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EFFICIENCY OF THE BANKING SYSTEM IN VIETNAM UNDER FINANCIAL LIBERALIZATION

A thesis presented in partial fulfilment of the requirements for the degree of

Doctor of Philosophy

in

Banking Studies

at Massey University, Manawatu Campus,

New Zealand.

Dang Thanh Ngo

2015
Abstract

The thesis reviews the (triangular) relationship between financial liberalization, economic growth, and banking development. It points out the causality effect where financial liberalization could improve the efficiency of the banking sector, but on the other hand, it also could lead to instability in the banking system. The recent Global Financial Crisis raised questions as to how and at what level financial liberalization could be done so that for banking development, improvements are achieved but instabilities are avoided. The thesis answers these questions employing a new sample (the Vietnamese banking system), covering a long period (1990-2010), and consistently applying different approaches and models. Three different approaches are used, namely ratio analysis, stochastic frontier analysis (SFA), and data envelopment analysis (DEA).

Our findings suggest that the performance of the Vietnamese banking system generally improved during 1990-2002, worsened during 2003-2008, and recovered in 2009-2010. However, there was no statistical association between this performance and the regional or global financial crises in 1997 and 2007/08. Although future studies are needed (since our sample was small and thus, the results may not be accurate), there was evidence that the state-owned commercial banks were less efficient than the joint-stock commercial banks and hence, equitization of the state-owned commercial banks should be speeded up in order to transform their ownership, reducing their size, and improving their performance.

There are consistencies between these approaches in terms of defining the efficiency scores, trends, and best and worst performers. Our findings also suggested that the time-trend-DEA, as well as the Fisher Index-DEA models, could be an alternative to the panel-DEA and Malmquist Index-DEA models since they could provide additional information on the performance measures, especially in case of data limitation. However, we could not find consistent results between the ratio analysis model and the ratio-based DEA ones (Panel- and Malmquist Index-DEA) in terms of scores, trends, and determinants.
Acknowledgements

My Ph.D journey, like that of many others, has been a long and challenging one. In this journey, I am privileged to have had the generous support of many people and organisations. I owe a debt of gratitude to all of them.

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I am fortunate to have Dr Claire Matthews and Associate Professor Ngoc-Thanh Nguyen as my second and third supervisors. I thank them for their feedback, supervision, and support for my research. Their wisdom helped me see things from different angles.

I would like to thank the School of Economics and Finance for assisting me in various aspects. Special thanks go to Professor Martin Young, the Head of the School, for providing financial supports so I could attend several local and international conferences. To other members of the School – Dr Stuart Birks, Dr James Alvey and Dr Sam Richardson, thank you for allowing me opportunities to gain experience in teaching and working in the academic environment. To many other staff – Sue Edwards, Cameron Rhodes, Kate Hope, Maryke Bublitz, and Fong Mee Chin, your help in different situations has always been most appreciated.
Last but not least, my appreciation to my parents, and families whose tremendous love and encouragement helped me through difficult times in my life. To my dear wife, daughter and son, thank you so much for your sacrifices and understanding. I love you all. Special thanks also go to Ha-Lien Ton and her family, especially Selena and Simon for your warm and caring friendship for my children, my wife and myself.
Publication during candidature

Some of the preliminary publications are not part of the thesis per se, but they were undertaken in the progress of me doing my thesis, which in turn enlighten aspects of this work.

I. (Peer-reviewed) Journal Articles:


II. Conference papers:


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<tbody>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>ATM</td>
<td>Auto Teller Machine</td>
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<tr>
<td>BCC</td>
<td>Banker, Charnes and Cooper (1984)</td>
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<tr>
<td>BFOB</td>
<td>Branch of Foreign-Owned Bank</td>
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<td>BIS</td>
<td>Bank for International Settlements</td>
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<tr>
<td>BMI</td>
<td>Business Monitor Inc.</td>
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<tr>
<td>BRC</td>
<td>Bank Restructuring Committee</td>
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<tr>
<td>CAMELS</td>
<td>Capital adequacy, Asset quality, Management quality, Earnings ability, Liquidity, and Sensitivity to market risks</td>
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<td>CCR</td>
<td>Charnes, Cooper and Rhodes (1978)</td>
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<td>CE</td>
<td>Cost Efficiency</td>
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<tr>
<td>CES</td>
<td>Cost Elasticity</td>
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<td>CIR</td>
<td>Cost-to-Income Ratio</td>
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<td>COLS</td>
<td>Corrected Ordinal Least Squares</td>
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<td>CRS</td>
<td>Constant Returns To Scale</td>
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<td>DEA</td>
<td>Data Envelopment Analysis</td>
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<tr>
<td>DFA</td>
<td>Distribution Free Analysis</td>
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<tr>
<td>DMU</td>
<td>Decision Making Unit</td>
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<tr>
<td>DRTS</td>
<td>Decreasing Returns To Scale</td>
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<td>EF</td>
<td>Efficiency score</td>
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<td>Acronym</td>
<td>Description</td>
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<tr>
<td>EOS</td>
<td>Economies Of Scale</td>
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<td>FDH</td>
<td>Free Disposal Hull</td>
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<td>FDIC</td>
<td>Federal Deposit Insurance Corporation</td>
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<td>FF</td>
<td>Fourier Flexible function</td>
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<tr>
<td>FI</td>
<td>Fisher Index</td>
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<tr>
<td>FR</td>
<td>FitchRatings</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GNP</td>
<td>Gross National Product</td>
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<tr>
<td>GSO</td>
<td>General Statistics Office of Vietnam</td>
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<tr>
<td>HASTC</td>
<td>Hanoi Securities Trading Centre</td>
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<tr>
<td>HOSE</td>
<td>Hochiminh Stock Exchange</td>
</tr>
<tr>
<td>HSTC</td>
<td>Hochiminh City Securities Trading Centre</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<tr>
<td>IRTS</td>
<td>Increasing Returns To Scale</td>
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<tr>
<td>JLMS</td>
<td>Jondrow, Lovell, Materov and Schmidt (1982)</td>
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<tr>
<td>JSCB</td>
<td>Joint-Stock Commercial Bank</td>
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<tr>
<td>JVB</td>
<td>Joint-Venture Bank</td>
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<tr>
<td>LML</td>
<td>Local Maximum Likelihood</td>
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<tr>
<td>MI</td>
<td>Malmquist Index</td>
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<tr>
<td>MIS</td>
<td>Moody's Investor Service</td>
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<td>MOLS</td>
<td>Modified Ordinary Least Squares</td>
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<td>Acronym</td>
<td>Definition</td>
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<tr>
<td>MPSS</td>
<td>Most Productive Scale Size</td>
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<td>NIM</td>
<td>Net Interest Margin</td>
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<td>NPL</td>
<td>Non-Performing Loan</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Cooperation and Development</td>
</tr>
<tr>
<td>OLS</td>
<td>Ordinary Least Squares</td>
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<tr>
<td>OTC</td>
<td>Over-The-Counter</td>
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<tr>
<td>PCA</td>
<td>Principal Component Analysis</td>
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<tr>
<td>PI</td>
<td>Performance Index</td>
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<tr>
<td>RA</td>
<td>Ratio Analysis</td>
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<tr>
<td>ROA</td>
<td>Returns On Average Assets</td>
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<tr>
<td>ROE</td>
<td>Returns On Average Equity</td>
</tr>
<tr>
<td>S&amp;L</td>
<td>Savings and Loan</td>
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<tr>
<td>SBM</td>
<td>Slacks-Based Measure</td>
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<td>SBV</td>
<td>State Bank of Vietnam</td>
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<tr>
<td>SFA</td>
<td>Stochastic Frontier Analysis</td>
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<tr>
<td>SOCB</td>
<td>State-Owned Commercial Bank</td>
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<tr>
<td>SWIFT</td>
<td>Society for Worldwide Interbank Financial Telecommunication</td>
</tr>
<tr>
<td>TE</td>
<td>Technical Efficiency</td>
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<tr>
<td>TFA</td>
<td>Thick Frontier Analysis</td>
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<tr>
<td>TFP</td>
<td>Total Factor Productivity</td>
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<td>U.S.</td>
<td>United States</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>UPCOM</td>
<td>Unlisted Public Company Market</td>
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<tr>
<td>VAMC</td>
<td>Vietnamese Asset Management Company</td>
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<tr>
<td>VCP</td>
<td>Vietnam Communist Party</td>
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<tr>
<td>VRS</td>
<td>Variable Returns To Scale</td>
</tr>
<tr>
<td>WB</td>
<td>World Bank</td>
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<tr>
<td>WTO</td>
<td>World Trade Organization</td>
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