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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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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