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The Efficiency of the Commercial Banks in six Pacific Island Countries

**A dissertation in partial fulfilment of the requirements
for the degree of**

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Banking Studies

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Research Abstract:

This thesis explores the efficiency of the commercial banks in six Pacific Island Countries (PICs): Fiji, Papua New Guinea, Samoa, Solomon Islands, Tonga, and Vanuatu over the period 2000 to 2006 using Data Envelopment Analysis (DEA). The use of DEA is justified primarily due to the small number of commercial banks operating in these small countries. This is the first detailed study of the relative efficiency and performance of banking firms in this selected group of small countries.

The dominant feature of this research is to investigate the primary prudential tools commonly used by banking supervisors in regulating the local banking system. In our understanding, this is the first effort to investigate the link between individual prudential tools and bank efficiency.

The small number of banks in this dataset further enables a structural investigation of the relative efficiency across commercial banks nationally and across countries, employs a series of explanatory variables to explain the possible sources of efficiency variation, and provides a series of practical measures to validate resulting efficiency scores from DEA. This comprehensive structural construct is also a new development in bank efficiency studies.

The key research finding is the identification of liquidity requirements as the main source of bank inefficiency. Capital requirements are not only ineffective in promoting bank efficiency but in the absence of formal liquidity requirements, they become a contributing factor for causing asset deterioration. Hence, asset quality is inversely related to bank efficiency. Scale inefficiency is unusually large compared with reported scale inefficiency in the literature and in most countries, it dominates technical inefficiency.

Finally, efficiency-based ratios should continue to supplement resulting efficiency scores, at least in the current measurement and development of bank efficiency in the context of smaller developing economies.

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Table of Contents	Page
Abstract.....	ii
Acknowledgement.....	iii
Table of Contents.....	iv
List of Tables.....	x
List of Figures.....	xii
Abbreviations.....	xiii
Chapter 1: Introduction.....	1
1.1 Research Mission Statement.....	1
1.2 Background: Pacific Region Geography	1
1.3 Political Instability.....	2
1.4 Research Objectives	3
1.5 Scope of the Research.....	3
1.6 Why does Banking Efficiency Matter?	5
1.6.1 Inform government policy.....	5
1.6.2 Address research issues.....	6
1.6.3 Improve managerial performance.....	7
1.7 Justification for the Efficiency of Banking in the Region.....	8
1.8 Dissertation Structure.....	8
Chapter 2: Development of Bank Efficiency Measurements.....	10
2.1 General definition of efficiency.....	10
2.2 Efficiency in banking.....	13
2.2.1 Financial Ratios.....	14
2.2.2 Scale and scope and Efficiencies.....	15
2.2.3 X-efficiency	17
2.3 Approaches to measuring bank’s efficiency	18
2.3.1 Parametric approach: Stochastic Frontier Approach (SFA)	18
2.3.1.1 Definitions and Assumptions.....	19

	2.3.1.2	Strengths.....	21
	2.3.1.3	Weaknesses.....	22
2.3.2		Parametric approach: Distribution-free Approach (DFA).....	23
	2.3.2.1	Definitions and Assumptions	23
	2.3.2.2	Strengths	24
	2.3.2.3	Weaknesses	25
2.3.3		Parametric approach: Thick Frontier Approach (TFA).....	26
	2.3.3.1	Definitions and Assumptions.....	26
	2.3.3.2	Strengths.....	28
	2.3.3.3	Weaknesses.....	28
2.3.4		Non-Parametric approach: Data Envelopment Analysis (DEA)...	29
	2.3.4.1	Definitions and Assumptions.....	29
	2.3.4.2	Strengths.....	32
	2.3.4.3	Weaknesses.....	33
2.3.5		Non-Parametric approach: Free Disposal Hull Method (FDH)...	34
	2.3.5.1	Definitions and Assumptions.....	34
	2.3.5.2	Strengths.....	35
	2.3.5.3	Weaknesses.....	36
2.4		Deciding the best approach.....	36
	2.4.1	Parametric Approaches.....	39
	2.4.2	Non-Parametric Approaches.....	41
	2.4.3	Possible solution such as meeting halfway.....	41
	2.4.4	Possible Tie-Breaker conditions.....	42
	2.4.5	Selected Approaches for the research in the PIC.....	43
2.5		Deciding the Economic Concept.....	44
	2.5.1	Cost Efficiency Function (CEF)	44
	2.5.2	Profit Efficiency Function (PEF)	45
	2.5.3	Chosen Economic Concept for the research in the PIC.....	45
2.6		Identifications of Input and Output Orientations.....	46
	2.6.1	Intermediation (or Asset) Approach.....	47
	2.6.2	User Cost Approach (UCA)	48
	2.6.3	Production (or Value-Added) Approach	48
	2.6.4	Other issues to consider such as the treatment of capital.....	48
	2.6.5	Chosen input/output orientation for the research in the PIC.....	49

2.7	Cross-country comparisons (CCC)	49
2.7.1	Homogeneous assumptions across dataset.....	50
2.7.2	Country specific Conditions and environmental effects.....	51
2.8	Chapter Summary.....	53
Chapter 3: The Six Banking Frameworks.....		54
3.1	Introduction	54
3.2	Core Principles for Effective Banking Supervision.....	55
3.3	Bank Efficiency and Prudential Requirements.....	58
3.3.1	Universal and Separated banking Systems.....	59
3.4	Overview of the Six Banking Frameworks.....	61
3.4.1	The Association of Financial Supervisors of Pacific Countries....	62
3.5	The Tongan banking system.....	63
3.5.1	Banking Structure.....	63
3.5.2	Banking Regulatory Framework.....	65
3.5.3	Non-Traditional Banking Activities.....	67
3.6	The Fijian banking system.....	67
3.6.1	Banking Structure.....	67
3.6.2	Banking Regulatory Framework.....	69
3.6.3	Non-Traditional Banking Activities.....	71
3.7	The Samoan banking system.....	71
3.7.1	Banking Structure.....	71
3.7.2	Banking Regulatory Framework	73
3.7.3	Non-Traditional Banking Activities.....	75
3.8	The PNG banking system.....	75
3.8.1	Banking Structure.....	75
3.8.2	Banking Regulatory Framework	77
3.8.3	Non-Traditional Banking Activities.....	78
3.9	The Solomon Islands banking system.....	78
3.9.1	Banking Structure.....	78
3.9.2	Banking Regulatory Framework	80
3.9.3	Non-Traditional Banking Activities.....	80
3.10	The Vanuatu banking system.....	81

3.10.1	Banking Structure.....	81
3.10.2	Banking Regulatory Framework	82
3.10.3	Non-Traditional Banking Activities.....	83
3.11	Chapter Summary.....	84
Chapter 4: Data and Methodology.....		86
4.1	Data Collection Process for both Primary and Secondary Data.....	86
4.2	Primary Data.....	87
4.2.1.	Market Share.....	87
4.2.2	Annual Growth.....	91
4.2.3	Intermediation Process.....	93
4.2.4	Asset Quality.....	95
4.2.5	Interest and Non-Interest Comparison.....	98
4.3	Secondary Data.....	101
4.3.1	Regional Interest Margin.....	101
4.3.2	Regional Inflation Rates.....	103
4.3.3	Regional GDP.....	104
4.4	Methodology.....	105
4.4.1	Banking Models.....	107
4.4.1.1	Model 1: Basic Intermediation.....	107
4.4.1.2	Model 2: Traditional Banking Activities.....	108
4.4.1.3	Model 3: Banking Production.....	109
4.4.2	DEA Analysis.....	109
4.4.2.1	DEA Models.....	109
4.4.2.2	The CCR and SBM Model.....	110
4.5	Bank Efficiency Measurements.....	111
4.5.1	The three National Frontiers: Fiji, PNG, and Samoa.....	112
4.5.2	Common Frontier for all Commercial Banks	115
4.6	Evaluating the Differences in Banking Efficiency.....	117
4.6.1	Technical Efficiency, Scale Efficiency, and CAR.....	117
4.6.2	Efficiency through Time.....	118
4.6.3	Efficiency and Annual Growth.....	118
4.6.4	Efficiency and Intermediation.....	119

4.6.5	Efficiency and Asset Quality.....	119
4.6.6	Efficiency and Liquidity.....	120
4.6.7	Efficiency and Asset Size.....	121
4.6.8	Efficiency and Foreign Banks.....	122
4.6.9	Efficiency and Equity.....	122
4.6.10	Efficiency and Macroeconomic Variables.....	123
4.7	Bank Efficiency Validating Procedures.....	125
4.7.1	Isotone Property across the three Banking Models.....	127
4.7.2	Consistent Ranking of Bank Efficiency.....	128
4.7.3	Cost Income Ratio and Bank Efficiency.....	128
4.7.4	Profitability and Bank Efficiency.....	130
4.7.5	Tripal Ratio and Bank Efficiency.....	131
4.8	Efficiency of the two Australian Banks across the region: ANZ & WPC...	132
4.9	Chapter Summary.....	133
Chapter 5: Results & Discussions.....		134
5.1	Resulting Efficiency Scores.....	134
5.1.1	Efficiency Scores from the Fijian Frontier.....	135
5.1.2	Efficiency Scores from the PNG Frontier.....	135
5.1.3	Efficiency Scores from the Samoan Frontier.....	136
5.1.4	Efficiency Scores from the Common Frontier.....	137
5.1.5	Inefficiency Sources from the Common Frontier.....	138
5.2	Efficiency Variations: Results and Discussions.....	141
5.2.1	Q1: Technical Efficiency, Scale Efficiency, and CAR.....	142
5.2.2	Q2: Efficiency through Time.....	145
5.2.3	Q3: Efficiency and Annual Growth.....	146
5.2.4	Q4: Efficiency and Intermediation.....	148
5.2.5	Q5: Efficiency and Asset Quality.....	149
5.2.6	Q6: Efficiency and LAR.....	151
5.2.7	Q7: Efficiency and Asset Size.....	152
5.2.8	Q8: Efficiency and Foreign Banks.....	153
5.2.9	Q9: Efficiency and Equity.....	153
5.2.10	Q10: Efficiency and Macro Economic Variables.....	154

5.3	Validating Procedures: Results and Discussions.....	156
5.3.1	Q11: Efficiency Isotone.....	156
5.3.2	Q12: Efficiency Ranking	156
5.3.3	Q13: Efficiency and CIR.....	159
5.3.4	Q14: Efficiency and ROE.....	161
5.3.5	Q15: Efficiency and ROA.....	162
5.3.6	Q16: Efficiency and Tripal Ratio.....	164
5.4	Efficiency of the two Australian Banks: ANZ and WPC.....	166
5.4.1	Q17: Consistency between National and CCC Scores.....	166
5.4.2	Q18: National and CCC Rankings.....	167
5.5	Chapter Summary.....	169
Chapter 6: Conclusions.....		174
6.1	Research Review.....	174
6.2	Sources of Efficiency and Inefficiency in the Pacific Region.....	175
6.3	Effectiveness of DEA application in small economies.....	176
6.4	Contribution to understanding banks' efficiency in the Pacific Region.....	178
6.5	Research Limitations and Implications.....	180
6.6	Future Research Challenges and Opportunities.....	181
References.....		182

List of Tables	Page
Table 1: General Regional Indicators	4
Table 2: Key Features of the five Efficiency Measurement Approaches	36
Table 3.4A: Commercial Banks' Assets in USD m for 2005	61
Table 3.4B: Three largest commercial banks in 2005 across the six PICs	62
Table 3.5: Tongan Commercial Banks' asset share in 2005	64
Table 3.6: Fijian Commercial Banks' asset share in 2005	68
Table 3.7: Samoan Commercial Banks' asset share in 2005	72
Table 3.8: PNG Commercial Banks' asset share in 2005	76
Table 3.9: Solomon Islands Commercial Banks' asset share in 2005	79
Table 3.10: Vanuatu Commercial Banks' asset share in 2005	82
Table 3.11: PICs Prudential Requirements for 2000 to 2006	84
Table 4.2A: Commercial Banks' Average Asset and Loan Growth	91
Table 4.2B: Commercial Banks' Average Intermediation	93
Table 4.2C: Commercial Banks' Average Asset Quality	96
Table 4.2D: Commercial Banks' Average Non-Interest Items	99
Table 4.3: Regional Interest Margin: 2000 – 2006	101
Table 4.5A: Descriptive Statistics for the National Frontier: Fiji	113
Table 4.5B: Correlations among Input and output Variables in Fiji	113
Table 4.5C: Descriptive Statistics for the National Frontier: PNG	114
Table 4.5D: Correlations among Input and output Variables in PNG	114
Table 4.5E: Descriptive Statistics for the National Frontier: Samoa	115
Table 4.5F: Correlations among Input and output Variables in Samoa	115
Table 4.5G: Descriptive Statistics for the Common Frontier: Model 1	116
Table 4.5H: Descriptive Statistics for the Common Frontier: Model 2	116
Table 4.5I: Descriptive Statistics for the Common Frontier: Model 3	117
Table 4.6A: Commercial Banks' Average Liquid Assets	121
Table 4.6B: Commercial Banks' Average Equity	123
Table 4.6C: Regional Average Macro-Economic Variables: 2000 - 2006	124
Table 4.7: Regional Average Tripal Ratio across the Banking Models	132
Table 4.9: Summary of the main Research Questions	133
Table 5.1A: Efficiency Results from the Fijian Frontier	135
Table 5.1B: Average Bank Efficiency Scores from the Fijian Frontier	135
Table 5.1C: Efficiency Results from the PNG Frontier	135
Table 5.1D: Average Bank Efficiency Scores from the PNG Frontier	136

Table 5.1E: Efficiency Results from the Samoan Frontier	136
Table 5.1F: Average Bank Efficiency Scores from the Samoan Frontier	136
Table 5.1G: Efficiency Results from the Common Frontier	137
Table 5.1H: Average Country Efficiency Scores from the Common Frontier	137
Table 5.1I: Weighting Statistics from the Common Frontiers: Model 2	138
Table 5.1J: Weighting Statistics from the CCC Frontiers: Model 3	140
Table 5.2A: Average Regional Technical and Scale Efficiency: Common Frontier	142
Table 5.2B: Correlations between CAR and Technical & Scale Efficiency: All Frontiers in Models 2 and 3	143
Table 5.2C: Correlations between Growth and Efficiency: All Frontiers	146
Table 5.2D: Correlations between Intermediation and Efficiency: All Frontiers	148
Table 5.2E: Correlations between Asset Quality and Efficiency: All Frontiers	149
Table 5.2F: Correlations between LAR and Efficiency: All Frontiers	151
Table 5.2G: Assets Size and Efficiency: Common Frontiers	152
Table 5.2H: Foreign Banks and Efficiency: Common Frontiers	153
Table 5.2I: Correlations between Equity and Efficiency: Common Frontier	153
Table 5.2J: Regression Outputs between Macro-economic Variables and Efficiency: Common Frontier	154
Table 5.3A: Efficiency Scores from all four Frontiers	156
Table 5.3B: Consistent Ranking of Average Banks' Efficiency: Fijian Frontier	156
Table 5.3C: Consistent Ranking of Average Banks' Efficiency: Samoa Frontier	157
Table 5.3D: Consistent Ranking of Average Banks' Efficiency: PNG Frontier	157
Table 5.3E: Consistent Ranking of Average Country's Efficiency: Common Frontier	157
Table 5.3F: Correlations between CIR and Efficiency: All Frontiers	159
Table 5.3G: Correlations between ROE and Efficiency: All Frontiers	161
Table 5.3H: Correlations between ROA and Efficiency: All Frontiers	162
Table 5.3I: Tripal Ratios in Fiji, Samoa, and PNG	164
Table 5.3J: Correlations between TR and Efficiency: All Frontiers	164
Table 5.4A: Efficiency of the two Australian Banks: All Frontiers	166
Table 5.4B: Comparable Efficiency across National and Common Frontiers	167
Table 5.5A: Efficient and Inefficient Banks - Comparable Scores	169
Table 5.5B: Efficient and Inefficient Banks - Comparable Explanatory and Checkpoint Variables	170
Table 5.5C: LAR 1, LAR 2, and Efficiency from the Common Frontiers	172

List of Figures	Page
Figure 1: Farrell's (1957) simple case of Efficiency diagram	12
Figure 2: Average Market Share for Assets, Deposits and Loans in Fiji	88
Figure 3: Average Market Share for Assets, Deposits and Loans in PNG	88
Figure 4: Average Market Share for Assets, Deposits and Loans in Samoa	89
Figure 5: Average Market Share for Assets, Deposits and Loans in Solomon	90
Figure 6: Average Market Share for Assets, Deposits and Loans in Tonga	90
Figure 7: Regional Average Deposit Rate: 2000 – 2006	102
Figure 8: Regional Average Loan Rate: 2000 – 2006	102
Figure 9: Regional Inflation Rate: 2000 – 2006	103
Figure 10: Regional Real GDP: 2000 – 2006	104
Figure 11: Commercial Banks' Average CIR (%): 2000 - 2006	129
Figure 12: Commercial Banks' Average ROE (%): 2000 - 2006	130
Figure 13: Commercial Banks' Average ROA (%): 2000 - 2006	130
Figure 14: Commercial Banks' Average Tripal Ratios across Banking Models	131
Figure 15: Efficiency through Time from all four Frontiers	145
Figure 16: Regional Efficiency through Time from the Common Frontier	146

Abbreviations

ABS	Accessibility to Banking Services
ACB	All Commercial Banks
ADB	Asian Development Bank
AFSPC	Association of Financial Supervisors of Pacific Countries
AGR	Asset Growth Rate
ALCO	Asset and Liability Committee
AMB	Asset Management Bank of Fiji Limited
ANZ	Australia and New Zealand Banking Group
ATM	Automatic Teller Machine
BPB	Best Practice Bank
BCC	Banker, Charnes, and Cooper DEA Model
BCP	Basel Core Principles for Effective Banking Supervision
BIS	Bank of International Settlement
BNZ	Bank of New Zealand
BOB	Bank of Baroda
BOH	Bank of Hawaii
BPNG	Bank of Papua New Guinea
BSP	Bank of South Pacific
BSPS	Banking Supervision Policy Statement
CAMEL	Cost, Asset, Management, Earnings, and Liquidity
CAR	Capital Adequacy Requirement
CBA	Commonwealth Bank of Australia
CBS	Central Bank of Samoa
CBs	Commercial Banks
CBSI	Central Bank of Solomon Islands
CBV	Central Bank of Vanuatu
CCC	Cross-Country Comparison or Common Frontier
CCR	Charnes, Cooper, and Rhodes DEA Model
CEF	Cost Efficiency Function
CFF	Cobb-Douglas Functional Form
CIR	Cost to Income Ratio
CNB	Colonial National Bank
CRR	Cash Reserve Requirement
CRS	Constant Return to Scale
DAL	Deposits Available for Loans
DEA	Data Envelopment Analysis
DFA	Distribution-free Approach
DMU	Decision Making Unit
EFA	Economic Frontier Approach
FDH	Free Disposal Hull Method
FFCR	Free Financial Capital Ratio
FFF	Fourier Flexible Functional Form
FIA	Financial Institution Act
FJD	Fijian Dollar (Local currency in Fiji)
FSAP	Financial Sector Assessment Program
GDP	Gross Domestic Product
GDS	General Disclosure Statement
GL	Gross Loans
HBB	Habib Bank Limited
HSBC	Hong Kong and Shanghai Banking Corporation
IAA	Intermediation or Asset Approach
IEX	Interest Expense

IINC	Interest Income
IMF	International Monetary Fund
INF	Inflation
KDS	Key Disclosure Statement
LAR	Liquid Asset Ratio
LFI	Licensed Financial Institution
LGR	Loan Growth Rate
MBF	Malaysian Banking Finance Limited
MBK	Maybank (PNG) Limited
MLAR	Minimum Liquid Asset Requirement
NBS	National Bank of Samoa
NBSI	National Bank of Solomon Islands
NIEX	Non-Interest Expense
NIINC	Non-Interest Income
NRBT	National Reserve Bank of Tonga
NTIC	Net Interest Income
OEA	Other Earning Assets
PCB	Pacific Commercial Bank
PEF	Profit Efficiency Function
PGK	Kina (Local currency in Papua New Guinea)
PICs	Pacific Island Countries
PNG	Papua New Guinea
PNGBC	Papua New Guinea Banking Corporation
PPP	Purchasing Power Parity
PVA	Production or Value Added Approach
Q1 to Q18	Research Questions number one to eighteen
RAMSI	Regional Assistance Mission to Solomon Islands
RBF	Reserve Bank of Fiji
RBV	Reserve Bank of Vanuatu
ROA	Return on Asset
ROE	Return on Equity
RRR	Required Reserve Ratio
SBD	Solomon Islands Dollar (Local Currency in Solomon Islands)
SBM	Slack Based Model
SCB	Samoa Commercial Bank
SEM	Super Efficiency Model
SFA	Stochastic Frontier Approach
SIBC	Solomon Islands Banking Corporation
SINPF	Solomon Islands National Provident Fund
Solomon	Solomon Islands
SRD	Statutory Reserve Deposit
TA	Total Assets
TD	Total Deposits
TDB	Tonga Development Bank
TFA	Thick Frontier Approach
TFF	Translog Functional Form
TOP	Tongan Pa'anga (Local currency in Tonga)
TR	Tripal Ratio
UCA	User Cost Approach
USD	United States Dollar
VRS	Variable Return to Scale
VUV	Vatu (Vanuatu local Currency)
WBT	Westpac Bank of Tonga
WPC	Westpac Banking Corporation