

CHAPTER 4

ANALYSIS

Preview

This chapter presents the analysis of impact of gender diversity of board members on profitability of selected Indian public and private banks in terms of risk performance, the lending practices of banks, and market price performance. Further, it also comparatively analyses the relationship between gender diversity of board members and profitability of public and private sector banks. This depicts the analysis of various factors that are affected by board's gender diversity.

4.1 Introduction

The current chapter reports the empirical results concerning the effect of gender diversity of board members on risk performance, lending practices of banks, market price performance, and also the relation between gender diversity of board members and profitability of public and private banks. Gender diversity on boards produces better outcomes in terms of risk (Brown et al., 2002). In comparison to men, women tend to set lower loan default rates (Beck et al., 2013). Von Bergen et al. (2005) noticed that more women on the board have a beneficial effect on the organization's performance in terms of profitability and productivity. Duppati et al. (2019) reported positive correlation between shareholder value and higher percentage of women on boards. The present chapter is concerned with analysing different factors, along with the role of gender diversity, in determining the performance of publicly traded public and private banks in India in the terms of risk, lending practices, market price and profitability. The panel data regression is employed to measure the impact of gender diversity on risk performance in terms of Tobin's Q (TobinQ), Provision towards NPA and Capital Adequacy Ratio (CAR). Further, panel data regression is employed to measure the impact of gender diversity on the lending practices of banks in the terms of Priority sector lending and NPL/TA. Market price performance is measured in the terms of Market Cap and EPS. Profitability is measured in terms of EPS, PPER, ROA and ROE. Hausman test chooses the appropriate test between fixed effect (FE) and random effect (RE) to ascertain consistent estimators.

Objective 1

4.2 Impact of gender diversity of board members on Risk performance of banks

The following sections depict the statistical analysis of the above stated research objective.

4.2.1 Impact of gender diversity on Tobins'Q (TobinQ)

Table 4.1 shows that multicollinearity is not found between variables as no correlation coefficient has a value greater than 0.7 in absolute terms.

Table 4.1: Correlation Matrix of TobinQ and other variables

	Tobin Q	Blau Index	Bank Size	Board Size	Bank Size	Id	Leverage
Tobin Q	1.000						
Blau Index	0.0631	1.000					
Bank Size	-0.3252	0.2760	1.000				
Board Size	0.0968	0.0185	0.2152	1.000			
Bank Age	0.0590	-0.2183	-0.4801	-0.1184	1.000		
Id	0.0162	0.2734	-0.1792	-0.1244	-0.1749	1.000	
Leverage	0.2514	-0.1061	-0.3316	0.0583	0.3408	-0.1639	1.000

Source: STATA Outcome

Table 4.2 depicts that on the basis of the Hausman test statistics, Random effect model is considered for the analysis in the current study.

Table 4.2: Hausman Test Statistics

Chi-Square	Prob>Chi2	Interpretation
26.19	0.202	Random Effect is appropriate

Source: STATA Outcome

Table 4.3: Effect of BGD and other control variables on TobinQ

TobinQ	Fixed Effect Model				Random Effect Model			
	Coefficient	Std. Err.	T	P>t	Coefficient	Std. Err.	t	P>t
Blau index	.2338323	.328923	0.71	0.478	.7394229	.310563	2.38	0.017*
Bank size	-.3189563	.038159	-8.36	0.000	-.2293063	.032630	-7.03	0.000*
Bank age	.0454611	.010833	4.20	0.000	-.0026007	.002016	-1.29	0.197
Board size	.0227807	.016166	1.41	0.161	.0296794	.015598	1.90	0.057**
Leverage	-.3862897	.282443	-1.37	0.173	.2238715	.257057	0.87	0.384
Id	-.0042638	.001933	-2.21	0.029	-.0048468	.001827	-2.65	0.008*
Constant	2.239037	.884399	2.53	0.012	3.878161	.700351	5.54	0.000

Source: Fixed Effect and Random Effect Regression Outcome in STATA

*significant at 5 % level **significant at 10 % level

The table 4.3 shows that Board gender diversity, and the control variables including bank size, board size and % of independent directors are significant. It is supported by the statistical test outcome as p-value of these variables is lower than 0.05. The table further highlights a few important points. It depicts that the positive sign of the

coefficient of Blau index signifies that with increase in board gender diversity in the board of the banks, the risk performance of the banks improves. It also observes a negative relationship of the control variables (percentage of independent directors on the board, Bank age and Bank Size) and TobinQ.

Table 4.4: Random Effect Regression Model Summary

Model Parameters	Statistical Value
R-Square	0.1829
F-Statistics	67.90
p-value	0.000

Source: Panel Regression Outcome in STATA

Table 4.4 presents the analysis of the model specification. It is evident from the table that the F-statistics obtained is quite high and is also significant with $p < 0.05$. This proves that the overall model is valid and the results are robust. The R-square value is 0.1829, which means that the board gender diversity and other control variables together are capable of explaining 18.92% variation in TobinQ. The rest of the variation is explained by the other factors. It proves that board gender diversity has significant impact on the TobinQ.

Regression Equation

TobinQ = 3.878161+0.7394229*Blau index -0.2293063*Bank size -0.0026007*Bank age +0.0296794*Board Size +0.2238715*Leverage -0.0048468* % of independent directors

4.2.2 Impact of gender diversity on Provision towards NPA

Table 4.5 shows that multicollinearity is not found between variables as no correlation coefficient has a value greater than 0.7 in absolute terms.

Table 4.5: Correlation Matrix of Provision towards NPA and other variables

	Provision Towards NPA	Blau Index	Bank Size	Board Size	Bank Size	Id	Leverage
Provision Towards NPA	1.0000						
Blau Index	-0.0853	1.0000					
Bank Size	0.0827	0.2760	1.0000				
Board Size	0.1308	0.0185	0.2152	1.0000			
Bank Age	0.0886	-0.2183	-0.4801	-0.1184	1.0000		
Id	-0.2792	0.2734	-0.1792	-0.1749	-0.1244	1.0000	
Leverage	0.4875	-0.1061	-0.3316	0.0583	0.3408	-0.1639	1.0000

Source: STATA Outcome

Table 4.6 shows that as per the statistical outcome of the Hausman test, Random effect regression model has emerged as the appropriate statistical test for this study.

Table 4.6: Hausman Test Statistics

Chi-Square	Prob>Chi2	Interpretation
73.82	0.415	Random Effect is appropriate

Source: STATA Outcome

Table 4.7: Effect of BGD and other control variables on Provision towards NPA

Provision Towards NPA	Fixed Effect Model				Random Effect Model			
	Coefficient	Std. Err.	T	P>t	Coefficient	Std. Err.	t	P>t
Blau index	-.7161325	.9827069	-0.73	0.467	-0.702	0.937	-0.75	0.045*
Bank size	-.0410814	.1140063	-0.36	0.719	0.149	0.098	1.52	0.128
Bank age	.0457235	.0323665	1.41	0.160	0.002	0.005	0.21	0.831
Board size	-.1042718	.0483006	-2.16	0.032	-0.057	0.047	-1.22	0.223
Leverage	1.828383	.8438406	2.17	0.032	3.528	0.776	4.54	0.000*
Id	-.0017575	.0057771	-0.30	0.761	-0.007	0.005	-1.37	0.172
Constant	9.896465	2.642269	3.75	0.00-	8.563	2.106	4.07	0.000

Source: Fixed Effect and Random effect Regression Outcome in STATA *significant at 5 % level

The table 4.7 shows that Board gender diversity, and the control variable leverage are significant as their p-values are lower than 0.05. The table also depicts that the negative sign of the coefficient of Blau index shows that with increase in board gender diversity in the board of the banks, the provision towards NPA decreases. It also observes a positive relationship of the control variables i.e. Bank size, Bank age, leverage and provision towards NPA. With increase in women director on the board, the companies need to keep the less provision towards NPA.

Table 4.8: Random Effect Regression Model Summary

Model Parameters	Statistical Value
R-Square	0.2914
F-Statistics	25.95
p-value	0.000

Source: Panel Regression Outcome in STATA

Table 4.8 presents the analysis of the random effect panel data model specification. It is evident from the table that the F-statistics obtained is high (25.95) and is also significant with $p < 0.05$. This proves the validity of the overall model as well as the robustness of the statistical results. The R-square value is 0.2914, which means that the board gender diversity and other control variables together effectively explained 29.14 percent variation in provision towards NPA.

Regression Equation

Provision towards NPA = 8.563 - 0.702*Blau index + 0.149*Bank size + 0.002*Bank age - 0.057*Board Size + 3.528*Leverage - 0.007* % of independent directors

4.2.3. Impact of gender diversity on Capital Adequacy Ratio (CAR)

The following section depicts the statistical output of probable impact of board gender diversity on maintaining the capital adequacy ratio by banks.

Table 4.9 shows that multicollinearity is not found between variables as no correlation coefficient has a value greater than 0.7 in absolute terms.

Table 4.9: Correlation Matrix of Capital Adequacy Ratio and other variables

	CAR	Blau Index	Bank Size	Board Size	Bank Size	Id	Leverage
CAR	1.000						
Blau Index	0.2733	1.0000					
Bank Size	0.2290	0.2760	1.0000				
Board Size	0.0797	0.0185	0.2152	1.0000			
Bank Age	-0.4364	-0.2183	-0.4801	-0.1184	1.0000		
Id	0.2131	0.2734	-0.1792	-0.1244	-0.1749	1.0000	
Leverage	-0.0404	-0.1061	-0.3316	0.0583	0.3408	-0.1639	1.0000

Source: STATA Outcome

Table 4.10 shows that as per the statistical outcome of the Hausman test, fixed effect regression model has emerged as the appropriate statistical test for this study.

Table 4.10: Hausman Test Statistics

Chi-Square	Prob>Chi2	Interpretation
39.49	0.000	Fixed Effect is appropriate

Source: STATA Outcome

Table 4.11: Effect of BGD and other control variables on Capital Adequacy Ratio

CAR	Fixed Effect Model				Random Effect Models			
	Coefficient	Std. Err.	t	P>t	Coefficient	Std. Err.	T	P>t
Blau index	-2.562754	1.797294	-1.43	0.156	1.354003	1.739262	0.78	0.436
Bank size	.4202275	.2085086	2.02	0.045*	0.55542	.1816958	3.06	0.002*
Bank age	.2410123	.0591959	4.07	0.000*	-.0289924	.0108124	-2.68	0.007*
Board size	-.1320675	.088338	-1.50	0.137	-.0980842	.0871486	-1.13	0.260
Leverage	6.430804	1.543318	4.17	0.000*	7.831521	1.440782	5.44	0.000*
Id	.0044909	.0105658	0.43	0.671	.0101706	.0101996	1.00	0.319
Constant	-15.90896	4.832504	-3.29	0.001	.6003968	3.901421	0.15	0.878

Source: Fixed Effect and Random Effect Regression Outcome in STATA *significant at 5 % level

The table 4.11 shows that the p-values and t-values are significant as p value is lower than 0.05. It signifies the significant impact of Bank size, Bank age and leverage on performance. The table also depicts that the negative sign of the coefficient of Blau index shows that with increase in board gender diversity in the board of the banks, capital adequacy decreases. It also observes a positive relationship of the control variables i.e. Bank size, Bank age, leverage, % of independent directors and capital adequacy.

Table 4.12: Fixed Effect Regression Model Summary

Model Parameters	Statistical Value
R-Square	0.1825
F-Statistics	21.46
p-value	0.000

Source: Panel Regression Outcome in STATA

Table 4.12 presents the analysis of the fixed effect panel data model specification. It is evident from the table that the F-statistics obtained is high (21.46) and is also significant with $p < 0.05$. This proves the validity of the overall model as well as the robustness of the statistical results. The R-square value is 0.1825, which means that the board gender diversity and other control variables together effectively explained 18.25 percent variation in capital adequacy.

Regression Equation

Capital Adequacy Ratio = $-15.90896 - 2.562754 * \text{Blau index} + .4202275 * \text{Bank Size} + .2410123 * \text{Bank age} - .1320675 * \text{Board Size} + 6.430804 * \text{Leverage} + .0044909 * \% \text{ of independent directors}$

Objective 2

4.3 Impact of gender diversity on the lending practices of banks

The following section depicts the statistical output of probable impact of board gender diversity on granting the priority sector lending by selected banks.

4.3.1 Impact of gender diversity on Priority Sector Lending (PSL)

Table 4.13 shows that multicollinearity is not found between variables as no correlation coefficient has a value greater than 0.7 in absolute terms.

Table 4.13: Correlation Matrix of Priority Sector Lending and other variables

	PSL	Blau Index	Bank Size	Board Size	Bank Size	Id	Leverage
PSL	1.000						
Blau Index	0.1677	1.000					
Bank Size	0.6663	0.2760	1.000				
Board Size	0.2711	0.0185	0.2152	1.000			
Bank Age	-0.4299	-0.2183	-0.4801	-0.1184	1.000		
Id	-0.1467	0.2734	-0.1792	-0.1244	-0.1749	1.000	
Leverage	0.0680	-0.1061	-0.3316	0.0583	0.3408	-0.1639	1.000

Source: STATA Outcome

Table 4.14 shows that as per the statistical outcome of the Hausman test, Random effect regression model has emerged as the appropriate statistical test for this study.

Table 4.14: Hausman Test Statistics

Chi-Square	Prob>Chi2	Interpretation
62.78	0.185	Random Effect is appropriate

Source: STATA Outcome

Table 4.15: Effect of BGD and other control variables on PSL

PSL	Fixed Effect Model				Random Effect Model			
	Coefficient	Std. Err.	T	P>t	Coefficient	Std. Err.	T	P>t
Blau index	-.6643264	.5073472	-1.31	0.192	-.2637254	.4449409	-0.59	0.055**
Bank size	.1760142	.0588586	2.99	0.003	.3897553	.0434841	8.96	0.000*
Bank age	.0270374	.01671	1.62	0.107	-.0073689	.0018633	-3.95	0.000*
Board size	.0124575	.0249364	0.50	0.618	.0354798	.021471	1.65	0.098**
Leverage	1.333667	.435654	3.06	0.003	2.23505	.3719731	6.01	0.000*
Id	-.0040763	.0029826	-1.37	0.173	-.0019743	.0025095	-0.79	0.431
Constant	9.283921	1.364138	6.81	0.000	7.254975	.9423728	7.70	0.000

Source: Fixed Effect and Random Effect Regression Outcome in STATA

*significant at 5 % level

**significant at 10 % level

The table 4.15 shows that Bank size, Bank age and leverage are significant at 5% level. The table also depicts that the negative sign of the coefficient of Blau index shows that with increase in board gender diversity in the board of the banks, priority sector lending decreases. It also observes a positive relationship of the control variables (Bank size, Board size, leverage) and priority sector lending.

Table 4.16: Random Effect Regression Model Summary

Model Parameters	Statistical Value
R-Square	0.5789
F-Statistics	174.03
p-value	0.000

Source: Panel Regression Outcome in STATA

Table 4.16 presents the analysis of the Random effect panel data model specification. It is evident from the table that the F-statistics obtained is high (174.03) and is also significant with $p < 0.05$. This proves the validity of the overall model as well as the robustness of the statistical results. The R-square value is 0.5789, which means that the board gender diversity and other control variables together effectively explained 57.89 percent variation in priority sector lending.

Regression Equation

$$PSL = 7.254975 - 0.2637254 * \text{Blau index} + 0.3897553 * \text{Bank Size} - 0.0073689 * \text{Bank age} + 0.0354798 * \text{Board Size} + 2.23505 * \text{Leverage} - 0.0019743 * \% \text{ of independent directors}$$

4.3.2 Impact of Gender diversity on Non-performing Loan to Total Assets ratio (NPL/TA)

The following section depicts the statistical output of probable impact of board gender diversity on Non-performing Loans to Total Asset ratio:

Table 4.17 shows that multicollinearity is not found between variables as no correlation coefficient has a value greater than 0.7 in absolute terms.

Table 4.17: Correlation Matrix of NPL/TA and other variables

	NPL/TA	Blau Index	Bank Size	Board Size	Bank Size	Id	Leverage
NPL/TA	1.000						
Blau Index	-0.3045	1.000					
Bank Size	-0.1882	0.2760	1.000				
Board Size	0.0646	0.0185	0.2152	1.000			
Bank Age	0.4999	-0.2183	-0.4801	-0.1184	1.000		
Id	-0.2783	0.2734	-0.1792	-0.1244	-0.1749	1.000	
Leverage	0.3700	-0.1061	-0.3316	0.0583	0.3408	-0.1639	1.000

Source: STATA Outcome

Table 4.18 shows that as per the statistical outcome of the Hausman test, Random effect regression model has emerged as the appropriate statistical test for this study.

Table 4.18: Hausman Test Statistics

Chi-Square	Prob>Chi2	Interpretation
42.27	0.357	Random Effect is appropriate

Source: STATA Outcome

Table 4.19: Effect of BGD and other control variables on NPL/TA

NPL/TA	Fixed Effect Model				Random Effect Model			
	Coefficient	Std. Err.	T	P>t	Coefficient	Std. Err.	t	P>t
Blau index	-3.366852	8.265912	-0.41	0.684	-4.135761	7.894482	-0.52	0.600
Bank size	-1.183254	.9589493	-1.23	0.219	-.5269518	.870831	-0.61	0.545
Bank age	.5660155	.2722469	2.08	0.039	.3214404	.0904114	3.56	0.000*
Board size	-.733637	.406274	-1.81	0.073	-.6964729	.4021895	-1.73	0.083
Leverage	-8.039213	7.097856	-1.13	0.259	-2.467225	6.5086	-0.38	0.705
Id	-.0781187	.0485933	-1.61	0.110	-.0952883	0.0475	-2.00	0.045*
Constant	11.90989	22.22511	0.54	0.593	16.04819	18.8937	0.85	0.396

Source: Fixed Effect and Random Effect Regression Outcome in STATA *significant at 5 % level

The table 4.19 shows that Bank age and % of independent directors are significant. The table also depicts that the negative sign of the coefficient of Blau index shows that with increase in board gender diversity in the board of the banks, Non-performing loan to Total Assets ratio decreases. It also observes a positive relationship of the control variables i.e. Bank age and Non-performing loan to Total Assets ratio.

Table 4.20: Random Effect Regression Model Summary

Model Parameters	Statistical Value
R-Square	0.2708
F-Statistics	22.07
p-value	0.000

Source: Panel Regression Outcome in STATA

Table 4.20 presents the analysis of the Random effect panel data model specification. It is evident from the table that the F-statistics obtained is high (22.07) and is also significant with $p < 0.05$. This proves the validity of the overall model as well as the robustness of the statistical results. The R-square value is 0.2708, which means that the board gender diversity and other control variables together effectively explained 27.08 percent variation in Non-performing loan to Total Assets ratio.

Regression Equation

$NPL/TA = 16.04819 - 4.135761 * \text{Blau index} - 0.5269518 * \text{Bank Size} + 0.3214404 * \text{Bank age} - 0.6964729 * \text{Board Size} - 2.467225 * \text{Leverage} - 0.0952883 * \% \text{ of independent directors}$

Objective 3

4.4 Impact of gender diversity of board members on Market Price Performance

The following section depicts the statistical output of probable impact of board gender diversity on market cap of the company.

4.4.1 Impact of gender diversity of board members on Market Cap

Table 4.21 shows that multicollinearity is not found between variables as no correlation coefficient has a value greater than 0.7 in absolute terms.

Table 4.21: Correlation Matrix of Market Cap and other variables

	Market Cap	Blau Index	Bank Size	Board Size	Bank Age	Id	Leverage
Market Cap	1.0000						
Blau Index	0.3461	1.0000					
Bank Size	0.5909	0.2760	1.0000				
Board Size	0.2630	0.0185	0.2152	1.0000			
Bank Age	-0.5415	-0.2183	-0.4801	-0.1184	1.0000		
Id	0.0082	0.2734	-0.1792	-0.1244	-0.1749	1.0000	
Leverage	-0.1130	-0.1061	-0.3316	0.0583	0.3408	-0.1639	1.0000

Source: STATA Outcome

Table 4.22 shows that on the basis of the Hausman test statistics, Random effect model is considered for the analysis in the current study.

Table 4.22: Hausman Test Statistics

Chi-Square	Prob>Chi2	Interpretation
20.81	0.200	Random Effect is appropriate

Source: STATA Outcome

Table 4.23: Effect of BGD and other control variables on Market Cap

Market Cap	Fixed Effect Model				Random Effect Model			
	Coefficient	Std. Err.	T	P>t	Coefficient	Std. Err.	t	P>t
Blau index	.5567521	.485032	1.15	0.253	1.336565	.4939949	2.71	0.007*
Bank size	.0067558	.0562698	0.12	0.905	.1470303	.0546958	2.69	0.007*
Bank age	.0664223	.0159751	4.16	0.000	-.012641	.0060767	-2.08	0.038*
Board size	-.0410688	.0238396	-1.72	0.087	-.026477	.0251725	-1.05	0.293
Leverage	.0859606	.4164921	0.21	0.837	.996808	.4074432	2.45	0.014*
Id	-.0009428	.0028514	-0.33	0.741	-.002843	.0029798	-0.95	0.340
Constant	9.269763	1.304138	7.11	0.000	12.18652	1.191617	10.23	0.000

Source: Fixed Effect and Random Effect Regression Outcome in STATA *significant at 5 % level

The table 4.23 shows that Board gender diversity, and the control variables including bank size, bank age and Leverage are significant. The table further highlights a few important points. It depicts that the positive sign of the coefficient of Blau index signifies that with increase in board gender diversity in the board of the banks, the Market cap of the banks improves. It also observes a negative relationship of the

control variables (percentage of independent directors on the board, Bank age, and Board size) and Market cap.

Table 4.24: Random Effect Regression Model Summary

Model Parameters	Statistical Value
R-Square	0.4353
F-Statistics	27.88
p-value	0.0001

Source: Panel Regression Outcome in STATA

Table 4.24 presents the analysis of the model specification. It is evident from the table that the F-statistics obtained is quite high (27.88) and is also significant with $p < 0.05$. This proves that the overall model is valid and the results are robust. The R-square value is 0.4353, which means that the board gender diversity and other control variables together are capable of explaining 43.53% variation in Market Cap.

Regression Equation

Market Cap = 12.18652 + 1.336565*Blau index + .1470303* Bank Size -.012641* Bank Age -.026477* Board Size +.996808* Leverage -.002843*percentage of independent directors

4.4.2 Impact of Gender diversity on Earning per Share (EPS)

The following section depicts the statistical output of probable impact of board gender diversity on the earning per share of the banks:

Table 4.25 shows that multicollinearity is not found between variables as no correlation coefficient has a value greater than 0.7 in absolute terms.

Table 4.25: Correlation Matrix of Earning per Share and other variables

	EPS	Blau Index	Bank Size	Board Size	Bank Size	Id	Leverage
EPS	1.0000						
Blau Index	0.2191	1.0000					
Bank Size	0.1534	0.2760	1.0000				
Board Size	0.0908	0.0185	0.2152	1.0000			
Bank Age	-0.4948	-0.2183	-0.4801	-0.1184	1.0000		
Id	0.3095	0.2734	-0.1792	-0.1244	-0.1749	1.0000	
Leverage	-0.1294	-0.1061	-0.3316	0.0583	0.3408	-0.1639	1.000

Source: STATA Outcome

Table 4.26 shows that on the basis of the Hausman test statistics, Random effect model is considered for the analysis in the current study.

Table 4.26: Hausman Test Statistics

Chi-Square	Prob>Chi2	Interpretation
3.82	0.703	Random Effect is appropriate

Source: STATA Outcome

Table 4.27: Effect of BGD and other control variables on EPS

EPS	Fixed Effect Model				Random Effect Model			
	Coefficient	Std. Err.	T	P>t	Coefficient	Std. Err.	t	P>t
Blau index	19.68891	16.62135	1.18	0.238	22.34497	14.5009	1.54	0.012*
Bank size	-.7687217	1.928284	-0.40	0.691	-1.156611	1.493229	-0.77	0.439
Bank age	-.1377338	.5474424	-0.25	0.802	-0.341838	.0816499	-4.19	0.000*
Board size	1.481075	.8169482	1.81	0.072	1.170233	.7219425	1.62	0.105
Leverage	15.37552	14.27258	1.08	0.283	14.30158	12.03755	1.19	0.235
Id	.0724797	.0977128	0.74	0.459	0.1406047	.0843433	1.67	0.096**
Constant	-4.877096	44.69092	-0.11	0.913	18.04587	32.11041	0.56	0.574

Source: Fixed Effect and Random Effect Regression Outcome in STATA

*significant at 5 % level **significant at 10 % level

The table 4.27 shows that board gender diversity and the control variable Bank age are significant. The table further highlights a few important points. It depicts that the positive sign of the coefficient of Blau index signifies that with increase in board gender diversity in the board of the banks, the EPS of the banks improves. It also observes a negative relationship of the control variables (Bank age, and Bank size) and EPS.

Table 4.28: Random Effect Regression Model Summary

Model Parameters	Statistical Value
R-Square	0.2991
F-Statistics	30.35
p-value	0.000

Source: Panel Regression Outcome in STATA

Table 4.28 presents the analysis of the model specification. It is evident from the table that the F-statistics obtained is quite high (30.35) and is also significant with $p < 0.05$. This proves that the overall model is valid and the results are robust. The R-square value is 0.2991, which means that the board gender diversity and other control variables together are capable of explaining 29.91% variation in EPS.

Regression Equation

EPS = 18.04587 + 22.34497*Blau index -1.156611* Bank Size -0.341838* Bank Age + 1.170233* Board Size +14.30158* Leverage + 0.1406047*percentage of independent directors

Objective 4

4.5 Compare the relationship between the gender diversity of board members and profitability of public and private sector banks

The following statistics depicts the probable impact of board gender diversity in banks on the EPS of the private banks.

4.5.1 Impact of the gender diversity on EPS of private banks

Table 4.29 shows that multicollinearity is not found between variables as no correlation coefficient has a value greater than 0.7 in absolute terms.

Table 4.29: Correlation Matrix of EPS of private banks and other variables

	EPS	Blau Index	Bank Size	Board Size	Bank Size	Id	Leverage
EPS	1.0000						
Blau Index	0.2358	1.0000					
Bank Size	0.3792	0.2760	1.0000				
Board Size	-0.0131	0.0185	0.2152	1.0000			
Bank Age	-0.4800	-0.2183	-0.4801	-0.1184	1.0000		
Id	0.1000	0.2734	-0.1792	-0.1244	-0.1749	1.0000	
Leverage	0.0858	-0.1061	-0.3316	0.0583	0.3408	-0.1639	1.0000

Source: STATA Outcome

Table 4.30 shows that on the basis of the Hausman test statistics, Random effect model is considered for the analysis in the current study.

Table 4.30: Hausman Test Statistics

Chi-Square	Prob>Chi2	Interpretation
2.00	0.9196	Random Effect is appropriate

Source: STATA Outcome

Table 4.31: Effect of BGD and other control variables on EPS of Private Banks

EPS	Fixed Effect Model				Random Effect Model			
	Coefficient	Std. Err.	T	P>t	Coefficient	Std. Err.	t	P>t
Blau index	31.45442	28.87155	1.09	0.279	31.31004	25.93016	1.21	0.227
Bank size	-.4407529	4.927678	-0.09	0.929	-3.445528	4.144447	-0.83	0.406
Bank age	-.3326165	.1132312	-2.94	0.004	-.3912771	.1034555	-3.78	0.000*
Board size	-1.238305	1.276977	-0.97	0.335	-.7315751	1.215936	-0.60	0.547
Leverage	-36.5654	105.3523	-0.35	0.729	22.68737	17.97155	1.26	0.207
Id	.2052778	.1319179	1.56	0.123	.2207236	.1247349	1.77	0.077**
Constant	67.23575	86.34604	0.78	0.438	68.35209	66.71268	1.02	0.306

Source: Fixed Effect and Random Effect Regression Outcome in STATA

*significant at 5 % level **significant at 10 % level

The table 4.31 shows that Bank age is significant. The table further highlights a few important points. It depicts that the positive sign of the coefficient of Blau index signifies that with increase in board gender diversity in the board of the banks, the

EPS of the banks improves. It also observes a negative relationship of the control variables (Bank age, Bank size and Board size) and EPS.

Table 4.32: Random Effect Regression Model Summary

Model Parameters	Statistical Value
R-Square	0.3021
F-Statistics	41.99
p-value	0.000

Source: Panel Regression Outcome in STATA

Table 4.32 presents the analysis of the model specification. It is evident from the table that the F-statistics obtained is quite high and is also significant with $p < 0.05$. This proves that the overall model is valid and the results are robust. The R-square value is 0.3021, which means that the board gender diversity and other control variables together are capable of explaining 30.21% variation in EPS.

Regression Equation

EPS = 68.35209 + 31.31004*Blau Index - 3.445528*Bank Size - 0.3912771*Bank Age - 0.7315751* Board Size + 22.68737*Leverage + 0.2207236*percentage of independent directors

4.5.2 Impact of gender diversity on Productivity per Employee Ratio (PPER) of private banks

The following statistical outcome depicts the probable impact of board gender diversity on PPER of private banks:

Table 4.33 shows that multicollinearity is not found between variables as no correlation coefficient has a value greater than 0.7 in absolute terms.

Table 4.33: Correlation Matrix of PPER of private banks and other variables

	PPER	Blau Index	Bank Size	Board Size	Bank Size	Id	Leverage
PPER	1.0000						
Blau Index	0.1853	1.0000					
Bank Size	0.1040	0.4520	1.0000				
Board Size	0.0144	0.2476	0.3722	1.0000			
Bank Age	-0.1013	-0.1763	-0.8022	-0.1440	1.0000		
Id	0.1303	0.2898	-0.2065	-0.1706	0.2211	1.0000	
Leverage	0.1512	0.2109	0.2717	0.0969	-0.0240	-0.1638	1.0000

Source: STATA Outcome

Table 4.34 shows that on the basis of the Hausman test statistics, Random effect model is considered for the analysis in the current study.

Table 4.34: Hausman Test Statistics

Chi-Square	Prob>Chi2	Interpretation
15.76	0.1578	Random Effect is appropriate

Source: STATA Outcome

Table 4.35: Effect of BGD and other control variables on Productivity per Employee Ratio (PPER) of private banks

PPER	Fixed Effect Model				Random Effect Model			
	Coefficient	Std. Err.	T	P>t	Coefficient	Std. Err.	T	P>t
Blau index	32.61361	25.58865	1.27	0.206	26.0165	23.42299	1.11	0.267
Bank size	-1.025741	4.367367	-0.23	0.815	-3.295895	3.743722	-0.88	0.379
Bank age	-.0574194	.100356	-0.57	0.569	-.1263179	.0934524	-1.35	0.176
Board size	-.3154685	1.131775	-0.28	0.781	.2080951	1.098368	0.19	0.850
Leverage	58.2019	93.373	0.62	0.535	27.97089	16.23389	1.72	0.085**
Id	.1120474	.1169179	0.96	0.340	.1372311	.1126743	1.22	0.223
Constant	-29.56543	76.52788	-0.39	0.700	30.7953	60.26227	0.51	0.609

Source: Fixed Effect and Random Effect Regression Outcome in STATA

*significant at 5 % level **significant at 10% level

The table 4.35 highlights a few important points. It depicts that the positive sign of the coefficient of Blau index signifies that with increase in board gender diversity in the board of the banks, the productivity per employee ratio of the banks improves. It also observes a negative relationship of the control variables (Bank age, Bank size) and productivity per employee ratio.

Table 4.36: Random Effect Regression Model Summary

Model Parameters	Statistical Value
R-Square	0.0794
F-Statistics	8.36
p-value	0.2127 (non -significant)

Source: Panel Regression Outcome in STATA

Table 4.36 presents the analysis of the model specification. It is evident from the table that the F-statistics obtained is 8.36 and is non-significant with $p > 0.05$. This proves that the overall model is not valid. The R-square value is 0.0794, which means that the board gender diversity and other control variables together are capable of explaining only 7.94% variation in the productivity per employee ratio.

Regression Equation

$PPER = 30.7953 + 26.0165 * \text{Blau Index} - 3.295895 * \text{Bank Size} - 0.1263179 * \text{Bank Age} + 0.2080951 * \text{Board Size} + 27.97089 * \text{Leverage} + 0.1372311 * \text{percentage of independent directors}$

4.5.3 Impact of gender diversity on Return on Assets (ROA) of private banks

The following statistical outcome depicts the probable impact of board gender diversity on ROA of private banks:

Table 4.37 shows that multicollinearity is not found between variables as no correlation coefficient has a value greater than 0.7 in absolute terms.

Table 4.37: Correlation Matrix of Return on assets of private banks and other variables

	ROA	Blau Index	Bank Size	Board Size	Bank Age	Id	Leverage
ROA	1.0000						
Blau Index	0.1061	1.0000					
Bank Size	0.0849	0.4520	1.0000				
Board Size	0.0014	0.2476	0.3722	1.0000			
Bank Age	-0.1620	-0.1763	-0.8022	-0.1440	1.0000		
Id	0.1336	0.2898	-0.2065	-0.1706	0.2211	1.0000	
Leverage	0.0500	0.2109	0.2717	0.0969	-0.0240	-0.1638	1.0000

Source: STATA Outcome

Table 4.38 shows that on the basis of the Hausman test statistics, Random effect model is considered for the analysis in the current study.

Table 4.38: Hausman Test Statistics

Chi-Square	Prob>Chi2	Interpretation
5.77	32.99	Random Effect is appropriate

Source: STATA Outcome

Table 4.39: Effect of BGD and other control variables on ROA of private banks

ROA	Fixed Effect Model				Random Effect Model			
	Coefficient	Std. Err.	T	P>t	Coefficient	Std. Err.	t	P>t
Blau index	1.970926	1.842986	1.07	0.288	1.100475	1.699578	0.65	0.517
Bank size	-.2891184	.3145533	-0.92	0.360	-.3780987	.2716455	-1.39	0.164
Bank age	-.0105037	.007228	-1.45	0.150	-.0151037	.0067809	-2.23	0.026*
Board size	.0010332	.0815145	0.01	0.990	.0377975	.0796979	0.47	0.635
Leverage	7.96565	6.725057	1.18	0.239	1.396753	1.177935	1.19	0.236
Id	.0091347	.0084208	1.08	0.281	.0120812	.0081757	1.48	0.139
Constant	-.9558124	5.511811	-0.17	0.863	5.598636	4.372646	1.28	0.200

Source: Fixed Effect and Random Effect Regression Outcome in STATA *significant at 5 % level

The table 4.39 shows that Bank age is significant. The table further highlights a few important points. It depicts that the positive sign of the coefficient of Blau index signifies that with increase in board gender diversity in the board of the banks, the ROA of the banks improves. It also observes a negative relationship of the control variables (Bank age, Bank size) and ROA.

Table 4.40: Random Effect Regression Model Summary

Model Parameters	Statistical Value
R-Square	0.0805
F-Statistics	8.49
p-value	0.2044 (non- significant)

Source: Panel Regression Outcome in STATA

Table 4.40 presents the analysis of the model specification. It is evident from the table that the F-statistics obtained is 8.49 and is non-significant with $p > 0.05$. This proves that the overall model is not valid. The R-square value is 0.0805, which means that the board gender diversity and other control variables together are capable of explaining only 8.05% variation in ROA.

Regression Equation

$$\text{ROA} = 5.598636 + 1.100475 * \text{Blau Index} - 0.3780987 * \text{Bank Size} - 0.0151037 * \text{Bank Age} + 0.0377975 * \text{Board Size} + 1.396753 * \text{Leverage} + 0.0120812 * \text{percentage of independent directors}$$

4.5.4 Impact of Gender diversity on Return on Equity (ROE) of private banks

The following statistical outcome depicts the probable impact of board gender diversity on ROE of private banks:

Table 4.41 shows that multicollinearity is not found between variables as no correlation coefficient has a value greater than 0.7 in absolute terms.

Table 4.41: Correlation Matrix of Return on Equity (ROE) of private banks and other variables

	ROE	Blau Index	Bank Size	Board Size	Bank Size	Id	Leverage
ROE	1.0000						
Blau Index	0.0880	1.0000					
Bank Size	-0.0062	0.4520	1.0000				
Board Size	0.0092	0.2476	0.3722	1.0000			
Bank Age	-0.0281	-0.1763	-0.8022	-0.1440	1.0000		
Id	0.1396	0.2898	-0.2065	-0.1706	0.2211	1.0000	
Leverage	0.0397	0.2109	0.2717	0.0969	-0.0240	-0.1638	1.0000

Source: STATA Outcome

Table 4.42 shows that on the basis of the Hausman test statistics, Random effect model is considered for the analysis in the current study.

Table 4.42: Hausman Test Statistics

Chi-Square	Prob>Chi2	Interpretation
11.92	0.0637	Random Effect is appropriate

Source: STATA Outcome

Table 4.43: Effect of BGD and other control variables on ROE of private banks

ROE	Fixed Effect Model				Random Effect Model			
	Coefficient	Std. Err.	T	P>t	Coefficient	Std. Err.	T	P>t
Blau index	24.23978	22.34306	1.08	0.281	13.23248	20.82486	0.64	0.525
Bank size	-3.197778	3.813422	-0.84	0.404	-3.783123	3.328461	-1.14	0.256
Bank age	-.0483453	.0876271	-0.55	0.583	-.1036405	.0830865	-1.25	0.212
Board size	.2196331	.988224	0.22	0.825	.5620646	.9765348	0.58	0.565
Leverage	133.8501	81.52983	1.64	0.104	13.45401	14.43319	0.93	0.351
Id	.0863529	.1020884	0.85	0.400	.1228375	.1001762	1.23	0.220
Constant	-53.65833	66.8213	-0.80	0.424	50.68627	53.57785	0.95	0.344

Source: Fixed Effect and Random Effect Regression Outcome in STATA *significant at 5 % level

The table 4.43 highlights a few important points. It depicts that the positive sign of the coefficient of Blau index signifies that with increase in board gender diversity in the board of the banks, the ROE of the banks improves. It also observes a negative relationship of the control variables (Bank age, Bank size) and ROE.

Table 4.44: Random Effect Regression Model Summary

Model Parameters	Statistical Value
R-Square	0.0707
F-Statistics	4.11
p-value	0.6616 (non- significant)

Source: Panel Regression Outcome in STATA

Table 4.44 presents the analysis of the model specification. It is evident from the table that the F-statistics obtained is 4.11 and is non-significant with $p > 0.05$. This proves that the overall model is not valid. The R-square value is 0.0707, which means that the board gender diversity and other control variables together are capable of explaining only 7.07% variation in ROE.

Regression Equation

ROE = 50.68627 + 13.23248 * Blau Index - 3.783123 * Bank Size - 0.1036405 * Bank Age + 0.5620646 * Board Size + 13.45401 * Leverage + 0.1228375 * percentage of independent directors

4.5.5 Impact of gender diversity on EPS of public banks

The following statistical outcome depicts the probable impact of board gender diversity on EPS of public banks:

Table 4.45 shows that multicollinearity is not found between variables as no correlation coefficient has a value greater than 0.7 in absolute terms.

Table 4.45: Correlation Matrix of EPS of public banks and other variables

	EPS	Blau Index	Bank Size	Board Size	Bank Size	Id	Leverage
EPS	1.0000						
Blau Index	0.0138	1.0000					
Bank Size	-0.0509	0.1530	1.0000				
Board Size	-0.1088	0.1112	-0.3313	1.0000			
Bank Age	0.1245	-0.1376	0.1400	-0.0663	1.0000		
Id	0.1356	-0.0808	-0.7074	0.2247	0.1229	1.0000	
Leverage	0.1775	0.0705	-0.3147	0.0340	-0.1858	0.3485	1.0000

Source: STATA Outcome

Table 4.46 shows that on the basis of the Hausman test statistics, Random effect model is considered for the analysis in the current study.

Table 4.46: Hausman Test Statistics

Chi-Square	Prob>Chi2	Interpretation
9.45	0.1498	Random Effect is appropriate

Source: STATA Outcome

Table 4.47: Effect of BGD and other control variables on EPS of Public banks

EPS	Fixed Effect Model				Random Effect Model			
	Coefficient	Std. Err.	T	P>t	Coefficient	Std. Err.	t	P>t
Blau index	10.17728	24.74911	0.41	0.682	12.96911	20.46092	0.63	0.526
Bank size	2.77345	3.396622	0.82	0.416	.0613542	2.260504	0.03*	0.978
Bank age	.2108198	.7067135	0.30	0.766	-.1644613	.1681924	-0.98	0.328
Board size	1.187806	1.182721	1.00	0.318	1.107202	.974859	1.14	0.256
Leverage	70.36905	43.42102	1.62	0.109	27.9912	32.29541	0.87	0.386
Id	-.2708219	.2026497	-1.34	0.185	.0923131	.1372387	0.67	0.501
Constant	-138.673	102.2693	-1.36	0.179	-30.68516	63.68559	-0.48	0.630

Source: Fixed Effect and Random Effect Regression Outcome in STATA *significant at 5 % level

The table 4.47 highlights a few important points. It depicts that the positive sign of the coefficient of Blau index signifies that with increase in board gender diversity in the board of the banks, the EPS of the banks improves. It also observes a negative relationship of the control variable Bank age and EPS.

Table 4.48: Random Effect Regression Model Summary

Model Parameters	Statistical Value
R-Square	0.0680
F-Statistics	5.07
p-value	0.5347(non- significant)

Source: Panel Regression Outcome in STATA

Table 4.48 presents the analysis of the model specification. It is evident from the table that the F-statistics obtained is 5.07 and is non-significant with $p > 0.05$. This proves that the overall model is not valid. The R-square value is 0.0680, which means that the board gender diversity and other control variables together are capable of explaining only 6.80% variation in EPS.

Regression Equation

EPS = -30.68516 + 12.96911 * Blau Index + 0.0613542 * Bank Size - 0.1644613 * Bank Age + 1.107202 * Board Size + 27.9912 * Leverage + 0.0923131 * percentage of independent directors

4.5.6 Impact of gender diversity on Productivity per Employee Ratio (PPER) of Public Banks

The following statistical outcome depicts the probable impact of board gender diversity on PPER of public banks:

Table 4.49 shows that multicollinearity is not found between variables as no correlation coefficient has a value greater than 0.7 in absolute terms.

Table 4.49: Correlation Matrix of PPER of public banks and other variables

	PPER	Blau Index	Bank Size	Board Size	Bank Age	Id	Leverage
PPER	1.0000						
Blau Index	0.1312	1.0000					
Bank Size	0.0348	0.1530	1.0000				
Board Size	-0.1212	0.1112	-0.3313	1.0000			
Bank Age	-0.0030	-0.1376	0.1400	-0.0663	1.0000		
Id	0.0794	-0.0808	-0.7074	0.2247	0.1229	1.0000	
Leverage	-0.0555	0.0705	-0.3147	0.0340	-0.1858	0.3485	1.0000

Source: STATA Outcome

Table 4.50 shows that on the basis of the Hausman test statistics, Random effect model is considered for the analysis in the current study.

Table 4.50: Hausman Test Statistics

Chi-Square	Prob>Chi2	Interpretation
0.64	0.9957	Random Effect is appropriate

Source: STATA Outcome

Table 4.51: Effect of BGD and other control variables on Productivity per Employee Ratio (PPER) of public banks

PPER	Fixed Effect Model				Random Effect Model			
	Coefficient	Std. Err.	T	P>t	Coefficient	Std. Err.	t	P>t
Blau index	90.62199	86.1652	1.05	0.296	97.96413	68.0691	1.44	0.150
Bank size	9.83394	11.8255	0.83	0.408	5.410549	7.509228	0.72	0.471
Bank age	.1647764	2.460456	0.07	0.947	-.6269205	.5562836	-1.13	0.260
Board size	-.7244814	4.1177	-0.18	0.861	-1.596302	3.242151	-0.49	0.622
Leverage	214.9014	151.1723	1.42	0.159	171.7121	107.3072	1.60	0.110
Id	-.8249751	.7055346	-1.17	0.246	-.5277948	.4557411	-1.16	0.247
Constant	-354.9456	356.0553	-1.00	0.322	-166.6174	211.4545	-0.79	0.431

Source: Fixed Effect and Random Effect Regression Outcome in STATA *significant at 5 % level

The table 4.51 highlights a few important points. It depicts that the positive sign of the coefficient of Blau index signifies that with increase in board gender diversity in the board of the banks, the productivity per employee ratio of the banks improves. It also

observes a negative relationship of the control variables (Bank age, Board size and percentage of independent directors) and productivity per employee ratio.

Table 4.52: Random Effect Regression Model Summary

Model Parameters	Statistical Value
R-Square	0.0705
F-Statistics	6.15
p-value	0.4068(non-significant)

Source: Panel Regression Outcome in STATA

Table 4.52 presents the analysis of the model specification. It is evident from the table that the F-statistics obtained is 6.15 and is non-significant with $p > 0.05$. This proves that the overall model is not valid. The R-square value is 0.0705, which means that the board gender diversity and other control variables together are capable of explaining only 7.05% variation in the productivity per employee ratio.

Regression Equation

$$PPER = -166.6174 + 97.96413 * \text{Blau Index} + 5.410549 * \text{Bank Size} - 0.6269205 * \text{Bank Age} - 1.596302 * \text{Board Size} + 171.7121 * \text{Leverage} - 0.5277948 * \text{percentage of independent directors}$$

4.5.7 Impact of gender diversity on Return on Assets (ROA) of Public Banks

The following statistical outcome depicts the probable impact of board gender diversity on ROA of public banks:

Table 4.53 shows that multicollinearity is not found between variables as no correlation coefficient has a value greater than 0.7 in absolute terms

Table 4.53: Correlation Matrix of Return on Assets (ROA) of Public Banks and other variables

	ROA	Blau Index	Bank Size	Board Size	Bank Size	Id	Leverage
ROA	1.0000						
Blau Index	-0.1540	1.0000					
Bank Size	-0.0807	0.1530	1.0000				
Board Size	0.1006	0.1112	-0.3313	1.0000			
Bank Age	0.2285	-0.1376	0.1400	-0.0663	1.0000		
Id	0.2268	-0.0808	-0.7074	0.2247	0.1229	1.0000	
Leverage	-0.0283	0.0705	-0.3147	0.0340	-0.1858	0.3485	1.0000

Source: STATA Outcome

Table 4.54 shows that on the basis of the Hausman test statistics, fixed effect model is considered for the analysis in the current study.

Table 4.54: Hausman Test Statistics

Chi-Square	Prob>Chi2	Interpretation
25.44	0.0003	Fixed Effect is appropriate

Source: STATA Outcome

Table 4.55: Effect of BGD and other control variables on ROA of public banks

ROA	Fixed Effect Model				Random Effect Model			
	Coefficient	Std. Err.	t	P>t	Coefficient	Std. Err.	T	P>t
Blau index	-1.413941	.6780636	-2.09	0.040*	-.8502643	.5956842	-1.43	0.153
Bank size	.0544219	.0930589	0.58	0.560	.0614411	.0664003	0.93	0.355
Bank age	.0373752	.0193622	1.93	0.057**	.0042726	.0050735	0.84	0.400
Board size	-.0132125	.0324036	-0.41	0.684	.0179829	.0284327	0.63	0.527
Leverage	3.473462	1.189627	2.92	0.004*	2.417653	.9470998	2.55	0.011
Id	-.0146584	.0055521	-2.64	0.010*	-.006067	.0040389	-1.50	0.133
Constant	-7.066036	2.801922	-2.52	0.014	-3.626989	1.87602	-1.93	0.053

Source: Fixed Effect and Random Effect Regression Outcome in STATA

*significant at 5 % level **significant at 10 % level

The table 4.55 shows that Blau index, Leverage and percentage of independent directors are significant. The table further highlights a few important points. It depicts that the negative sign of the coefficient of Blau index signifies that with increase in board gender diversity in the board of the banks, the ROA of the banks decreases. It also observes a positive relationship of the control variables (Bank age, Bank size and leverage) and ROA.

Table 4.56: Fixed Effect Regression Model Summary

Model Parameters	Statistical Value
R-Square	0.1477
F-Statistics	24.39
p-value	0.0007

Source: Panel Regression Outcome in STATA

Table 4.56 presents the analysis of the model specification. It is evident from the table that the F-statistics obtained is quite high and is also significant with $p < 0.05$. This proves that the overall model is valid and the results are robust. The R-square value is 0.1477, which means that the board gender diversity and other control variables together are capable of explaining 14.77% variation in ROA.

Regression Equation

ROA = -7.066036-1.413941*Blau Index +.0544219*Bank Size +.0373752*Bank Age --.0132125* Board Size + 3.473462*Leverage -.0146584*percentage of independent directors

4.5.8 Impact of gender diversity on Return on Equity (ROE) of public banks

The following statistical outcome depicts the probable impact of board gender diversity on ROE of public banks:

Table 4.57 shows that multicollinearity is not found between variables as no correlation coefficient has a value greater than 0.7 in absolute terms except between the variables Bank size and percentage of independent directors.

Table 4.57: Correlation Matrix of Return on Equity (ROE) of public banks and other variables

	ROE	Blau Index	Bank Size	Board Size	Bank Size	Id	Leverage
ROE	1.0000						
Blau Index	-0.1045	1.0000					
Bank Size	-0.1164	0.1530	1.0000				
Board Size	0.0004	0.1112	-0.3313	1.0000			
Bank Age	0.2486	-0.1376	0.1400	-0.0663	1.0000		
Id	0.2182	-0.0808	-0.7074	0.2247	0.1229	1.0000	
Leverage	-0.0522	0.0705	-0.3147	0.0340	-0.1858	0.3485	1.0000

Source: STATA Outcome

Table 4.58 shows that on the basis of the Hausman test statistics, fixed effect model is considered for the analysis in the current study.

Table 4.58: Hausman Test Statistics

Chi-Square	Prob>Chi2	Interpretation
15.45	0.0145	Fixed Effect is appropriate

Source: STATA Outcome

Table 4.59: Effect of BGD and other control variables on ROE of public banks

ROE	Fixed Effect Model				Random Effect Model			
	Coefficient	Std. Err.	T	P>t	Coefficient	Std. Err.	t	P>t
Blau index	-34.84817	36.10299	-0.97	0.337	-14.35487	29.1351	-0.49	0.622
Bank size	-4.368443	4.954852	-0.88	0.380	-.5459705	3.144013	-0.17	0.862
Bank age	1.467786	1.030925	1.42	0.158	-.0725465	.2177218	-0.33	0.739
Board size	-.1731871	1.725305	-0.10	0.920	2.138682	1.380703	1.55	0.121
Leverage	118.8503	63.3408	1.88	0.064**	73.69532	45.0051	1.64	0.102
Id	-.1792417	.2956171	-0.61	0.546	-.1872545	.1895913	-0.99	0.323
Constant	-183.0156	149.1862	-1.23	0.223	-76.65163	87.77401	-0.87	0.383

Source: Fixed Effect and Random Effect Regression Outcome in STATA

*significant at 5 % level **significant at 10 % level

The table 4.59 highlights a few important points. It depicts that the negative sign of the coefficient of Blau index signifies that with increase in board gender diversity in the board of the banks, the ROE of the banks decreases. It also observes a positive relationship of the control variables (Bank age and leverage) and ROE.

Table 4.60: Fixed Effect Regression Model Summary

Model Parameters	Statistical Value
R-Square	0.1045
F-Statistics	13.23
p-value	0.0066

Source: Panel Regression Outcome in STATA

Table 4.60 presents the analysis of the model specification. It is evident from the table that the F-statistics obtained is quite high and is also significant with $p < 0.05$. This proves that the overall model is valid and the results are robust. The R-square value is 0.1045, which means that the board gender diversity and other control variables together are capable of explaining 10.45% variation in ROE.

Regression Equation

ROE = -183.0156-34.84817*Blau Index -4.368443*Bank Size +1.467786*Bank Age -0.1731871* Board Size + 118.8503*Leverage -0.1792417*percentage of independent directors

4.6 Summary of statistical output

4.6.1 Summary of statistical output of Objective 1 to Objective 3

Table 4.61: Summary of statistical output of Objective 1 to Objective 3

Variables	Objective 1			Objective 2		Objective 3		Total no. of significance
	Tobin Q	Provision towards NPA	Capital Adequacy Ratio	NPL/TA	PSL	Market Cap	EPS	
Blau Index	0.017*	0.045*	0.156	0.600	0.055**	0.007*	0.012*	5
Bank Size	0.000*	0.128	0.045*	0.545	0.000*	0.007*	0.439	4
Bank Age	0.197	0.831	0.000*	0.000*	0.000*	0.038*	0.000*	5
Board Size	0.057**	0.223	0.137	0.083**	0.098**	0.293	0.105	3
Leverage	0.384	0.000*	0.000*	0.705	0.000*	0.014*	0.235	4
Id	0.008*	0.172	0.671	0.045*	0.431	0.340	0.096**	3
Total no. of significant variables	4	2	3	3	5	4	3	

Source: Author's compilation

* significant at 5% level **significant at 10% level

The effects of the independent variable(s) and control variable(s) on the different dependent variable(s) are summarised in the table above. P-values are used to determine whether or not the independent and controlled factors in a study have a statistically significant impact on the results. Variables with p-values below 0.05 are deemed to be significant at the 5 per cent level, and those with p-values below 0.10 are considered to be significant at the 10 per cent level.

Two of the three proxies (TobinQ and Provision towards NPA) for objective 1 (bank risk performance) show statistical significance for the Blau index (a measure of gender diversity in the workplace). Bank size and Leverage affect two proxy measures out of the three under research, while the other three affect only one proxy variable. The TobinQ and Capital Adequacy ratio of a bank are strongly influenced by its size, whereas the provision for non-performing assets and the capital adequacy ratio are strongly influenced by the bank's leverage. In the current study, there are four variables (Blau index, bank size, board size and percentage of independent directors) that influence TobinQ, while only three (bank size, bank age and leverage) influence the capital adequacy ratio. The statistics depicts that out of the six variables that are considered for objective 2 (Priority sector lending practices), five of those variables have a substantial influence on the priority sector lending that the banks do. The bank age, board size and the proportion of its directors that are independent are found to be important factors in the second proxy measurement for objective 2 (the ratio of non-performing loans to total assets). With regard to the third objective (market price performance), market capitalization has emerged as the proxy indicator that is most affected when compared to earnings per share. EPS is found to be affected by three variables (Blau index, bank age, and proportion of independent directors), whereas market cap is affected by four variables (Blau index, bank size, bank age, and leverage).

In order to study the three objectives, while keeping the broader context in mind, seven different proxy measures have been utilised. The findings presented in the table indicate that out of the total of six variables, one of which is independent and the other five of which are controlled, the Blau index and the age of the bank are the most influential variables. This is because both of these factors have a significant impact on the five proxy measures. The size of the bank and its leverage had less of an impact

on the other four proxy indicators. It was discovered that board size and percentage of independent directors are the variables with the least amount of influence because these only have a meaningful impact on three proxy measures.

While considering the regression results, the findings of this study showed that increased gender diversity on corporate boards increases the risk faced by banks. There is a substantial positive connection between TobinQ and the presence of females on board. There is a strong negative influence on Provision towards NPA and capital adequacy ratio caused by the presence of gender diversity on boards. It gives the impression that women directors are not those who shy away from taking risks. Women directors lead to better risk management. On the other hand, evidence of an inconsequential association between the presence of women on board and danger is provided by Cosentino et al. (2012), Sila et al. (2016), Loukil and Yousfi (2016), and Adams and Ragunathan (2017). The findings further indicate that the presence of women on corporate boards has a statistically detrimental effect on the lending policies of financial institutions. Diversity in terms of gender makes it easier to make fewer loans to priority sectors in the economy. Researchers Huang and Kisgen (2013) discovered that female-led companies are less risk-taking than male-led companies. Specifically, female-led companies are less likely to engage in acquisitions or issue loans. According to the findings of Bellucci et al. (2010), female loan officers have a tendency to be more risk-averse than their male colleagues when it comes to making decisions on the provision of loans to new loan applicants with no prior credit history. Additional gender diversity is related with a negative correlation with the ratio of non-performing loans to total assets. It is anticipated that there will be fewer loans in default if the managers are of a higher calibre (Ahmed et al. 1997). It was found by Beck et al. (2013), who reported similar findings, that loans handled by female loan officers have a tendency to be less likely to turn problematic than loans screened by male loan officers. This was shown to be the case regardless of the loan amount. It has been shown that gender diversity in the workplace improves a company's bottom line and helps it to attract and retain top talent. Ayadi et al. (2015) observed that having a diverse group of women in the team can boost company's bottom line. Positive correlation between gender diversity and stock market value was discovered by Salawudeen and Dandago (2020).

4.6.2 Summary of statistical output of Objective 4

Table 4.62: Summary of statistical output of Objective 4

Objective 4								
	Private Banks				Public Banks			
Variables	EPS	Productivity per Employee Ratio	ROA	ROE	EPS	Productivity per Employee Ratio	ROA	ROE
Blau Index	0.227	0.267	0.517	0.525	0.526	0.150	0.040*	0.337
Bank Size	0.406	0.379	0.164	0.256	0.978	0.471	0.560	0.380
Bank Age	0.000*	0.176	0.026*	0.212	0.328	0.260	0.057**	0.158
Board Size	0.547	0.850	0.635	0.565	0.256	0.622	0.684	0.920
Leverage	0.207	0.085**	0.236	0.351	0.386	0.110	0.004*	0.064**
Id	0.077**	0.223	0.139	0.220	0.501	0.247	0.010*	0.546
Total	2	1	1	0	0	0	4	1

Source: Author's compilation

* significant at 5% level

**significant at 10% level

In the preceding table, a comparison was made between the effects of gender diversity on the variables that were the subject of the study in public and private sector banks in India. The statistics shows that when looking at private sector banks, there are three variables that are determined to be influential variables that have a considerable impact on proxy measures of profitability. These variables include bank age, leverage and the percentage of independent directors. In the case of public banks, the Return on Assets (ROA) has emerged as the most effected profitability indicator due to the fact that it is affected by four variables that are being studied (Blau index, Bank age, leverage and percentage of independent directors). Return on Equity (ROE) is unaffected by the understudy variables in private banks, however in public sector banks, two proxy measures of profitability (EPS and Productivity per employee ratio) also remain unaffected by the understudy factors.

The regression outcome of our research indicates a correlation between a diverse Board of Directors and financial success. Earnings per share, productivity per employee, and return on assets in both public and private banks all improve when they adopt more inclusive policies that encourage the participation of women. What's more, the findings show that private banks' EPS, PPER, ROA and ROE improve as the proportion of women director rises, but ROA and ROE decline for public banks. These findings are consistent with the resource dependence theory, which holds that the presence of women on corporate boards increases both the company's resources and its profitability (Terjesen et al., 2016). As Luckerath-Rovers (2013) discovered, companies that maintained at least two women on their board of directors outperformed those that had none. Earlier research has shown that having between 20 and 40 per cent women in managerial positions improves organisational effectiveness, thus our conclusion is consistent with that theory (Reinert et al. 2015). According to research by Arora and Kumar (2016), the percentage of women in top executive roles in Indian banks is significantly lower than in their overseas counterparts. One possible explanation for this finding is the widespread belief that women are inherently less self-assured, courageous, and level-headed than men. This interpretation could have played a role in the findings. Women were discouraged from pursuing executive roles because of social norms (Ahern and Dittmar, 2012).

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