CHAPTER 8

Analysis of Data-Impact of Corporate Governance dimensions on bank performance
CHAPTER 8
ANALYSIS OF DATA-IMPACT OF CORPORATE GOVERNANCE DIMENSIONS ON BANK PERFORMANCE

OBJECTIVE 4
To study the impact of various dimensions of corporate governance of the selected banks on bank performance

For this purpose, all 25 banks listed on BSE200 were selected. The study period was 2004-05 to 2008-09. Performance parameters that were used were Tobin’s Q, earnings per share, and return on assets. Dimensions of corporate governance that were used were board size, frequency of meetings, board composition and number of non executive directors.

For the purpose of this objective, the following hypotheses were set up.

Null hypothesis 8(a)

$H_{8(a)}$: Board size does not influence the earnings per share of the bank.

Null hypothesis 8(b)

$H_{8(b)}$: Board size does not influence the return on assets of the bank.

Null hypothesis 8(c)

$H_{8(c)}$: Board size does not influence the Tobin’s Q of the bank.

Null hypothesis 9(a)

$H_{9(a)}$: Frequency of meetings has no impact on Earnings per share (Rs) of banks.

Null hypothesis 9(b)

$H_{9(b)}$: Frequency of meetings has no impact on return on average assets.
Null hypothesis 9(c)

\[ H_{9(c)}: \text{Frequency of meetings has no impact on Tobin's q.} \]

Null hypothesis 10(a)

\[ H_{10(a)}: \text{Number of non executive directors has no impact on net profit of banks.} \]

Null hypothesis 10(b)

\[ H_{10(b)}: \text{Number of non executive directors has no impact on return on assets.} \]

Null hypothesis 10(c)

\[ H_{10(c)}: \text{Number of non executive directors has no impact on Tobin's q.} \]

A detailed analysis of these hypotheses is given below.

**Hypothesis relating to board size:**

1. \( H_0: \text{Board size does not influence the earnings per share of the bank.} \)
2. \( H_0: \text{Board size does not influence the return on assets of the bank.} \)
3. \( H_0: \text{Board size does not influence the Tobin's Q of the bank.} \)

**Table 8-1 Impact of board size on performance-Statistics**

<table>
<thead>
<tr>
<th></th>
<th>Dependent variable</th>
<th>Independent variable</th>
<th>R</th>
<th>R²</th>
<th>F value</th>
<th>Sig Value</th>
<th>Accept/ reject H0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Earnings per share (Rs)</td>
<td>Board size</td>
<td>0.059</td>
<td>0.003</td>
<td>0.423</td>
<td>0.516</td>
<td>Accept</td>
</tr>
<tr>
<td>2</td>
<td>Return on average assets</td>
<td>Board size</td>
<td>0.050</td>
<td>0.002</td>
<td>0.298</td>
<td>0.586</td>
<td>Accept</td>
</tr>
<tr>
<td>3</td>
<td>Tobin's Q</td>
<td>Board size</td>
<td>0.101</td>
<td>0.010</td>
<td>1.238</td>
<td>0.268</td>
<td>Accept</td>
</tr>
</tbody>
</table>

(Source: Data collected from annual reports of banks)
"A Study of Corporate Governance Practices in India"

1. In case of Earnings per share
   - It is seen from the table that the correlation coefficient value is (R) 0.059, which exhibits low correlation between the Independent variable (Board size) and dependent variable (Earnings per share (Rs)).
   - The R^2 square value gives us the goodness of fit of the regression model. That is, 0.3% changes in Earnings per share (Rs) can be attributed to change in CG Score.
   - With the F-ratio being 0.423 (less than 4) and its associated significance level being 0.516 (greater than 0.05), we can conclude that the model is not statistically significant.

   Thus we accept the null hypothesis
   \( H_0: \) Board size has no impact on Earnings per share (Rs) of a bank.

2. In case of Return on average assets
   - It is seen from the table that the correlation coefficient value is (R) 0.050, which exhibits low correlation between the Independent variable (Board size) and dependent variable (Return on average assets).
   - The R^2 square value gives us the goodness of fit of the regression model. That is, 0.2% changes in Return on average assets can be attributed to change in CG Score.
   - With the F-ratio being 0.298 (less than 4) and its associated significance level being 0.586 (greater than 0.05), we can conclude that the model is not statistically significant.

   Thus we accept the null hypothesis.
   \( H_0: \) Board size has no impact on Return on average assets of a bank.

3. In case of Tobin’s Q
   - It is seen from the table that the correlation coefficient value is (R) 0.101, which exhibits low correlation between the Independent variable (Board size) and dependent variable (Tobin’s Q).


“A Study of Corporate Governance Practices in India”

- The $R^2$ square value gives us the goodness of fit of the regression model. That is, 1% changes in Tobin’s Q can be attributed to change in Board size.
- With the F-ratio being 1.238 (less than 4) and its associated significance level being 0.268 (greater than 0.05), we can conclude that the model is not statistically significant.

Thus we accept the null hypothesis.

$H_0$: Board size has no impact on Tobin’s Q of a bank.

As all the three null hypotheses relating to the impact of board size on bank performance are accepted.

It can thus be said that the number of directors on the board has no influence on the performance of the bank.

**Hypothesis relating to Frequency of meetings:**

1. $H_0$: Frequency of meetings has no impact on net profit of banks.
2. $H_0$: Frequency of meetings has no impact on return on assets.
3. $H_0$: Frequency of meetings has no impact on Tobin’s q.

**Table 8-2 Impact of frequency of meetings on performance-Statistics**

<table>
<thead>
<tr>
<th>Model</th>
<th>Dependent variable</th>
<th>Independent variable</th>
<th>R</th>
<th>$R^2$</th>
<th>F value</th>
<th>Sig Value</th>
<th>Accept/reject $H_0$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Earnings per share (Rs)</td>
<td>Frequency of meetings</td>
<td>0.107</td>
<td>0.011</td>
<td>1.367</td>
<td>0.245</td>
<td>Accept</td>
</tr>
<tr>
<td>2</td>
<td>Return on average assets</td>
<td>Frequency of meetings</td>
<td>0.007</td>
<td>0.000</td>
<td>0.006</td>
<td>0.938</td>
<td>Accept</td>
</tr>
<tr>
<td>3</td>
<td>Tobin’s Q</td>
<td>Frequency of meetings</td>
<td>0.228</td>
<td>0.044</td>
<td>6.452</td>
<td>0.012</td>
<td>Reject</td>
</tr>
</tbody>
</table>

(Source: Data collected from annual reports of banks)
“A Study of Corporate Governance Practices in India”

1. In case of Earnings per share,
   - It is seen from the table that the correlation coefficient value is \( R \) 0.107, which exhibits low correlation between the Independent variable (Board size) and dependent variable (Earnings per share (Rs)).
   - The \( R^2 \) square value gives us the goodness of fit of the regression model. That is, 1% changes in Earnings per share (Rs) can be attributed to change in CG Score.
   - With the F-ratio being 1.367 (less than 4) and its associated significance level being 0.245 (greater than 0.05), we can conclude that the model is not statistically significant.

   Thus we accept the null hypothesis

   \( H_0: \) Frequency of meetings has no impact on Earnings per share (Rs) of a bank.

2. In case of Return on average assets
   - It is seen from the table that the correlation coefficient value is \( R \) 0.007, which exhibits very low correlation between the Independent variable (Board size) and dependent variable (Return on average assets).
   - The \( R^2 \) square value gives us the goodness of fit of the regression model. That is, 0% changes in Return on average assets can be attributed to change in CG Score.
   - With the F-ratio being 0.006 (less than 4) and its associated significance level being 0.938 (greater than 0.05), we can conclude that the model is not statistically significant.

   Thus we accept the null hypothesis.

   \( H_0: \) Frequency of meetings has no impact on Return on average assets of a bank.
3. In case of Tobin’s Q
   - It is seen from the table that the correlation coefficient value is (R) 0.228, which exhibits low correlation between the Independent variable (Board size) and dependent variable (Tobin’s Q).
   - The R² square value gives us the goodness of fit of the regression model. That is, 4% changes in Tobin’s Q can be attributed to change in Board size.
   - With the F-ratio being 6.452 (greater than 4) and its associated significance level being 0.012 (less than 0.05), we can conclude that the model is statistically significant.

Thus we reject the null hypothesis.
\( H_0: \) Frequency of meetings has no impact on Tobin’s Q of a bank.
And accept the alternative hypothesis
\( H_a: \) Frequency of meetings has an impact on Tobin’s Q of a bank.

Hypothesis relating to Frequency of meetings:
1. \( H_0: \) Number of non executive directors has no impact on net profit of banks.
2. \( H_0: \) Number of non executive directors has no impact on return on assets.
3. \( H_0: \) Number of non executive directors has no impact on Tobin’s q.

\textbf{Table 8-3} \quad \textit{Impact of number of non executive members of the board on Performance-Statistics}

<table>
<thead>
<tr>
<th>Model</th>
<th>Dependent variable</th>
<th>Independent variable</th>
<th>R</th>
<th>R²</th>
<th>F value</th>
<th>Sig Value</th>
<th>Accept/reject H0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Net profit</td>
<td>Number of non executive members</td>
<td>0.185</td>
<td>0.034</td>
<td>4.321</td>
<td>0.040</td>
<td>Reject</td>
</tr>
<tr>
<td>2</td>
<td>Return on average assets</td>
<td>Number of non executive members</td>
<td>0.128</td>
<td>0.016</td>
<td>2.011</td>
<td>0.159</td>
<td>Accept</td>
</tr>
<tr>
<td>3</td>
<td>Nonperforming assets</td>
<td>Number of non executive members</td>
<td>0.057</td>
<td>0.003</td>
<td>0.403</td>
<td>0.527</td>
<td>Accept</td>
</tr>
</tbody>
</table>

(Source: Data collected from annual reports of banks)
1. In case of Net profit,
   - It is seen from the table that the correlation coefficient value is (R) 0.185, which exhibits low correlation between the Independent variable (Number of non executive members) and dependent variable (Net profit).
   - The $R^2$ value gives us the goodness of fit of the regression model. That is, 3% changes in Net profit can be attributed to change in Number of non executive members.
   - With the F-ratio being 4.321 (greater than 4) and its associated significance level being 0.04 (less than 0.05), we can conclude that the model is statistically significant.

   Thus we reject the null hypothesis.
   
   $H_0$: Number of non executive members has no impact on Net profit of a bank.
   
   And accept the alternative hypothesis
   
   $H_a$: Number of non executive members has an impact on Net profit of a bank.

2. In case of Return on average assets
   - It is seen from the table that the correlation coefficient value is (R) 0.128, which exhibits low correlation between the Independent variable (Number of non executive members) and dependent variable (Return on average assets).
   - The $R^2$ value gives us the goodness of fit of the regression model. That is, 1% changes in Return on average assets can be attributed to change in Number of non executive members.
   - With the F-ratio being 2.011 (less than 4) and its associated significance level being 0.159 (greater than 0.05), we can conclude that the model is not statistically significant.

   Thus we accept the null hypothesis.
   
   $H_0$: Number of non executive members has no impact on Return on average assets of a bank.
3. **In case of Nonperforming assets**

- It is seen from the table that the correlation coefficient value is (R) 0.057, which exhibits low correlation between the Independent variable (Number of non executive) and dependent variable (Nonperforming assets).
- The R² square value gives us the goodness of fit of the regression model. That is, 0.3% changes in Nonperforming assets can be attributed to change in Number of non executive members.
- With the F-ratio being 0.403 (less than 4) and its associated significance level being 0.527 (greater than 0.05), we can conclude that the model is not statistically significant.

Thus we accept the null hypothesis.

\[ H_0: \text{Number of non executive directors has no impact on Nonperforming assets of a bank.} \]

The average of all the attributes has increased tremendously during the Post compulsion period when compared to the pre compulsion period. Since all the variables have secured Sig. value of less than .05, all are statistically Significance at 5% level. This is clearly indicated by the F ratio which is greater than 4 in case of all attributes.

Thus the null hypothesis

\[ H_0: \text{There is no difference in the disclosure level of attributes between the two study periods (pre-compulsion and post compulsion period) is rejected and the alternative hypothesis} \]

There is difference in the disclosure level of attributes between the two study periods (pre-compulsion and post compulsion period) is accepted.

Thus, it can be said that making it compulsory for the banks has had an immense impact on the corporate governance disclosure practices of the banks.