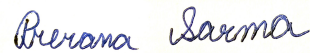


Dedicated to
Ma, Deuta, Dada and Juhil

DECLARATION

I, Prerana Sarma, Research Scholar in the Department of Business Administration, under the school of Management Sciences, of Tezpur University, Assam, India, hereby declare that the thesis entitled “Green Banking Initiative in India: A Study on its Practices, Performance and Stakeholder Perception” is a bonafide research undertaken by me under the supervision and guidance of Dr. Arup Roy, Associate Professor, Department of Business Administration, Tezpur University, Assam. The work embodies the results of my original research and reflects achievement in this area of research. I also certify that, to the best of my knowledge, any help received in preparing this thesis, and all sources used have been acknowledged in this thesis.

This work has not been submitted elsewhere for award of any degree.



(Prerana Sarma)

Date: 28-06-2023

Place: Tezpur University

Registration No.TZ189873 of 2018



तेजपुरविश्वविद्यालय/ TEZPUR UNIVERSITY

(संसदके अधिनियमद्वारा स्थापितकेन्द्रीय विश्वविद्यालय)

(A Central University established by an Act of Parliament)

तेजपुर-784028 :: असम/ **TEZPUR-784028 :: ASSAM**

Dr. Arup Roy

Associate Professor

Department of Business Administration

School of Management Sciences

Tezpur University

Email: arup@tezu.ernet.in

Phone: 03712 275012

CERTIFICATE FROM THE SUPERVISOR

This is to certify that the thesis entitled “Green Banking Initiative in India: A Study on its Practices, Performance and Stakeholder Perception” submitted to the School of Management Sciences, Tezpur University in partial fulfillment for the award of the degree of Doctor of Philosophy in Management Sciences is a record of research carried out by Prerana Sarma under my supervision and guidance. All help received by her from various sources have been duly acknowledged.

No part of this thesis has been submitted elsewhere for award of any other degree.

Date: 28-06-2023

Place: Napaam

(Dr. Arup Roy)

Associate Professor

Department of Business Administration

School of Management Sciences

ACKNOWLEDGMENT

I would like to thank everyone without whom the completion of my research work would have been impossible.

First and foremost, I would like to thank and offer my sincere gratitude to my supervisor Dr. Arup Roy, for agreeing to guide me. I thank him for his constant motivation to search for and achieve new goals. His belief and faith on Sri Sri Anukul Chandra has shown me the path of silence, positivity and happiness in sacrifice. I would also like to thank the Doctoral Committee members, Prof. Debabrata Das and Dr. Tridib Ranjan Sarma, for their guidance and insightful suggestions. I want to thank all other doctoral research committee members of Department of Business Administration who helped in various ways during my research process. A special thanks to Professor Mrinmoy Kumar Sarma for being my mentor and for guiding me throughout the journey.

I offer my gratitude towards Prof. Dhruva Kumar Bhattacharyya, Vice Chancellor (In-Charge), Tezpur University for his support. I also want to thank the staff of the Department of Business Administration for their help and support. Special thanks to all the bank officials, and the participants, who understood the importance of the research, and gave their precious time to the study.

I am who I am today, because of four people in my life, and I have to thank each one of them individually. Thank you Deuta for showing the positive side of every little downfall that I had seen during this period, and also thank you for travelling with me to Mumbai for data collection. Thank you Ma for your trust, concern and unconditional love which encouraged me to stay focused and work harder. Thank you, Dada for guiding me throughout my career and celebrating every little success of mine. A special thanks to Juhil Medhi who supported and motivated me throughout the journey and made it easy and beautiful. Special thanks to Dr. Gitashree Gogoi, Dr. Ashifuddin Ahmed Saikia, Ankita Das, Sikha Sadani, Monu Singh for their support and confidence which made the journey worth remembering.

Prerana Sarma

LIST OF TABLES AND FIGURES

Table No.	Table Name	Page No.
2.1	Research Articles as Per Indexation	18
2.2	Studies according to their Nature	18
2.3	Aspects and Subsidiary Aspects	19
2.4	Geographical Spread of Research Articles	21
2.5	Journals Active in Publishing Articles on Green Banking	21
2.6	One-Dimensional Studies in India	23
2.7	Two-Dimensional Studies on Green Banking in India	23
3.1	Objective and Type of Research	35
3.2	Banks under Sample	38
3.3	Literatures about Banking Disclosure	39
3.4	Sample Banks	40
3.5	Green Banking Performance Evaluation Index (GBPEI)	47
3.6	Independent Variables for Objective 2	53
3.7	Cities Chosen for the Study	58
3.8	Banks under Sample	60
3.9	Stakeholder Studies on Green Banking	61
3.10	Distribution of Sample Size	63
3.11	Banks for Pilot Study	64
3.12	Reliability Statistics for Stakeholders' Perception	65
3.13	Variables Considered for Objective 3	65
4.1	Year-Wise Dimension Score and Total GBPEI score	74
4.2	Popular Dimensions over the Period of Study	75
4.3	Dimension Score Attained out of Total Dimension Score	76
4.4	Percentage of Items reported in Dimensions over the Study Period	76
4.5	Green Banking Performance Evaluation Score for 2009-2010	78
4.6	Green Banking Performance Evaluation Score for 2010-2011	79
4.7	Green Banking Performance Evaluation Score for 2011-2012	80
4.8	Green Banking Performance Evaluation Score for 2012-2013	81
4.9	Green Banking Performance Evaluation Score for 2013-2014	82

4.10	Green Banking Performance Evaluation Score for 2014-2015	83
4.11	Green Banking Performance Evaluation Score for 2015-2016	84
4.12	Green Banking Performance Evaluation Score for 2016-2017	84
4.13	Green Banking Performance Evaluation Score for 2017-2018	85
4.14	Green Banking Performance Evaluation Score for 2018-2019	86
4.15	GBPEI Scores of Banks from 2009-10 to 2018-19	88
4.16	Highest and Lowest Scorer Banks	89
4.17	Yearly Descriptive Statistics of GBPEI	90
4.18	Total score and Annual Growth Rate of GBPEI	92
4.19	One-Way Anova of GBPEI in SEBI BRR Phases	94
4.20	Post Hoc Analysis	95
4.21	Total and Average GBPEI Scores	98
4.22	Score Card for Public Sector Banks	99
4.23	Score Card for Private Sector Banks	99
4.24	Ranks of Public Sector and Private Sector Banks	100
4.25	Group Statistics of GBPEI across Public and Private Sectors	101
4.26	Independent t-test of Public Banks and Private Banks	102
5.1	Corporate Characteristics of Banks	105
5.2	Descriptive Statistics of GBPEI	110
5.3	Independent Variables: Descriptive Statistics	111
5.4	Correlation between Independent Variables	113
5.5	Panel unit root test: Summary	113
5.6	Heteroscedasticity Test	115
5.7	Auto-Correlation Test	116
5.8	Pooled OLS Regression	116
5.9	Bruesch Pagan Test	118
5.10	Random Effect Model	119
5.11	Hausman Test	121
5.12	Fixed Effect Model	121
6.1	Stakeholders across sectors of Banks	125
6.2	Demographic Statistics of the Respondents	126
6.3	Descriptive Statistics of Product Awareness and Usage	128

6.4	Independent t-test for Awareness and Usage across Demographic Variables	128
6.5	Normality Tests for Benefits of GBPS across Demographic Variables	130
6.6	Results of Mann-Whitney U Test for Benefits of GBPS	131
6.7	Descriptive Statistics of Benefits of GBPS	132
6.8	Normality Tests for Difficulties of GBPS across Demographic Variables	133
6.9	Results of Mann-Whitney U Test for Difficulties of GBPS	134
6.10	Descriptive Statistics of Difficulties of GBPS	136
6.11	Tests of Normality of Purposes of GBD	137
6.12	Mann-Whitney U Test of Purposes of GBD	137
6.13	Descriptive Statistics of Purposes of GBD	139
6.14	Frequency Analysis of Benefits of Green Banking Disclosures	140
6.15	Tests of Normality of Benefits across Demographic Variables	141
6.16	Benefits of Green Banking Disclosures amongst Demographic Variables	142
6.17	Independent t-test of Quality of GBD across Demographic Variables	144
6.18	Frequency Analysis of Satisfaction with Green Banking Disclosures	145
6.19	Tests of Normality of Satisfaction with Green Banking Disclosures	146
6.20	Descriptives of Satisfaction with Green Banking Disclosures	146
6.21	Test Statistics of Satisfaction with Green Banking Disclosures	147
6.22	Frequencies of Common Sources of Information	148
6.23	Frequencies of Preferred Sources of Information	149
6.24	Frequency Analysis of Preferred Location for Disclosure	150
6.25	Chi Square Results of Preferred Location for Disclosure	151
6.26	Frequency Analysis of Encountered and Preferred Form of	152

	Reporting	
6.27	Chi- Square Results of Encountered and Preferred Reporting Format	153
7.1	Highest and Lowest Scorer Banks	157
List of Figures		
Figure No.	Figure Name	Page No.
1.1	Phases of Evolution of Green Banking	7
1.2	Stages of Evolution of Green Banking in India	9
2.1	Growth of Research Articles on Green Banking	20
2.2	Scope for Future Studies	22
2.3	Chronological Growth of Research Articles in India	22
3.1	Research Design Objective-Wise	35
3.2	Concept of Content Analysis	42
3.3	Map of India showing Study Area	57
3.4	Sampling Technique Applied	61
4.1	Overview of Analyses for Objective 1	70
4.2	Mean of GBPEI from 2009-10 to 2018-19	91
4.3	Annual Growth Rate of GBEPI across 10 years	92
4.4	Comparison of Total Green Banking Performance Evaluation Score	96
4.5	Annual Growth of Public Sector Banks and Private Sector Banks	97
6.1	Diagrammatic Representation of Demographics of Sample	127
6.2	Percentage Analysis of Encountered Sources of Information	148
6.3	Percentage Analysis of Preferred Sources of Information	149
6.4	Percentages Analysis of Disclosure Location Preference	150
6.5	Percentage Analysis on Encountered and Preferred Form of Reporting	152

LIST OF ABBREVIATIONS

Abbreviation	Expansion
AGR	Annual Growth Rate
ATM	Automated Teller Machine
BOD	Board of Director
BRR	Business Responsibility Report
BRDSIZE	Board Size
CIGI	The Centre for International Governance Innovation
CRM	Customer Relationship Management
CSED	Corporate Social and Environment Disclosure
CSR	Corporate Social Responsibility
CSRD	Corporate Social Reporting Disclosure
ECS	Electronic Clearing Service
E &S	Environmental and Social
FEM	Fixed Effect Model
GBD	Green Banking Disclosures
GBPS	Green Banking products and services
GBPEI	Green Banking Performance Evaluation Index
GBPES	Green Banking Performance Evaluation Score
GDP	Gross Domestic Product
G20	The Group of Twenty
HSBC	The Hongkong and Shanghai Banking Corporation Limited
IDRBT	The Institute for Development and Research in Banking Technology
IFC	The International Finance Corporation
IMPS	Immediate Payment Service
NPA	Non-Performing Assets
NEFT	National Electronic Funds Transfer
NGOs	Non-Governmental Organization
NRDC	National Research Development Corporation
POLS	Pooled Ordinary Least Square

POS	Point of Sales
PSL	Priority Sector Lending norms
RBI	The Reserve Bank of India
REM	Random Effect Model
ROA	Return on Assets
RTGS	Real Time Gross Settlement
SBI	State Bank of India
SEBI	Security and Exchange Board of India
Sig Value	Significance Value
UK	The United Kingdom
UNEP	United Nations Environment Programme
U.S.A	The United States of America
WOMNDIR	Women Director