership structure and board composition had a strong impact on bank performance. Results indicated that banks with institutional majority ownership had the best performance but the size of the board had no effect on the bank's performance. In a study on cooperative banks of 12 countries namely, France, Greece, Bulgaria, Germany, Denmark, Luxembourg, Portugal, Poland, Cyprus, Netherlands, Australia, and Finland over a period ranging from 2004 to 2011, Maroua (2015) found that the governance of cooperative banks had a significant influence on their performance. It was also noticeable that the membership variable had a strong impact on performance. However, information asymmetry and conflicts of interest amongst members resulted in a significant and negative impact on the performance of cooperative banks. Yamori, Harimaya, and Tomimura (2017) sought to examine the effect of governance-related variables on performance across stock and cooperative banks in Japan and established that a large number of board members had negative effects on the efficiency of both stock and cooperative banks. On the other hand, the presence of outside directors had a significant effect on efficiency measures for cooperative banks, whereas the same had no significant effect on stock banks. These results suggested that the presence of outside directors was more necessary for cooperative banks than for stock banks, which were subjected to comparatively stronger market discipline. Since member-driven cooperative banks being endogenous in their operations faced comparatively less market scrutiny

and pressure from shareholders, a discipline imposed by the presence of outside directors in their boards had a positive impact on their efficiency.

This paper has contributed to the existing body of knowledge on the subject by identifying significant factors relating to the governance structure of UCBs along its three dimensions, namely, democratic structure, professionalism, and control. It filled the gap which existed in the body of knowledge on the subject due to insufficient work on the relationship of governance and financial performance concerning cooperative banks.

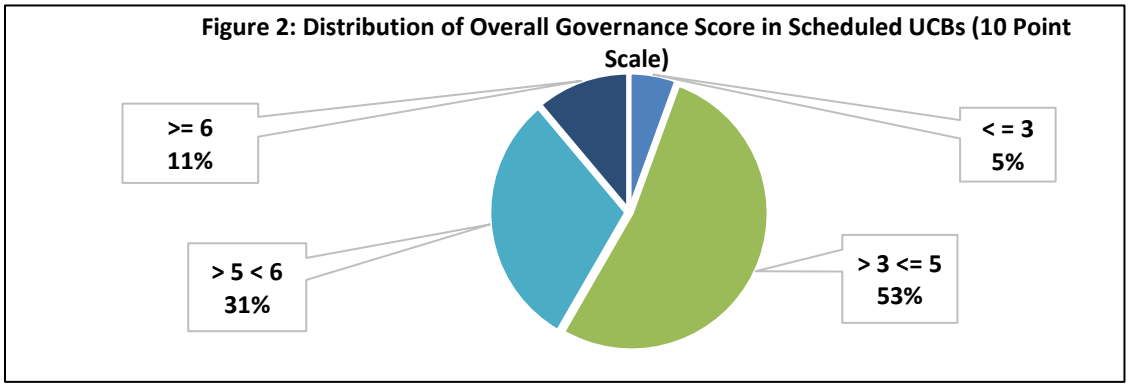
5. Objectives, Sample, Methodology, and Limitations

This paper assessed the quality of governance systems in scheduled UCBs, and also examined the relationship between the effectiveness of corporate governance in scheduled UCBs and their financial performance. The quality and effectiveness of the governance were measured by computing a governance score. A model for computing an overall governance score, comprising three sub-components of democratic structure, professional management, and control systems was developed by assigning a weight of 25%, 40%, and 35%, respectively, for the above sub-components. In all, 21 parameters were used for scoring, out of which 19 parameters were distributed across the above three components, and 2 were supplementary add-on parameters. The scoring model developed and used for the study is placed in the Appendix. Information about the model parameters was sought from the scheduled UCBs voluntarily without informing them about the respective weights of the model parameters. Out of the 54 scheduled UCBs in India, 36 responded, which makes the sample for the study covering about 67% of the population in terms of the number of banks and about 77% of the total asset size of scheduled cooperative banks. Based on the information supplied by the banks, respective sub-scores for democratic structure, professional management, control systems, and an overall governance score were computed. Financial performance of scheduled UCBs was measured by the mean value of their key financial indicators for the last three years, which are available on the database link on the Reserve Bank of India (RBI) website. Suitable statistical tools were used for analysis and interpretation.

Limitations: A difficulty in assessment of certain aspects of corporate governance namely, the quality of discussions and deliberations in board-level committees, adherence to arm's length principles in connected transactions, the integrity of board members, etc., is a limitation of this paper. However, the researchers ensured that the questions posed for computation of the governance score were direct and unambiguous and had minimal scope for interpretational/perceptual errors.

6. Data Analysis & Interpretation

The governance score was computed for the 36 scheduled urban cooperative banks (UCBs) who responded to the questionnaire used for the study. The governance score was a 10-point scoring model with three components, namely, democratic structure, professional management, and control systems with maximum scores of 2.5, 4.0, and 3.5 points, respectively. The assumption of our research, based on the literature above, is that the democratic process, systems for internal supervision, and management control represent the three key elements in any analysis of cooperative governance. Giving the lowest rating to the democratic process may seem contrary to cooperative identity but we feel the reality of low levels of membership participation and the membership's distance from decision making on a day-to-day basis in large cooperatives makes a small reduction in the weighting a simple recognition of reality. The wide acceptance of the agency problem in literature and the privileged position of executive management in access to and distribution of information justifies assigning management the higher weighting. It is critical, however, for the management not to hide behind boards, merely on an insistence on the cooperative context, but to accept responsibility for upholding an ethical agency contract based on cooperative identity and purpose. The third element in the scoring process is certainly very important as the professional processes still need ethical human implementation to work. The distribution of the computed governance scores of scheduled UCBs is presented in Figure 2.



It could be observed that 11% of the banks scored 6 or more out of 10, 31% scored between 5 and 6, 53% scored between 3 and 5, and 5% scored less than or equal to 3 in the overall governance score. For the analysis, governance scores between 5 and 6 were referred to as high scores (31% banks), and those equal to or more than 6 (11% of the banks) were designated as very high governance scores.

6.1 Descriptive Statistics of the Governance Score and its Components

Descriptive statistics of the overall governance score of the scheduled UCBs under study is placed in Table 2. To test for normality, the One-Sample Kolmogorov-Smirnov test was applied. Results of the test are provided in Table 3. Test results showed that the variables representing the overall governance score, control systems, and professional management showed p-values greater than 0.05 and hence, these adhere to a normal distribution. The variable representing democratic structure had a p-value less than 0.05 and hence, it did not conform to a normal distribution. However, transformed to its square, the squared variable representing democratic structure had improved its normal distribution characteristics (p-value ~ 0.01).

Table 2: Descriptive Statistics - Governance Score and its Components

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
SCORES FOR -	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
DEMOCRATIC STRUCTURE **(DEMO)**	36	0.00	1.95	1.3292	0.30668	-2.201	0.393
PROFESSIONAL MANAGEMENT **(PROF)**	36	0.90	3.80	1.8633	0.62769	0.945	0.393
CONTROL SYSTEMS **(CONTL)**	36	0.80	3.25	1.7606	0.62743	0.448	0.393
GOVERNANCE SCORE **(GOV_SC)**	36	1.72	6.90	4.8232	1.11934	-0.274	0.393
Valid N (listwise)	36						

Table 3: One-Sample Kolmogorov-Smirnov Test						
		DEMO	(DEMO)^2	PROF	CONTL	GOV_SC
N		36	36	36	36	36
Normal Parameters[a,b]	Mean	1.3292	1.8581	1.8633	1.7606	4.8233
	Std. Deviation	.30668	.65791	.62769	.62743	1.11937
Most Extreme Differences	Absolute	.222	.173	.107	.106	.079
	Positive	.178	.165	.107	.106	.078
	Negative	-.222	-.173	-.074	-.063	-.079
Test Statistic		.222	.173	.107	.106	.079
Asymp. Sig. (2-tailed)		.000[c]	**.008[c]**	**.200[c,d]**	**.200[c,d]**	**.200[c,d]**

a. Test distribution is Normal. b. Calculated from data.
c. Lilliefors Significance Correction. d. This is a lower bound of the true significance.

Test Result: Variables - Null hypothesis of normal distribution can't be rejected (p > 0.05). PROF, CONTL, and GOV_SC conform to a normal distribution. However, DEMO does not follow a normal distribution. (DEMO) ^2 is not perfectly normal but the transformation has improved its normality.

Following variables represent scores for –

DEMO – Score for Democratic Structure, PROF – Score for Professional Management,
CONTL – Score for Control Systems, GOV_SC – Governance Score

6.2 Regression Analysis for Governance Score

The overall governance score comprised three components, namely, democratic structure, professional management, and control systems. A regression analysis, presented in Table 4, showed a significant regression estimate with adjusted R-Square at 0.924. The Durbin Watson test value at 2.1 indicated almost no autocorrelation in data, and the Variance Inflation Factor (VIF) was found close to 1.0 for all the independent variables which indicated no multi co-linearity in the data. The estimated equation was as follows.

GOV_SC = 0.186 + 0.422*(DEMO)^2 + 1.134*(PROF) + 0.988*(CONTL)

Where, CONTL: Score for Control Systems, PROF: Score for Professional Management,
DEMO: Score for Democratic Structure, GOV_SC: Governance Score. Constant, not significant.

Table 4: Regression Analysis for Governance Score					
Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.965[a]	0.931	**0.924**	0.30790	**2.143**

a. Predictors: (Constant), CONTL, PROF, DEMO-SQ
b. Dependent Variable: GOV_SC

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40.821	3	13.607	143.534	.000[b]
	Residual	3.034	32	.095		
	Total	43.854	35			

a. Dependent Variable: GOV_SC b. Predictors: (Constant), CONTL, PROF, DEMO-SQ

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		Beta	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.186	0.234		0.795	0.432		
	DEMO-SQ	0.422	0.081	0.248	5.180	**0.000**	.942	**1.061**
	PROF	1.134	0.084	0.636	13.461	**0.000**	.968	**1.033**
	CONTL	0.988	0.084	0.554	11.703	**0.000**	.966	**1.036**
a. Dependent Variable: GOV_SC								

The above regression estimate is reliable (Durbin Watson and VIF test) and highly significant (p-value < 0.01) for all the explanatory variables but not for the constant. A high value of adjusted R-Square showed that the three predictors were able to explain 93.1% of the variation in the dependent variable, and hence, a non-significant character of the constant did not take away the significance of the regression estimate. The adjusted R-Square was very close to R-Square, and hence, the model did not suffer from the problem of too many predictors. The estimated equation showed that the 10-point Governance Score of scheduled UCBs, as computed by the model used for the paper, could increase (decrease) by 1.134% against a 1% increase (decrease) in the score for professional management. Further, a 1% increase (decrease) in the score for control systems could bring a 0.988% increase (decrease) in the governance score. Finally, a 1% increase (decrease) in the score for democratic structure could lead to an increase (decrease) of 0.844% (2 * 0.422) of the score for democratic structure in the governance score. To illustrate, if a bank's score for the democratic structure is 1.5 (out of a maximum score of 2.5 assigned for democratic structure in the scoring model), a 1% increase (decrease) in the score for the democratic structure will lead to a 1.266%[4] increase (decrease) in the governance score.

Based on the above regression estimate, the following deductions are made regarding the impact of the three explanatory variables, namely, score for democratic structure, professional management, and control systems on the overall governance score.

The score for professional management had a direct impact on the governance score at an increasing rate. A change of 1% in its score caused a 1.134% change in the governance score.

The score for control systems had a direct impact on the governance score at a slightly decreasing rate. A change of 1% in its score caused a 0.988% change in the governance score.

The score for democratic structure operated with a threshold at 1.185 which represented a 47.4% mark in the score for democratic structure. At this threshold score for democratic structure, a 1% change in it caused an equivalent percentage change in the governance score[5]. However, for banks scoring more than 47.4%, any change in the score for the democratic structure had an increasing rate impact on the governance score. Similarly, for banks scoring less than 47.4%, any change had a decreasing rate impact on the governance score. This meant that as per the scoring model used for this paper and the above estimated significant regression equation, banks performing better (score >= 1.185 out of 2.5) on the democratic score gained more by further enhancing their democratic character. However, other banks, scoring less than the threshold governance score, needed to cross the minimum threshold level to have a positive impact on their overall governance score. In the case of the banks covered by the study, 80.6% of banks obtained equal to or more than the threshold score for democratic structure with an average value of 1.43.

The above discussion highlighted the importance of all three components of the governance score. To further understand the interaction of important governance parameters, the following paragraphs present a detailed analysis of key governance and financial parameters and their relationships.

6.3 Descriptive Statistics of Key Governance and Financial Parameters

Following the discussion about the governance score and its three components in the previous section, Table 6 presents the descriptive statistics of select components of the overall governance score of scheduled UCBs as per the scoring model placed in the Appendix. Instead of listing the details of all 21 parameters used in the model, the table presents only ten select parameters which were found to have a good correlation with the scheduled UCBs' key financial parameters. This reduced the size of tables and helped in a simple and clear presentation. An explanation of these select ten parameters is presented as follows (Table 5).

Table 5: Select Governance Parameters (abbreviation used and their explanations)

M_ELECT	Member Participation in Elections (Higher Participation – Higher Score)	**CEO_QUAL**	CEO's Educational Qualifications (Higher Qualifications – Higher Score)
M_AGM	Member Participation in AGM (Higher Participation – Higher Score)	**BD_TRAIN**	Training of Board Members (Higher Percentage of Training – Higher Score)
2_MORE_TERMS	More than Two Consecutive Terms for Board Members (More Terms – Lower Score)	**STF_TRAIN**	Training of Staff (Higher Percentage of Training – Higher Score)
BD_FAM	Family Members in Board (More Family Members – Lower Score)	**COMPL_D**	Existence of the Compliance Department (Score for the department, else zero)
DIR-QUAL	Director's Educational Qualifications in finance, accounts, or IT (Higher Qualifications – Higher Score)	**PROF_AD**	Attendance of Professional Directors in Audit Committee Meetings (Higher Percentage of Attendance– Higher Score)
Other parameters used for computation of governance score, as per model (Appendix), though reflected in the component and overall score, did not show any significant correlation with key financial parameters.			

Table 6: Descriptive Statistics – Select Governance Parameters

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Std. Error
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
(i) Select Parameters – Democratic Structure							
Member Participation in Elections (Higher Participation – Higher Score)	36	.00	.45	.1417	.07973	1.139	.024
Member Participation in AGM (Higher Participation – Higher Score)	36	.00	.45	.1542	.05654	3.720	.026
More than Two Consecutive Terms for Board Members (More Terms – Lower Score)	36	.00	.45	.2167	.10420	.751	.036
Family Members in Board (More Family Members – Lower Score)	36	.00	.90	.8167	.18439	-2.894	.136
(ii) Select Parameters – Professional Management							
Director's Educational Qualifications (Higher Qualifications – Higher Score)	36	.00	.90	.4167	.21844	.645	.069
CEO's Educational Qualifications (Higher Qualifications – Higher Score)	36	.30	.90	.6333	.26619	-.227	.106
Training of Board Members (Higher Percentage of Training – Higher Score)	36	.00	.90	.3667	.21647	.600	.061
Training of Staff (Higher Percentage of Training – Higher Score)	36	.00	.45	.1875	.11550	1.516	.031
(ii) Select Parameters – Control Systems							
Existence of the Compliance Department (Score for department, else zero)	36	.00	.50	.3472	.23359	-.881	.058
Attendance of Professional Directors in Audit Committee Meetings (Higher Percentage of Attendance– Higher Score)	36	.00	.45	.3083	.13862	-.575	.051
Valid N (listwise)	36						

These ten select parameters were tested for normality using the One-Sample Kolmogorov-Smirnov test. Results of the test are below in Table 7. Test results showed that all ten variables representing select components of the governance score showed a p-value less than 0.05 and hence, these did not adhere to a normal distribution. This necessitated the use of non-parametric techniques for correlation analysis and hypothesis testing in the subsequent sections.

Table 7: One-Sample Kolmogorov-Smirnov Test: Select Governance Parameters

		M_ELECT	M_AGM	2_MORE_TERMS	BD_FAM	DIR-QUAL	CEO_QUAL	BD_TRAIN	STF_TRAIN	COMPL_D	PROF_AD
N		36	36	36	36	36	36	36	36	36	36
Normal Parameters[a,b]	Mean	.142	.154	.217	.817	.417	.633	.3667	.188	.347	.308
	Std. Deviation	.080	.057	.104	.185	.218	.266	.21647	.116	.234	.139
Most Extreme Differences	Absolute	.403	.502	.350	.452	.342	.286	.343	.461	.438	.236
	Positive	.403	.502	.350	.326	.342	.228	.343	.461	.257	.153
	Negative	-.403	-.443	-.233	-.452	-.241	-.286	-.268	-.317	-.438	-.236
Test Statistic		.403	.502	.350	.452	.342	.286	.343	.461	.438	.236
Asymp. Sig. (2-tailed)		**.000[c]**	**.000[c]**	**.000[c]**	**.000[c]**	**.000[c]**	**.000[c]**	**.000[c]**	**.000[c]**	**.000[c]**	**.000[c]**

a. Test distribution is Normal. b. Calculated from data. c. Lilliefors Significance Correction.
Result – Null hypothesis of normal distribution rejected ($p < 0.05$). Test distribution for all variables is not normal.

Table 8 presents the descriptive statistics of the key financial parameters of the scheduled UCBs. One-Sample Kolmogorov-Smirnov test for a test of normality is presented in Table 9. Test results showed that all the financial variables except NIM and ROA showed a p-value less than 0.05 and hence, these did not adhere to a normal distribution.

Table 8: Descriptive Statistics: Key Financial Parameters

(₹ Crore) **(1 Billion = 100 Crore)**	N	Minimum	Maximum	Mean	Std. Deviation	Skewness
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
Capital	36	10.49	366.36	83.8928	81.83416	1.967
Reserves	36	-581.64	3621.69	349.4442	653.62251	3.849
Deposits	36	396.57	34936.32	4593.7903	6463.69313	3.399
Investments	36	186.05	9818.15	1488.3803	1905.68533	2.923
Advances	36	109.43	23600.89	2940.1344	4438.77873	3.377
Assets	36	563.56	46224.83	5721.9919	8334.88772	3.677
PAT	36	-11.16	255.34	31.0761	48.24252	3.374
NIM (%)	36	1.25	4.03	2.7928	.63730	-0.115
ROA (%)	36	-1.97	1.54	.5822	.63230	-1.800
CRAR (%)	36	-542.40	41.90	-1.4728	93.38526	-5.872
ROE (%)	36	-7.07	40.87	7.7856	7.20611	2.543
Valid N (list wise)	36					

Table 9: One-Sample Kolmogorov-Smirnov Test: Key Financial Parameters

		Capital	Reserves	Deposits	Investments	Advances	Assets	PAT	NIM (%)	ROA (%)	CRAR (%)	ROE (%)
N		36	36	36	36	36	36	36	36	36	36	36
Normal Parameters[a,b]	Mean	83.89	349.44	4593.79	1488.38	2940.13	5721.99	31.08	2.79	.58	-1.47	7.79
	Std. Deviation	81.83	653.62	6463.69	1905.69	4438.78	8334.89	48.24	.64	.63	93.39	7.21
Most Extreme Differences	Absolute	.243	.294	.298	.29	.321	.299	.271	.109	.144	.494	.193
	Positive	.243	.294	.298	.287	.321	.299	.271	.109	.103	.355	.193
	Negative	-.185	-.264	-.258	-.247	-.262	-.268	-.223	-.087	-.144	-.494	-.120
Test Statistic		.243	.294	.298	.287	.321	.299	.271	.109	.144	.494	.193
Asymp. Sig. (2-tailed)		**.000[c]**	**.000[c]**	**.000[c]**	**.000[c]**	**.000[c]**	**.000[c]**	**.000[c]**	**.200[c,d]**	**.056[c]**	**.000[c]**	**.002[c]**

a. Test distribution is Normal. c. Lilliefors Significance Correction.
b. Calculated from data. d. This is a lower bound of the true significance.
Result – Null hypothesis of normal distribution rejected ($p < 0.05$) for all variables except NIM and ROA. Test distribution for all variables is not normal for all variable except NIM and ROA.

Having studied the nature of data-points about the governance score, its components/parameters and the key financial parameters, the following section examines correlation to better understand the symbiotic nature of these parameters.

6.4 Correlation of the Governance Score, its Components and Parameters with Key Financial Parameters

Table 10 presents the nonparametric correlation using Kendall's tau model. However, as NIM and ROA followed a normal distribution, Pearson correlation coefficients are also computed for NIM and ROA with reference to the scores for governance components.

Table 10: Correlation of the Components of the Governance Score with Key Financial Parameters

Nonparametric Correlations (Kendall's tau_b) - Correlation Coefficient and their Significance (N = 36)

SCORES FOR -	Capital	Reserves	Deposits	Investments	Advances	Assets	PAT	NIM	ROA	CRAR	ROE
Democratic Structure	-0.032	0.029	-0.043	-0.138	-0.050	-0.058	0.054	**0.219@**	0.177	0.232	0.188
Professional Mgmt.	**0.291#**	0.300	**0.349***	0.201	**0.421***	**0.311#**	0.201	0.128	0.015	-0.040	0.014
Control Environment	0.267	**0.348***	**0.426****	**0.398***	**0.400***	**0.443****	**0.383***	0.042	0.138	0.133	0.093
Overall Governance	**0.375***	**0.436****	**0.501****	0.326	**0.533****	**0.471****	**0.414***	0.013	0.081	-0.053	0.110

(Higher Score -Better Position). **@ Pearson Correlation of 0.360, significant at 5%.**

**** Significant at 1%, * Significant at 5%, # Significant at 10%**

It can be observed from Table 10 that the overall Governance Score has a statistically significant positive, though not very strong, correlation with certain financial parameters, namely, Reserves, Deposits, Advances, Assets, and Profit after Tax (PAT). Though a correlation analysis does not indicate causation, it means that these financial parameters of scheduled UCBs moved positively along with the governance score. Looking at the individual components of the governance score, the democratic structure had a significant positive correlation with NIM. Professional Management correlated positively with Capital, Deposits, Advances, and Assets. It could be inferred that the banks with a better score for professional management enjoyed a superior position in these financial parameters. Regarding the control environment, positive correlations were observed in respect of Reserves, Deposits, Investments, Advances, Assets, and PAT.

Having discussed the significant correlations of the components of governance score with key financial parameters, Table 11 presents nonparametric correlations of the select parameters of the governance score with the key financial parameters.

Table 11: Correlation of the Select Parameters of Governance Score(s) with Key Financial Parameters

Nonparametric Correlations (Kendall's tau_b) (N = 36)

SCORES FOR –	Capital	Reserves	Deposits	Investments	Advances	Assets	PAT	NIM	ROA	CRAR	ROE
M_ELECT	-0.093	-0.048	-0.071	-0.121	-0.052	-0.090	-0.119	0.150	-0.036	0.173	0.207
M_AGM	0.023	**0.329****	0.238	0.159	**0.284#**	0.204	0.216	0.062	0.136	**0.306#**	**0.363***
2_MORE_TERMS	0.005	0.085	0.065	0.003	0.045	0.049	-0.029	0.048	-0.070	-0.027	-0.010
BD_FAM	0.047	0.112	-0.009	-0.118	0.030	-0.039	0.212	**0.348***	**0.331***	**0.361***	0.254
DIR-QUAL	0.102	0.172	0.177	0.030	0.223	0.137	0.131	0.007	0.019	-0.135	0.110
CEO_QUAL	0.188	0.118	0.144	0.121	0.139	0.147	0.164	0.177	0.157	-0.043	-0.006
BD_TRAIN	0.029	-0.057	-0.013	-0.141	0.086	-0.053	-0.122	0.218	-0.066	0.092	0.033
STF_TRAIN	0.263	0.130	0.079	-0.012	0.134	0.050	0.152	**0.294#**	0.126	0.127	0.121
COMPL_D	-0.055	0.119	0.084	0.142	0.026	0.113	0.148	0.200	**0.203@**	**0.340***	0.038
PROF_AD	0.059	0.124	0.073	0.050	0.121	0.068	-0.023	0.068	-0.116	-0.157	-0.022

@ Pearson Correlation Coefficient 0.345, significant at 5%.
**** Significant at 1%, * Significant at 5%, # Significant at 10%.**

It can be observed that participation in a bank's annual general meeting (AGM) has a significant positive, but not very strong, correlation with the position of Reserves, Advances, Capital Adequacy (CRAR), and Return on Equity (ROE). It can be argued, therefore, that higher participation of members in the AGM strengthens the market discipline on UCBs and thereby catalyses the bank's position regarding these financial parameters. Moreover, greater participation of members in the AGM ensures that the economic interest of members is accorded due importance and thereby, such banks, quite intuitively, produce a higher return on equity (ROE).

Another crucial result was related to the presence of family members[6] in the bank's boards. A higher score on this count meant a lesser presence of family members in the board. This variable positively correlated with Net Interest Margin (NIM), Return on Asset (ROA), and Capital Adequacy (CRAR). This is very important as it shows that banks with more independent boards (less or nil presence of family members) have a propensity to perform better in terms of NIM, ROA, and CRAR. Further, training of staff had a significant positive correlation with the net interest margin (NIM). It can be argued that better-trained staff can handle the business better and thereby achieve higher NIM. In another significant result, a higher score for a well-functioning compliance department had a positive correlation with ROA and CRAR.

The above correlation analysis provided very useful insights about the relationship between governance and the financial performance of scheduled UCBs. Besides, it is also important to understand the significant differences in the characteristic of banks based on their scores across the governance components. To facilitate the analysis, the next section presents a clustering of the governance components into two groups, namely, higher scores and lower scores, based on a certain cut-off. The normal cut-off was fixed intuitively around 50%, i.e., 1.5 out of 2.5 for democratic structure, 2 out of 4 for professional management, 2 out of 3.5 for control systems, and 5 out of 10 for the overall governance score. Group-1 represented the banks scoring equal to or better than the cut-off and Group-2 comprised banks scoring less than the cut-off. Additionally, scores for the democratic structure were also grouped based on the threshold score computed in Section 6.2. Moreover, one additional grouping was attempted for the overall governance score in respect of banks achieving very high scores compared to others. A summary of groupings and the number of banks falling into each group, used for key differentiator analysis, is presented in Table 12.

6.5 Understanding the Key Differentiators using a Grouping Analysis

Based on a grouping of key governance components, the Independent-Samples Mann-Whitney U Test was used to analyze if the banks falling into these groups showed significantly different characteristics in key governance and financial parameters. Rejection of the null hypothesis using the test proved that the groups were significantly different. To be brief, only the cases showing significant differences were included. The parameters not discussed in the following paragraphs did not show any significant difference across the groups of governance components.

Table 12: Grouping of Governance Parameters based on Scores				
Grouping of Governance Components based on scores for: (N=36)	**Group 1 (Higher Scores)**		**Group 2 (Lower Scores)**	
Democratic Structure (Max Score = 2.5)	Score >= 1.5	(N = 14)	Score < 1.5	(N = 22)
	Score >= 1.185	(N = 29)	Score < 1.185	(N = 07)
Professional Management (Max Score = 4.0)	Score >= 2.0	(N = 13)	Score < 2.0	(N = 23)
Control Systems (Max Score = 3.5)	Score >= 2.0	(N = 13)	Score < 2.0	(N = 23)
Overall Governance (Max Score = 10)	Score >= 5.0	(N = 16)	Score < 5.0	(N = 20)
	Score >= 6.0	(N = 04)	Score < 6.0	(N = 32)
N = Number of banks in groups.				

Key Deductions (based on the rejection of null hypotheses):

(a) Democratic Structure and Multiple-Terms for Board Members: Banks with better democratic structure (score >= 1.5, Group-1) had comparatively lower instances of two or more continuous terms for their board members. (Table 13)

Table 13: Group Statistics (Democratic Structure)					
Score for -	DEMO-GR	N	Mean	Std. Deviation	Std. Error Mean
TWO_OR_MORE_TERMS	1	14	.3107	.09236	.02468
	2	22	.1568	.05626	.01200
Higher mean score means less instances of two or more continuous terms for board members.					

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
1	The distribution of TWO_OR_MORE_TERMS is the same across categories of DEMO-GR.	Independent-Samples Mann-Whitney U Test	.000[a]	Reject the null hypothesis.
Asymptotic significances are displayed. The significance level is .050. a. Exact significance is displayed for this test.				

(b) Threshold-Score for Democratic Structure and Presence of Family Members in Boards: Banks scoring more than the threshold-score7 for the democratic structure (score >= 1.185, Group-1) had a comparatively lower percentage of family members on their boards, and hence such boards were more independent (Table 14).

(c) Threshold-Score for Democratic Structure and Educational Qualification of Board Members: Banks scoring more than the threshold8 score for democratic structure (score >= 1.185) (Group-1) also had a higher percentage of technically qualified (finance/accounts/IT) board members. This is a very important deduction which showed that banks with superior democratic control tend to have more qualified directors on their boards in comparison to other Group-2 banks (Table 14).

Table 14: Group Statistics (Democratic Structure – Threshold Value)					
Score for -	DEMO-THRESHOLD	N	Mean	Std. Deviation	Std. Error Mean
BD_FAM	1	29	.8897	.05571	.01034
	2	7	.5143	.22678	.08571
DIR-QUAL	1	29	.4552	.22134	.04110
	2	7	.2571	.11339	.04286

The higher mean score for family members in the board (BD_FAM) means the lower presence of family members in boards. The higher mean score for Director's qualification (DIR_QUAL) means more board members with higher academic qualifications.

Hypothesis Test Summary

Null Hypothesis		Test	Sig.	Decision
Presence of family members in Boards	The distribution of BD_FAM is the same across categories of DEMO-THRESHOLD.	Independent-Samples Mann-Whitney U Test	.000[a]	Reject the null hypothesis.
Qualification of Directors	The distribution of DIR-QUAL is the same across categories of DEMO-THRESHOLD.	Independent-Samples Mann-Whitney U Test	.044[a]	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.
a. Exact significance is displayed for this test.

(d) Quality of Professional Management and Net Interest Income: Banks scoring better in respect of professional management (Group-1), on average, had a higher cost of deposits by 63 basis points and they also performed better in respect of yield on advances by 95 basis points. Therefore, in a way, banks with a higher score for professional management had an advantage of about 32 basis points in their Net Interest Income (NII) than other banks (Group-2) (Table 15).

(e) Quality of Professional Management and Educational Qualification of CEO: Banks obtaining comparatively high (Group-1) score for professional management were observed to have better-qualified CEOs (Table-15).

(f) Quality of Professional Management and Training of Board Members: Banks obtaining comparatively high (Group-1) scores for professional management had a higher percentage of directors who had attended relevant training programmes in comparison to Group-2 banks (Table-15).

Table 15: Group Statistics (Professional Management)

	PROF-GR	N	Mean	Std. Deviation	Std. Error Mean
Average Cost of Deposits (%)	1	13	6.66	.52080	.14444
	2	23	6.03	1.14625	.23901
Average Yield on Advances (%)	1	13	11.48	.97255	.26974
	2	23	10.53	1.79389	.37405
Score for CEO_QUAL	1	13	.9000	.00000	.00000
	2	23	.4826	.21669	.04518
Score for BD_TRAIN	1	13	.5077	.18913	.05245
	2	23	.2870	.19142	.03991

The mean value of Average Cost of Deposits and Average Yield on Advances represent actual percentage values. PROF-GR refers to groups made based on scores for professional management.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
i	The distribution of Average Cost of Deposits (%) is the same across categories of PROF-GR.	Independent-Samples Mann-Whitney U Test	.047[a]	Reject the null hypothesis.
ii	The distribution of Average Yield on Advances (%) is the same across categories of PROF-GR.	Independent-Samples Mann-Whitney U Test	.040[a]	Reject the null hypothesis.
iii	The distribution of CEO_QUAL is the same across categories of PROF-GR.	Independent-Samples Mann-Whitney U Test	.000[a]	Reject the null hypothesis.
iv	The distribution of BD_TRAIN is the same across categories of PROF-GR.	Independent-Samples Mann-Whitney U Test	.004[a]	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.
a. Exact significance is displayed for this test.

(g) Control Systems, Asset Size, and Operating Profit: Based on the grouping of banks in respect of their scores on control systems, Table 16 established that the banks with better control scores (Group-1) had much larger asset sizes in comparison to other banks falling in Group-2. In a way, it could be argued that with an increase in asset size, banks tend to put in place more sophisticated control systems. The operating profit of these two groups also differed significantly as evident from the rejection of the null hypothesis based on the Independent-Sample Mann-Whitney U Test. This again was a reiteration of proportionality of control systems to the size of business. In terms of the ratio of operating profit to assets, however, both groups ranked almost similar at 1.34%.

Table 16: Group Statistics (Control Systems)

	CONTL-GR	N	Mean	Std. Deviation	Std. Error Mean
Assets	1	13	10026.2885	12478.28345	3460.85314
	2	23	3289.1287	2907.57741	606.27180
Op. Profit	1	13	133.6777	159.17794	44.14802
	2	23	44.1691	39.99792	8.34014

Value of Assets and Operating Profit in ₹ Crore (1 Billion = 100 Crores). CONTL-GR refers to the groups made based on scores obtained by banks in respect of their control systems.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Assets is the same across categories of CONTL-GR.	Independent-Samples Mann-Whitney U Test	.022[a]	Reject the null hypothesis.
2	The distribution of Op. Profit is the same across categories of CONTL-GR.	Independent-Samples Mann-Whitney U Test	.034[a]	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.
a. Exact significance is displayed for this test.

(h) Overall Governance Score, Asset Size, and Profit: Based on the grouping of banks in respect of their overall governance score, Table 17 showed that the banks with higher governance scores (Group-1) had much larger asset size, profit before tax, and profit after tax in comparison to other banks falling in Group-2. Based on this and by looking at the distribution of governance scores, it can be argued that some degree of proportionality exists in business size and quality of governance.

Table 17: Group Statistics (Governance Score)

	GOVSC-GR	N	Mean	Std. Deviation	Std. Error Mean
Assets	1	16	8591.6994	11449.8730	2862.4683
	2	20	3426.2260	3462.5373	774.2469
PBT	1	16	64.0019	87.2900	21.8225
	2	20	29.6875	39.3143	8.7909
PAT	1	16	45.5013	63.9073	15.9768
	2	20	19.5360	27.3400	6.1134
DIR-QUAL	1	16	0.5625	.2156	.0539
	2	20	0.3000	.1377	.03078

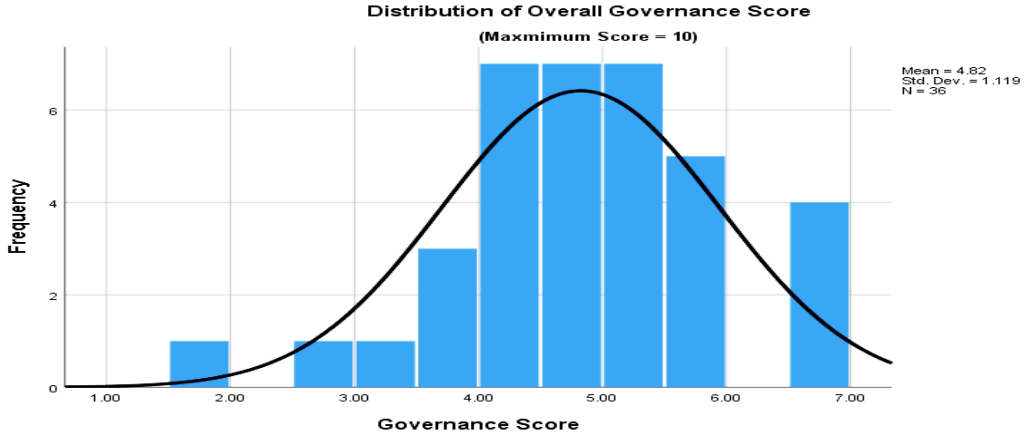
GOVSC-GR refers to groups made on the basis of Governance Scores (Group-1 >=5, Group-2 < 5).
Assets, Profit Before Tax (PBT), and Profit After Tax (PAT) in ₹ Crore (1 Billion = 100 Crores). DIR-QUAL refers to scores obtained by banks for director's qualification.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
(i)	The distribution of Assets is the same across categories of GOVSC-GR.	Independent-Samples Mann-Whitney U Test	.026[a]	Reject the null hypothesis.
(ii)	The distribution of PBT is the same across categories of GOVSC-GR.	Independent-Samples Mann-Whitney U Test	.028[a]	Reject the null hypothesis.
(iii)	The distribution of PAT is the same across categories of GOVSC-GR.	Independent-Samples Mann-Whitney U Test	.021[a]	Reject the null hypothesis.

(iv)	The distribution of DIR-QUAL is the same across categories of GOVSC-GR.	Independent-Samples Mann-Whitney U Test	.001[a]	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.
a. Exact significance is displayed for this test.



(i) Overall Governance Score and Qualification of Directors: Banks obtaining comparatively higher (Group-1) scores for overall governance were observed to have better-qualified directors (Table 17).

(j) High Governance Score and CEO's Qualification and Return on Equity: Looking at the above histogram of the governance score, a small number of banks attained very high scores. To evaluate the key differentiating factors of such banks obtaining very high governance scores (>= 6 out of 10), Table 18 presented an analysis based on a comparison of two groups. Using the Independent-Samples Mann-Whitney U Test, it was established that the banks with a very high governance score had highly qualified CEOs as a key differentiating factor.

(k) High Governance Score and Return on Equity: It followed from the analysis that banks with a very high governance score achieved a comparatively higher return of equity (ROE) than other banks. The ROE of high governance-score banks was observed to be significantly better than the other banks by about 366 basis points, which was a sizeable difference. This excess ROE could be seen as a Governance Premium earned by the banks which were able to put in place an effective governance system (Table 18).

Table 18: Group Statistics (Governance Score)

	GOVSCHGR	N	Mean	Std. Deviation	Std. Error Mean
CEO_QUAL	1	4	.9000	.00000	.00000
	2	32	.6000	.26396	.04666
ROE (%)	1	4	11.0350	1.83049	.91525
	2	32	7.3794	7.53469	1.33196

GOVSCHGR refers to groups made based on high Governance Scores (Group-1 >=6, Group-2 < 6).
CEO_QUAL refers to scores obtained by banks for their CEO's qualifications. Return on Equity (ROE) measures the ratio of net profit to equity share capital in percentage.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
(i)	The distribution of ROE (%) is the same across categories of GOVSCHGR.	Independent-Samples Mann-Whitney U Test	.044[a]	Reject the null hypothesis.
(ii)	The distribution of CEO_QUAL is the same across categories of GOVSCHGR.	Independent-Samples Mann-Whitney U Test	.044[a]	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.
a. Exact significance is displayed for this test.

To sum up, this section analyzed the symbiotic relationship amongst the various governance components/parameters, and key financial parameters using a combination of three approaches, namely, **(a)** regression estimate for governance scores, **(b)** correlation analysis using nonparametric techniques, and (**c)** key differentiator analysis using hypotheses testing by a grouping of governance components. A summary of key findings is presented in the following section.

7. Summary of Important Findings

The quality and effectiveness of the governance in scheduled UCBs was measured by computing a 10-point governance score based on a model comprising three sub-components, namely, democratic structure (2.5 points), professional management (4.0 points), and control systems (3.5 points). Estimation of these components was based on a total number of 21 governance-related parameters. Scores for democratic structure ranged between 0.00 and 1.95 (mean: 1.35), scores for professional management ranged from 0.90 to 3.80 (mean: 1.87), scores for control systems ranged between 0.80 and 3.25 (mean: 1.76), and scores for overall governance varied from 1.72 to 6.90 (mean: 4.82). The symbiotic relationships amongst the overall governance score, its key components, significant parameters, and key financial parameters were analysed using regression analysis, correlation analysis, and hypotheses testing. The following is a summary of the key findings of the paper.

7.1 Governance parameters and their interaction with the governance score

- **a)** The regression estimate of the governance score identified a threshold score for the democratic structure of scheduled UCBs at 1.185 (47.4% Score). Any rise or fall in the score for the democratic structure above the threshold had an increasing impact on the overall governance score but any increase or decrease below the threshold had a decreasing impact on the governance score. This meant that to gain from the democratic structure, there must be a minimum threshold of democratic character in the UCBs.
- **b)** The score for professional management had a direct impact on the governance score at an increasing rate. A change of 1% in its score caused 1.134% change in the governance score.
- **c)** The score for control systems had a direct impact on the governance score at a slight decreasing rate. A change of 1% in its score caused 0.988% change in the governance score.

The above showed that all three governance parameters contributed to the quality of overall governance, and UCBs with strong democratic structures contributed more effectively towards the quality of overall governance. Quality of professional management emerged as the most important factor in the quality of governance in scheduled UCBs.

7.2 Governance parameters, key financial parameters and their correlation

- **a)** A significant positive correlation of the governance score was found with certain financial parameters, namely, Reserves, Deposits, Advances, Assets, and Profit after Tax (PAT). It meant that these financial parameters of scheduled UCBs moved positively along with the governance score.
- **b)** In respect to the individual components of the governance score, the democratic structure had a significant positive correlation with the net interest margin (NIM).
- **c)** Quality of professional management correlated positively with Capital, Deposits, Advances, and Assets. Banks with a better score for professional management enjoyed a superior position in these financial parameters.
- **d)** Regarding the control environment, positive correlations were observed in respect of Reserves, Deposits, Investments, Advances, Assets, and Profit after Tax.
- **e)** Participation in a bank's annual general meeting (AGM) had a significant positive correlation with Reserves, Advances, Capital Adequacy (CRAR), and most importantly Return on Equity (ROE). It could be argued, therefore, that higher participation of members in AGMs strengthened the bank's position regarding these financial parameters and large participation of members in AGM to oversee their economic interests and to monitor the bank's business resulted in a higher return on equity (ROE).
- **f)** Lower or nil presence of family members in boards positively correlated with the Net Interest Margin (NIM), Return on Assets (ROA), and Capital Adequacy (CRAR). It showed that banks with

more democratic and independent boards (less or nil presence of family members) had a propensity to perform better in terms of NIM, ROA, and CRAR.

g) Further, training of staff had a significant positive correlation with the net interest margin (NIM). It could be argued that better-trained staff could handle the business better and thereby achieved higher NIM.

h) In another significant result, the existence of a well-functioning compliance department had a positive correlation with ROA and CRAR. Intuitively, a well-functioning compliance department ensures continuous oversight of the business and compliance practices.

Table 19 presents a summary of important correlations between governance components/parameters, and key financial parameters of scheduled UCBs.

Table 19: Significant Correlation of Governance Parameters with Financial Parameters		
Nonparametric Correlations (Kendall's tau_b) (N = 36)		
Governance Component	**Governance Parameters**	**Financial Parameters** (Positive Correlation coefficient/ significance)
Democratic Structure	Attendance of members in AGM – 'Member Participation'	ROE (0.363*), CRAR (0.306#)
	Lower/Nil presence of family members in Boards – 'Independence of Boards'	NIM (0.348*), ROA (0.331*), CRAR (0.361*)
Professional Management	Training of Staff – 'HR Quality'	NIM (0.294#)
Control Systems	Well-functioning Compliance Department – 'Proactive Oversight'	CRAR (0.340*), ROA (0.345@)
* Significant at 5%, # Significant at 10%. (correlation coefficients within parenthesis) @ Pearson Correlation significant at 5%.		

7.3 Key Differentiators of Better Governed Scheduled UCBs

The following presents a summary of key differentiators which distinguished the banks with higher scores on various governance parameters with that of the banks with comparatively lower scores.

a) Banks with better democratic structures (score >= 1.5) had comparatively lower instances of two or more continuous terms for their board members.

b) Banks scoring more than the threshold-score9 for democratic structure (score >= 1.185) had a low or nil presence of family members in their boards.

c) Banks scoring more than the threshold-score for democratic structure (score >= 1.185) also had better educationally qualified directors. This showed that the improvement in the democratic characteristics of UCBs also had an indirect positive influence on the quality of their professional management.

d) Banks scoring better in respect of professional management had an advantage of about 32 basis points in their Net Interest Income (NII) than the other banks.

e) Banks obtaining a higher score for professional management were observed to have CEOs with higher educational qualifications.

f) Banks obtaining a comparatively higher score for professional management had a greater percentage of their directors having attended relevant training programmes.

g) Banks with better scores for control systems had much larger asset sizes in comparison to other banks as an indication of proportionality of control systems to the size of business.

h) Banks obtaining comparatively higher scores for overall governance were observed to have better-qualified directors.

i) Banks with very high governance scores had highly qualified CEOs as a key differentiating factor.

j) Return on Equity (ROE) of very high governance score banks was observed to be significantly better than the other banks by about 366 basis points, which was a sizeable difference. This excess ROE could be seen as a Governance Premium earned by the banks which were able to put in place an effective governance system.

A summary of key differentiators of the governance quality in scheduled UCBs is placed in Table 20.

Table 20: Key Differentiators of the Governance Quality in Scheduled UCBs

Governance Parameters	Financial Parameters
Lower instances of two or more continuous terms for board members.	Higher Net Interest Income (NII)
Low/ Nil presence of family members in bank's boards.	Higher Return on Equity (ROE)
Better technically qualified directors.	
Better trained directors.	
CEOs with higher educational qualifications.	
Differentiators based on hypotheses testing using Independent-Samples Mann-Whitney U Test. (rejection of null hypotheses of same distribution across the categories of the higher score and lower score groups)	

8. Conclusion

Governance as a latent force directs an organization to the right path, and therefore, it also positively nudges its financial performance. While several of such influences may be subtle and indirect, this paper brought out significant correlations of several governance parameters with key financial parameters such as NIM, ROA, CRAR, and ROE. The analysis showed that all three components of corporate governance in scheduled UCBs, namely, democratic structure, professional management, and control systems contributed to and shaped the quality and effectiveness of overall governance. The strength of democratic structure above a threshold and the quality of professional management contributed to the overall governance score at an increasing rate. The importance of the independence of boards for effective governance was vindicated by identification of parameters such as lower instances of more than two continuous terms for board members, and lower or nil presence of family members in boards as key differentiators for banks with high governance scores. Besides, the aspects such as educational qualifications of the CEO, qualifications relating to finance/accounts, and IT and training of directors, training of staff, etc., were assessed as significant differentiators of the quality of governance. Improved quality of professional management contributed to an uplift of about 32 basis points in the bank's net interest income (NII), and the banks with very high governance scores enjoyed a higher ROE by 366 basis points as a governance premium. The analysis also highlighted the proportionality of control systems to the size of a bank's business.

To conclude, this paper established a significant positive relationship between governance and the financial performance of scheduled UCBs. Paying due attention to significant parameters, correlations, and key differentiators identified by the paper could help improve the corporate governance standards and financial performance of scheduled UCBs and accordingly, go a long way in strengthening cooperative banking in India.

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Notes

[1] Urban Co-operative Banks included in the Second Schedule of Reserve Bank of India Act, 1934.

[2] Cadbury, Adrian, (December 1992), Report of the Committee of Financial Aspects of Corporate Governance, United Kingdom.

[3] Corporate Governance Principles for Banks (2015), Bank for International Settlement.

[4] 1.5 * 0.844% = 1.266%

[5] 1 ÷ 0.844 = 1.185 (A score of 1.185 out of a maximum of 2.5 represented 47.4% score).

[6] Presence of family members has been defined as presence of HUF, Spouse, Father, Mother, Son, Daughter, Son's wife, Daughter's husband, Brother, Brother's wife, Sister, Sister's husband in the board, or as CEO/ deputy CEO.

[7] Threshold Score as computed in Section 6.2.

[8] Threshold Score as computed in Section 6.2.

[9] Threshold Score as computed in Section 6.2.

Appendix

Governance Score Model for UCBs						
Sr.	**MODEL PARAMETERS**			**ACTUAL PERFORMANCE**		
	MEASUREMENT PARAMETER(S)	**SCALE**	**WEIGHT**	**GOOD (9/10)**	**AVERAGE (6/10)**	**POOR (3/10)**
A.	**EFFECTIVE DEMOCRATIC SET-UP (25%)**		**[X]**			
1	Member participation in elections	> = 70% = 40% - 70% < 40%	5%			
2	Member participation in AGM/ General Body Meetings	> = 70% = 40% - 70% < 40%	5%			
3	Percentage of board members (including the chairman) continuing for more than two terms.	< 20% = 20% - 50% > 50%	5%			
4	Percentage of board members (including the chairman) having family members (*HUF, Spouse, Father, Mother, Son, Daughter, Son's wife, Daughter's husband, Brother, Brother's Wife, Sister, Sister's husband*) in the board, or as CEO/deputy CEO.	< 10% = 10% - 30% > 30%	10%			
B.	**PROFESSIONAL MANAGEMENT (40%)**		**[Y]**			
5	Percentage of directors having a professional degree in finance/ accountancy/information security out of the total number of directors.	> = 50% = 30% - 50% < 30%	10%			
6	CEO having a professional degree in finance/accountancy/information security.	- Yes - No, but PG - Not a PG	10%			
7.	Percentage of board members who attended a training programme, during the last three years, at CAB, or any external organisation.	> = 70% = 50% - 70% < 50%	10%			
8	Percentage of staff who attended a training programme, during the last three years, at CAB, or any external organisation.	> = 70% = 50% - 70% < 50%	5%			
9	Board approved recruitment and succession policy.	- Yes - No	2.5%			
10	Board-approved training and development policy.	- Yes - No	2.5%			

C.	**CONTROL SYSTEMS (35%)**		**[Z]**			
11	Board approved accountability policy for lapses by the senior management and board members.	- Yes - No	2.5%			
12	Board approved accountability policy for lapses in detecting serious irregularity/fraud by the internal auditors/statutory auditors.	- Yes - No	2.5%			
13	Board approved accountability policy for lapses by the staff.	- Yes - No	2.5%			
14	Board approved information and cybersecurity policy.	- Yes - No	2.5%			
15	Compliance department/officer exists and reports directly to the board/CEO.	- Yes - No	5%			
16	Whether accountability was examined by the bank of any official of senior management during the last three years?	- Yes - No	5%			
17	Whether accountability was examined by the bank of any staff/officer of the bank during the last three years?	- Yes - No	5%			
18	Whether accountability was examined of internal auditors/statutory auditors on lapses in the detection of any serious irregularity/fraud in the bank during the last three years?	- Yes - No	5%			
19	Participation of professional director(s) in audit committee. (Percent attendance in meetings during the last three years)	> = 90% = 70% - 90% < 70%	5%			
Score Value [X + Y + Z]						
D.	**ADDITIONAL INFORMATION**					
20	Was the board superseded by the RBI during the last 5 years?	- No - Yes	If Yes,	20% REDUCTION IN THE FINAL SCORE VALUE		
21	Was any monetary penalty posed by the RBI during the last 5 years?	- No - Yes	If Yes,	10% REDUCTION IN THE FINAL SCORE VALUE		
Final Score Value						