

UNIVERSITY OF MACAU
FACULTY OF BUSINESS ADMINISTRATION

**ECONOMIES OF SCALE AND SCOPE IN MACAU'S
BANKING SECTOR**

Sio Ut-Sim, Emily

M-A4-5723-2

Thesis presented to the

Faculty of Business Administration

University of Macau

In partial fulfillment for granting the MBA Degree

(In Finance)

2010

Table of Contents

Executive Summary	i
Acknowledgements	ii
Table of Contents	iii
List of Tables	v
List of Figures	vi
Chapter 1: Introduction	1
Chapter 2: Overview of Macau’s Banking Sector	5
Chapter 3: Literature review	23
3.1 Theoretical Framework	23
3.1.1 Theory of Economies of Scale	23
3.1.2 Theory of Product-Specific Economies of Scale	26
3.1.3 Theory of Economies of Scope	27
3.1.4 Theory of Product-Specific Economies of Scope	30
3.2 Output and Input Variables Definition	30
3.2.1 Intermediation Approach	31
3.2.2 Production Approach	32
3.3 Review of the Previous Studies	32
Chapter 4: Methodology and data	49
4.1 Methodology	49
4.1.1 Measures of Economies of scale	51
4.1.2 Measures of Product-specific Economies of scale	51
4.1.3 Measures of Economies of scope	52
4.1.4 Measures of Product-specific Economies of scope	54
4.2 Data	55
Chapter 5. Empirical Results	57
Chapter 6. Conclusion	69
References	72
Appendices	73
Appendix 1. Operating Profit (Loss) of Banking Industry in 1995-2006	75
Appendix 2. Non-Performing Loans (NPL) of Banking Industry in 1995-2006	76
Appendix 3. Consolidated Capital Adequacy Ratio, including Postal Savings Bank in 1995-2006.....	77
Appendix 4. Total Loans of Bank Industry in 1995-2006.....	78
Appendix 5. Total Deposits of Bank Industry in 1995-2006	79
Appendix 6. Loan-To-Deposit Ratio of Bank Industry in 1995-2006	80