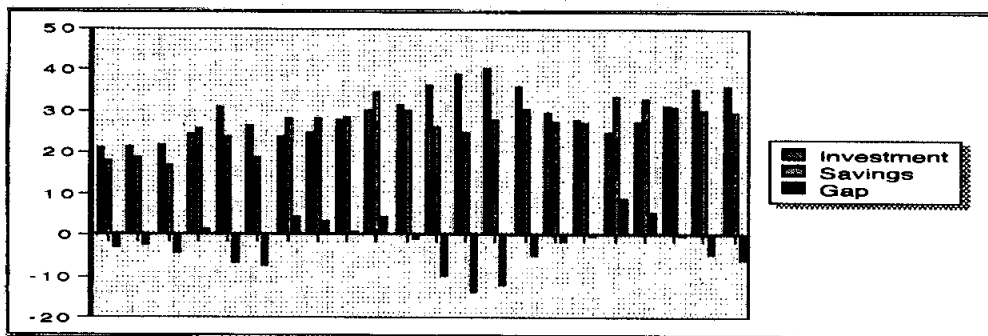
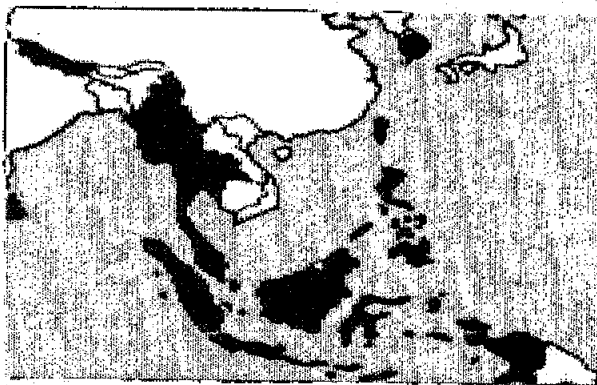


Domestic Resource Mobilization in the SEACEN Countries

Y. M. W. B. Weerasekera



The SEACEN Centre
Kuala Lumpur, Malaysia

DOMESTIC RESOURCE MOBILIZATION IN THE SEACEN COUNTRIES

by

Y.M.W.B. Weerasekera



The South East Asian Central Banks (SEACEN)
Research and Training Centre
Kuala Lumpur, Malaysia

DOMESTIC RESOURCE MOBILIZATION IN THE SEACEN COUNTRIES

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FOREWORD

The conventional wisdom suggests that there is a direct and positive correlation between savings and growth. The experience of many high growth countries, particularly those of the East and South East Asia region, has given the impression that a high level of savings is indicative of superior economic performance and better future prospects. This view along with recent research has raised the issue as to whether savings drive growth or vice versa. To elaborate further, the issue is raised as to whether high savings are symptomatic of rapid growth. On balance, however, there seems little disagreement that fundamentally income growth leads savings.

This brings us to the question of what explains the differences in savings performances of the SEACEN countries. Some countries have generated savings surpluses in recent years, while others are experiencing investment-savings gaps of varying magnitudes for long periods. Saving surplus countries are generally associated with high growth rates, low inflation and macroeconomic stability. Saving deficit countries are the opposite. This implies that growth is the key to savings. But where does growth come from? Growth is largely determined by investment. This means, if savings are low, growth is low and vice versa. This is a dilemma for the low growth, low savings countries. If one assumes that savings are a prerequisite for growth, it follows that one must know what determines savings.

Savings can be generated domestically or from external sources. In some of the SEACEN countries, growing debt burdens, rising public sector spending and the limitations of foreign direct investment have refocused initiatives on new strategies in tapping domestic resources. They have begun to realize that mobilizing domestic savings is the surest way to meet these challenges. Hence, it has been felt that early action must be taken to devise a consistent package of economic programmes to enhance saving in an environment of macroeconomic stability. In such an effort, few basic questions need be asked, namely, "what is the level of savings?", "what determines savings?" and "what can be done to increase savings?". This study on Domestic Resource Mobilization attempts to answer the above queries which are of great interest to member SEACEN countries. In doing so, the nature and pattern of savings mobilization, the role of the financial system and financial reform policies and the factors determining savings will be given special focus.

This collaborative study was conducted by Mr. Y.M.W.B. Weerasekera, Senior Economist, seconded from the Central Bank of Sri Lanka to The SEACEN Centre. At various stages of the project, Mr. Weerasekera was assisted by Miss Seow Yun Yee, Senior Research Associate. Ms. Haslina bt. Muda retyped some of the country chapters on the computer and helped in organizing the chapters for publication. Chapters 1 to 4 in Part I were typed by the author himself.

The Centre wishes to express its appreciation to participating central banks and country researchers for their contributions which appear as country chapters in Part II of this volume. The views expressed in this volume are those of the authors and do not necessarily reflect the views of the member central banks and monetary authorities or that of The SEACEN Centre.

Dr. Vicente B. Valdepeñas, Jr.
Director
The SEACEN Centre

Kuala Lumpur
December 1993

TABLE OF CONTENTS

	Page
FOREWORD	iii
LIST OF TABLES	xvi
LIST OF CHARTS	xxii
LIST OF FIGURES	xxiii
LIST OF APPENDICES	xxvi

PART I: REGIONAL OVERVIEW

Chapter 1: Domestic Resource Mobilization in the SEACEN Countries

I.	Introduction	3
	1.1 Background	3
	1.2 Objective of Study	5
	1.3 Scope and Organization of the Study	5
II.	Overview of the Investment-Savings Gap and Domestic Resource Mobilization Attempt	9
	2.1 Investment and Savings	9
	2.2 The Level of Investment (I), Savings (S) and the I-S Gap in the SEACEN Countries	10
	2.2.1 Indonesia	10
	2.2.2 Korea	17
	2.2.3 Malaysia	17
	2.2.4 Myanmar	19
	2.2.5 Nepal	20
	2.2.6 Philippines	21
	2.2.7 Singapore	21
	2.2.8 Sri Lanka	22
	2.2.9 Taiwan	23
	2.2.10 Thailand	24
	2.3 Correlation Between Savings, Investment and Growth	25

	Page
III. Summary and Conclusion	30
 <i>Chapter 2: Factors Affecting Savings Behaviour in the SEACEN Countries</i> 	
I. Introduction	33
II. Factors Affecting Savings	34
2.1 Income	34
2.1.1 Absolute Income Hypothesis	34
2.1.2 Permanent Income Hypothesis	35
2.1.3 Asset Adjustment and Growth Rate of Income Models	36
2.1.4 Life Cycle Hypothesis	36
2.2 Interest Rate	38
2.3 Wealth	41
2.4 Foreign Capital Inflow	41
2.5 Taxation	43
2.6 Exports	44
2.7 Terms of Trade	45
2.8 Financial Services	45
2.9 Summary	46
III. The Model and Data	46
IV. Unit Roots and Cointegration	51
V. Estimation Results	54
5.1 Indonesia	54
5.2 Korea	58
5.3 Malaysia	60
5.4 Myanmar	60
5.5 Nepal	62
5.6 Philippines	65
5.7 Singapore	67
5.8 Sri Lanka	67
5.9 Taiwan	69
5.10 Thailand	69

	Page
VI. Summary and Conclusion	72
 <i>Chapter 3: Financial Reforms in the SEACEN Countries</i>	
I. Introduction	83
II. Nature of the Financial System and Financial Reforms in the SEACEN Countries	84
2.1 Indonesia	84
2.2 Korea	92
2.3 Malaysia	93
2.4 Myanmar	96
2.5 Nepal	97
2.6 Philippines	99
2.7 Singapore	101
2.8 Sri Lanka	102
2.9 Taiwan	106
2.10 Thailand	108
III. Financial Deepening	112
IV. Real Interest Rates	113
4.1 Institutional Developments	120
4.2 Macroeconomic Stability	121
4.3 Timing and Sequencing	128
V. Summary and Conclusion	130
 <i>Chapter 4: Policy Implications and Concluding Remarks</i>	 133
References	141

PART II: COUNTRY STUDIES

Chapter 5: Domestic Resource Mobilization in Indonesia

I. Introduction	149

	Page
II. Overview	149
III. The Role of Financial System in Domestic Saving Mobilization	153
IV. The Role of Capital Market in Domestic Resource Mobilization	159
V. Factors Affecting the Mobilization of Domestic Savings	160
5.1 The Model	160
5.2 Measurement Problems	161
5.3 Estimation Results	164
VI. Concluding Remarks	166
Bibliography	168

Chapter 6: Domestic Resource Mobilization in Korea

I. An Overview of the Developments in Domestic Savings Mobilization	169
1.1 Definitions and the Measurement of Domestic Savings	169
1.2 The Role and Significance of Domestic Savings	170
1.3 Introduction to Domestic Savings in Korea	171
1.3.1 Savings and Investment	171
1.3.2 Domestic Savings by Sector	171
1.3.3 The Role of Financial Institutions and Capital Market	171
II. The Role of Financial System in Domestic Savings Mobilization	173
2.1 Financial Savings Through Financial Institutions	173
2.2 Policies to Promote Financial Savings	176
2.2.1 Establishment of New Types of Financial Institutions	178
2.2.2 Introduction of New Financial Instruments	183
2.2.3 Preferential Taxation and Interest Rates on the Financial Savings	186
2.2.4 Policies to Promote Domestic Savings in the Early 1990s	191

III. The Role of the Capital Market in Domestic Savings Mobilization	194
3.1 Overview of the Capital Market	194
3.2 Stock Market	194
3.3 Bond Market	195
3.4 Recent Characteristics of the Capital Market	196
IV. Factors Affecting the Mobilization of Domestic Savings	196
4.1 Model of Domestic Savings	196
4.2 Estimation Results	199
4.3 Simulation Exercises	202
4.4 Impulse Responses	203
V. Policy Recommendations	205

Chapter 7: Domestic Resource Mobilization in Malaysia

I. Introduction	215
II. Overview of Savings-Investment Gap	216
III. The Role of Financial System	218
3.1 The Structural Developments	218
IV. The Role of Capital Market	220
V. Determinants of Savings	225
VI. Conclusion	228

Chapter 8: Domestic Resource Mobilization in Myanmar

I. Introduction	231
II. Overview of the Developments in Domestic Savings Mobilization in Myanmar	231
2.1 Role and Significance of Domestic Savings	231

	Page
2.2 Pattern of Savings	232
2.3 Sources of Investment	237
2.3.1 Fiscal Resources Mobilization	237
2.3.2 Foreign Resource Mobilization	241
2.3.3 Financing with Domestic and External Resources	242
III. The Role of the Financial System in Domestic Resource Mobilization	244
3.1 Development of Financial Structure	244
3.2 Present Financial Structure	246
3.2.1 Financial Institutions	247
3.2.2 Non-Bank Financial Institutions	248
IV. Trends and Structure of Savings Mobilized Through Financial Institutions	249
4.1 Financial Savings	249
4.2 Savings Mobilized by the Myanmar Insurance	252
V. Policy Measures and Reforms in the Mobilization for Domestic Savings	252
5.1 Measures Taken in the Fiscal Area	252
5.2 Measures Taken to Attract Foreign Investment	254
5.3 Measures Taken to Promote Private Savings	257
5.4 Monetary Policy and Measures Taken in the Financial Sector	258
VI. The Role of the Capital Market in Domestic Resource Mobilization	261
VII. Factors Affecting the Mobilization of Domestic Savings	262
7.1 Factors Affecting Savings Behaviour	262
7.2 Factors Affecting Financial Savings	264
VIII. Policy Recommendations	264
8.1 Savings Mobilization in the Public Sector	266
8.1.1 Measures to Increase Savings of the Union Government	266
8.1.2 Measures to Increase Savings of State Economic Enterprises (SEEs)	267

	Page
8.2 Measures to Promote Savings in the Private Sector	267
8.2.1 Interest Rate Policy	267
8.2.2 Development in Financial Sector	268
8.2.3 Other Measures	269
IX. Conclusion	270
Bibliography	271

Chapter 9: Domestic Resource Mobilization in Nepal

I. An Overview of the Developments in Domestic Saving Mobilization	275
1.1 Role and Significance of Domestic Saving	275
1.2 Definition and Concept of Domestic Saving	289
1.3 Domestic Saving Mobilization	290
II. The Role of the Financial System in Domestic Saving Mobilization	303
2.1 Role of Central Bank and Financial Institutions	303
2.2 Policies and Procedures Adopted to Improve Domestic Saving	311
III. The Role of Capital Market in Domestic Resource Mobilization	320
IV. Factors Affecting the Mobilization of Domestic Saving	329
4.1 Domestic Saving	329
4.2 Financial Saving	333
V. Policy Recommendations	334
VI. Major Findings and Concluding Remarks	340
Bibliography	343

Chapter 10: Domestic Resource Mobilization in the Philippines

I. Overview of the Developments in Domestic Savings Mobilization in the Philippines	345

	Page
1.1 The Role of Domestic Savings in Economic Growth and Development	345
1.2 Foreign Capital Inflows	346
1.3 Definitions and Measurement of Savings	347
1.3.1 Investment-Savings Situation	347
1.3.2 Domestic Savings by Sector	351
II. The Role of the Financial System	353
2.1 The Banking Sector	355
2.2 Contractual Savings Sector	356
2.3 Policy Measures to Improve Domestic Savings	359
2.3.1 Interest Rate Policy	359
2.3.2 Branching Policy	360
2.4 Financial Sector Reforms	362
2.4.1 Adoption of Universal Banking System	362
2.4.2 Increased Scope of Banking Operations	364
2.4.3 Interest Rate Deregulation	364
2.4.4 Liberalization	365
2.5 Financial Innovations and Its Impact on Savings	366
III. The Role of the Capital Market	366
3.1 Development of the Philippine Capital Market	366
3.2 Components of Capital Market	367
3.2.1 The Non-Securities Markets	367
3.2.2 The Securities Markets	367
3.3 Problems of the Philippine Capital Market	369
3.4 Recommendations to Develop the Capital Market	370
IV. Factors Affecting the Mobilization of Domestic Savings	370
4.1 Household Savings	371
4.2 Corporate Savings	373
4.3 Government Savings	374
V. Concluding Remarks	375
Bibliography	376

Chapter 11: Domestic Resource Mobilization in Singapore

I. Introduction	379

	Page
II. Savings and Investment Trends	379
2.1 Changing Investment Needs	379
2.2 Emergence of Savings-Investment GAP	380
III. Components of Gross National Savings	381
3.1 Government Operating Surplus	383
3.2 Statutory Board's Operating Surplus	383
3.3 Government-Linked Companies' Operating Surplus	383
3.4 Central Provident Fund Savings	384
3.5 Private Discretionary Savings	384
IV. Determinants of Private Savings	385
4.1 Some Conceptual Issues	385
4.2 Empirical Results	387
V. Conclusion	390

Chapter 12: Domestic Resource Mobilization: The Case of Sri Lanka

I. An Overview of the Developments in Domestic Savings Mobilization	393
1.1 The Role and Significance of Domestic Savings	393
1.2 Definitions Associated with the Measurement of Domestic/National Savings	395
1.3 Experience and Trends in Savings Mobilization	396
II. Role of the Financial System in Domestic Savings Mobilization	398
2.1 Developments in the Financial Structure	399
2.1.1 Discretionary Savings Institutions	399
2.1.2 Contractual Savings Institutions	400
2.1.3 Expansion of Financial Institutions	401
2.1.4 Expansion in Financial Facilities	401
2.2 Trends and Magnitude of Savings Through the Financial System	403
2.3 Financial Reforms	405
III. The Role of the Capital Market in Domestic Resource Mobilization	406

	Page
3.1 Introduction	406
3.2 Development of the Capital Market	407
3.2.1 Recent Developments in the Equity Market	408
3.2.2 Bond Market	409
3.3 Problems and Issues	413
3.3.1 Equity Market	413
3.3.2 Bond Market	415
IV. Factors Affecting the Mobilization of Domestic Savings	418
4.1 Determinants of Private Financial Savings	418
4.2 Analysis of Estimated Financial Savings Functions	419
V. Summary and Concluding Remarks	422

Chapter 13: Domestic Resource Mobilization in the Republic of China, Taipei

I. An Overview of the Development in Domestic Savings Mobilization in the Republic of China, Taipei	425
II. The Role of the Financial System in Domestic Savings Mobilization	428
III. The Role of the Capital Market	432
IV. Factors Affecting the Mobilization of Domestic Savings	436
4.1 The Households and Private Non-Profit Institutions Sector	437
4.2 The General Government Sector	438
4.3 The Private Enterprises Sector	439
4.4 The Public Enterprises Sector	440
4.5 Major Findings and Concluding Remarks	441

Chapter 14: Domestic Resource Mobilization in Thailand

I. Introduction	443
1.1 The Saving-Investment Situation	443
1.2 The Financing of the Current Account Deficit	445

	Page
II. The Role of Financial System in Domestic Savings	
Mobilization	448
2.1 Savings Mobilization Through Financial Institutions	449
2.2 Unorganized Financial Market	452
2.3 Measures to Promote Domestic Resource Mobilization	452
2.3.1 Interest Rate Policy	452
2.3.2 Commercial Bank Branching Policy	453
2.3.3 Promotion of Contractural Savings Schemes	453
2.3.4 Development of Financial Instruments and Services	454
III. Role of the Securities Market in Domestic Savings	
Mobilization	454
3.1 Measures to Improve Regulation and Supervision	458
3.2 Measures to Increase the Supply of Securities	458
3.3 Measures to Increase the Demand for Securities	459
3.3.1 Tax Incentives	459
3.4 Measures to Improve SET Operations	459
3.5 Other Measures	462
IV. Determinants of Domestic Saving	462
4.1 Variables Determining Ability to Consume/Save	462
4.1.1 Income	462
4.1.2 Demographic Factors	463
4.2 Relative Price of Present and Future Consumption	464
4.3 Liquidity Constraints	464
V. Major Findings and Conclusion	468
Bibliography	470

LIST OF TABLES

Table	Page
PART I: REGIONAL OVERVIEW	
<i>Chapter 1: Domestic Resource Mobilization in the SEACEN Countries</i>	
1.1 Investment-Savings Gap of the SEACEN Countries	11
1.2 Correlation Coefficients and Standard Deviation	26
1.3 Correlation Between Investment, Savings and Growth	28
<i>Chapter 2: Factors Affecting Savings Behaviour in the SEACEN Countries</i>	
2.1 Definition of Variables	50
2.2 Indonesia - Unit Root Test Results	55
2.3 Indonesia - Cointegration Test Results	55
2.4 Korea - Unit Root Test Results	59
2.5 Korea - Cointegration Test Results	59
2.6 Malaysia - Unit Root Test Results	61
2.7 Malaysia - Cointegration Test Results	61
2.8 Myanmar - Unit Root Test Results	63
2.9 Myanmar - Cointegration Test Results	63
2.10 Nepal - Unit Root Test Results	64
2.11 Philippines - Unit Root Test Results	66
2.12 Philippines - Cointegration Test Results	66
2.13 Sri Lanka - Unit Root Test Results	68
2.14 Sri Lanka - Cointegration Test Results	68
2.15 Taiwan - Unit Root Test Results	70
2.16 Taiwan - Cointegration Test Results	70
2.17 Thailand - Unit Root Test Results	71
2.18 Thailand - Cointegration Test Results	71
2.19 Regression Results	76

Chapter 3: Financial Reforms in the SEACEN Countries

3.1 Real Deposit Rates and Total Deposits of the Banking Sector	86
3.2 Indicators of Financial Deepening	114
3.3 Indicators of Financial Deepening	115
3.4 Real Interest Rates and the Spread	118
3.5 Inflation in SEACEN Countries	123
3.6 Key Macroeconomic Indicators	124
3.7 Level of Real Interest Rates, Inflation and Spreads	125
3.8 Feasible Sequencing of a Financial Liberalization Program	132

PART II: COUNTRY STUDIES

Chapter 5: Domestic Resource Mobilization in Indonesia

5.1 Savings-Investment Gap, 1970-1991	150
5.2 External Debt, 1970-1990	152
5.3 Interest Rates, 1970-1991	155
5.4 Number of Financial Institutions	157
5.5 Time and Saving Deposits with Banks	158
5.6 Developments in the Jakarta Stock Exchange	158
5.7 Domestic Savings as Percentage of GDP	163

Chapter 6: Domestic Resource Mobilization in Korea

6.1 Investment and Saving Ratios	172
6.2 Composition of Domestic Savings by Sector	174
6.3 The Role of Financial Institutions and Capital Market in Investment	174
6.4 The Composition of Household Savings	176
6.5 Financial Savings by Type of Institutions	177
6.6 Financial Savings Through Non-Bank Financial Institutions	179

6.7 Financial Institutions in Korea	182
6.8 Establishment of Major Financial Institutions	183
6.9 Introduction of New Saving Instruments	184
6.10 Taxation on Financial Savings	186
6.11 Financial Savings with Tax Exemption	187
6.12 Savings Deposits with Lower Tax Rate	189
6.13 Savings Deposits with Higher Interest Rates	190
6.14 Financial Savings Through the Capital Market	192
6.15 Stock Market	193
6.16 Bond Market	193
6.17 Unit Root Test Results	201
6.18 Cointegration Test Results	201

Chapter 7: Domestic Resource Mobilization in Malaysia

7.1 Savings-Investment Gap, 1961-1990	217

Chapter 8: Domestic Resource Mobilization in Myanmar

8.1 Gross Domestic Investment (GDI), Gross National Savings (GNS), Gross Domestic Savings (GDS) and Foreign Savings (FS)	234
8.2 Investment-Savings GAP	236
8.3 Savings by Public and Private Sectors	237
8.4 Total Revenue, Total Expenditure and Overall Balance of Public Sector Budget	239
8.5 Composition of Government Revenue	240
8.6 Structure of Tax Revenue	241
8.7 Current Account of Balance of Payments	243
8.8 Foreign Capital Inflows (Net)	243
8.9 Debt Servicing Ratio	244
8.9a Financing of Public Sector Budget Deficit	245
8.10 Financial Savings	250
8.11 Financial Savings Relation to Gross Domestic Product	251
8.12 Myanmar Insurance: Income, Expenditure and Contribution to the State	253

Table	Page
8.13 Income Tax	255
8.14 Selected Interest Rates, 1975-To Date	260
8.15 Type of Business and Capitalization of State-Domestic Private Sector Joint - Venture Corporations	263
8.16 Savings Regression (1976/77-1990/91)	265
8.17 Financial Savings Regression (1976/77-1990/91)	266

Chapter 9: Domestic Resource Mobilization in Nepal

9.1 Structure of Demand	276
9.2 Government Development Expenditure and Its Financing	279
9.3 Bilateral and Multilateral Grants and Loans (Million Rupees)	280
9.4 Bilateral and Multilateral Grants and Loans (In Per Cent of Total Foreign Assistance)	281
9.5 Regular and Development Expenditure of the Government	282
9.6 Financing of Overall Budget Deficit (Per Cent of GDP)	283
9.7 Financing of Overall Budget Deficit (Per Cent Distribution)	286
9.8 Outstanding External Debt and Its Servicing	287
9.9 Total Government Debt Stock	287
9.10 Average Terms of New Commitments and Other Details of External Debt	288
9.11 Growth of Domestic Saving and Investment	291
9.12 Total Investment, Domestic Savings and Savings Gap	292
9.13a Domestic Investment and Inter-Sectoral Flow of Funds During the Three Five-Year Periods (1976-1990)	293
9.13b Inter-Sectoral Flow of Funds	294
9.14 Gross Domestic Saving	296
9.15 Gross Domestic Investment	298
9.16 Saving-Investment Gap	298
9.17a Investment and Savings	299
9.17b Investment and Savings Components	301

Table	Page
9.18 Public, Private and Total Consumption	304
9.19 Total Investment and Its Components	306
9.20 Deposits Mobilized Through the Financial System	312
9.21 Securities Transactions in Nepal	323
9.22 Total Number of Industrial Licenses Issued	325
9.23 Ownership Structure of Government Securities	327
9.24 Variables	335

Chapter 10: Domestic Resource Mobilization in the Philippines

10.1 Total Foreign Borrowings and Investments, 1970-1991	348
10.2 Selected Economic Indicators, 1970-1991	349
10.3 Savings-Investment Gap, 1970-1991	352
10.4 Per Cent Distribution of Gross Domestic Savings by Sector, 1970-1991	354
10.5 Number of Financial Institutions, 1970-1992	357
10.6 Financial Savings by Type of Instrument, 1970-1991	357
10.7 Financial Savings by Type of Instrument, 1970-1991	361
10.8 Philippines: Nominal Interest Rates, 1970-1991	363

Chapter 11: Domestic Resource Mobilization in Singapore

11.1 Independent Variables	387

Chapter 12: Domestic Resource Mobilization: The Case of Sri Lanka

12.1 Relative Shares of Domestic Savings, National Savings, Investment and Foreign Savings	397
12.2 Developments in the Institution Net-work	402
12.3 Accumulated Financial Saving-Financial Assets	404
12.4 Summarized Trading Statistics	410
12.5 Borrowings Through Rupee Securities and Debentures Issued by SMIB, UDA and NHDA	412
12.6 Determinants of Financial Savings (FS)	420
12.7 Determinants of Aggregate Savings, Gross National Savings	421

Chapter 13: Domestic Resource Mobilization in the Republic of China, Taipei

13.1 Savings Mobilized Through the Capital Market	435

Chapter 14: Domestic Resource Mobilization in Thailand

14.1 Current Account Deficit in Term of Investment-Saving Gap	444
14.2 Financing of the Current Account Deficit, 1970-1990	447
14.3 Household Savings: Equity and Non-Equity	449
14.4 Household Savings Classified by Institution	451
14.5 Proportion of Household Savings Classified by Institution	451
14.6 Equity and Debt Instruments in Primary Market	456
14.7 Financial Instruments in Secondary Markets	460
14.8 Vital Statistics on Quoted Securities	461

LIST OF CHARTS

Charts	Page

PART I: REGIONAL OVERVIEW

Chapter 1: Domestic Resource Mobilization in the SEACEN Countries

Investment-Savings Gap in the SEACEN Countries	12
1.1 Indonesia	12
1.2 Korea	12
1.3 Malaysia	13
1.4 Myanmar	13
1.5 Nepal	14
1.6 Philippines	14
1.7 Singapore	15
1.8 Sri Lanka	15
1.9 Taiwan	16
1.10 Thailand	16

Chapter 2: Factors Affecting Savings Behaviour in the SEACEN Countries

2.1 Regression Results - Indonesia	78
2.2 Regression Results - Korea	78
2.3 Regression Results - Malaysia	79
2.4 Regression Results - Myanmar	79
2.5 Regression Results - Nepal	80
2.6 Regression Results - Philippines	80
2.7 Regression Results - Sri Sri Lanka	81
2.8 Regression Results - Taiwan	81
2.9 Regression Results - Thailand	82

Chapter 3: Financial Reforms in the SEACEN Countries

3.1 Real Interest Rates and Bank Deposits - Indonesia	87
3.2 Real Interest Rates and Bank Deposits - Korea	87
3.3 Real Interest Rates and Bank Deposits - Malaysia	88
3.4 Real Interest Rates and Bank Deposits - Myanmar	88
3.5 Real Interest Rates and Bank Deposits - Nepal	89
3.6 Real Interest Rates and Bank Deposits - Philippines	89
3.7 Real Interest Rates and Bank Deposits - Singapore	90
3.8 Real Interest Rates and Bank Deposits - Sri Lanka	90
3.9 Real Interest Rates and Bank Deposits - Taiwan	91
3.10 Real Interest Rates and Bank Deposits - Thailand	91

LIST OF FIGURES

Figures	Page
PART II: COUNTRY CHAPTERS	
<i>Chapter 6: Domestic Resource Mobilization in Korea</i>	
6.1 Interest Rate Reform and Its Impact	181
6.2 Base Simulation Results	204
6.3 Change of Savings in Response to a 1% Increase in Permanent Income	204
6.4 Change of Savings in Response to a 1% Increase in Temporary Income	204
6.5 Change of Savings in Response to a 1% Increase in Interest Rate	208
6.6 Change of Savings in Response to a 1% Increase in Wealth	208
6.7 Change of Savings in Response to a 1% Increase in Domestic Credit	208
<i>Chapter 8: Domestic Resource Mobilization in Myanmar</i>	
8.1 Gross Domestic Investment, Gross National Savings, Gross Domestic Savings and Foreign Saving	235
8.2 Savings by Public and Private Sectors	238
<i>Chapter 9: Domestic Resource Mobilization in Nepal</i>	
9.1 Government Revenue and Expenditure	284
9.2 Government Revenue and Expenditure	284
9.3 Savings	297
9.4 Savings	297
9.5 Saving-Investment Gap	300
9.6 Saving-Investment Gap	300
9.7 Government Consumption and Revenue	305
9.8 Government Consumption and Revenue	305

Figures	Page
9.9 Financial Saving	313
9.10 Financial Saving	313

Chapter 10: Domestic Resource Mobilization in the Philippines

10.1 Selected External Indicators Debt and Debt Service Ratios, 1970-1991	350
10.2 Investment-Savings Gap, 1970-1991	350
10.3 Financial Savings by Type of Instruments	358

Chapter 11: Domestic Resource Mobilization in Singapore

11.1 Saving-Investment Gap, 1960-1991	382

Chapter 13: Domestic Resource Mobilization in the Republic of China, Taipei

13.1 Gross National Savings and Gross Domestic Investment	426
13.2 External Public Debt	426
13.3 Annual Growth Rate of Consumer Price Index	431
13.4 Real Interest Rate of One-Year Time-Savings Deposits	431
13.5 Source of Funds	433

LIST OF APPENDICES

Appendix	Page
PART II: COUNTRY CHAPTERS	
<i>Chapter 6: Domestic Resource Mobilization in Korea</i>	
6.1 The Structure of the Capital Market	209
6.2 Plan for Interest Rate Deregulation	211
6.3 Data Related with Total Saving Function	212
<i>Chapter 8: Domestic Resource Mobilization in Myanmar</i>	
8.1 Data Used for Regression Analysis	272
<i>Chapter 11: Domestic Resource Mobilization in Singapore</i>	
11.1 Savings-Investment Gap	391
11.2 CPF Contribution Rates	392

Part I

REGIONAL OVERVIEW

**DOMESTIC RESOURCE
MOBILIZATION IN THE
SEACEN COUNTRIES**

by

Y.M.W.B. Weerasekera

PART 1 - REGIONAL OVERVIEW

Chapter 1

DOMESTIC RESOURCE MOBILIZATION IN THE SEACEN COUNTRIES

I. Introduction

1.1 Background

Economic growth is enabled largely by the efficient investment of resources, both domestic and foreign. While external resources can be conditional, uncertain, inadequate and sometimes costly, mobilization of domestic resources appears to be the surest way to finance domestic investment on a continuing basis. A steady flow of domestic savings is therefore, crucial to sustain growth over the long run. But in many SEACEN countries, domestic savings have fallen short of the requirements of investment. The investment-savings (I-S) gaps in these countries have widened with a corresponding rise in their reliance on foreign savings. Although the private savings/GDP ratios have always remained positive, the public sector savings/GDP ratios have been negative for many countries in recent years, especially for Sri Lanka and Nepal.

Public savings being negative in some countries, the burden of financing investments has fallen on the private sector savings. That, too, is inadequate given the very low level of growth and development in some of these countries. Under the circumstances, the countries naturally tend to resort to foreign borrowing to supplement the resources generated from domestic savings.

It is known that external borrowing involves high risks for the recipient countries as it requires regular repayment over long periods of time. Foreign direct investment (FDI) involves equity participation implying payments need be made only when investments earn positive returns. In fact, FDI is generally regarded as the best source of foreign savings as it provides among other things, a source of new technology and managerial skills, a driving force to foster economic growth through its mobilization of domestic resources (e.g. labour), an agent to explore

export markets, and an accelerator for economic transformation and restructuring. This additional source of capital is particularly important for the developing countries that are in the early stages of development. Despite some skepticism on the role of FDI in heavily indebted developing countries (see Fry, 1993), developing countries are increasingly relying on such investment as they will have to depend on some source of foreign savings to finance the widening Investment-Savings (I-S) gaps and FDI still appears to be the best form of foreign financing.

The role and significance of domestic savings, as well as that of FDI as against foreign borrowings, in developing countries is aptly described in the World Economic Outlook (May 1993) as follows:

"The stronger performers among the developing countries share a number of essential characteristics. Compared with the slow-growing countries, the successful countries have markedly higher savings rates; higher investment rates (also in human capital); and higher efficiency of investment and higher overall productivity growth. They also typically finance a larger proportion of investment from domestic saving, and when they have recourse to external saving, it is often in the form of foreign direct investment and equity capital rather than debt-creating capital inflows...." (World Economic Outlook, International Monetary Fund, May 1993, p.6).

The trends in the sources and uses of external financing in recent years have been somewhat discouraging. The prolonged recession in western countries, the international debt crisis resulting in bank failures in some countries in the 1980s and causing some other countries to unilaterally suspend loan repayments, have signaled the developing countries who rely heavily on foreign capital, that sufficient aid may not be forthcoming in the years to come. Developing countries have now begun to realize that continuing dependence on foreign capital to supplement domestic investment is undesirable. Besides, foreign capital (savings), particularly the loan capital, will have to be redeemed by domestic savings at some point in the future. The importance of generating 'domestic savings' has, therefore, received top priority in the policy agenda of many developing countries.

After a decade of somewhat unsatisfactory world economic outlook and slow economic development, the SEACEN countries are now in the process of reshaping their development strategy for the 1990s in the wake of an immense burden of servicing their external debt and poor

prospects of increasing the inflow of foreign capital. A fundamental question underlying this process is what are the best prospects of mobilizing domestic resources and how does one mobilize such resources in a way that both the requirements of domestic investment as well as one's foreign obligations are met with little or no cost to the domestic economy within a general framework of financial liberalization. Within this broad perspective, this study attempts primarily to examine the nature and the level of the domestic savings mobilization effort in the SEACEN countries and to identify ways and means of accelerating the process which is of immense current interest to SEACEN member countries.

1.2 Objective of Study

With the above considerations in mind, this study is expected to address three broad issues, namely, (i) What is the level of savings? (ii) What determines savings? and (iii) What can be done to increase savings in the SEACEN countries? In trying to address these questions, the study will first review the nature and pattern of domestic savings mobilization, in particular the I-S gap, in the SEACEN countries and examine the role of the financial system in mobilizing domestic savings¹. The factors that affect the savings behavior in the SEACEN countries will be examined with the help of a simple, single equation econometric model. The study will also attempt to evaluate the process and impact of financial sector reforms in the context of savings mobilization effort in the SEACEN countries.

1.3 Scope and Organization of the Study

In this study, 'domestic resources' means 'savings', though in another and wider context it includes 'all' factors of production. Savings, mobilized domestically or from abroad, are required for domestic investment. Foreign savings, to some extent, are externally determined. Domestically generated savings on the other hand are determined by many domestic factors which can be largely influenced by policy. Hence, in this study, we focus mainly on 'domestically induced savings'.

1. The country chapters included in this volume contain sections on the role of capital markets in mobilising savings in their respective countries. A comprehensive study has already been conducted by The SEACEN Centre in Ng Beoy Kui, "The Development of Capital Markets in the SEACEN Countries", The SEACEN Centre, Kuala Lumpur, 1989.

Since we are using 'domestic savings' in a national income accounting framework, the concept 'domestic' vs 'national', must be clarified. If one uses the 'domestic' concept, then, one leaves out the net factor income and net current private transfers from abroad which in some countries constitute a significant source of domestic investment. It is, therefore, appropriate to use the 'national' concept in such countries. However, for those countries which have negative figures for net factor income and net current transfers, it seems unrealistic to exclude such transfers as they constitute a major effort in their domestic resource mobilization. Therefore, either concept may be used as and when applicable².

A rather less important point relates to the concept of 'gross' or 'net' in savings. Since data on depreciation allowances in many SEACEN countries are somewhat scanty and arbitrary, the 'gross' concept would be more appropriate. Besides, one can argue that depreciation is also a form of savings. Companies can rejuvenate themselves with additional savings generated in the form of depreciation allowances.

Thus, the Gross Domestic Savings concept adopted in this study can be defined using the popular National Income Identity as follows:

$$\begin{aligned} Y &= C + I + (X-M) \\ Y &= C + S \\ S &= Y - C \\ S &= I + (X-M) \\ I - S &= - (X-M) \end{aligned}$$

Y = GDP, C = Total consumption, I = Investment, X = Exports of goods and non-factor services, M = Imports of goods and non-factor services, S = Gross Domestic Savings, $(X-M)$ = Current Account Balance, all in current market prices. Other definitions used in the study will be explained as and when they occur. In the above formulation, investment-savings gap is equivalent to the deficit in the external current account.

2. Domestic savings can be divided into public and private. Private savings are composed of personal and corporate savings. And personal savings can be compulsory and/or voluntary. All these components are important in determining domestic savings. However, our focus will be on the level of total savings.

The discussion in this study is subject to the deficiencies in the definition of domestic (or national) savings. It has often been argued that since national savings (S) is arrived at as a residue between income (Y) and consumption (C) or between total investment (I) and (plus or minus) the current account balance ($X-M$) of the balance of payments (BOP), which are estimated independently, any measurement errors in estimating any of these aggregates would be compounded in the estimate of savings. For example, any misclassification of spending as investment rather than consumption would result in a higher estimate of investment and a wrong estimate of savings. Collection of savings data on disaggregated sectoral basis would be far superior but much work has had to be done to generate such data on an annual basis. As mentioned in Chapter 3, only estimates based on the national accounts approach were available for a time series for all the countries which are being studied.

The use of the word 'mobilization' in the title may also appear to be too broad when considering the contents of the study. In general, 'mobilization' means "collecting together" and "successful employment of resources" for "investment and growth". Mobilization should also involve the study of the efficiency of investment measured by such concepts as the Incremental Capital Output Ratios (ICORs). In our study, we are concerned with the first issue of "collecting together" of domestic savings rather than the second one. It is readily admitted though that the efficiency of investment is an equally important issue but that should become the theme of another study.

The study is not intended to provide a survey of the literature on savings mobilization or to analyze the behavior of savings extensively in a sophisticated macro-economic model³. Hence regarding the question of 'what determines savings', we limit ourselves to an examination of a single equation aggregate saving function using the ordinary least squares method⁴. The emphasis of the study is on the

3. It is recognized that since aggregate savings is generally derived as a residual from income and consumption, determination of savings should be done simultaneously with consumption involving simultaneous equation models. Such a study would be more useful but it will be too taxing on the country researcher to undertake such large models. Besides, data limitations may pose a problem.

4. Country chapters in Part II of this volume present savings functions for different categories of savings depending on the availability of data. We restrict ourselves to an aggregate savings function.

mechanisms and policies that are in place in order to mobilize domestic savings and those that are required to further enhance the savings mobilization effort within a general framework of financial liberalization. Identification of the important factors determining savings is crucial in this process and that is where the results of regressions would fit in, if at all.

This study is a collaborative one. Under the collaborative arrangement, the country researcher or researchers from the member central banks/monetary authorities undertook to carry out the respective country study according to a research outline designed by The SEACEN Centre. The Centre served as the coordinating agency and conducted a workshop for the country researchers to discuss problems that encountered during the course of the study. The overall analysis in Part I was also conducted by The SEACEN Centre's Senior Economist, based largely on the country studies. The sources of additional material used are given in the list of references.

It is encouraging to know that all the ten member central banks/monetary authorities, namely Bank Indonesia, The Bank of Korea, Bank Negara Malaysia, Central Bank of Myanmar, Nepal Rastra Bank, the Central Bank of the Philippines, the Monetary Authority of Singapore, the Central Bank of Sri Lanka, The Central Bank of China, Taipei and the Bank of Thailand participated in the project. This is a clear indication of the keen interest and priority which has been assigned to this subject by the member banks/monetary authorities. The study covers a period of 22 years from 1970 to 1991. Myanmar, Nepal and Sri Lanka were able to cover a period of only 17, 16 and 14 years respectively.

The study will be in two parts. Part I will briefly review the level, nature and pattern of domestic savings mobilization and in particular the role played by the financial system and financial reforms in mobilizing domestic savings. It will also attempt to draw inferences from the regression estimates based on data supplied along with the country studies and highlight the policy implications behind such inferences. Part II will contain the country chapters as drafted by the country researchers themselves with minimum editing by the Centre.

II. Overview of the Investment-Savings Gap and Domestic Resource Mobilization Attempt

2.1 Investment and Savings

'Savings' is that portion of disposable income which is not consumed, and retained for future use. It can be public or private, domestic or foreign. In many developing countries, private sector, comprising households and business sectors, save more than the public sector. Private sector, particularly households, save for such purposes as future consumption or investment, provision of bequests, insurance and for future emergencies. Savings can be held as cash, jewelry, land and buildings, deposits with financial institutions and stocks and shares. The relative distribution among these instruments depends on the level of development of the financial and capital markets as well as the macroeconomic stability of the country.

Savings play a catalytic role in the process of economic growth. They finance investments without which economic growth and income generation would not be feasible. A higher and sustained rate of economic growth and income, which also implies a higher rate of savings, requires that investment in productive sectors must be increased.

'Investment' or 'capital formation' is the expenditure incurred in increasing the country's capital stock such as plant and equipment, machinery buildings, irrigation network, power generation, roads and rail tracks and so on. It should enhance the productive capacity of the country. A high rate of investment and a high rate of utilization of invested capital is necessary for a country to achieve a higher rate of economic growth. A higher rate of investment should be accompanied by a higher rate of savings. If savings are low, it means that either investments will have to be cut down or they will have to be financed from external sources, which can be both costly to the economy and cannot be sustained over the long run. Unfortunately, many developing countries including a few in the SEACEN group are entangled in a "vicious circle of low incomes" causing low savings, low investments, low growth and again low incomes and so on. As a result, foreign capital has become a permanent feature in financing domestic investment projects. In order to break out of this vicious circle, it is necessary that these countries make a vigorous attempt to accumulate capital through increased domestic savings mobilization.

2.2 The level of Investment (I), Savings (S) and the I-S Gap in the SEACEN Countries

The question of how much domestic savings are required for a country is generally guided by the level of its investment, although perfect correlation between the two variables cannot be expected⁵. Experience has shown that savings can exceed the level of investments which may result in net foreign lending and/or build up of external reserves. It should not mean that no more additional savings are necessary as one should be prepared for any eventualities in the future. A convenient way of gauging the domestic savings requirements is to examine the investment and savings ratios and their corresponding investment-savings (I-S) gaps. Tables 1.1 and Charts 1.1 to 1.10 present the investment and saving ratios and investment-savings gap for the SEACEN countries.

2.2.1 Indonesia

Indonesia's investment ratio had been rather low in the early 1970s. It was only 14 per cent of GDP in 1970 but increased gradually to reach an average of 20 per cent during 1976-1980. During most of the 1980s, it remained close to 25 per cent of GDP and accelerated to 30 per cent in 1990 and 1991. On the other hand, the savings ratios have been lower than investment ratios except in the years of the oil boom namely, 1974, 1979 and 1980 resulting in an investment-savings gap for most of the period under review. Although the monetary reforms of 1983 saw the narrowing of the investment-savings gap, except for 1986 due to a drop in oil prices, the years 1990 and 1991 have witnessed a gradually increasing investment-savings gap. This was mainly due to the investment boom (Investment ratios were 30 per cent in 1990 and 1991 compared to 20 per cent in 1980) resulting from the financial sector reforms and increase in the foreign assistance, particularly that of foreign commercial borrowing.

Indonesia's government recorded budget deficits throughout the period except for the years of oil boom. In recent years, government investment slowed down resulting in an I-S surplus for the government, for example, in 1990. However, the reduction in government

5. As discussed later in this chapter.

Table 1.1
Investment - Savings Gaps in the SEACEN Countries

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Indonesia																						
Investment Ratio	0.14	0.15	0.18	0.17	0.16	0.19	0.20	0.20	0.20	0.20	0.20	0.24	0.25	0.25	0.22	0.23	0.24	0.25	0.26	0.27	0.30	0.30
Savings Ratio	0.09	0.11	0.14	0.13	0.16	0.16	0.18	0.19	0.17	0.22	0.24	0.23	0.19	0.18	0.20	0.21	0.19	0.22	0.24	0.26	0.27	0.26
Inv.-Savings Gap	-4.56	-4.63	-4.07	-4.70	0.09	-3.13	-2.43	-0.15	-2.64	1.76	3.61	-0.52	-5.49	-7.55	-2.25	-2.23	-5.12	-2.99	-1.84	-1.40	-2.94	-3.62
Korea																						
Investment Ratio	0.25	0.25	0.21	0.26	0.32	0.29	0.27	0.29	0.34	0.37	0.33	0.31	0.30	0.30	0.31	0.30	0.29	0.30	0.31	0.34	0.37	0.39
Savings Ratio	0.17	0.15	0.14	0.19	0.14	0.13	0.22	0.25	0.27	0.24	0.18	0.19	0.21	0.23	0.24	0.24	0.29	0.31	0.33	0.30	0.30	0.31
Inv.-Savings Gap	-7.94	-10.61	-7.43	-7.06	-18.20	-16.10	-5.19	-4.44	-6.54	-12.34	-14.50	-11.41	-8.57	-6.97	-6.92	-5.86	-0.65	1.02	2.02	-3.90	-6.72	-8.28
Malaysia																						
Investment Ratio	0.21	0.21	0.22	0.24	0.31	0.26	0.24	0.25	0.28	0.30	0.32	0.36	0.39	0.40	0.36	0.30	0.28	0.25	0.27	0.31	0.35	0.36
Savings Ratio	0.18	0.19	0.17	0.26	0.24	0.19	0.28	0.29	0.35	0.30	0.26	0.26	0.25	0.28	0.31	0.28	0.27	0.34	0.35	0.31	0.30	0.30
Inv.-Savings Gap	-3.19	-2.73	-4.83	1.37	-7.17	-7.72	4.49	3.46	0.69	4.58	-1.21	-10.13	-14.09	-12.39	-5.28	-2.11	-0.47	8.89	5.55	-0.61	-4.96	-6.43
Myanmar																						
Investment Ratio																						
Savings Ratio																						
Inv.-Savings Gap																						
Nepal																						
Investment Ratio																						
Savings Ratio																						
Inv.-Savings Gap																						
Philippines																						
Investment Ratio	0.21	0.21	0.21	0.22	0.27	0.31	0.33	0.31	0.31	0.33	0.29	0.28	0.27	0.25	0.27	0.21	0.16	0.17	0.21	0.21	0.20	0.19
Savings Ratio	0.24	0.25	0.25	0.29	0.28	0.28	0.28	0.28	0.28	0.27	0.11	0.11	0.10	0.09	0.10	0.14	0.12	0.12	0.11	0.10	0.09	0.12
Inv.-Savings Gap	-2.90	-3.90	-3.80	7.60	1.50	-2.60	-3.80	-2.90	-2.70	-5.10	-1.90	-0.30	-3.20	-3.00	-0.60	1.10	1.20	2.50	2.90	-1.50	-3.10	-1.60
Singapore																						
Investment Ratio	0.38	0.40	0.41	0.40	0.47	0.40	0.41	0.37	0.39	0.43	0.48	0.48	0.49	0.48	0.48	0.41	0.37	0.39	0.37	0.35	0.39	0.37
Savings Ratio	0.19	0.19	0.24	0.28	0.26	0.29	0.31	0.32	0.33	0.36	0.34	0.37	0.41	0.45	0.46	0.41	0.39	0.39	0.41	0.43	0.45	0.47
Inv.-Savings Gap	-19.02	-21.33	-17.03	-12.69	-20.34	-10.23	-9.97	-4.56	-5.77	-7.79	-15.83	-11.01	-8.75	-3.50	-2.48	-0.02	2.58	-0.79	4.05	8.27	6.10	10.29
Sri Lanka																						
Investment Ratio	0.19	0.17	0.18	0.14	0.12	0.16	0.16	0.14	0.20	0.26	0.34	0.28	0.31	0.29	0.26	0.24	0.24	0.23	0.23	0.22	0.22	0.23
Savings Ratio	0.17	0.15	0.13	0.14	0.09	0.10	0.14	0.18	0.15	0.14	0.11	0.12	0.12	0.14	0.20	0.13	0.12	0.13	0.15	0.12	0.14	0.13
Inv.-Savings Gap	-2.28	-2.34	-4.76	-0.19	-2.73	-5.40	-2.33	3.66	-4.77	-12.04	-22.58	-16.08	-18.90	-15.10	-5.94	-10.33	-11.61	-10.50	-9.95	-9.50	-7.88	-10.21
Taiwan																						
Investment Ratio	0.26	0.26	0.26	0.29	0.39	0.31	0.31	0.28	0.28	0.33	0.34	0.30	0.25	0.23	0.22	0.19	0.17	0.20	0.23	0.22	0.22	0.23
Savings Ratio	0.26	0.29	0.32	0.34	0.31	0.27	0.32	0.33	0.34	0.33	0.32	0.31	0.30	0.32	0.34	0.34	0.38	0.38	0.34	0.31	0.29	0.30
Inv.-Savings Gap	0.01	2.59	6.49	5.28	-7.70	-5.81	1.57	4.30	6.12	0.50	-1.56	1.31	4.84	8.70	11.87	14.82	21.35	18.40	11.69	8.51	7.29	7.18
Thailand																						
Investment Ratio	0.26	0.24	0.20	0.24	0.25	0.25	0.23	0.27	0.28	0.28	0.27	0.27	0.23	0.26	0.25	0.24	0.22	0.24	0.29	0.32	0.36	0.36
Savings Ratio	0.23	0.22	0.20	0.23	0.24	0.21	0.20	0.24	0.22	0.24	0.22	0.21	0.20	0.21	0.21	0.20	0.21	0.24	0.29	0.31	0.32	0.32
Inv.-Savings Gap	-3.54	-2.49	-0.84	-0.66	-0.30	-4.18	-2.93	-4.96	-4.37	-5.10	-5.55	-5.79	-3.47	-4.79	-4.35	-4.70	-0.90	-0.23	-0.23	-0.77	-3.92	-3.92

Source: Compiled by author

Investment-Savings Gaps in the SEACEN Countries

Chart 1.1 - Indonesia

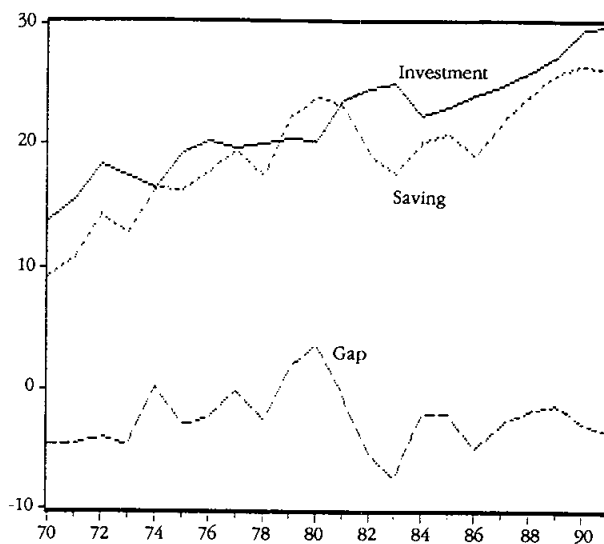


Chart 1.2 - Korea

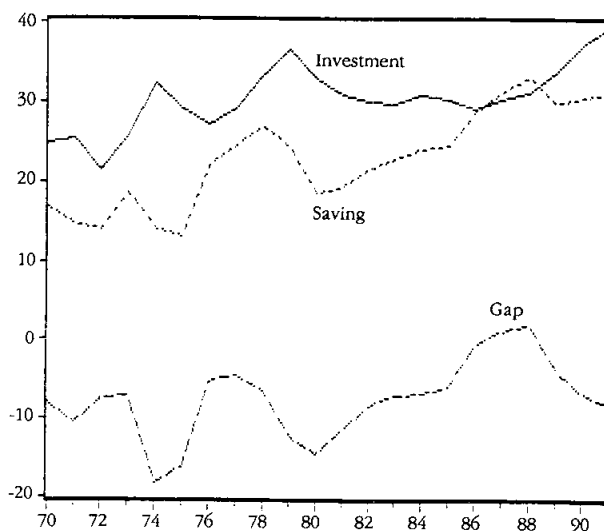


Chart 1.3 - Malaysia

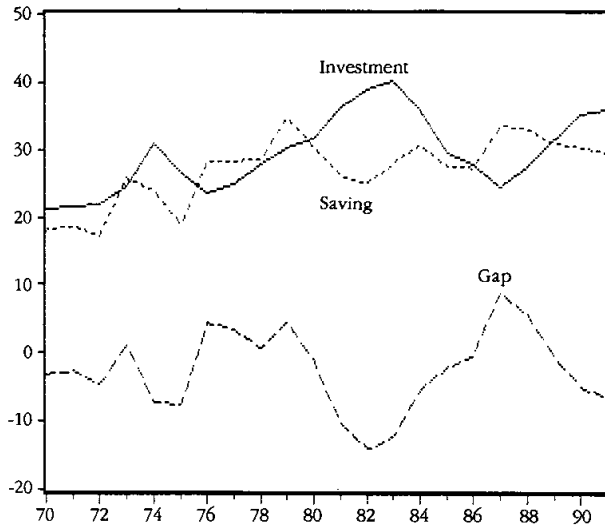


Chart 1.4 - Myanmar

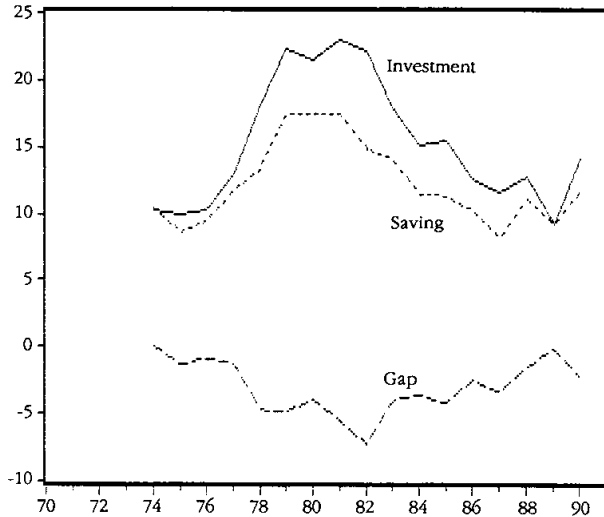


Chart 1.5 - Nepal

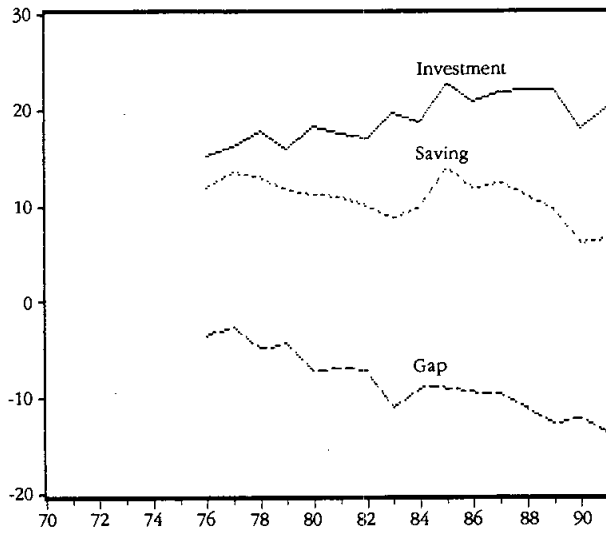


Chart 1.6 - Philippines

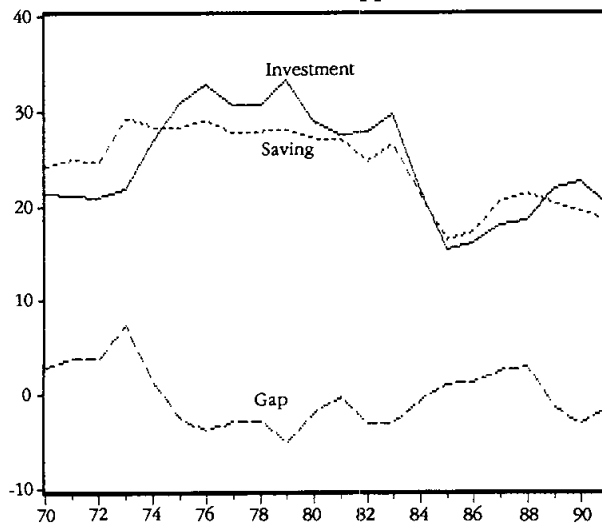


Chart 1.7 - Singapore

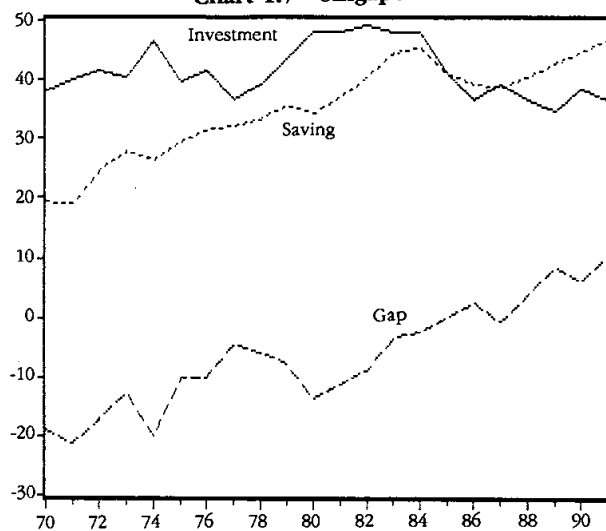


Chart 1.8 - Sri Lanka

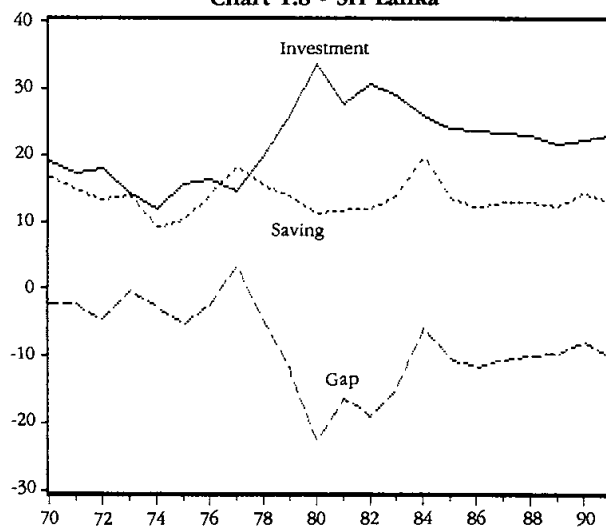


Chart 1.9 - Taiwan

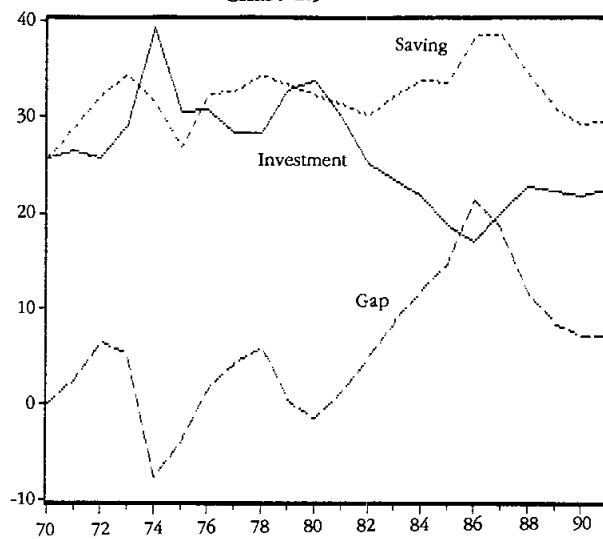
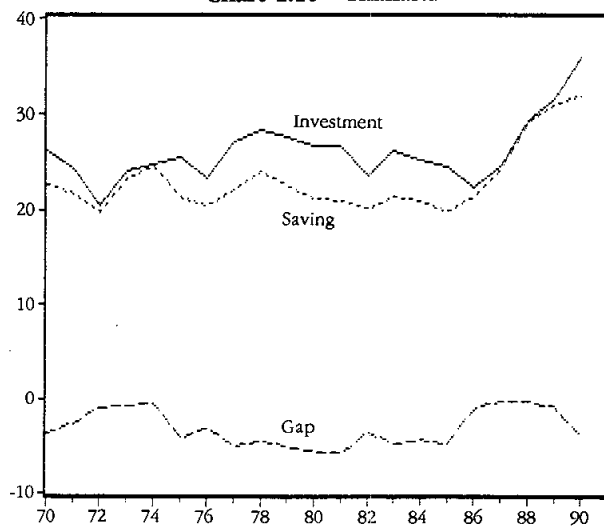


Chart 1.10 - Thailand



investment was offset by an increase in private investment in the past few years. Consequently, the total investment-savings gap increased to nearly 4 per cent of GDP in 1991.

2.2.2 Korea

Korea's investment ratio has remained, on average, above 30 per cent of GDP during the last two decades. This is the second highest investment ratio, after Singapore, for the SEACEN group of countries. Although its savings ratio increased gradually from about 17 per cent in 1970 to about 31 per cent in 1991, the investment-savings gap continued with the increasing levels of investment. Rising investment ratios and resulting gaps are particularly evident during the years 1989-1991. The very high savings ratios of 31 and 33 per cent for 1987 and 1988 respectively have generated a savings surplus in the Korean economy for the first time in many years. It is argued that lower debt service ratios, for Korea during the ensuing years were partly due to these savings surpluses. Since 1989, however, the investment ratio began to increase fairly rapidly from around 31 per cent in 1988 to 34 per cent in 1989, 37 per cent in 1990 and 39 per cent in 1991, while savings ratio stabilized around 30 per cent. This has resulted in a widening investment-savings gap during the past few years causing concern for the authorities.

In Korea, the share of government savings was about 24 per cent of total savings in 1990. Household savings comprised 48 per cent while firm savings amounted to 28 per cent. During the period 1986-1990, the government budget produced surpluses sometimes exceeding 2 per cent of GDP (1988). In the meantime, the rate of increase in household savings was very high; 47 per cent in 1986, 29 per cent in 1987, 26 per cent in 1988, 8 per cent in 1989 and 25 per cent in 1990. Increase in household savings and budgetary surplus were mainly responsible for the total I-S surplus experienced by Korea during 1986-1988.

2.2.3 Malaysia

Malaysia has always maintained a relatively high investment ratio throughout the period 1970-1991. It sometimes reached as high as 40 per cent (1983). The very high investment ratios during the period 1981-85 were mainly due to the increased public sector investment activities. Since 1985, through a deliberate policy of structural adjustment, public

investment was scaled down gradually which has resulted in a lower investment ratio for the ensuing years. However, mainly as a result of fluctuating savings ratios, its investment-savings gap showed a cyclical behavior during this period. In some years, investment picked up while savings lagged behind showing a scissor movement. The investment ratio was high at 36 per cent in 1981 and continued to increase to 39 per cent in 1982 and 40 per cent in 1983 while the savings ratio was low at around 26 per cent, 25 per cent and 28 per cent respectively during the three years resulting in very large investment-savings gaps, the largest recorded so far, being 14 per cent of GDP in 1982. This gap was narrowed during the following years as a result of fiscal restraint and improving commodity prices, and culminated in a large savings surplus of 9 per cent of GDP in 1987. In 1989, however, the investment-savings gap re-emerged and continued to increase due mainly to increasing investments and a rising consumption expenditure resulting in a lower savings ratio.

The decline in savings ratio, particularly since 1987 is a major concern for Malaysia. A disaggregation of savings into public and private will indicate that the fall in the total savings ratio has been entirely due to a fall in the share of private savings from 27 per cent of GNP in 1987 to 18 per cent of GNP in 1991 though it slightly recovered to 21 per cent in 1992⁶. On the other hand, the share of public sector savings has increased from 6 per cent in 1987 to 12 per cent in 1990. It remained at 12 per cent in 1992 as well. Improved savings performance of the public sector was due to several factors. One was the revenue expansion resulting from the commodity boom in the early 1980s and tax reforms which included the widening of the tax base in late 1980s. Increase in income tax from individuals and corporations contributed to a larger revenue. Also the government exercised fiscal restraint particularly in response to the recession of the early 1980s. This was further followed up by downsizing the public sector, freezing the intake of staff to public service and rationalizing and privatising public enterprises. The improved financial position of the government has enabled the country to reduce its foreign debt and rely less on such captive sources as the Employees Provident Fund (EPF) for financing

6. Private savings constitute about 73 per cent of total savings in the Fifth Five Year Plan period, i.e. 1986-1990.

its deficit⁷. Thus, prudent budgetary management has resulted in public saving surpluses leading to many other healthy developments in the country. However, there seems to be no room for complacency as measures still need to be taken to arrest the declining private savings rate.

2.2.4 Myanmar

Compared to an investment ratio of 10 per cent in the 1970's, Myanmar increased its investment ratio to over 20 per cent during 1979-1982. This was mainly due to an increase in the inflow of official development assistance. Following the decline of major export prices in 1981, investment had to be cut down as shown by the declining investment ratios for the period 1982-1989. This period was also associated with low economic growth rate as well as a low savings rate. The savings rate began to increase in 1990 following the change in economic policy in 1989 and the associated incentives for investment particularly the enactment of Foreign Investment law which encouraged the inflow of foreign capital and private investment. During the period of the second oil boom (1979-1980), the savings ratios of Myanmar were rather high at around 17-18 per cent. But the investment-savings gap for the whole period remained rather high sometimes reaching 7 per cent of GDP (1982). On average, domestic savings financed about 75 per cent of domestic investment in Myanmar. The balance was financed from outside sources. The economic reforms started in late 1988 are expected to encourage investment and growth while inducing larger mobilization of domestic savings.

In Myanmar, on average, about 40 per cent of domestic savings came from the public sector during 1978/79-1990/91. The public sector had been generating surpluses during 1976/77-1987/88, but the surpluses were on a declining trend. Since 1988/89, they turned to negative as a result of increasing current expenditure. This decline in public savings had even overshadowed the increase in private savings resulting in a very low national savings rate of 9 per cent in 1989/90 and 12 per cent in 1990/91. Since total investment has picked up after the low of 9 per cent in 1989/90, it is of utmost importance to increase the

7. EPF Act had a provision that at least 70 per cent of its investible funds should be held in Malaysian Government Securities (MGS). The Act has now been amended enabling the EPF to diversify their investments into other areas.

public savings by way of budgetary prudence, and implementing the structural reform policy programmes started in 1988, which will enable the country to cope with the increasing requirements of investment.

2.2.5 Nepal

Nepal's investment ratio was relatively higher at around 20 per cent during the 1980's compared to the 1970's. Gradually increasing investment ratios were generally associated with the successive development plans. During the Fifth Five Year Plan (1976-1980), the investment ratio stood at an average of 17 per cent and increased to 19 per cent during the Sixth Five Year Plan (1981-1985). It further increased to 21 per cent during the Seventh Five Year Plan (1986-1990). Its savings ratio, however, did not keep pace with the increasing investment ratio. In fact, the savings ratios for the three plan periods at 12 per cent, 11 per cent and 10 per cent respectively indicated a declining trend. And as a result, the investment-savings gap increased from 4 per cent in the first period to 9 per cent in the second period and to 11 per cent in the third period. It continued to widen over the years and reached an all time high of 14 per cent of GDP in 1991. Heavy reliance on external financing to meet domestic investment requirements during the past two decades has further worsened the already alarmingly large external debt situation, which at the end of 1990, stood at 53 per cent of GNP.

Nepal government's contribution to total savings had varied from positive to negative from time to time. For instance, government savings was about 2 per cent of GDP in 1981, but it became negative at -2 per cent in 1989. Heavy current expenditures were the main reason for the savings deficits of the government. While the government did not save consistently, it continued to incur large investment expenditure increasing from 3 per cent of GDP in 1975 to 7 per cent in 1991. The increase in private sector investment increased from 11 per cent in 1975 to 13 per cent in 1991. The large and increasing I-S gap in Nepal is more due to falling savings by both private and public sector savings. The lowering of interest rates on deposits of over one year and rising inflation may have caused the dramatic decline in private savings in 1990 and 1991. It is, therefore, necessary to intensify the financial reform measures to achieve positive real interest rates in an environment of fiscal discipline.

2.2.6 Philippines

In the Philippines, both investment and savings ratios were higher in the 1970's than during the 1980's. During 1970-1974, the savings ratio was even higher than investment ratio resulting in a savings surplus in that period. However, as a result of a significant increase in investment, from about 22 per cent during 1970-74 to about 31 per cent during 1975-79, the investment-savings gap emerged and widened to a peak of about 5 per cent of GDP in 1979. The improvement in the external current account after 1985 as a result partly of stabilization measures undertaken during 1983-85 was reflected in a turnaround of investment-savings gap to a surplus during 1985-88. Another reason for this improvement in the investment-savings gap was a significant drop in the investment rate during this period. Investment ratio dropped from 30 per cent in 1983 to 22 per cent in 1984 and to 15 per cent in 1985 before gradually picking up thereafter. In other words, between 1983 and 1985, the drop in investment is about 50 per cent. Although the savings rate also declined (from 27 per cent in 1983 to 16 per cent in 1985), it was still higher than the investment ratio in 1985. While the savings ratio tended to slow down since then, the investment ratio gradually increased during 1987-91 following the increase in prices, resulting once again in an investment-savings gap.

Performance of government savings in the Philippines in recent years is commendable. While the share of household savings declined from about 60 per cent in 1986 to 25 per cent in 1991, the government savings increased from -9 per cent to 21 per cent between the two years. The decline in the share of household savings was partly due to the low real yields on deposits resulting from high inflationary pressures. Inflation rose to 18 per cent in 1991 and real interest rates on savings deposits became negative in that year. Measures need be taken therefore to improve the savings situation while maintaining investment at sustainable levels.

2.2.7 Singapore

Singapore has the highest investment ratio among the SEACEN countries. It increased from an average of about 40 percent in the 1970's to over 48 per cent in the first half of 1980's. After the initial years of industrialization which led to heavy investments in industrial estates and shipyards in the early 1970's, investment expenditure increased

further during late 1970's and early 1980's with the acceleration of the public housing programme and other large scale public infrastructure projects. Following the 'over-building'⁸ in the early 1980s, there was a slump in construction investment during 1985-88. The investment ratio during the latter half of 1980s decelerated to less than 40 per cent and the capital-output ratio began to approach the levels of a mature, industrial economy while economic growth rate also began to moderate towards a more sustainable rate especially after 1990.

Singapore's savings rate too increased significantly from about 19 per cent in 1970 to about 47 per cent in 1991. As the post war 'baby boom' generation entered the work force with dependency ratios falling dramatically, Singapore began to experience the highest savings rates in the world by the early 1980s. In 1991, Singapore's savings rate peaked at 47 per cent of GNP. Despite the very high savings rates, the investment-savings gap remained negative until 1985 due partly to heavy foreign direct investment as manufacturing sector continued to be dominated by foreign multinational companies. Since 1986, and excepting 1987, Singapore's savings ratio exceeded its investment ratio resulting in savings surpluses which, in 1991, amounted to more than 10 per cent of GNP. But Singapore continued to depend heavily on foreign direct investment in view of its benefits to the economy. In fact, the high savings ratio was regarded as being helpful in instilling investor confidence necessary to attract foreign direct investment.

Reflecting the philosophy of fiscal prudence, Singapore has consistently generated budgetary surpluses. Not only that the public sector is a net saver, its share in the total savings of the country has increased over the years from around 20 per cent in early 1970s to over 70 per cent in early 1990s. Corresponding to this increase, the share of private sector savings declined. Gradual increases in the CPF⁹ contribution rates, and the significant surpluses on government operations have largely contributed to the I-S surplus of Singapore.

2.2.8 Sri Lanka

Compared to a relatively low level of investment in the early 1970's, Sri Lanka's investment ratio began to increase in the late 1970's and

8. Monetary Authority of Singapore, Annual Report, 1991.

9. About 75 per cent of private savings are from the CPF.

until about 1984, mainly due to large infrastructure development programmes undertaken by the government¹⁰. Implementation of these public sector programmes together with an increase in private sector investment following the economic liberalization policies of 1977, resulted in an increase in the investment ratio from 14 per cent in 1977 to 31 per cent in 1982. As some of these public sector large programmes neared completion in the early parts of 1980's while some others were phased out and the government concentrated more on the ongoing development projects rather than new ones, the investment ratio also began to decline since 1983 and it leveled off during the later years. The private sector was allowed to take over the major task of investment especially in export oriented industries but the relative slowdown of investment by government was not adequately offset by the private sector investment as reflected by the reduced investment ratio of 23 per cent during the last five years.

While investment ratio increased after 1977, Sri Lanka's savings ratio did not increase at the same pace, except in 1984 when the savings rate shot up to 20 per cent owing to the "tea boom". Meanwhile, Sri Lanka's government has been a net dis-saver over the entire period. This was largely due to the heavy welfare expenditure, low operational efficiency of public enterprises, as well as increasing defense expenditure particularly since 1983. On the whole, the investment- savings gap increased from about 5 per cent of GDP in 1978 to a peak of 23 per cent of GDP in 1980. In fact, this is the highest investment-savings gap recorded by any SEACEN country for any one year during the entire 22 year period. Furthermore, on average, Sri Lanka has the highest investment-savings gap (12.4 per cent) for the period 1980-1991, the second highest being Nepal (9.8 per cent). This indicates Sri Lanka's poor performance in domestic resource mobilization and its overwhelming dependence on foreign savings to finance domestic investment.

2.2.9 Taiwan¹¹

The Republic of China, Taipei (Taiwan) is the only country in the SEACEN group that has been able to generate savings surpluses through-

10. These programmes included the acceleration of a massive hydro power cum irrigation development programme known as the Mahaveli Development Programme, Katunayake Investment Promotion Zone, Urban Development Programme, Housing Development Programme and the Integrated Rural Development Programme.

11. Throughout the study, "Taiwan" means the Taiwan Province of China, or, the Republic of China, Taipei.

out the period excepting the years of oil crises namely, 1974/75 and 1980. Large and sustained expansion of savings not only accommodated the investment requirement of the country but also resulted in net foreign lending by Taiwan during the period under consideration. Taiwan's investment ratio showed an increasing trend from early 1970's till about 1981 when the rate averaged about 30 per cent. It started to decelerate since then, sometimes reaching 17 per cent (1986). Savings ratio in the meantime, was high and relatively steadier during the period. It increased significantly during 1982-87 (38 per cent in 1987) resulting in massive savings surpluses leading to a large net foreign lending by Taiwan. Since 1988, however, the savings ratio declined gradually to reach 29 per cent in 1990 and slightly improved to 30 per cent in 1991. Although the savings ratio decelerated during the last three years or so, it has more than accommodated the investment requirements (23 per cent) of the country. Nevertheless, since the investment requirements of the six-year National Development Plan (1991-1996)¹² are going to be high, authorities in Taiwan are concerned about the declining savings rate and the ways and means of restoring it to previous high levels.

Government sector's contribution to Taiwan's total savings has been on the increase until 1989. It rose from 14 per cent of total savings in 1970 to 25 per cent in 1989. When 'public enterprises' are included, the contribution stands at 31 per cent in 1970 and 39 per cent in 1989. However, the government sector's share declined from 25 per cent in 1989 to 20 per cent in 1990 and 5 per cent in 1991 mainly because of decreases in tax revenue and substantial increases in transfer payments. As for investment, the government sector (excluding public enterprises) contributed about 25 per cent of total domestic investment in 1991 as against 11 per cent in 1970. Both government sector and public enterprises account for over 50 per cent of total investment. This ratio is expected to increase along with the implementation of the National Development Plan (1991-1996) and so will be the requirements of additional savings to meet the targeted investment as set out in the plan.

2.2.10 Thailand

Thailand's investment requirements are implicitly set by the National Economic and Social Development Plans. Its investment ratio which

12. Aims at improving the infrastructure facilities and raising the quality of life.

has fluctuated between 20 and 28 per cent during 1970-1987 increased to about 29 per cent in 1988, 32 per cent in 1989 and to 36 per cent in 1990. Its savings ratio varied between 20 and 24 per cent during 1970-1987 but accelerated to 29 per cent in 1988, to 31 per cent in 1989 and further to 32 per cent in 1990. Thus, in spite of a strong investment expansion, which is partly linked to the government policy to substantially increase infrastructural investment, the investment-savings gap narrowed considerably from about 5 per cent in 1985 to about 1 per cent in 1989, indicating partly the favourable developments in the external current account.

The size of government in both savings and investment is relatively small in Thailand. Of the average savings rate of about 27 per cent during 1987-1990, 18 per cent is from private savings while the balance (9 per cent) is from the government and government enterprises. This shows an increase of 5 percentage points from the 1970-1974 level. This was primarily due to the implementation of a comprehensive stabilization policy in the 1980s, which included among other things, strict fiscal discipline. To strengthen the public sectors performance, tax collection was improved while expenditure was tightened. Limits were set on external borrowings by public agencies. State enterprises were revitalized and the private sector was encouraged to take on a lead role in economic activities. These measures helped reduce the budget deficit from 5.2 per cent of GDP in 1982 to 1.4 per cent of GDP in 1987. It turned into a surplus of 2 per cent of GDP in 1988 and increased up to 5 per cent of GDP in 1990, largely benefiting from the strong growth of tax revenues since 1988. On the whole, government fiscal prudence in recent years resulted in narrowing the I-S gap in Thailand. However, since the overall gap appears to be widening, particularly since 1989, corrective measures need be taken immediately.

2.3 Correlation between Savings, Investment and Growth

The importance of studying the level of savings and investment and resulting gaps or surpluses should really lie in their relationship with growth. This can be examined by looking at the correlation between savings, investment and growth. Table 1.2 present correlation coefficients for pairs of variables and standard deviations for each

Table 1.2

**Correlation Coefficients and
Standard Deviations, 1970-1991**

Country	Correlation Coefficients for				Standard Deviations of			
	Investment & Saving	Investment & Growth	Savings & Growth	I-S Gap & Growth	Investment	Saving	I-S Gap	Growth Rate
Indonesia	0.86	-0.38	-0.15	0.37	4.36	4.85	2.75	2.15
Korea	0.60	-0.24	0.29	0.56	4.23	6.23	4.63	3.76
Malaysia	0.32	-0.09	0.25	0.28	5.76	5.07	6.76	5.77
Myanmar	0.95	0.29	0.37	-0.11	4.72	3.07	1.94	5.10
Nepal	-0.02	0.11	0.27	0.10	2.45	2.24	3.16	3.43
Philippines	0.82	0.33	0.56	0.15	5.58	4.16	3.22	3.90
Singapore	0.07	0.02	-0.45	-0.42	4.60	8.28	8.55	3.52
Sri Lanka	-0.06	0.46	0.17	-0.35	5.72	2.44	6.63	1.84
Taiwan	-0.29	-0.25	0.38	0.36	5.37	3.14	7.30	3.45
Thailand	0.84	0.44	0.66	0.43	3.35	3.52	1.95	3.71

Sources: Investment and savings ratios are from Table 1.1. GDP Growth rates are from Key Indicators of ADB and World Economic Outlook of the IMF.

variable¹³. Table 1.3 shows the same relationships in two variable simple regressions¹⁴.

According to Table 1.2, investment and saving ratios are highly and positively correlated in Indonesia, Korea, Myanmar and Thailand. In Malaysia and Singapore, correlation is positive but not very strong. Nepal, Sri Lanka and Taiwan indicate negative correlation. In the case of Nepal and Sri Lanka, negative correlation is caused by the widening I-S gap while in Taiwan, it is caused by the impact of the widening savings surplus, particularly in the 1980s (see Charts 1.5, 1.8 and 1.9). A positive correlation between saving and investment may not necessarily indicate a positive correlation between investment and growth. As the table shows, the correlation between investment and growth is negative even in countries like Indonesia, Korea and Malaysia which have high positive correlation between saving and investment. Taiwan with negative saving-investment correlation has a negative investment-growth correlation as well. Other SEACEN countries show positive but small correlation coefficients for investment and growth. These results are confirmed by the results in Table 1.3¹⁵. All this suggests that growth rates need not be highly correlated to investment ratios.

Whether higher level of savings lead to a higher growth rate is not quite clear. But the reverse may be true as causality runs predominantly from growth to savings. According to Fry (1991, p.17), "given the relatively similar investment ratios between geographic regions of the developing world, the relatively high growth in Asia cannot be

13. The correlation coefficients presented in this paper are only indicative of the direction of movement of two variables. They are based on the concept of covariance which is a measure of the linear association between two variables. For instance, if both variables are always above and below their means at the same time, the covariance will be positive. If they move in different direction, the covariance will be negative. The same principle will apply to correlation coefficient. Unlike covariance, correlation is scale-free. It lies between -1 and +1. It should not be interpreted as one variable causing the other or as indicating their true relationship as would be obtained for example from an econometric model. In Chapter 2, determinants of savings are discussed separately.

14. The focus in this table should be on the sign of the coefficient. Hence, indicators of goodness of fit are not given here. "t" ratios indicate the level of significance of coefficients.

15. A positive correlation is observed for Malaysia for the period 1970-1991. However, it turns to negative for the period 1979-1991. The results are: Coefficient = -0.93, "t" value = -2.32**. This negative correlation can also be read from Chart 1.3.

Table 1.3**Correlation between Investment, Saving and Growth**

	Investment on Savings	Growth on Investment	Savings on Growth
Indonesia			
Coefficient	0.77	-0.19	-0.34
"t" Value	7.41***	-1.83	-0.67
Korea			
Coefficient	0.41	-0.19	0.55
"t" Value	3.33***	-1.10	1.37
Malaysia			
Coefficient	0.46	-0.08	0.23
"t" Value	2.00**	-0.40	1.14
Myanmar			
Coefficient	1.46	0.30	0.24
"t" Value	11.85***	1.18	1.56
Nepal			
Coefficient	-0.02	0.14	0.18
"t" Value	-0.08	0.40	1.03
Philippines			
Coefficient	1.10	0.22	0.62
"t" Value	6.47***	1.58	3.03***
Singapore			
Coefficient	0.04	0.02	-1.04
"t" Value	0.30	0.10	-2.26**
Sri Lanka			
Coefficient	-0.15	0.14	0.23
"t" Value	-0.29	2.32**	0.76
Taiwan			
Coefficient	-0.49	-0.16	0.35
"t" Value	-1.33	-1.14	1.82*
Thailand			
Coefficient	0.80	0.48	0.64
"t" Value	6.67***	2.16**	3.85***

*** = Significant at 1% level

** = Significant at 5% level

* = Significant at 10% level

explained by higher savings and investment. What these economies achieved was more efficient use of the factors of production". Our data show positive correlation between savings and growth in eight (8) out of ten (10) countries (Table 1.1). Only in Indonesia and Singapore, the relationship is negative. This is confirmed by Table 1.3 as well. There is, in general, a higher positive correlation between savings and growth than between investment and growth. In Singapore, the investment and savings ratios have remained, on average, the highest among SEACEN countries. In contrast, countries like Korea and Taiwan, investment and savings ratios were lower but the growth rates were higher than those of Singapore. Therefore, it appears that high investment ratios are not a necessary condition to achieve high growth rates. The efficiency of investment may explain high growth rates in these countries. The available estimates from the I.M.F. show that the ICORs of 'high growth'¹⁶ countries have dropped from 3.1 per cent in 1982-86 to 2.4 per cent in 1987-92, indicating increased efficiency of investment. The same source also reports that the total factor productivity of these countries have increased substantially by 2.8 per cent during 1987-1991 as compared to a 1.9 per cent during 1982-86¹⁷.

As regards the correlation between I-S gap and growth rates, seven (7) out of ten (10) countries show a positive sign. Myanmar, Sri Lanka and Singapore show a negative relationship. In Sri Lanka, a large share of domestic investment is financed through foreign savings¹⁸. Myanmar's I-S gap is relatively small compared to Sri Lanka. But the country had recorded substantially large negative growth rates particularly in 1987 and 1988 and very low growth rates thereafter, resulting in a negative correlation. In Singapore, the I-S surplus, caused more by increased savings rather than by decreasing investment, has an inverse relationship with growth rates. In other SEACEN countries, higher savings rates (and lower I-S gaps) tend to be associated with higher growth rates. This is in line with the general trend observed in 'high growth' countries¹⁹.

16. This generally includes the high growth developing countries of East and South East Asia such as Korea, Malaysia, Singapore and Thailand.

17. World Economic Outlook, International Monetary Fund, May 1993, P.47-48.

18. Government sector investment is largely responsible for the increase in investment ratios since 1977. In 1980, more than 60 per cent of government investment was financed through foreign sources.

19. See for example, World Economic Outlook, May 1993, p.45.

Table 1.1 also show the standard deviations of investment, savings, I-S gap and growth rates for the period 1970-1991. According to this table, Nepal's savings ratio is least volatile followed by Sri Lanka and Myanmar. These countries happen to be the lowest income countries in the SEACEN group in terms of per capita GNP²⁰ in the same order of ranking. In contrast, Singapore (highest per capita income in the group) has the highest standard deviation in savings followed by Korea and Malaysia. These are also the countries with consistently high savings ratios and high level of per capita income. This finding may suggest that the higher the level and growth of income, the greater the volatility of savings. The significance of income growth in determining savings as highlighted in chapter 3 is further enhanced by this result.

Malaysia's investment ratio exhibits the highest standard deviation. It is also associated with the highest standard deviation for growth rates. Sri Lanka, Philippines and Taiwan also show high volatility of investment, but they are not so closely associated with growth rates. In fact, Sri Lanka ranks the lowest in the standard deviation of growth rates, despite its very high (second highest) ranking in terms of investment volatility.

Looking at the standard deviations of I-S gap (=current account balance), Singapore shows the highest volatility followed by Taiwan, Malaysia and Sri Lanka. But the correlation between investment and savings in these countries is small or negative. On the other hand, the countries whose I-S gap is least volatile i.e. Myanmar, Thailand, Indonesia and Philippines, as indicated by very low standard deviations, exhibits a very high positive correlation between savings and investment. This may suggest that a positive correlation between investment and savings would reduce the volatility of I-S gap (current account balance) and a negative correlation would increase it. The experience of Singapore, Taiwan and Malaysia also shows that volatility in the current account should not affect economic growth.

III. Summary and Conclusion

The SEACEN countries have been facing investment-savings gaps of one form or another in recent years, except perhaps Singapore and

20. See Table 2.2 in Chapter 2.

Taiwan. While the 'gaps' indicate the increasing investment requirements, they also represent inadequate savings mobilization efforts by the countries. Public sectors in many SEACEN countries have failed to generate savings surpluses. Although, households sectors comprise the bulk of the national savings, imperfections in financial and capital markets have resulted in lower household savings ratios in recent years. Fiscal prudence by government and measures to deepen the financial and capital markets while maintaining price stability are essential to raise the savings ratios of the SEACEN countries. Singapore, Malaysia and Taiwan provide good examples of fiscal prudence and price stability.

Saving and investment are generally positively correlated. However, our results show that growth rates need not be highly correlated with investment ratios. High growth rates must therefore be explained by the level of efficiency of investments. There is a close correlation between savings and growth. Results also indicate that the higher the level and growth of income, the greater the volatility of savings. The positive correlation between saving and investment would reduce the volatility of the current account balance and negative correlation would increase it. At the same time, as demonstrated by Malaysia, Singapore and Taiwan, volatility in the current account should not affect growth.

The analysis in this study focused on the importance and the level of savings and investment. An equally important issue is the efficiency of investment. It is in the interest of the low- savings countries to first examine their investment 'portfolio' and ensure that savings are used for generating more output or to increase productive capacity in the country. They should endeavour to improve the efficiency of investment, generally measured by the Incremental Capital Output Ratios (ICORs)²¹. The I.M.F. has observed falling ICORs for 'high growth' countries during the past decade, indicating increasing efficiency of

21. "The incremental capital-output ratio varies considerably as between economies, partly because of differences in natural resources, industries, technology and population density; and partly because it is possible to postpone some service investments temporarily, without diminishing the rate of growth". See W. Arthur Lewis, *Development Planning, Essentials of Economic Policy*". George Allen and Unwin, 1960, p. 165. In the absence of ICORs, the share of investment goods in total imports would provide a rough guide as to how much of the savings are being used for various types of investment.

investment. Such improvement in ICORs was possible due to dynamic private sector in these countries. The low income/low growth countries should also pursue policies to encourage private sector investment. Micro-level examination of whether investment projects are properly identified and whether proper follow-up is being conducted by the lending institutions would prove useful in learning how savings are being utilized. Once a correct mechanism to employ savings in productive investments is set in motion, more savings would generate more output. If, on the other hand, savings are used for current consumption or to finance persistent budget deficits, then the idea behind the mobilization of additional savings would be defeated.

Chapter 2

FACTORS AFFECTING SAVINGS BEHAVIOUR IN THE SEACEN COUNTRIES

I. Introduction

Studying the savings behaviour in the SEACEN countries is important for the following reasons. First, the idea that low level of growth and development is a problem of too little savings is deeply embedded in the thinking of the SEACEN countries, as much as in the development economics literature. What needs to be done to increase savings must, therefore, be guided by an analysis of the factors affecting savings. Second, SEACEN countries have begun to believe that liberalizing the financial system will bring beneficial effects to the economy, with noticeable improvements in saving and investment. Looking back on the past performance with the help of an econometric model may help in the choice of relevant financial reforms that can be adopted, or fine tune the ongoing ones or, undertake other policy changes as may be appropriate, so that savings can be further enhanced.

Since savings are a residual from income and consumption, savings theories are generally associated with consumption theories. Theoretical literature and empirical evidence on the factors affecting savings behaviour in developing countries is voluminous. Among the major determinants of savings, 'income' and 'interest rates' stand out as extremely important. There are a host of other factors such as inflation, wealth, level of foreign savings, distribution of income, urbanization and demographic factors that affect savings in particular countries under particular conditions. Some of these factors such as income and demographic factors may determine the 'ability to save', while others such as interest rate and inflation - which induce present vs. future consumption - may determine the 'incentives to save'. A third set of factors such as the level of financial development including financial institutions and instruments, may determine the 'opportunities to save'. The very simple model that will be discussed later in this section attempts to incorporate some of these important factors that are regarded as important in determining national savings in the SEACEN countries. In this context, it would be appropriate to highlight such factors briefly. We do not intend to bring in an exhaustive survey of

literature on the subject, but only present the basic strands of arguments insofar as they relate to the conditions in the SEACEN countries and to our framework of analysis.

II. Factors Affecting Savings

2.1 Income

2.1.1 Absolute Income Hypothesis

Current income is the first and basic determinant of consumption (and savings). How much of income is saved, after consumption, depends on the marginal propensity to consume or save. This is the fundamental building block of Keynes's "Absolute Income Hypothesis". The level of per capita current income generally has a positive effect on the savings rate. Under the Keynesian hypothesis, saving is a stable, linear function of current income and the marginal propensity to save (MPS) is constant over time.

Many studies have found support for the Keynesian argument though with some variations. Evidence on the absolute income hypothesis from developing countries suggests that consumption or saving does respond to variations in current income but the relationship is erratic and somewhat weaker than for advanced countries. Virtually all studies¹ conducted up to now found that current income is a statistically significant determinant of savings. Evidence on the exact form of saving-income relationship, however, is less clear. The size of the "average" and "marginal" propensities to save at various levels of income and the variation in these two parameters across different socio-economic groups are important in designing development policy.

The analysis of savings took a new turn with the emergence of a few non-Keynesian savings functions. There are three such non-Keynesian

1. Theories of savings behaviour and empirical evidence are summarised in Mikesell and Zinser (1976). Much of the literature pertaining to the 1960s and 1970s and cited here are drawn from this important review article. Some of the recent articles are, Lahiri (1988), Arrieta (1988), Fry (1988), Deaton (1989), Kotlikoff (1989) and Schmidt-Hebbel and others (1992). Some sources referred to in this chapter may not be found in the list of references but in the above mentioned sources.

savings functions identified in the literature: namely, (i) Duesenberry's "Relative Income" hypothesis, (ii) Friedman's "Permanent Income" hypothesis and (iii) Modigliani, Brumberg and Ando's (MBA) "Life Cycle" hypothesis. Let us call these three hypotheses "DFM".

2.1.2 Permanent Income Hypothesis

DFM rejects the Keynesian consumption function. Over a long period of steady state growth, an increase in per capita income will not in itself bring about a higher savings ratio at least insofar as personal income is concerned. DFM find evidence that the average saving rate for higher income groups is higher than for lower income groups. Also, it may be inferred that a relatively rapid increase in the growth rate giving rise to substantial increases in per capita income will increase the average personal saving rate. This is because a rapid increase in the growth rate of per capita income changes the relative income and lifetime consumption patterns and increases transitory income in relation to permanent income.

"Permanent Income Hypothesis" (Friedman, 1957) is the starting point for a variety of specifications of the saving-income relationship. By looking at the trend in their earnings over the recent past and by making educated guesses about their future incomes, people derive a sum they treat as their 'permanent income', a much more stable aggregate than their actual earnings or current income. A marginal propensity to consume (MPC) out of this income which would be constant over time is one aspect of the permanent income hypothesis. On the other hand, the MPS of any transitory income would be unity.

The important question is what is the size of MPS out of permanent and transitory income? Friedman's hypothesis is that individuals do not consume any of their transitory incomes making $MPS = 1$. This implies that consumption expenditure is determined heavily on the past behaviour of consumption patterns but any changes in transitory income will lead to a change in the level of savings. Empirical evidence on this, however, is not uniform.

Somewhat different views have also been expressed on this. Since households in developing countries are credit constrained, consumption would respond significantly to temporary income changes. Campbell and Deaton (1989) argue that, at least in industrial countries,

a household's perception of its permanent income is strongly affected by current shocks, with no evident distinction made between current and permanent income flows. This implies that households will consume out of current shocks, saving much less out of shocks than predicted by consumption smoothing models. Gupta (1987), however, consistently finds that saving responds significantly and positively to temporary income shocks. In general, evidence supports the existence of a higher marginal propensity to save out of transitory income than out of permanent income.

2.1.3 Asset Adjustment and Growth Rate of Income Models

Apart from the popular permanent income models, two alternative specifications of the permanent income hypothesis can also be found in the literature. They are: (i) the "asset adjustment model" and (ii) the "growth rate of income" model.

Saving may be viewed as a means of accumulating assets. The asset adjustment model assumes that the desired level of assets is a direct function of permanent income and that the desired stock of assets is acquired only over a fairly long period of time. In the growth rate of income model, the average saving rate is related to the rate of growth of income. The arguments in favour of positive and significant relationship between growth rate of income and savings have been developed by many economists such as Singh (1971), Houthakker and Taylor (1966), Modigliani (1965), Swamy (1968) and Collins (1989).

According to Collins, a positive coefficient for the growth rate could also reflect the slowness with which people change their consumption habits or indicate that people have regressive expectations about their level of income. The studies that investigate real growth of gross domestic product (GDP) as a determinant of saving - such as Collins (1989); Fry (1978, 1980); Giovannini (1983, 1985); Mason (1987, 1988); and Mason and others (1986) - find positive and usually significant effects on the savings rate (Schmidt-Hebbel, Webb and Corsetti, 1992).

2.1.4 Life Cycle Hypothesis

"Life cycle hypothesis" of Modigliani, Brumberg and Ando (MBA) is probably the most popular and widely used saving model in recent times, of course, with modifications to incorporate various elements

identified in other models. According to the MBA hypothesis, individuals adopt a planning horizon for their life-time consumption. They attempt to spread their life-time consumption evenly over their lives by accumulating enough savings during their earning years to maintain the consumption standard during retirement. The MBA model implies that in a society with stationary population and income, there would be no aggregate net personal saving since the dis-saving of the retired would exactly offset the saving of the employed.

However, in a society with a growing population and/or growing per capita income, aggregate net personal saving is positive because the working population is larger than the retired population. Therefore, the higher the level of current per capita income, the larger will be the amount of saving necessary to maintain an individual's consumption level in retirement. Thus an increase in income in a particular year will affect that year's consumption but will also increase saving since the individual seeks to equalize consumption over his remaining life span.

Two empirical questions relevant here are: (i) can a pattern of saving behaviour that is strictly a function of age be observed from the time an individual becomes a "productive" member of society? (ii) to what extent do non-productive members (those who are very young or very old) affect saving patterns?. These questions became increasingly important when it was observed that birth and death rates have an impact on the level of savings mobilization.

The most commonly used method to assess the impact of the non-productive members of the society on savings is to use the dependency ratio - those under 15 years of age and over 65 years of age as a share of total population - as an explanatory variable. In such a formulation, dependency ratio is expected to have a negative effect on savings.

Leff (1969) sought to determine the degree to which dependency ratios would affect the rate of domestic saving. Leff concluded that high birth rates are among the important factors in accounting for the great disparities in aggregate saving rates between developed and developing countries and that the prospects for increased saving rates in the developing countries are not favorable unless birth rates are reduced. Gupta (1971) repeated Leff's regressions but disaggregated the LDCs into different income groups and found that in the two lowest income

categories, dependency ratios were statistically insignificant as determinants of either the average rate or per capita savings. Leff's findings were found to be correct only in the highest income category. This argument can be supported by the results obtained by Bovenberg and Evans (1990) who demonstrate that changing age structure of population has reduced the personal savings rates in the United States.

More recent studies, however, have challenged the robustness of the results of earlier studies and have examined both the theory and the measurement of demographic variables more carefully (Mason and others 1986; Mason 1987, 1988). The results seem to depend on the data used and on the other explanatory variables included. The models of Mason and others (1986) and Collins (1989), applied to cross country samples of Asian economies, add to the dependency ratio and the growth rate of per capita income (among other variables), an interaction term between the two. Although Mason and others find that higher population dependency lowers saving unambiguously, Collin's results show an ambiguous effect of the dependency ratio, with a negative (positive) influence on saving in countries with high (low) growth rates (Schmitt-Hebbel, Webb and Corsetti, 1992).

2.2 Interest Rate

There is a large and growing body of literature in development economics that deals with the impact of inflation in countries where financial intermediation by the banking sector is intervened by the state and in particular, the nominal interest rates are pegged. In times of high inflation, the real interest rates become low or negative resulting in withdrawals of funds from the banking sector and disintermediation². The ultimate result would be a low level of productive investment because households decrease savings and increase the consumption of luxury durable goods or buy real estate, on the one hand; and, the existing funds for productive investment are not allocated efficiently as market price rationing system is not at work, on the other. In such a situation, the firms which do not know the true shadow price of capital rely on an excessively low non-market price signal and get into difficulties.

2. According to Lahiri (1988), "there seems to be some evidence of inertia in revising the largely administered deposit rates of interest appropriately in response to inflation".

This is essentially the line of argument in the McKinnon-Shaw (1973) hypothesis of 'financial repression'. McKinnon (1974) has stressed this point further in his essay on the "Korean Saving Propensities". Indeed, the danger of returning to a more repressed financial system, which existed prior to 1965, is always present as long as savers are punished with low or negative returns on monetary assets". Commenting along the same lines, Fry (1988) stated that increasing institutional interest rates towards their competitive free market equilibrium rates would raise saving and investment and, at the same time, increase the efficiency of investment, hence accelerating the rate of economic growth. The policy implication of this line of reasoning is straightforwardly that of raising real interest rates in order to increase (i) saving and investment and (ii) the efficiency of financial intermediation.

The classical school of thought would argue that the sign of the real interest rate coefficient cannot be predetermined in view of two opposing effects of an interest rate change. One is the "income effect" and the other is the "substitution effect". Under an increase in the interest rate, the former leads to a decrease in savings as the amount of savings needed to achieve a desired level of income would now be smaller, and the latter leads to an increase in savings as the opportunity cost of future consumption in terms of present consumption becomes lower, or, in other words, the relative price of present consumption rises resulting in lower present consumption and a higher amount of savings. the sign of the coefficient, therefore, should depend on the relative power of the two effects. Keynesians, on the other hand, would argue that high interest rates would reduce savings via a decrease in investment and incomes.

Empirical evidence on the sign and the size of the real interest rate coefficient is inconclusive. Since the work of McKinnon and Shaw (1973), a large number of empirical studies have found support for the interest-elasticity hypothesis. Some notable studies are the works of Fry (1976, 1978, 1979, 1980, 1988), Fry and Mason (1981), Giovannini (1983,1988), Gupta (1987), Lahiri (1988) and Arrieta (1988).

In the study of national savings rates of seven Asian countries³, Fry (1978) finds that an increase in the real interest rate of 1 per cent would

3. Based on pooled time series data for Burma, India, Korea, Malaysia, Philippines, Singapore and Taiwan, between 1962 and 1972.

raise the ratio of savings to income by 1.6 to 2.1 tenths of 1 per cent, asymptotically, from 1.8 to 2.2 tenths of 1 per cent. This means that a substantial increase in the real interest rate is necessary to achieve an appreciable increase in domestic savings. Fry (1988), however, conceded that the magnitude of the effect is small.

In an assessment of recent empirical research on interest rates, savings and growth in less developed countries, Arrieta (1988) concluded that the debate on the interest rate responsiveness of savings is far from settled. He points out that the task of advancing more knowledge on the subject has confronted huge limitations mainly arising from data and analytical considerations. He also states that domestic financial savings or domestic private savings are more appropriate dependent variables to test the theoretical models advocating a positive responsiveness of savings.

While the debate on the interest rate responsiveness is on, there has also been some evidence to say that inflation encourages savings. Juster and Watchel (1972)⁴ have found that inflation dampens consumer confidence and increases savings in a developed country. Deaton (1977) has presented a price-confusion effect. Individual consumers buying one thing at a time cannot distinguish unanticipated inflation from relative price increases and, in response, tend to postpone purchases. Unanticipated inflation, therefore, leads to involuntary savings.

Gupta (1987) and Lahiri (1988) include the 'expected' and 'unexpected' components of the inflation rate as a separate determinant of saving, and Gupta also includes the nominal interest rate. Gupta's results differ by region. In Asia, both expected and unexpected inflation have positive and significant coefficients. In Latin America, neither coefficient was significant. In Lahiri's study of Asian countries, the signs of both inflation variables are mixed and no conclusion can be made. In general, there is no clear empirical evidence as to the impact of inflation on saving.

4. As quoted in Gupta (1987).

2.3 Wealth

Wealth is an important determinant of consumption (or saving). Theory unambiguously predicts that wealth would reduce savings out of current income. Wealth, however, is not directly observable, and, as such, it is hardly being used in empirical studies. Schmidt-Hebbel (1987) uses five alternative measures of wealth in an empirical intertemporal consumption model for Chile, based on different assumptions regarding expectation formation. Behrman and Sussangkarn (1989) use household-level data on wealth and saving in Thailand. In both studies, wealth has a strong negative effect on saving (Schmidt-Hebbel and others, 1992).

An important component of total consumer wealth is 'monetary' or 'financial' assets. It is generally believed that the higher the holdings of financial assets, the higher is the level of consumption and the lower will be the private savings. Since both financial assets and total wealth are expected to affect savings negatively, there is apparently no harm in using financial assets as the proxy for both variables.

2.4 Foreign Capital Inflow

The impact of foreign capital inflow on domestic savings is ambiguous. In the late 1960s and early 1970s, most authors thought that foreign capital inflows are complementary to domestic savings. However, in recent years, the authors have put forward the hypothesis that an increase in foreign capital inflows would produce a decline in domestic savings, implying a substitutability between foreign saving and domestic savings. A "psychological" consideration that appears to be at play has it that an increase in foreign funds causes a relaxation of government saving and thus a reduction in the average national saving rate. The substitution hypothesis was originally put forward by Haavelmo (1963)⁵. He pointed out that foreign investors could take the place of domestic investors and in this way, they could reduce internal savings. The substitutability between foreign capital and domestic savings has been justified mainly with the argument that foreign capital could be used to increase consumption rather than investment.

5. As quoted in Schmidt-Hebbel and others (1992).

The studies of Chenery and Strout (1966), Rahman (1968), Gupta (1970), Landau (1969), Chenery and Eckstein (1970), Singh (1971), Yusuf and Peters (1984) tested the substitution hypothesis and confirmed the existence of a negative relationship between foreign capital inflow and domestic savings. Giovannini (1983), however, doubts the existence of the substitutability of foreign savings for domestic savings. His estimations yielded insignificant coefficients for the foreign savings variable.

He argues that if savings-investment decisions by domestic residents are not constrained by the availability of foreign aid or foreign credit, and investment itself is not constrained, the direction of causality would normally run from domestic savings to foreign savings. In Giovannini's re-estimations of equations omitting the foreign savings variables, the coefficients of other variables and the goodness of fit were rendered largely unaffected compared to the equation where foreign savings variables were included. According to Schmidt-Hebbel and others (1992), however, the above proposition may not apply in a situation where foreign borrowing is rationed, either by the lenders or by government regulations. In most of the post World War II period, households in the developing countries were effectively constrained by foreign borrowing and even government and corporations were constrained at various times. For such a situation, domestic savers (and investors) are constrained in their intertemporal choices by the amount of available foreign finance, and foreign savings become a determinant of domestic savings. In a later study, however, Giovannini (1985) finds the effect of foreign savings to be significant and negative, although its size is small.

Majority of the empirical evidence as reported by Schmidt-Hebbel and others, for example, also point to a negative impact of foreign saving on domestic savings. The results of the studies conducted so far seemed to depend on the sample and model specification. All of the studies with foreign saving as an explanatory variable used total saving as the dependent variable, so the results may reflect the extent to which capital inflows went straight to public and corporate investment, which appears as an increase in saving (Schmidt-Hebbel and others, 1992).

Morriset (1989) reexamined the existing evidence on the relationship between foreign capital and saving using aggregate data and observed that the framework used by the proponents of the

substitution hypothesis was not appropriate to analyze the impact of foreign savings (F) on domestic savings (S). His results indicated that F does not influence S significantly at least not in the short term. He also demonstrated that the previous studies have misrepresented the causal relationship between these two variables. He further states "Indeed, as long as exogenous factors such as monetary and fiscal policies or changes in the external interest rate can affect F and S simultaneously, one is not able to interpret the traditional empirical results properly. Besides, we have found that, according to the nature of the shock, this estimate could be negatively or positively biased" (Jacques Morriset, 1989).

The nature of data and the way in which the aggregate savings are generated is also important in evaluating these results. For example, in the absence of an accompanying increase in gross investment, net capital imports reduce gross domestic savings as reflected in the national accounts i.e. gross domestic saving is calculated by subtracting net capital imports from gross domestic investment.

2.5 Taxation

If fiscal policy can be used as a means of mobilizing savings, the level and structure of taxation will be an extremely important variable to consider. However, one must also examine the relative marginal propensities to save by the government and by the private sector. It is generally expected that government saving increases with increased revenue. This relationship has been questioned in some studies. Stanley Please (1967, 1970) suggested that the marginal propensity to consume by governments out of increased revenues is extremely high and that in several cases increased taxation may have led to reduced national saving. It is also possible that an increase in the tax rate will result in a decrease in the rate of private saving as observed by Landau (1969).

There is also the argument that any increase in savings by the government sector will be offset by a decrease in savings by the private sector (Ricardian Equivalence). For Ricardian Equivalence to hold, some conditions must be satisfied. They are: the absence of liquidity constraints, existence of equal discount rates for the public and private sectors and the certainty of the future income, tax and public expenditure flows. Empirical studies have rejected the Ricardian Equivalence primarily on grounds of the pervasiveness of the

borrowing constraints. For a sample of developing countries, Haque and Montiel (1989) also find that borrowing constraints are the main causes of the deviation from the Ricardian equivalence. They also test for differences between public and private discount rates but do not find that such differences explain the deviations from Ricardian equivalence.

Corbo and Schmidt-Hebbel (1991) explicitly test the Ricardian hypothesis by regressing private consumption on permanent government saving in 13 developing countries. They conclude that the Ricardian hypothesis does not explain consumption behaviour. Because it implies that private and public saving are not perfect substitutes, empirical rejection of Ricardian equivalence is a powerful argument in favour of using household saving data instead of aggregate saving data (Schmidt-Hebbel and other, 1992). Household saving data for continuous series, however, simply do not exist in most developing countries.

The level of government expenditure is a significant factor affecting savings. Public sector savings is a residual between its current expenditure and current revenue. If the marginal propensity to consume out of current revenue is very high, as is the case in many developing countries, it would seem more important to reduce government expenditure than anything else. Reducing government expenditure may increase government (and national) savings directly. And increased government consumption and budget deficits reduce the total available pool of investible resources in the private sector indirectly. Therefore, Fry (1991) advises that "policy makers in the poorer and more heavily indebted Asian developing economies might consider urgent measures to improve domestic resource mobilization. The more direct and effective measure is to reduce government deficits". As demonstrated by Smith (1990), this applies equally to developed countries as well.

2.6 Exports

Exports have long been considered as an important factor having a positive influence on savings. This is generally known as the "Maizels-Lee Hypothesis". As Maizels (1968), Lee (1971), Chenery and Eckstein (1970), Laumas (1982) and Papanek (1973) have proposed, rapidly expanding exports can raise savings because of a higher

propensity to save in the exports sector, the importance of export taxes for government revenue and other linkage effects. According to Chenery and Eckstein, positive coefficients for exports are to be expected as investment depends on imports of capital goods which in turn depend on export earnings. Maizels's (1968) study attempted to find out whether export income has a higher explanatory power than non-export income in the determination of gross domestic savings. He observed that the coefficient for export income was positive and significant. This argument was supported by the works of Lee (1971). However, Lahiri (1988) did not find a consistent pattern in the sign of the coefficients for exports for some Asian countries when private savings was the dependent variable. While he found some support for the Maizels-Lee hypothesis in the cases of Indonesia and Thailand, the direction of effect was perverse for Malaysia: an increased export orientation actually serves to reduce the private savings rate in that country.

2.7 Terms of Trade

A change in the terms of trade leads to three different effects on consumption; first, a direct effect through revaluation of exports and imports; second, a wealth effect through revaluation of wealth; and third, a pure substitution effect from relative price changes within and between periods (Lahiri, 1988). The possibility of a reduction in the savings rate in response to an adverse movement in the terms of trade is generally known as the 'Laursen-Metzler-Harberger' effect. Svensson and Razin (1983) and Persson and Svensson (1985) have, however, shown that the nature of the effect of changes in the terms of trade on savings rate is ambiguous.

2.8 Financial Services

Whether demand driven or supply driven, an increase in the number of financial institutions and their branches as well as the variety of financial services offered by such institutions are considered to affect savings positively. The beneficial effects come from promoting the banking habit to a wider section of the population, collecting scattered and small savings as well as from increased efficiency in financial intermediation leading to a higher level of total financial savings. The opening of new branches or new financial instruments should lead to an increase in real financial savings. Funds mobilized by the new branches should be allocated efficiently. If not, a policy of opening new branches cannot be justified.

There is no one single yardstick to measure the level of expansion in the financial institutions which range from opening of new institutions and branches to introduction of new financial instruments. A point to note here is that the bank branch expansion may not be as relevant to national savings as it is to financial savings. Nonetheless, since financial savings of the household sector is a major component of national savings, one can expect to see an indirect impact of branch expansion on national savings.

2.9 Summary

In sum, the current knowledge on the determinants of savings is vast but inconclusive. As Kotlikoff (1989) points out, "one way to describe the current state of the knowledge about savings is that a great deal is known at a theoretical level about saving determinants taken one at a time. Much less is known about the interactions of these determinants, and too little is known at an empirical level about the true causes of savings. As is often the case in economics, theory seems to have advanced well beyond the empirical research. Unfortunately, the theoretical progress has dimmed the prospects for quick empirical resolution of the major outstanding questions concerning savings. The theory has pointed out a number of subtle but powerful determinants of savings on which little data are available."⁶

III. The Model and Data

Drawing from the theoretical underpinnings and empirical results as briefly outlined in the previous section, the determinants of savings in the SEACEN countries will be examined using a behavioral function fitted to gross domestic (or national) savings data. The dependent variable is either Gross Domestic Savings (GDS) or Gross National Savings (GNS) depending on the availability of data and the usefulness of the concept to the country concerned. The use of GDS means that the information on net factor income from abroad and net current private transfers would be left out. For countries with substantially large inflows of net factor income or net private transfers, it is important to use GNS because such

6. Kotlikoff, Laurence J, "What Determines Savings", Cambridge, 1989.

income constitutes a significant part of national savings. For those countries with net outflows of net factor income and net private current transfers, leaving out such transfers also seems unrealistic as they constitute a major effort in their domestic resource mobilization.

The advantage of using gross domestic or national savings rates as the dependent variable is that more years of data are available for more countries. Even when private or household data are available, they may have limited use because of lack of comparability across countries. The use of national savings is rationalized with the argument that private savings is a large and typically predominant part of total saving. It should be borne in mind, however, that an extrapolation of total saving behaviour to household savings (private savings) behavior is inappropriate in view of the lack of evidence of perfect substitutability between public and private savings. In other words, in the absence of a Ricardian Equivalence, total saving behaviour cannot be thought of as being representative of private saving behaviour.

In order to examine the elasticity of savings to such important factors as income, a semi-log function would be estimated for countries which have provided data on the required variables. In particular, the dependent variable will be the natural logarithm of either the real gross domestic savings or real gross national savings. Where population data are available, per capita savings have been employed. Among the independent variables, income variables are in logarithmic form. The coefficients of such variables, therefore, represent income elasticities of savings. Other variables as discussed below are measured in their percentage changes or ratios in GDP as the case may be.

Where the ratios of GDS or GNS to GDP rather than their absolute levels are available, such ratios have been used as dependent variables. The use of ratios can be defended on three grounds: first, there is no adequate deflator to transform nominal saving into constant-price saving; second, ratios will help make cross-country comparisons without having to choose appropriate exchange rates; and third, saving ratios tend to be stationary, whereas absolute savings flows grow over time, so that by using ratios, spurious correlation with time trended explanatory variables can be minimized. The third reason is particularly important as the limited number of observations in the samples hinders the efficient performance of unit roots and cointegration tests on data series (For example, in Sri Lanka's case, only 14 observations are available).

A typical saving function formulated on the basis of the hypotheses reviewed in the previous section would look like the following:

$$S/Y = f (\overset{+}{Y}_a, \overset{+}{Y}_b, \overset{+}{YT}, \overset{+}{g}, \overset{?}{R}, \overset{?}{INF}, \overset{-}{M2/Y}, \overset{-}{FS/Y}, \overset{-}{D}, \overset{+}{B})$$

where S is GDS or GNS, Y is GDP, $\overset{+}{Y}_a$ is the trend GDP per capita, $\overset{+}{Y}_b$ is the per capita household disposable income or current income per capita, YT is the 'transitory' income per capita, g is the growth rate of the trend GDP per capita, R is the real interest rate, INF is the inflation rate, M2 is broad money supply (i.e. the currency held by the public and demand deposits plus time and savings deposits held by the public with commercial banks), FS is foreign savings, and D is the dependency ratio and B is the number of bank branches. The expected signs are indicated above the equation.

The above equation is not much different from the traditional saving functions. It attempts to incorporate the main elements of both the "permanent income" and "life-cycle" hypotheses. The variable YT in particular, is the variable for "transitory income". This is the difference between GDP per capita and the trend GDP per capita ($\overset{+}{Y}_b - \overset{+}{Y}_a$). The trend GDP per capita can be best obtained by fitting the values from regressing the 3-year moving average of GDP per capita on time trend. However, the efficiency of this method is constrained by the limited number of data points. Therefore, a simple 3-year moving average will be used. In the absence of a good index of wealth, M2Y is used as a proxy. In the case of Korea, the variable M2Y is substituted by a broader definition of wealth and proxied by the Land Price Index (W). The expected signs for the real interest rate and inflation coefficients are not pre-determined as one is not sure which effect, "income" or "substitution" is dominant in a change in real interest rate.

The real interest variable, R, is calculated using the following formula:

$$R = \{ (1 + N) / (1 + INF) \} - 1$$

where N is the nominal interest rate proxied by the 12-month deposit rate and INF is the inflation rate measured by the annual percentage change in the consumer price index (CPI). FS is proxied by the current account balance and D is the ratio of population under 15 years of age and over 65 years of age to total population. B is the number of

commercial bank branches. (Data on D and/or B were not available with us for some countries.)

Thus, the semi-log function to be estimated can be briefly stated as follows:

$$\log s = a + b(\log Y_a) + c(\log Y_b) + d(\log YT) + e(G_r) + f(R_r) + g(INF_r) + h(M2Y_r) + i(FS_r) + j(D_r) + k(\log B_r) + u$$

where, s can be either real Gross Domestic or Gross National Savings or in per capita basis as the case may be; Y_a is our measure of permanent income; Y_b is current income per capita; YT represents transitory income ($Y_b - Y_a$); G is the growth rate of real GDP, a proxy for income growth; and other variables are as defined before. Finally, "u" represents the random error term. The variables G , R , and INF are in percentage form and $M2Y$, FS and D are in ratios. Real savings and real income variables are in logarithmic form. In the case of Sri Lanka, saving ratios were used as the dependent variable. Current values were used to calculate ratios. The definitions of variables used in different estimations are given in Table 2.1 below.

The inclusion of income variables in regressions will be guided by theoretical considerations and their levels of significance. For instance, various savings hypotheses were tested by varying the income variable. A simple Keynesian model was tested by using the current income variable. By using the permanent income variable, the simple permanent income hypothesis was tested. Similarly, the "ratchet" model was tested taking the ratio of the current income to permanent income. This last one however, was insignificant in explaining savings in all cases examined. Hence it was not included in the regressions.

An important point to remember here is that the model outlined above does not perform equally well for all member countries nor will it include all variables at all times. There are many reasons for it. First, there may be slight variations in the definitions of variables used by different countries. Second, the quality and the degree of accuracy of data vary from country to country.

Third, the sample period used in the regressions is not uniform across countries. For instance, Sri Lanka has a short sample period of 14 years(1978-1991), Nepal, a period of 15 years(1977-1991), Myanmar,

Table 2.1

Definitions of Variables

Variable definitions are as follows. Please note that except where otherwise stated, the same definitions will apply in unit root, cointegration and regression results.

- LNS - Natural logarithm of real Gross National Savings per capita. For Myanmar, Nepal and the Republic of China, Taipei, Gross Domestic Savings has been used.
- LNS1 - LNS lagged one period.
- LN Y - Natural logarithm of real national income per capita. For Korea, Gross National Disposable Income has been used.
- LYA - Natural logarithm of real permanent income per capita. Permanent income = 3-year moving average of the current real income per capita.
- LYB - Natural logarithm of the Transitory Income per capita. Transitory income = current income - permanent income.
- FS - Foreign savings (current account balance as a share of GDP).
- N - Nominal interest rate (12-month deposits rate).
- R - Real interest rate (nominal interest rate - inflation rate).
- INF - Inflation rate (percentage change in the Consumer Price Index). For Indonesia, the Consumer Price Index itself has been used.
- M2Y - Broad money supply (M2) as a share of GDP.
- EXPT - Total exports earnings as a share of GDP.
- Dep - Dependency ratio (share of population under 15 years and over 60 years of age, in total population).
- W - Land price index.
- TT - Terms of trade index.
- LB - Natural logarithm of the number of bank branches in the country.

The letter "D" outside the brackets indicate differencing. The number separated by a comma within the brackets indicates the level of differencing. For e.g., D(LNY,2) means, LNY series have been differenced twice. Income and savings variables are in real terms. Nominal values are used in calculating ratios. Interest rate, inflation, land price and terms of trade are in percentage changes.

a period of 17 years(1975-1991) and Korea, a period of 22 years (1970-1991). Fourth, data on some important variables are simply not available in some countries (e.g. dependency ratios). Finally, even if we get the data sets organized, such data sets may not be suitable for use in any meaningful time series regression due to presence of unit roots and the absence of adequate cointegration (discussed below) among variables. Even differencing of variables may not sometimes help solve the problem of lack of cointegration. For instance, cointegration cannot be found among the variables for Nepal even at the level of fourth differencing. Differencing is not the best way to achieve stationarity of series as, in the process, a lot of information contained in the data set may be lost.

Added to the above difficulties is the vast diversity among the SEACEN countries in terms of political and economic regimes or cultural practices which makes the use of a uniform model or inter-country comparisons of savings behaviour somewhat difficult. It is more appropriate, therefore, to discuss the performance of each country on their individual merits.

IV. Unit Roots and Cointegration

Time series regressions using non-stationary data series lead to spurious results. In other words, the stationarity of the series is important if the regressions were to make any long-term economic sense. Whether a series is stationary or random walk is usually tested using the 'Unit Roots' test introduced by Dickey and Fuller (1979)⁷. It tests whether the coefficient " $\hat{\rho}$ " in the following equation estimated via least squares is at least equal to and not less than one, with the former case implying unit roots:

$$\Delta Y = \mu + \beta t + \alpha Y_{t-1} + \sum_{i=1}^k c_i \Delta Y_{t-i} + e^t$$

where, k is the number of lags, μ is a constant and e_t is the random error term which is assumed to be independently and

7. Dickey, D. A. and W. A. Fuller, "Distribution of Estimators for Autoregressive Time Series with a Unit Root", *American Journal of the Statistical Association*, 74, pp. 427-431.

identically distributed with zero mean and constant variance. The coefficient for the linear time trend is indicated by β . It will take into account the tendency of most of the data series to increase steadily over time. The level of k is selected by identifying the highest number of k for which a coefficient of 0 on c_k can be rejected.

A time series is said to be stationary if $-1 < \alpha < 1$ in the above regression. If $\alpha = 1$, the equation defines a random walk with drift and Y is non-stationary. If the absolute value of α is greater than 1, the series is said to be explosive.

The testing of this null hypothesis is called the "Unit Root Test". The t-statistic produced by the forgoing process cannot be compared with the standard 't' tables since under the null hypothesis, the Y variable is non-stationary. Dickey and Fuller have therefore computed the empirical approximations for selected sample sizes. MacKinnon (1990) has implemented a much larger set of replications than those underlying the Dickey-Fuller tables. Further, he has estimated response surface regressions over these replications. These response surfaces permit the calculation of Dickey-Fuller critical values for any sample size and for any options, namely regressions with constant, constant and time trend or no constant or time trend.⁸

It is equally important that a set of data series used in a time series regression generally move together if the regression were to make economic sense. This is known as cointegration. Even though individual series are non stationary, there may exist various stationary linear combinations of such variables. Such series are then said to be cointegrated and are generally measured by the Engle-Granger Cointegration technique⁹.

For example, if X is to make any economic sense in explaining Y , the residuals from the regression of Y on X must be stationary. If the error term series (u) is integrated of order 1, i.e., $I(1)$, its variance will explode and X can explain little or no variation of Y . If, however, u is integrated of order zero, i.e., $I(0)$, X and Y are said to be cointegrated. The two series thus tend to move roughly together.

8. See MicroTSP *Users' Manual*, Version 7.0b, 1990.

9. Engle Robert F and C.W.J. Granger, "Cointegration and Error Correction: Representation, Estimation and Testing", *Econometrica*, Vol. 55, No. 2, March 1987, pp. 251-276.

Test of the existence of cointegrating vectors requires two steps:

- (i) Estimate the contemporaneous cointegrating equation,

$$Y_t = \mu + \beta_0 t + \beta_1 X_{1,t} + \beta_2 X_{2,t} + u_t$$

- (ii) Use the residuals from the above regression and perform the Unit Root Tests (Augmented Dickey-Fuller Test) on the residuals from,

$$\Delta u_t = \alpha u_{t-1} + \sum_{i=1}^k c_i \Delta u_{t-i}$$

α in the above equation is distributed according to the number of variables. This procedure is generally known as the Engle-Granger Cointegration Test¹⁰.

If the null hypothesis is that the series are not cointegrated and there exists a unit root in the residuals, the expected value of the t-statistic is zero. The null hypothesis will be rejected if the absolute value of t-statistic is greater than the relevant MacKinnon critical value.

However, there is an ongoing debate over the use of unit root and cointegration techniques. Many economists argue that these techniques do not add much value to the empirical estimations. The tests are sensitive to the use of lag lengths in the difference of the series as well as whether deterministic components are included in the regressions. Too few lags may adversely affect the size of the test while too many lags may reduce the power of the test because of more parameters being estimated and the lesser number of effective observations. Although several criteria have been proposed in the literature to select the optimal lag lengths, the underlying assumption is that the larger the number of observations, the better is the performance of the test and more likely is the stationarity of the series. This is precisely the bottleneck in performing the tests for short series such as those encountered here in saving regressions.

Nevertheless, before estimating the saving functions as described earlier, unit roots and cointegration techniques were applied to the

10. Engle, R.F. and C.W.J. Granger (1987), op.cit.

original data series of all member countries except Singapore. The data set used in the Singapore country paper was not available. Results of tests as reported in Tables 2.2 through 2.18 vary considerably but it appears that in general, most of the series are non-stationary in their levels across all SEACEN countries. In some cases (Nepal), the series were not cointegrated even at the level of fourth differencing. When cointegration of variables was not found, the series were used in their levels in the regressions. In any case, the number of observations is too small to obtain any long term coefficients. Although it may not be appropriate to make long term forecasting using the non-stationary time series such as these, they can be used to suggest some idea of the relationship between the dependent and independent variables and the size of the respective coefficients. The regressions estimated in this report can be used for this purpose only and not for the purpose of forecasting. As mentioned before, the performance of the tests were largely affected by the limited number of observations: the number of observations ranged from as few as 14 for Sri Lanka, 15 for Nepal, 17 for Myanmar to about 20 for other countries. This is clearly too small to test or observe any long term stationarity in the series.

V. Estimation Results

5.1 Indonesia

As shown in Table 2.2, variables for permanent income, real interest rates, exports and inflation are stationary in their levels and others are stationary in their first differences. Cointegration can be obtained for different combinations of these variables as shown in Table 2.3.

Our initial tests showed that current disposable income alone explains more than 95 per cent of variation in savings. However, some serial correlation of the residuals was present in these estimations. The results are not reported here due to absence of cointegration. After a process of including more relevant variables and dropping less significant variables, the three equations reported in Table 2.19 were selected. These equations pass the Engle-Granger Cointegration test.

As can be seen in equation 1, current disposable income per capita is highly significant (at 1 per cent level) in explaining real gross national savings. This observation is in line with the Keynesian absolute income

Table 2.2
Indonesia
Unit Root Test Results

Variable Name	No. of Lagged Differenced Terms	D-F 't' Statistic with		MacKinnon Critical Value
		Constant Only	Constant and Trend	
D(LNS)	0		-4.8158***	-4.5348
D(LNY)	0		-4.5535***	-4.5348
LYa	0	-5.5027***		-3.8572
D(N)	0		-4.2462**	-3.6746
R	0		-5.9161***	-4.5000
EXPT	0	-2.9968*		-2.6502
D(M2Y)	0		-3.7224**	-3.6746
D(FS)	0		-5.4034***	-4.5348
D(Dep)	0	-2.6766*		-2.6552
INF	0	-3.3325**		-3.0199

Table 2.3
Indonesia
Cointegration Test Results

Variables	No. of Lagged Differenced Terms	D-F 't' Statistic with		MacKinnon Critical Value
		Constant Only	Constant and Trend	
LNS, LNY, FS, Dep, M2Y, N	0		-5.7011*	-5.4830
LNS, LNY, FS, N, INF	0	-5.2942**		-5.1161

- *** Significant at 1% level
 ** Significant at 5% level
 * Significant at 10% level

hypothesis. The coefficients for the foreign savings variable shows a positive sign for Indonesia. It is statistically significant as well. The sign of the foreign savings coefficient is somewhat controversial. In some developing countries, foreign capital inflows tend to relax the efforts in domestic resource mobilization, particularly that of the government sector, thus showing a negative relationship between foreign and domestic savings. A positive relationship can imply that capital inflows encourage countries' savings further by the investment of such capital in productive sectors and increasing income. Also commitment of foreign capital is generally conditional upon fulfilling certain trade and financial reforms which aim, among other things, higher growth of incomes and savings. As such, foreign savings could have a positive relationship with savings, as observed in Indonesia.

Dependency ratio has the expected sign but is significant only at the 15 per cent level. In our preliminary estimations where inflation was added as an explanatory variable, the dependency ratios explain little or no variation in savings behaviour. When the inflation variable is absent, the dependency ratio becomes statistically significant.

Broad money supply as an indicator of wealth has shown a positive sign contrary to expectations. This is probably because the bulk of broad money supply comprises of the financial savings of the private sector which is the largest of the major components of Gross Domestic Savings. While it can be argued that a higher money supply is indicative of a greater availability of credit leading to higher investment, income and finally savings, the sign of the monetary variable can also be thought of as being indicative of the relationship between financial deepening and national savings.

While real interest rate is weak in explaining saving behaviour, nominal interest rate appears to affect savings negatively. These results lend support to the argument that interest rates can have a positive influence on 'financial savings' rather than on 'national savings'. It is because financial savings are sensitive to interest rates while national savings are derived as a residual from income and consumption having no significant sensitivity to interest rate movements. If at all, it will be to reduce savings in the long run, by way of increasing costs for investment thus reducing growth and incomes. On the other hand, the dominance of the income effect over the substitution effect of interest rate changes could result in a negative sign for the interest rate coefficient. Our results may depict this situation.

The D-W statistic of the estimate for equation 1 is somewhat low but is acceptable. According to the "Adjusted R²" statistic, 98 per cent of the variation in gross national savings in Indonesia is explained by these five (5) variables during the period under review.

In equation 2, we have attempted to obtain a better fit by dropping variables which are statistically less significant and adding other possible variables. In this model, all the coefficients are highly significant at 1 per cent level. The additional variable, INF, which is the consumer price index used as a measure of inflation, appears to influence savings positively. A positive coefficient for inflation, is contrary to the conventional wisdom that high inflation rates reduce savings by reducing the real rate on savings. This is particularly so with financial savings. The results are nevertheless in line with the alternative thinking that inflation would encourage savings by inducing cuts in current consumption. It can also be argued that inflation could increase the savings of the business sector, and hence that of the government sector by way of corporate taxes.

In this equation, almost 99 per cent of variation in savings is explained by the four (4) independent variables. The D-W statistic at 1.74 is satisfactory and a very large "F" statistic also further confirms that all coefficients taken together are statistically significantly different from zero.

Equation 3 is an attempt to incorporate permanent income hypothesis into the model. 'LYA' and 'LYB' represent permanent and current disposable incomes respectively in their logarithmic forms. Since transitory income ($Y_T = Y_b - Y_a$) has negative values, the log of this variable cannot be taken. Hence, it is expected that at least part of the effect of transitory income can be captured by using the variable Y_b (i.e., LYB) separately instead of Y_T .

In this equation permanent income is significant at 1 per cent level and current income at 15 per cent level. The coefficient of the permanent income is also larger than that of the current income. This implies that permanent income is more important in determining saving behaviour than current income in Indonesia.

Although the other coefficients are also statistically significant, and the explanatory power of the regression is very high at 0.99, there is

little cointegration among the variables. This should not mar the results as there are no strong symptoms of spurious regression. If one were to obtain cointegration, a first difference of the series in the same order will provide it, but the OLS regression coefficients are not very satisfactory. It is, therefore, advisable to preserve these results rather than discarding them altogether on grounds of lack of cointegration.

5.2 Korea

Unit Root tests for Korean data series (Table 2.4) indicate that except for W (Land Price Index) and FS (Foreign Savings), all other variables are non-stationary in their levels. The variables LNY (Natural logarithm of Current Disposable Income) and D (Dependency Ratios) are stationary in the first difference while LYA (Natural Logarithm of Permanent Income) is stationary at the level of second differencing. The cointegrating regressions were found for the combinations of variables as shown in Table 2.5.

The regression equations 4 and 5 appearing in Table 2.19 correspond to the sets of variables in Table 2.5 (Cointegration Test Results). The cointegration test results for equation 4 can be accepted although the Dickey-Fuller statistic is slightly lower than the MacKinnon Critical Value at the 10 per cent level of significance. If better cointegration is to be obtained, equation 5 is the other alternative. In this equation, however, many variables have been dropped and the first differences of the series have been taken. Equation 4 is, therefore, preferable to equation 5.

The regression results indicate that current disposable income is highly significant in determining the level of savings in Korea¹¹. Real interest rate also has the positive sign as expected but is significant at the 15 per cent level. Increasing wealth is expected to cause a decline in savings through increased consumption. In Korea, the wealth variable has shown the anticipated negative impact on national saving and is highly significant. The impact of foreign savings is positive and significant as in Indonesia while population dependency ratios exert a negative influence on savings. Except for the coefficient for R which is significant at the 15 per cent level, all other coefficients are significant at the 10 per cent level or less.

11. Our tests of the permanent income hypothesis showed unsatisfactory results. Besides, cointegration cannot be achieved when permanent income variables are included.

Table 2.4
Korea
Unit Root Test Results

Variable Name	No. of Lagged Differenced Terms	D-F 't' Statistic with		MacKinnon Critical Value
		Constant Only	Constant and Trend	
D(LNS)	0		-3.8065**	-3.6746
D(LNS)	1		-4.2215**	-3.6746
D(LNY)	0		-3.8724**	-3.6746
D(LYA,2)	2	-2.8167*		-2.6829
W	0	5.9700***		-3.6959
FS	1		-3.6648**	-3.2677
D(D)	0		-4.0556**	-3.5943
D(D)	0	-4.1576***		-3.7076

Table 2.5
Korea
Cointegration Test Results

Variables	No. of Lagged Differenced Terms	D-F 't' Statistic with		MacKinnon Critical Value
		Constant Only	Constant and Trend	
LNS, LNY, R, W, FS, D	1	-5.0576*		-5.0916
D(LNS), D(R), D(FS), D(D)	0		-5.2285*	-4.7624

- *** Significant at 1% level
 ** Significant at 5% level
 * Significant at 10% level

Although D-W statistic is somewhat low, the explanatory power of this regression is quite high as indicated by an R^2 of 0.99. The 'F' statistic is also very high and the null hypothesis that all coefficients taken together are equal to zero can be easily rejected.

5.3 Malaysia

Table 2.6 shows Unit Root test results for Malaysia. According to this table, most of the series except savings (LNS) and nominal interest rate (N), are stationary in their levels. The sets of variables for which cointegration could be found are reported in Table 2.7. Equation 7 in Table 2.19 correspond to equation 1 in Table 2.7. These results show that current income and dependency ratios explain over 97 per cent of the variation in real gross national savings in Malaysia. The two coefficients are highly significant. A further examination showed that the income variable alone explains 95 per cent of the variation in savings as shown in equation 6 in Table 2.19. There is, however, little cointegration among these two variables. Some positive correlations among the residuals as shown by the low D-W statistic also cannot be ruled out. It has been further observed that adding of more variables has left the results more or less unchanged, indicating the importance of such variables as shown by equation 8.

Our experiments with the equation indicated that real interest rate is insignificant in explaining savings in Malaysia. The same is true for nominal interest rates. Therefore, we have dropped these variables from the regressions. Regarding equation 8, the following observations can be made. Inflation appears to influence savings positively (at the 13 per cent level of significance) perhaps via reduced consumption in response to inflation. Foreign savings has the expected sign and is highly significant at 1 per cent level. Terms of Trade also positively influences national savings in Malaysia. Population dependency ratio has the expected negative sign but significant only at the 16 per cent level. Care must be taken in interpreting these coefficients as the data series have been used in their second differences for the purpose of obtaining better cointegration among them.

5.4 Myanmar

Data series on real gross domestic savings, foreign savings and inflation for Myanmar, are stationary in their levels and the other series,

Table 2.6
Malaysia
Unit Root Test Results

Variable Name	No. of Lagged Differenced Terms	D-F 't' Statistic with			MacKinnon Critical Value
		No Constant & Trend	Constant Only	Constant & Trend	
D(LNS)	0			-6.2825***	-4.6193
LNY	1	2.1427**			1.9627
R	1	-2.3174**			-1.9614
FS	1		-2.7129*		-2.6608
DEP	0		-9.3180***		-3.8572
INF	0			-3.6366*	-3.2856
S	0			-3.7309**	-3.6920
G	0		-3.4590**		-3.0521
TT	0		-3.6207**		-3.0400
D(N)	0		-3.1418**		-3.0521

Table 2.7
Malaysia
Cointegration Test Results

Variables	No. of Lagged Differenced Terms	D-F 't' Statistic with		MacKinnon Critical Value
		No Constant Only	Constant & Trend	
LNS, LNY, DEP,	0		-4.6816*	-4.3917
D(LNS,2), D(LNY,2), D(INF,2), D(FS,2), D(TT,2), D(DEP,2)	0	-5.5693*		-5.2584

- *** Significant at 1% level
- ** Significant at 5% level
- * Significant at 10% level

in their first differences (see Table 2.8). The cointegration among the series are as reported in Table 2.9.

Two regression equations corresponding to cointegration regressions are given in Table 2.19. According to equation 9, nominal interest rates, exports, dependency ratio and foreign savings explain about 86 percent of variation in real savings in Myanmar. All coefficients are statistically significant at the 1 percent level. The F-statistic confirms the significance of all coefficients. All coefficients except that of FS have the correct signs. The plus sign for FS may indicate that foreign savings could enhance real national savings by way of increased capacity, investments and thereby incomes.

In equation 10, current income has been added as an explanatory variable but is statistically insignificant. In both equations, the nominal interest rate instead of real interest rate has been used. This is because the real interest rate variable, when used, is not only insignificant but also has the wrong sign. Thus, the positive and significant coefficient for the nominal interest rate indicates that savers respond more to nominal rather than real interest rates. Our experiments using inflation as an additional explanatory variable also indicated that savings are not responsive to inflation. We have, therefore, dropped both real interest rate and inflation rate variables from the model.

5.5 Nepal

Unit root test results for Nepal are presented in Table 2.10. The table shows that saving and income variables are free of unit roots in the first difference of the series and lagged savings are stationary in their second differences. All other variables are stationary in their levels. Cointegration tests were also performed on different sets of variables but results were unsatisfactory. Cointegration of variables could not be found even at the level of fourth differencing. Since further differencing of the series may be both meaningless and costly in terms of the quality of data, we decided to run the regression using the variables in their levels.

The regression estimates are reported in Table 2.19. Results show that lagged savings are a major determinant of savings in Nepal. The real interest rate has a positive and significant influence on savings. The expansion of bank branches in the country also appears to have

Table 2.8
Myanmar
Unit Root Test Results

Variable Name	No. of Lagged Differenced Terms	D-F 't' Statistic with		MacKinnon Critical Value
		Constant Only	Constant and Trend	
LNS	2	-3.0615*		-2.7180
D(LNY)	0	-3.1857**		-3.1483
D(EXPT)	0	-2.8949*		-2.7180
D(R)	0		-3.5722*	-3.3820
D(N)	0		-4.1603**	-3.8730
FS	0		-3.3839*	-3.3588
INF	0		-4.0292**	-3.8288
D(DEP)	0		-4.5177**	-3.8730

Table 2.9
Myanmar
Cointegration Test Results

Variables	No. of Lagged Differenced Terms	D-F 't' Statistic with		MacKinnon Critical Value
		Constant Only	Constant and Trend	
LNS, N, EXPT DEP, FS	0		-6.6023**	-6.1540
LNS, LNY, N, FS, EXPT, DEP	0		-7.0359**	-6.6366

- *** Significant at 1% level
 ** Significant at 5% level
 * Significant at 10% level

Table 2.10
Nepal
Unit Root Test Results

Variable Name	No. of Lagged Differenced Terms	D-F 't' Statistic with	MacKinnon Critical Value
		Constant and Trend	
D(LNS)	0	-3.5035*	-3.3588
D(LNY)	0	-4.5940**	-3.8288
R	0	-3.9392**	-3.7611
N	0	-4.9304**	-4.7315
FS	0	-4.3290**	-3.7611
M2Y	0	-5.6871***	-4.7315
D(LNS1,2)	0	-4.4006**	-3.9271

*** Significant at 1% level

** Significant at 5% level

* Significant at 10% level

Note: Cointegration cannot be found even at the level of 4th differencing.

helped generate more savings as indicated by a positive and significant coefficient for LB. Broad money supply used as a wealth variable, tends to decrease savings. The equation is free from autocorrelation but the explanatory power is rather limited as shown by an R^2 of 0.632 and an adjusted R^2 of 0.486.

Our experiments also showed that income variables are insignificant in explaining national savings behaviour in Nepal. It was also found that dropping the interest rate variable, and adding an inflation variable to the regression equation 1, has not only improved the explanatory power marginally, but also improved the level of significance of the coefficients as shown by equation 12. This equation shows that inflation exerts a negative influence on savings as expected. The conventional argument on the negative impact of inflation on savings is confirmed by both equations in which we found a positive coefficient for the real interest rate variable in the first equation and a negative coefficient for the inflation variable in the second equation.

5.6 Philippines

As shown in Table 2.11, savings and income variables are non-stationary in their levels but are stationary in the first and second differences respectively. All the other variables are free from unit roots in their levels. There were a few combinations of variables which are cointegrated but not all of them yield meaningful and significant results. In Table 2.19, the regression results pertaining to the best possible combination of variables which are cointegrated (as reported in table 2.12) are presented.

Equation 13 in Table 2.19 shows that current income is highly significant in explaining savings in the Philippines. Inflation exerts a positive influence but is not very significant. Nominal interest rate also has the unexpected sign, i.e., negative, perhaps due to its indirect impact via investment and income. It may also be possible that income effect of interest rate changes are more dominant than substitution effects. The absence of some important variables such as the population dependency ratio may also be responsible for the unexpected signs of these coefficients. The relatively low adjusted R^2 at .69 is also a result of the absence of other possible explanatory variables. Nevertheless, the importance of current income in determining savings in the Philippines need not be overemphasized. It should be noted that in this equation, the first differences of the series have been used for the purpose of achieving cointegration.

Table 2.11
Philippines
Unit Root Test Results

Variable Name	No. of Lagged Differenced Terms	D-F 't' Statistic with	MacKinnon Critical Value
		Constant and Trend	
D(LNS)	0	-3.4240*	-3.2762
D(LNY,2)	0	-3.7469**	-3.6920
R	0	-4.5184***	-4.5000
M2Y	2	-3.3813*	-3.2762
FS	3	-3.6245*	-3.2856
N	1	-4.2531**	-3.6591
INF	0	-3.8528**	-3.6591

Table 2.12
Philippines
Cointegration Test Results

Variables	No. of Lagged Differenced Terms	D-F 't' Statistic with	MacKinnon Critical Value
		Constant and Trend	
D(LNS), D(LNY), D(N), D(INF)	0	-5.8187**	-5.2033

- *** Significant at 1% level
 ** Significant at 5% level
 * Significant at 10% level

5.7 Singapore

Regression results obtained by the country researcher are given in Chapter 9. Our own tests of unit roots or cointegration could not be performed as the data sets used in the regression were not available. According to the country researcher's estimations, income growth, governments savings rate and the demographic factors are important in affecting domestic savings. Nominal interest rate has a negative impact on savings implying that the income effect may be dominant over the substitution effect. The other factors which have a positive and significant influence are the appreciation of the exchange rate and the statistical discrepancy.

5.8 Sri Lanka

Unit Root Test results as reported in Table 2.13 indicate that savings and income variables are nonstationary in their levels but stationary in their first and second differences respectively. All other variables are free of unit roots. Cointegration of variables could be found, however, only in the first differences of the series as reported in Table 2.14.

Table 2.19 presents regression results corresponding to cointegration regressions in Table 2.14. Equation 16 in Table 2.19 indicates that the three independent variables, namely, current income, foreign savings and inflation explain about 88 per cent of the variation in real gross domestic savings in Sri Lanka. The coefficients for these variables are highly significant at 1 per cent level. Income and foreign savings have the expected signs while inflation bears a positive sign implying that people tend to save when inflation occurs in anticipation of a lower inflation in the future.

As shown in equation 17, the real interest rate is not significant in determining savings in Sri Lanka. We have used nominal interest rate and inflation as separate variables but the coefficient for the interest rate variable remains insignificant. However, when the regression is run using level variables ignoring cointegration, the interest rate variable becomes highly significant. It would nevertheless be advisable to use the equations that are cointegrated (equations 16 and 17) even if the number of observations is too small to make any long-term economic sense.

Table 2.13
Sri Lanka
Unit Root Test Results

Variable Name	No. of Lagged Differenced Terms	D-F 't' Statistic with		MacKinnon Critical Value
		Constant Only	Constant and Trend	
D(LNS)	0		-4.1346**	-3.9271
D(LNY,2)	1		-3.6560*	-3.4455
R	0	-3.1643**		-3.1483
N	1	-3.0577*		-2.7180
LB	0	-2.9740*		-2.7349
D(Dep)	0		-3.7667*	-3.4104
EXPT	0	-3.0322*		-2.7180
FS	0		-4.2511**	-3.8730
INF	0	-2.9205*		-2.7180
M2Y	2		-4.2515**	-3.9271

Table 2.14
Sri Lanka
Cointegration Test Results

Variables	No. of Lagged Differenced Terms	D-F 't' Statistic with	MacKinnon Critical Value
		Constant and Trend	
D(LNS), D(LNY), D(FS), D(INF)	0	-5.6610*	-5.1464
D(LNS), D(LNY), D(FS), D(INF), D(R)	0	-6.3215**	-6.2827

- *** Significant at 1% level
 ** Significant at 5% level
 * Significant at 10% level

5.9 Taiwan

Unit Root test results are presented in Table 2.15. According to the table, all data series except M2Y used in the regressions are stationary in their levels. M2Y is stationary in the first difference of the series. Cointegration among the sets of variables can be found as reported in Table 2.16. As such, the regression results corresponding to these cointegrating variables, as reported in Table 2.19, can be thought of as being stationary over the long term.

According to equation 14 in Table 2.19, the coefficients for the current income and exports are statistically significant. Broad money supply has a positive influence but is insignificant in this equation. Real interest rate has the wrong sign and is insignificant. Our experiments with the use of nominal interest rate and inflation rate separately indicated that interest rate is not a significant factor in determining the level of national savings. In fact, current income and exports alone contributed to almost 96 per cent of the variation in national savings.

Since interest rate is insignificant, we have excluded it from equation 15, with almost no change in the explanatory power of the regression. In this equation, income and export coefficients are significant at the 1 per cent level and money supply and dependency ratios are significant at the 10 per cent level. The coefficient for the money supply used as a wealth variable is significant in this equation but positive as before, perhaps indicating the strong influence of exports on savings which is reflected in an expansion in the broad money supply. Thus it appears that the positive impact of the expansion in the broad money supply (wealth) is greater than its negative effects on national savings in the case of Taiwan.

5.10 Thailand

Unit root test results as shown in Table 2.17 indicate that data series on nominal and real interest rates, inflation, and bank branches are stationary in their levels while those on domestic savings, foreign savings and exports are stationary in their first differences. The series on income and money supply are stationary in the second differences. In Table 2.18, cointegration test results are presented for combinations of variables which yield meaningful and significant regression coefficients.

Table 2.15
Taiwan
Unit Root Test Results

Variable Name	No. of Lagged Differenced Terms	D-F 't' Statistic with		MacKinnon Critical Value
		Constant Only	Constant and Trend	
LNS	1		-3.8551**	-3.6920
LN Y	0		-3.6413*	-3.2856
D(M2Y)	0	-3.3222**		-3.0521
EXPT	3	-4.0915***		-3.9228
DEP	2	-5.0624***		-3.8877

Table 2.16
Taiwan
Cointegration Test Results

Variables	No. of Lagged Differenced Terms	D-F 't' Statistic with	MacKinnon Critical Value
		Constant and Trend	
LNS, LN Y, EXPT, M2Y, R	0	-5.2592*	-5.1691
LNS, LN Y, EXPT, M2Y, DEP	0	-5.3583*	-5.1691

- *** Significant at 1% level
 ** Significant at 5% level
 * Significant at 10% level

Table 2.17
Thailand
Unit Root Test Results

Variable Name	No. of Lagged Differenced Terms	D-F 't' Statistic with		MacKinnon Critical Value
		Constant Only	Constant and Trend	
D(LNS)	0		-3.9111**	-3.7119
D(LNY,2)	0		-4.1786**	-3.7347
R	1		-3.6575*	-3.2964
D(M2Y,2)	0		-5.0337***	-4.6712
D(FS)	0		-5.2040***	-4.6193
N	3		-5.1626***	-4.6712
INF	1		-3.5238*	-3.2964
D(EXPT)	0		-4.3016**	-3.7119
LB	0	-3.2824**		-3.0521

Table 2.18
Thailand
Cointegration Test Results

Variables	No. of Lagged Differenced Terms	D-F 't' Statistic with	MacKinnon Critical Value
		Constant Only	
D(LNS), D(LNY), D(R), D(FS), D(LB)	0	-5.1346*	-4.8190
D(LNS), D(LNY), D(FS), D(LB)	0	-5.7258**	-4.8558

*** Significant at 1% level

** Significant at 5% level

* Significant at 10% level

The regression results corresponding to these cointegrated variables are given in Table 2.19. Equation 18 shows that current income is a significant determinant of national savings in Thailand. Real interest rate has a negative sign and is insignificant.

We have tried using nominal interest rate and inflation in place of real interest rate, but the coefficient for the nominal interest rate was always negative. Besides, both variables become insignificant. Hence we have dropped them from our equation 19. Foreign savings represented by the ratio of the current account balance to nominal GDP, appears to encourage savings rather than discourage it as normally expected, perhaps through its influence on domestic investment and income.

Results also indicate that expansion of bank branches has a negative impact on savings. While it can be argued that heavy overhead and staff expenses in connection with opening new branches may result in reduced overall savings, financial savings are expected to increase with the increase in the number of branches unless the expenditure in generating additional savings is more than the amount of real savings mobilized.

According to our results, the four independent variables selected explain about 92 per cent of the variation in gross domestic savings in Thailand. The D-W statistic after correcting for autocorrelation using the Cochrane-Orcutt procedure stands at 1.96, indicating little or no autocorrelation. Results suggest that growth of income and increase in foreign savings are major determinants of savings in Thailand.

VI. Summary and Conclusion

Regression equations presented in Table 2.19 fit reasonably well the data sets of most of the SEACEN countries. The coefficient of determination (R^2) showing the "goodness of fit" is very high except for Nepal and the Philippines. Actual and fitted values of the dependent variables together with the residuals are plotted in Charts 2.1 to 2.9. Better "fits" are shown by smoother curves and smaller deviations of fitted values from the actual values. In some cases (e.g., Malaysia), differencing of the series in order to achieve cointegration has produced seemingly large fluctuations in savings in spite of very high coefficients of determination.

The level of current income (LNY) is significant in all countries except Myanmar and Nepal. Therefore, increasing current real incomes by way of generating higher real growth rates would be the key to enhancing savings. The "permanent income" variable does not perform well for many countries except for Indonesia. However, the marginal propensity to save (MPS) out of transitory income is rather low at 0.12 for Indonesia. Under the permanent income hypothesis, the MPS of transitory income should be close to 1.

Foreign savings is an important and significant determinant of savings in all countries except Nepal and Taiwan. Nepal is a country which is dependent on foreign assistance for its development projects with little contribution from domestic savings. Taiwan, on the other hand, has been a capital exporting country for quite some time. It is not surprising that in these two extreme cases, one cannot find a significant relationship between foreign assistance and savings. Of the other countries whose foreign savings variables are significant, the signs of coefficients vary. For instance, in Malaysia and Sri Lanka, foreign savings have the expected negative sign but in other countries namely, Indonesia, Korea, Myanmar and Thailand, it bears a positive sign. These countries have demonstrated that domestic savings should not be discouraged in an environment of increasing foreign assistance. Rather, it should help raise the savings rate by increased foreign investment and income therefrom.

The evidence on the impact of real interest rates in the SEACEN countries is inconclusive. For Korea and Nepal, real interest rates have the expected positive sign and are statistically significant. For Sri Lanka, it is positive but insignificant. For Taiwan and Thailand, it is negative and insignificant. Negative and insignificant effect of interest rates in these two countries may be an indication of widespread financial repression that existed during the earlier years. For Myanmar, only the nominal interest rate coefficient is positive and significant.

In Indonesia and the Philippines, nominal interest rates are significantly negative. One reason for the negative sign for the interest rate in Indonesia is the decreasing trend of nominal interest rates particularly during 1977-1982. In the Philippines, the nominal interest rates were quite volatile during the post-reform period (since 1981) thus yielding unexpected signs for the two countries. It may also be true that the substitution and income effects of higher real interest rates

offset each other or that intertemporal consumption decisions are limited by liquidity constraints.

In general, the response of national savings to real interest rate is inconclusive. This could be due to several reasons. First, despite interest rate liberalizations, the real interest rates are still too low to stimulate a major savings drive. Second, only a few years have passed since liberalization and no appreciable result could be expected within a short period of time. Third, interest rate liberalization per se is inadequate in achieving the results. Other policies, particularly price stabilization, must be in place during the process of financial reforms.

In cases where interest rates are insignificant, attempt was made to include inflation in the model as a separate explanatory variable. Inflation is generally expected to reduce savings as it erodes current income. The expected sign, therefore, is negative. Negative and significant coefficient for this variable was observed only in Nepal. In three other countries (Indonesia, Malaysia and Sri Lanka), the coefficient is positive and significant. The size of the inflation coefficient is extremely small for Malaysia.

Wealth has the expected negative sign and is significant for Korea. The variable used to proxy wealth in this case is the Land Price Index. For all the other countries, broad money was used as a proxy. However, only Nepal has got a negative sign and all other countries showed a positive influence indicating perhaps the dominance of household savings in the form of quasi money in the monetary aggregates, which itself forms part of national savings. Further, higher money supply is indicative of greater availability of credit and thereby investment, income and savings. The positive sign for the monetary variable in the estimations may suggest that the monetary variable may perform better as an indicator of financial deepening rather than as an indicator of wealth.

The coefficient for exports is positive and highly significant for Myanmar and Taiwan. Myanmar's foreign exchange earnings are an important source of savings. On the other hand, Taiwan has been able to maintain trade surpluses during most of the period under review. In other countries, although positive relationship is observed, the coefficients are not statistically significant. Therefore, exports variables were dropped from the equations for those countries without loss of

explanatory power. In Malaysia, the terms of trade have proven to be a very important determinant of savings as shown by the positive and highly significant coefficient.

The impact of demographic variables was tested for Indonesia, Malaysia, Korea, Myanmar, Taiwan and Sri Lanka as the data permitted. The coefficient for the dependency ratio yielded negative signs as expected. They are statistically significant as well. For Indonesia, it is significant at the 15 per cent level. Our results also indicated that in Nepal, the increase in bank branches increased savings, while a negative impact is shown for Thailand. Of course, the relevant variable to examine along with bank branches is the "financial" savings rather than "national" savings. It could be possible that while bank branches and financial savings increase, the real national savings could decrease due to rising inflation. Therefore, it may not be appropriate to infer that bank branch expansion will result in reduction of savings unless there is clear evidence that the economic costs of opening new branches are greater than economic benefits. Therefore, care must be exercised in interpreting this result. In any case, it would be worthwhile to examine the effectiveness of the bank branch expansion policy in Thailand.

Table 2.19
REGRESSION RESULTS a/

Country/ Variable	C	LN1	LN2(1)	LYA	LYB	FS	N	R	INF	MZY	EXPT	DEP	W	TT	LB	R	R	DW	F	Sample No. of Period Obs.
1. Indonesia																				
Eq. 1	0.5277 (0.2672)	1.6132 (7.5857)				2.7889 (2.1680)	-0.0191 (-2.6791)			2.7545 (2.1827)		-0.4554 (-1.5957)				0.9852	0.9806	1.5324	213.5499	1970-91 22
Eq. 2	4.3417 (2.5248)	0.7898 (2.7688)				3.5172 (3.4678)	-0.0241 (-3.9335)		1.4186 (4.4972)							0.9890	0.9864	1.7428	382.7906	1970-91 22
Eq. 3	7.2544 (26.3939)			0.3201 (4.8785)	0.1208 (1.6883)	2.9649 (2.2172)			0.7135 (2.6319)							0.9887	0.9857	1.5944	328.2580	1972-91 20
2. Korea																				
Eq. 4	-0.3932 (-0.1362)	1.5683 (4.9966)				0.9699 (2.1375)		0.0063 (1.4995)				-0.0070 (-1.9735)	-0.0014 (-2.1122)			0.9935	0.9915	1.4835	490.7688	1970-91 22
Eq. 5 b/	0.0529 (1.7981)					1.9717 (3.9688)		0.0161 (3.2607)				-0.0133 (-2.9259)				0.6886	0.6336	2.1675	12.5280	1971-91 21
3. Malaysia																				
Eq. 6	-5.7747 (-7.4188)	1.8508 (19.7145)														0.9731	0.9696	1.6322	272.0465	1973-90 18
Eq. 7	6.9599 (2.2609)	0.8912 (3.7793)										-6.2995 (-3.9315)				0.9771	0.9743	2.1748	342.5022	1972-90 19
Eq. 8 c/	0.0172 (0.6820)	0.7376 (4.9836)				-2.0608 (-5.2168)		0.0073 (4.9836)					0.0072 (2.3178)			0.9650	0.9491	2.2924	60.6140	1974-90 17
4. Myanmar																				
Eq. 9	12.6960 (10.4162)					7.6080 (3.9657)	0.0833 (7.6100)			16.0596 (5.4399)	-0.1106 (-3.8513)					0.9123	0.8575	2.3938	16.6451	1977-90 14
Eq. 10	13.4388 (3.3631)	-0.5092 (-1.1712)				4.5341 (1.6453)	0.0660 (2.8542)			14.4525 (3.9606)	-0.0439 (-0.8461)					0.9009	0.8160	2.4852	10.6077	1977-90 14
5. Nepal																				
Eq. 11	-1.1100 (0.4523)					0.5967 (2.8560)		0.0224 (2.1755)		-0.0473 (-2.4242)					0.9790 (2.4892)	0.6329	0.4860	2.0752	4.3092	1977-91 15
Eq. 12	-1.2389 (-0.5093)					0.6146 (2.9536)		-0.0220 (-2.3639)	-0.0494 (-2.5770)						1.0316 (2.6525)	0.6424	0.4993	2.0746	4.4908	1977-91 15

Table 2.19 (cont'd)

REGRESSION RESULTS a/

Country/ Variable	C	LN	LN(1)	LVA	LYB	FS	N	R	INF	M2Y	EXPT	DEP	W	TT	LB	R	R	DW	F	Sample No. of Period Obs.
6. Philippines																				
Eq. 13 b/	-0.0258	2.6989					-0.0114		0.0020							0.7392	0.6932	2.4298	16.0643	1971-91 21
	(-1.4296)	(6.2572)					(-1.9919)		(1.4371)											
7. ROC, Taipei																				
Eq. 14	-0.2307	1.0768					-0.0005		0.1566	0.0215						0.9955	0.9944	1.6965	838.7760	1972-91 20
	(-0.1730)	(8.0840)					(-0.4799)		(1.1209)	(7.7708)										
Eq. 15	2.5469	0.8716							0.2457	0.0217	-0.0152					0.9964	0.9955	2.1102	1045.1050	1972-91 20
	(1.3669)	(5.4525)							(1.8460)	(8.8411)	(-1.9900)									
8. Sri Lanka																				
Eq. 16b/ d/	-0.0670	3.6110					-0.0324		0.0193							0.9240	0.8806	1.8594	21.2800	1980-90 12
	(-2.2433)	(4.8996)					(-8.3125)		(5.2049)											
Eq. 17b/ d/	-0.0452	3.4475					-0.0327		0.0050	0.0228						0.9312	0.8738	2.1408	16.2373	1980-90 12
	(-2.0910)	(4.4161)					(-8.0676)		(0.7860)	(3.7728)										
9. Thailand																				
Eq. 18b/ d/	-0.0631	3.2046					39.9736		-0.0017							-0.7707	0.9457	1.9615	34.8007	1974-89 16
	(-2.5301)	(9.8958)					(5.1091)		(-1.1563)							(-2.8943)				
Eq. 19b/	-0.0622	3.4120					34.9537									-0.7159	0.8167	1.5286	20.7904	1972-89 18
	(-1.5321)	(6.3667)					(2.4512)									(-1.5876)				

a/ Dependent variable is LNS.

b/ Data series are in their first differences.

c/ Data series are in their second differences.

d/ Equation has been corrected for autocorrelation using the Cochrane-Orcutt Iteration Technique.

t Values are in parentheses.

Chart 2.1
Regression Results - Indonesia

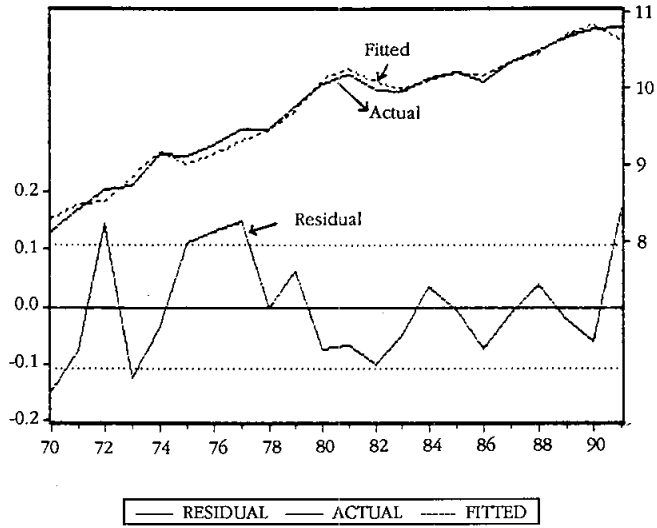


Chart 2.2
Regression Results - Korea

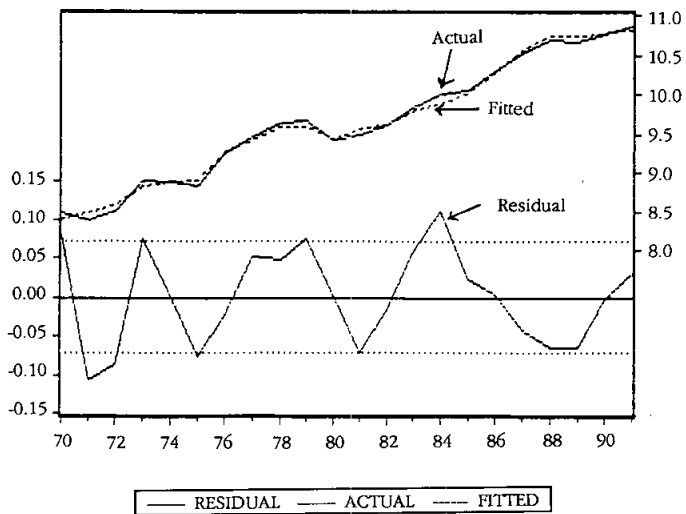


Chart 2.3
Regression Results - Malaysia

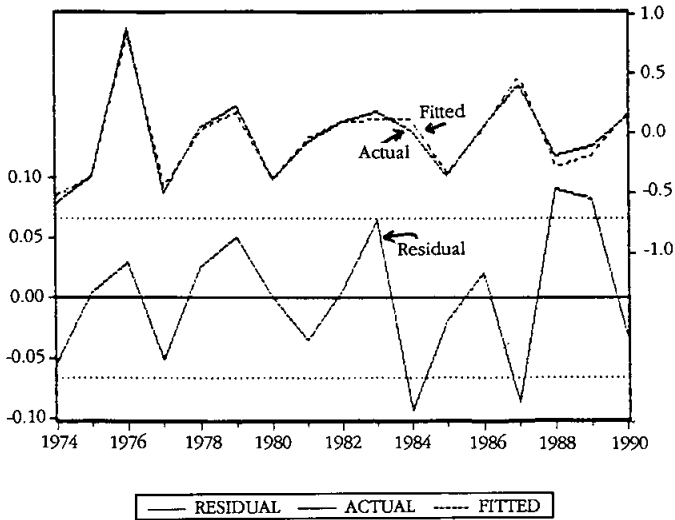


Chart 2.4
Regression Results - Myanmar

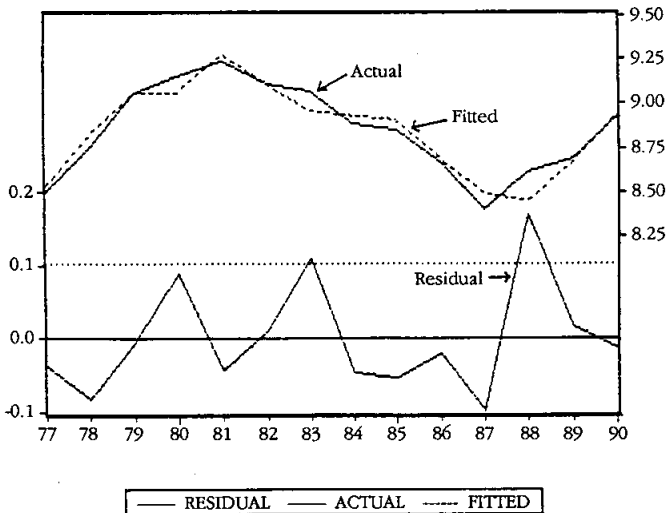


Chart 2.5
Regression Results - Nepal

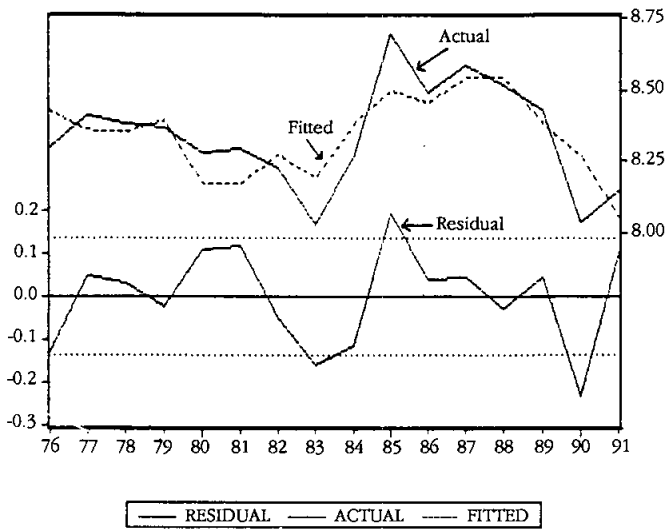


Chart 2.6
Regression Results - Philippines

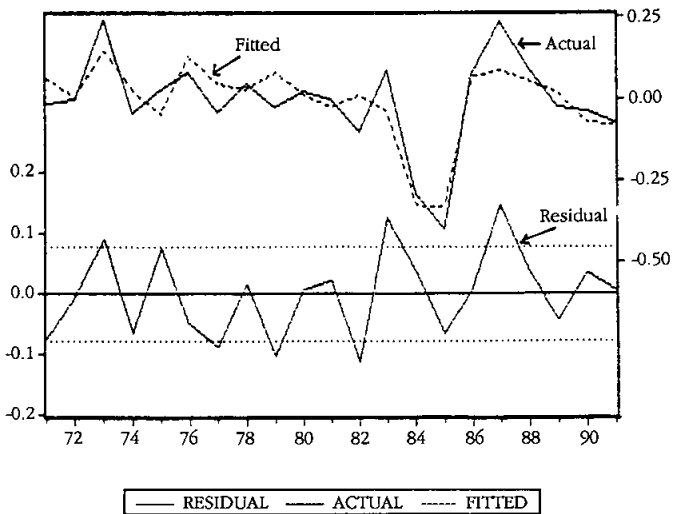


Chart 2.7
Regression Results - Sri Lanka

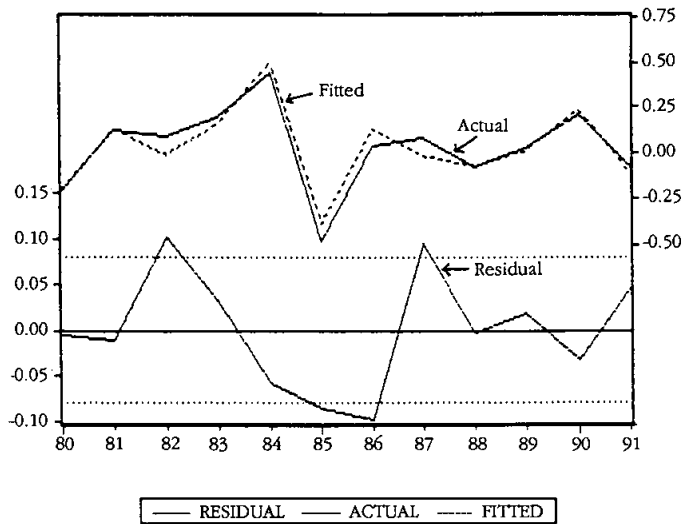


Chart 2.8
Regression Results - Taiwan

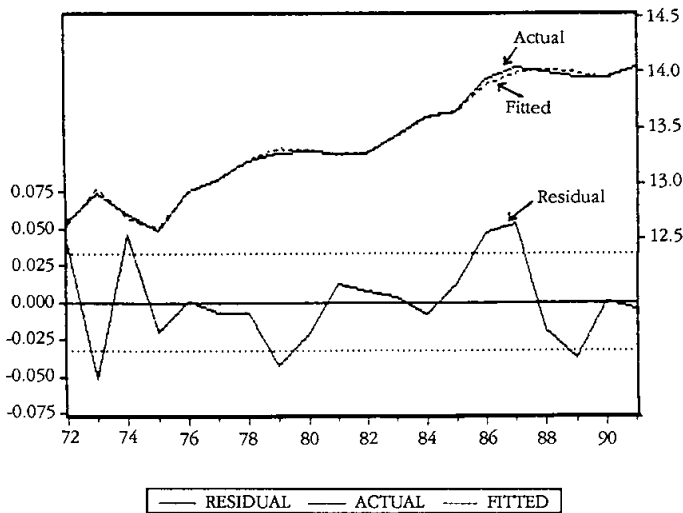
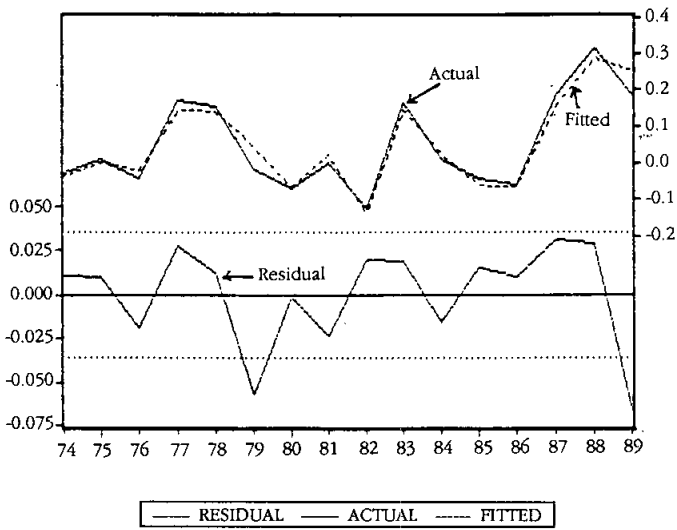


Chart 2.9
Regression Results - Thailand



Chapter 3

FINANCIAL REFORMS IN THE SEACEN COUNTRIES

I. Introduction

The second oil shock of 1979/1980 followed by the world recession in early 1980s posed several economic hardships for the developing countries. SEACEN countries were not spared by the adverse repercussions of these external shocks which were compounded by alarmingly large external debt burdens. Such high debt burdens were the cause of inadequate domestic savings and in some cases, heavy government consumption and overambitious government investment projects leading to massive investment-savings gaps. In some countries, growth rates lagged behind while inflation accelerated. Financial sectors came under severe pressure as some banks and finance companies began to collapse. In response to these difficulties and challenges, the SEACEN countries had to undertake various macroeconomic and structural adjustment programmes, often with the consultation and assistance of international financial institutions such as the International Monetary Fund and the World Bank.

Financial reforms featuring interest rate deregulation, elimination of preferential practices by Central Bank or other financial institutions, institutional developments, strengthening of supervision of financial institutions and restoring macroeconomic stability, have received high priority in such adjustment programmes. The main purpose of these policies was to create an environment conducive to enhancing savings, investment and thereby growth. This chapter will briefly review the nature of the financial system¹ and financial sector reform programmes undertaken by the SEACEN countries, and try to examine the differences in the performance with special reference to the behavior of real interest rates.

1. Although there exist large and parallel "informal" financial markets in many SEACEN countries, information on such markets is scanty. In this study, therefore, we focus on the "formal" financial markets only.

II. Nature of the Financial System and Financial Reforms in the SEACEN Countries

2.1 Indonesia

Indonesia's financial institutions include the central bank, commercial banks, rural banks, and non-bank financial institutions (NBFIs) including insurance and leasing companies, venture capital companies and others. Of these, commercial banks dominate the financial system both in terms of total assets and mobilization of deposits.

In the 1970's, Indonesia's financial system was in an early stage of development. Fiscal and financial policy paid little attention to enhancing domestic saving. Tight monetary policy on the one hand and Bank Indonesia's liquidity credit schemes which featured largely subsidized lending rates for certain categories of borrowers, on the other, led to distorted interest rates in the economy. The real interest rates had been negative in some periods, and financial savings mobilized through the banking system were very low during the 1970's as evident from Table 2.1. Although the oil boom in the early part of the 1970's brought in a lot of foreign exchange and helped Indonesia meet its investment requirements, it was only short-lived. The falling of oil prices and the recession in the western countries in the early 1980's made Indonesia realize the uncertainty of dependence on the foreign sector for resource mobilization and focus more on domestic sector savings to meet investment. Consequently, several financial reforms were made including the deregulation of interest rates, increasing the number of financial institutions and improving financial markets, to develop the financial system in the country.

Several far reaching reforms were undertaken by Indonesia in the 1980's. Commercial bank interest rates were deregulated in 1983 to reflect market rates. Credit ceilings were removed and direct monetary management was replaced by indirect controls through reserve money management. Conduct of reserve money management was done mainly through open market operations. New money market instruments such as the Certificates of Bank Indonesia (SBIs) and Money Market Securities (SBPUs) were introduced. Following the reforms, the interest rates were left to be determined by the market forces although some element of intervention still existed through the maintenance of the Liquidity Credit Scheme.

The financial reforms of 1983 were quickly followed by a series of tax reforms beginning in 1984 aimed not only at further mobilizing domestic savings but also at promoting a more equal income distribution. Incentives in the form of tax exemptions and subsidies on interest rates were provided to promote the mobilization of savings.

In October 1988, the government instituted a fresh package of sweeping reforms designed to instill the principles of free competition and to increase the efficiency of the financial market. These reforms were aimed at addressing a range of issues including the acceleration of domestic savings, promotion of non-oil exports, increasing the efficiency of financial institutions, enhancing the effectiveness of monetary policy and creating a climate for the development of the capital market. Under the reforms, inter alia, opportunities were provided to establish new banks, bank branches and to broaden the range of deposit instruments. Reserve requirements of commercial banks were brought down from 15 per cent to 2 per cent with a view to increasing the liquidity positions of banks and to reduce intermediation costs. In January 1990, the government decided to phase out the liquidity credit system with a reduction in the amounts eligible for subsidized rediscount and the adoption of market-related interest rates to the end borrower.

As a result of liberalizing the rules on establishment of private commercial banks, the number of private commercial banks increased from 63 in 1988, to 126 in 1991. Foreign banks were allowed to expand into other areas as well apart from Jakarta. The number of foreign banks also increased from 11 in 1988, to 29 in 1991. The regulations restricting the acceptance of saving deposits by state run banks and private commercial banks, and acceptance of deposits of public corporations by state banks, were relaxed. At the same time bank branch siting conditions were also liberalized.

The financial reforms of 1988 also aimed at reinforcing the supervision of financial institutions with the objective of strengthening them and to encourage the modernization of the financial system. With a view to addressing the broader issues regarding the management difficulties faced by the financial institutions, Bank Indonesia issued a set of directives in March 1991. These directives were aimed at sustaining order in the marketplace, maintaining sound management practices and fostering the continued development of the financial market. Although some management difficulties have required the central bank

Table 3.1
Real Deposit Rates 1/ and Total Deposits of the Banking Sector

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Indonesia																						
12 M. Time Dep. Rate	24.00	24.00	18.00	15.00	18.00	15.00	14.21	12.00	9.00	9.00	9.00	9.00	9.00	18.04	19.11	18.24	15.72	17.50	18.49	18.38	18.53	22.76
Inflation Rate	8.94	2.50	25.99	27.35	33.27	19.71	14.21	11.82	6.68	30.25	17.10	7.34	10.02	11.95	9.08	4.38	9.24	9.25	5.99	6.11	9.94	10.04
Real Interest rate	15.06	21.50	-8.99	-12.35	-15.27	-4.74	-2.61	-0.18	-3.33	-1.15	-0.31	-0.92	-1.08	-0.43	-0.10	-0.40	-0.44	-0.21	-0.10	-0.01	0.00	0.00
Total Dep. as % of GDP	4.72	6.54	7.50	7.28	7.17	6.93	10.08	9.16	9.70	8.33	8.53	8.69	10.07	11.43	12.36	12.54	17.93	18.35	20.59	25.69	30.82	40.34
12 M. Time Dep. Rate	19.00	17.00	10.00	10.00	11.20	11.20	12.20	12.20	13.20	13.20	13.20	13.20	13.20	13.20	13.20	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Inflation Rate	15.40	14.00	11.70	3.00	24.50	25.40	15.30	10.00	14.50	18.20	20.70	21.60	7.10	3.40	2.40	2.90	2.80	3.00	7.10	5.70	8.60	9.40
Real Interest rate	3.12	2.63	-1.52	6.90	-10.34	-11.32	-2.69	2.00	-1.14	-1.69	-0.57	6.41	6.17	4.86	7.75	7.52	7.00	6.80	1.60	1.60	0.70	0.70
Total Dep. as % of GDP	18.26	18.98	21.20	21.76	18.36	18.07	17.20	19.92	19.90	19.29	20.38	22.53	24.03	25.14	25.14	22.46	21.68	24.10	26.12	26.69	29.65	28.67
12 M. Time Dep. Rate	6.00	6.00	5.75	8.00	9.00	7.50	7.50	7.50	6.50	7.00	6.50	10.00	10.50	9.00	10.75	7.50	7.00	4.25	5.50	7.25	8.00	8.00
Inflation Rate	1.60	1.60	3.32	10.47	17.43	4.43	2.62	-4.71	-4.99	3.54	6.72	9.70	5.83	5.40	3.00	0.32	0.72	0.67	1.96	2.85	2.63	4.49
Real Interest rate	4.40	4.40	2.35	-2.47	-7.10	2.94	-4.76	2.64	1.44	3.44	2.14	1.19	4.43	5.11	6.75	7.16	6.28	3.58	3.54	4.39	5.37	3.54
Total Dep. as % of GDP	28.67	29.62	32.44	32.46	30.17	30.27	37.41	37.79	40.13	45.43	47.76	48.38	54.30	53.57	53.52	51.15	50.71	52.55	57.97	59.02	51.07	59.02
12 M. Time Dep. Rate 2/																						
Inflation Rate																						
Real Interest rate																						
Total Dep. as % of GDP																						
12 M. Time Dep. Rate	6.00	7.50	7.50	9.50	9.50	9.50	15.00	12.00	11.00	12.00	12.00	12.00	12.50	12.50	13.50	13.50	12.50	12.50	12.50	12.50	12.25	11.75
Inflation Rate																						
Real Interest rate																						
Total Dep. as % of GDP																						
12 M. Time Dep. Rate	6.00	6.00	5.75	7.25	9.00	5.79	5.31	5.53	6.01	7.65	10.51	8.95	7.98	6.75	6.80	4.88	3.30	3.56	4.03	4.45	5.48	4.17
Inflation Rate	1.68	2.39	19.39	22.41	2.70	-1.91	3.17	4.85	3.95	8.46	8.30	5.79	1.24	2.64	0.45	-1.56	0.45	1.55	2.37	3.48	3.48	3.48
Real Interest rate	4.42	3.61	-10.17	-10.95	3.01	7.36	2.29	1.11	3.56	1.93	0.60	3.17	5.34	4.05	4.35	4.72	4.12	2.44	2.15	1.03	1.03	1.03
Total Dep. as % of GDP	41.76	44.51	57.88	56.15	51.91	56.29	57.51	55.86	55.02	59.02	65.63	67.91	71.58	71.12	69.71	73.34	70.76	64.78	64.24	73.11	68.74	68.74
12 M. Time Dep. Rate	4.75	4.75	4.75	4.75	4.75	4.75	4.75	15.00	15.00	15.00	15.00	15.00	15.00	15.00	22.00	22.00	14.00	14.00	15.00	20.50	21.00	21.00
Inflation Rate	2.70	6.30	9.70	12.30	6.70	1.90	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Real Interest rate	2.00	2.00	-4.51	-4.51	-4.51	-4.51	-4.51	-4.51	-4.51	-4.51	-4.51	-4.51	-4.51	-4.51	-4.51	-4.51	-4.51	-4.51	-4.51	-4.51	-4.51	-4.51
Total Dep. as % of GDP			25.61	20.37	17.87	16.68	19.71	21.14	20.53	21.70	21.20	17.78	20.11	30.05	43.61	46.57	5.36	5.95	1.32	1.32	1.32	1.32
12 M. Time Dep. Rate	9.44	9.44	9.00	9.36	14.41	12.34	11.83	9.91	9.50	10.98	12.50	13.59	11.96	8.60	8.31	7.14	5.53	5.00	5.12	8.03	9.50	9.17
Inflation Rate																						
Real Interest rate																						
Total Dep. as % of GDP	22.35	25.01	28.78	28.29	26.26	31.49	34.97	35.89	35.91	35.92	34.35	31.08	33.92	30.40	40.25	47.64	52.07	56.06	64.38	69.17	67.38	67.38
12 M. Time Dep. Rate 2/																						
Inflation Rate																						
Real Interest rate																						
Total Dep. as % of GDP	6.00	6.00	6.00	6.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	10.00	10.00	7.00	7.00	9.00	9.50	15.50	15.50
Inflation Rate	0.25	0.25	5.05	15.36	24.98	5.36	4.13	7.48	7.55	9.67	10.76	12.70	5.24	3.21	0.89	2.42	1.81	2.55	3.84	5.30	6.00	5.90
Real Interest rate	5.74	5.74	0.90	-8.13	-13.97	1.56	2.70	-0.43	-0.98	-2.61	-3.15	-1.51	5.17	7.89	5.10	-4.34	-5.45	-5.10	-4.34	-3.90	-3.90	-3.90
Total Dep. as % of GDP	25.90	26.76	29.40	27.13	27.49	29.35	31.74	32.41	32.48	31.25	32.65	33.90	38.21	44.69	41.14	43.01	57.30	59.90	59.16	65.61	70.63	70.63

Notes: 1/. Real Interest Rate (R) is calculated thus: $R = (1 + N) / (1 - INF) - 1$, where N and INF are Nominal Interest Rate and Inflation Rates respectively.
2/. 6 - 12 months rates. 3/. Interest rates were raised substantially in 1977 but continued to be managed and monitored by the Central Bank.

Sources: SEACEN Financial Statistics, 1991 and Country Chapters on Domestic Resource Mobilization in the SEACEN Countries.

Chart 3.1

Real Interest Rates and Bank Deposits - Indonesia

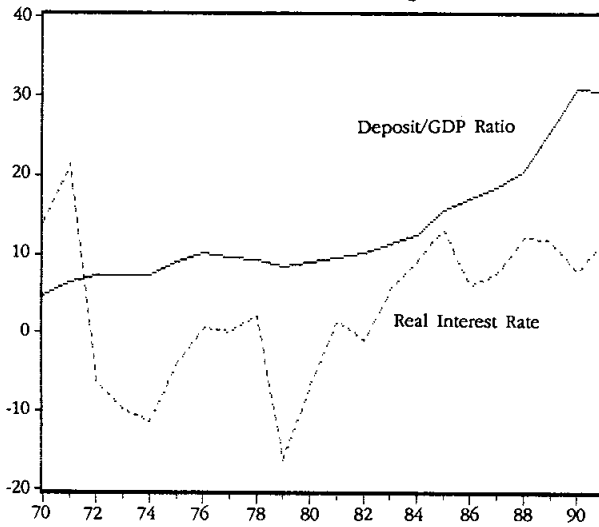


Chart 3.2

Real Interest Rates and Bank Deposits - Korea

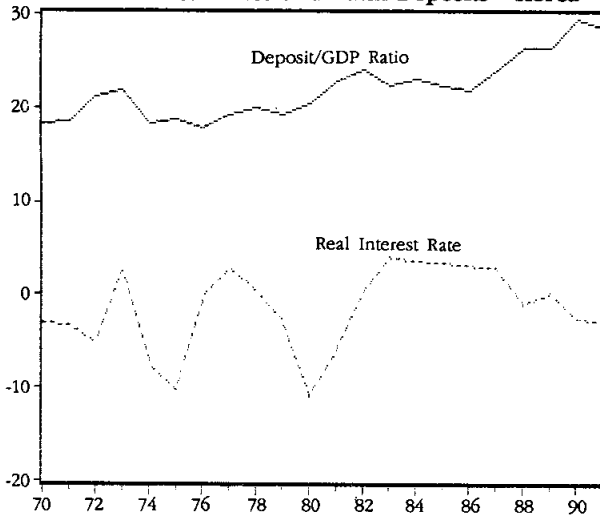


Chart 3.3

Real Interest Rates and Bank Deposits - Malaysia

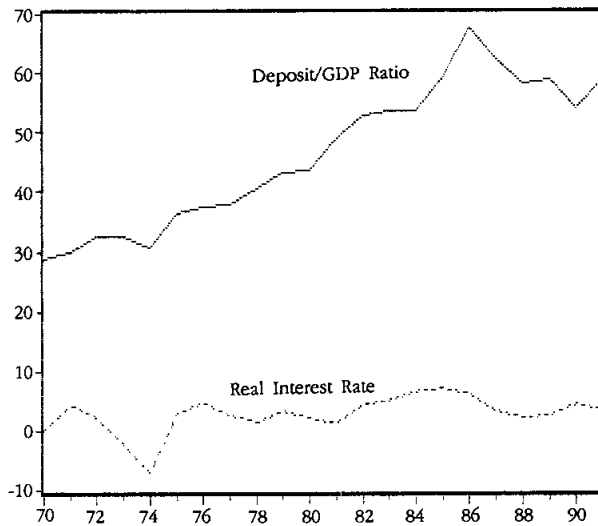


Chart 3.4

Real Interest Rates and Bank Deposits - Myanmar

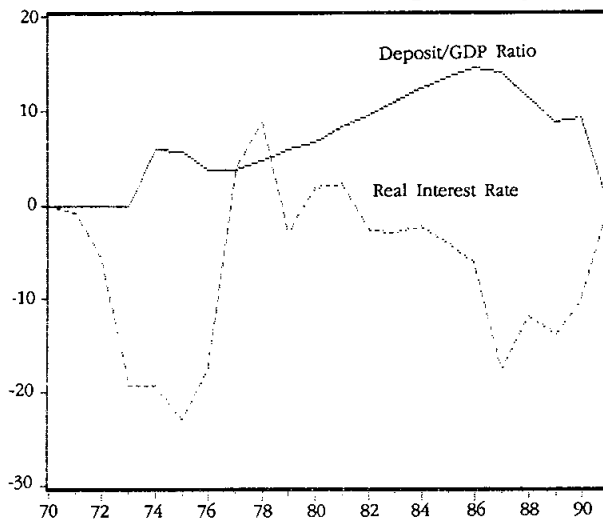


Chart 3.5

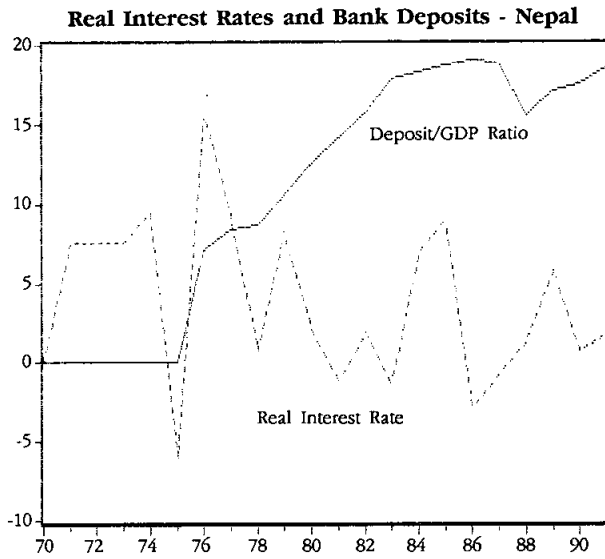


Chart 3.6

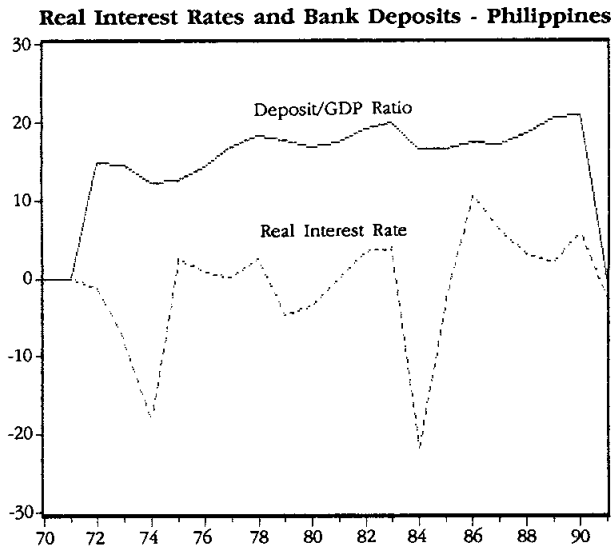


Chart 3.7

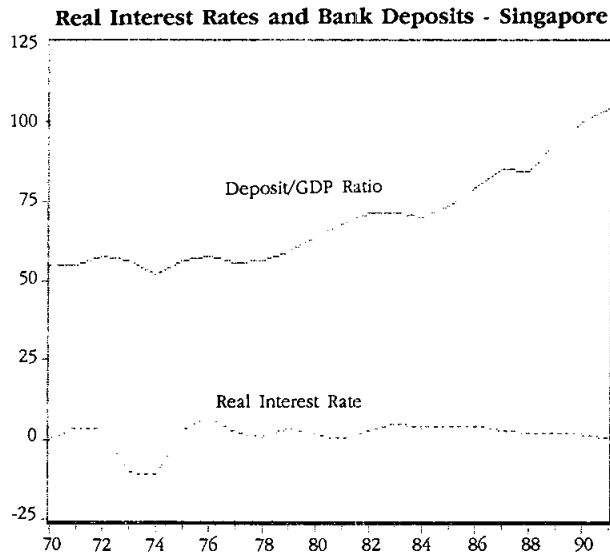


Chart 3.8

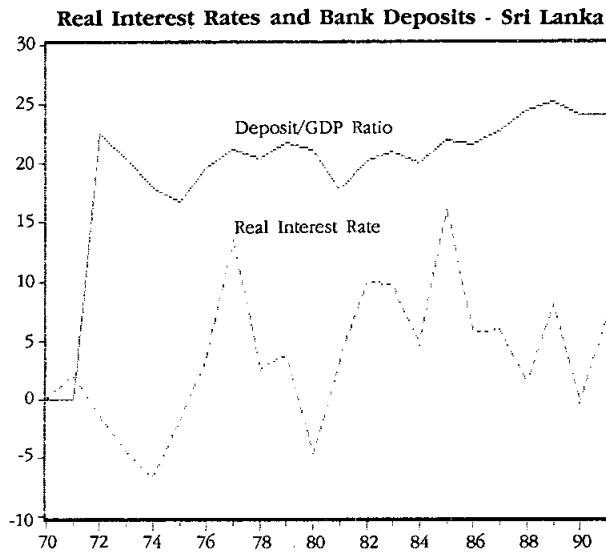


Chart 3.9

Real Interest Rates and Bank Deposits - Taiwan

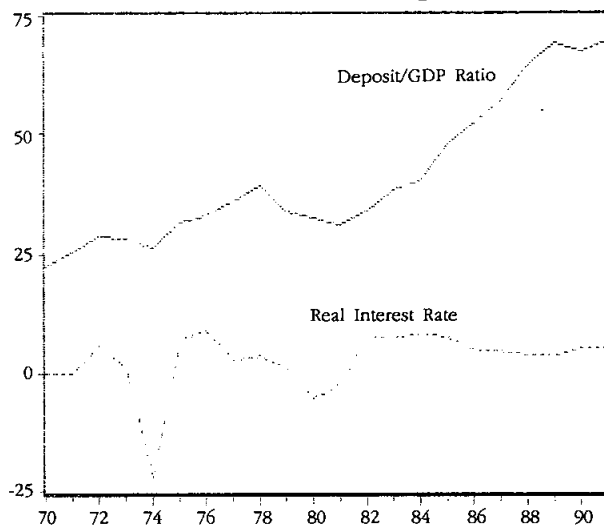
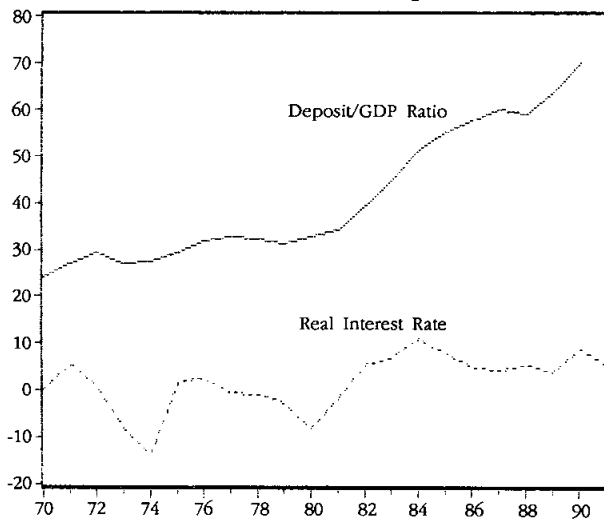


Chart 3.10

Real Interest Rates and Bank Deposits - Thailand



to take some tough measures recently, the country's financial system appears to be forging ahead with the principles of free competition and maintenance of a sound financial system.

2.2 Korea

The financial system in Korea consists of the Central Bank, banking institutions comprising commercial banks and specialized banks, non-bank financial institutions and life insurance companies and other institutions. These institutions have played a significant role in mobilizing financial savings in Korea during the past 3 decades. Of these, commercial banks were dominant in mobilizing savings until early 1970s, when non-bank financial institutions were also established in order to attract unorganized curb market funds into the organized financial market. Since then, the growth of financial savings mobilized by banks began to slow down. Meanwhile, helped by a relatively higher interest rate for deposits, non-bank financial institutions grew quite rapidly increasing its share of financial savings in total savings from 23 per cent in 1970 to 71 per cent in 1991. The strong growth in the total financial savings by the financial institutions (see Table 2.1) was also helped by several policy measures including interest rate flexibility, establishment of new institutions and introduction of new financial instruments.

A series of measures to develop the Korean financial market were introduced beginning in the early 1960s and 1970s. Among these, the "Decree of August 3rd" (The Emergency Presidential Decree Pertaining to Economic Stability and Growth, August 3rd, 1972) which was aimed at merging the private financial activities into the organized financial markets, was prominent. New types of non-bank financial institutions were introduced and existing ones institutionalized to attract private savings from the unorganized curb market to the organized financial institutions. Following this, a variety of financial institutions and financial instruments were introduced. The property formation savings deposits for workers was one of such new saving instrument. The 1980s saw the beginning of the deregulation and internationalization of the financial markets. Initially, commercial banks were privatised nationwide. The number of bank branches increased and branches of foreign banks opened with 18 branches in 1979 growing to 53 branches in 1985. Meanwhile, measures were taken to curb the inflation in order to encourage financial savings. Further, starting in 1987, foreign exchange controls were gradually relaxed and in December 1988,

interest rates regulations were relaxed. In 1989, the call market was unified. Three additional commercial banks were established in the same year.

The financial sector reforms which were intensified during the latter part of 1980s are expected to continue throughout the 1990s as well. However, the government continues to guide the financial institutes to adopt low interest rates in practice. The Seventh Five Year Plan which commenced in 1992, envisages among other things substantial moves to deregulate interest rates. As for institutional reforms, the establishment of new financial institutions were approved; the status of the Korea Exchange Bank was changed; financial investment companies were permitted to be converted into commercial banks or securities companies; the number of branches of foreign banks was increased; and the regulations concerning their scope of business were relaxed.

The liberalization of interest rates proposed under the plan would be undertaken in three steps. The first step would be the liberalization of coupon rates on corporate bonds, the interest applicable to various forms of credit, and on Certificates of Deposits (CDs). The second step will involve the liberalization of coupon rates on Money Stabilization Bonds and government bonds. It would also permit banks to sell market interest-based financial products. The third step would be the liberalization of interest rates on deposits at non-banks and long-term banking institutions. These measures coupled with the proposed internationalization of the national currency, Won, the deregulation of foreign exchange controls and the structural revision of the capital market are expected to further enhance the domestic resource mobilization effort of the country.

2.3 Malaysia

Malaysia's financial system has undergone several changes during the last three decades in that its financial institutions transformed from the main objective of financing trade and commerce, to mobilizing and channeling financial resources to the growing sectors of the economy. The changing economic environment, the expansion of the system of banking and other financial institutions as well as financial deregulation were largely helpful in the transformation of the Malaysian financial system.

The financial sector of Malaysia can be categorized into three types of institutions: the banking system (Bank Negara Malaysia, 36 commercial banks, Bank Islam Malaysia Berhad, 41 financial companies, 12 merchant banks, 7 discount houses and 8 money and foreign exchange brokers), non-bank financial institutions (comprising development finance institutions, the savings institutions, provident and pension funds, insurance companies and other financial intermediaries such as building societies, Unit Trusts and several special investment agencies), and the capital market. The banking institutions are supervised by the central bank while non-bank financial institutions, except insurance companies which came under the supervision of the Central Bank in 1988, are supervised by the respective government agencies.

The expansion of banking facilities in Malaysia during the past 3 decades was instrumental not only in providing enhanced investment opportunities but also in bringing in the banking habit to a wider section of the population while mobilizing the savings required for investment. In early 1959, there were 23 commercial banks with 99 branches concentrated mainly in urban areas. By 1992, the numbers have increased to 37 commercial banks and 1050 branches throughout the country. There are, in addition, 41 finance companies with 603 branch offices and 12 merchant banks with 17 branch offices operating in the country. These institutions are supplemented by a number of development finance and savings institutions as well. These developments in the financial sector have led to a substantial growth in the financial savings mobilized by commercial banks of the country during 1970-1991, as shown in Table 6.

Financial liberalization based on market principles was started at a relatively early stage in Malaysia, notably in the early 1970s with the introduction of a bidding system for government securities in 1973. In August 1973, the interest rates on finance companies were deregulated. In October 1978, interest rates on deposits and non-priority loans of commercial banks were formally freed, but remained significantly influenced by the behaviour of a few banks. An inter-bank rate mechanism was introduced in late 1981, under which each individual bank announced its own Base Lending Rate (BLR) in line with its cost of funds. The rate was however, under constant supervision by the central bank. From November 1983, all lending rates of commercial banks were pegged to the BLR which applied to the banks' prime customers. In

February 1991, interest rates were fully liberalized. Following this, the Base lending Rate (BLR) was also freed from the administrative control of the central bank.

Meanwhile, the technological advancements particularly those related to communications and electronic banking have transformed the range and speed of banking services available to the public while providing additional incentives for greater financial intermediation. The first Automated Teller Machine (ATM) was installed in Malaysia in 1981. Since then, the number of ATMs has increased to 1335 by end of 1991. Some banks have now teamed up to share ATM networks to provide a better and speedy service to their customers. All banks have computerized their operations particularly in the consumer deposit sector by end of 1991. Further, banking hours have been extended beyond the traditional five hours during week days and two hours on Saturdays to more than twelve hours and in some cases to 24 hours.

Additionally, various innovative measures have been introduced by a number of banks and finance companies in recent years to increase the savings deposits. One such scheme is the formation of special clubs and giving away educational materials for opening new savings accounts. This will inculcate the saving habits among school children while mobilizing more savings. Introduction of a multi-tier interest rate structure where the interest rate rises with the amount of savings deposit is another measure.

Measures were also taken to strengthen the supervisory activities of Bank Negara Malaysia over the financial institutions and thereby to ensure soundness and creditworthiness of such institutions. The central bank in this connection issued a set of guidelines to commercial banks in 1989 and 1990 requiring them, among other things, to comply with the capital adequacy rules.

The financial liberalization policies in Malaysia are continuing along with some obligatory fund distribution policies such as the "Bumiputra" policy and the existence of "Islamic Banking" concept².

2. Interest free banking where the bank and the customer will share the capital as well as profits of projects funded by the bank. In Malaysia, Islamic Banking has reportedly proven to be successful.

2.4 Myanmar

Myanmar's financial system up to 1988 had been characterized by policies of a centrally planned economy. Nationalization of all 25 commercial banks, of which 14 were foreign owned, and other financial institutions in 1963, was a major feature in the banking policy which culminated in the creation of the Union of Burma Bank in 1972. Union of Burma Bank was reorganized in 1976 to delineate some commercial bank functions from Central Banking, functions resulting in the creation of three specialized banks namely the Myanmar Economic Bank, Myanmar Foreign Trade Bank and Myanmar Agricultural Bank. Union of Burma Bank continued to function as the Central Bank.

The moves to transform the Myanmar economy into a market-oriented one began in 1988. Since then, a new bank called the Myanmar Investment and Commercial Bank has been established in 1989 bringing the total number of state-owned commercial banks to 4. Apart from the Central Bank, these four banks together with the state-owned Myanmar Insurance Corporation, constituted the financial sector in Myanmar until 1991. These institutions which have wide network of branches throughout the country have been able to mobilize a large amount of financial savings over the past 1 1/2 decades. In line with the financial reforms being undertaken, several banking laws were introduced during 1990-1992.

In 1990, The Central Bank of Myanmar Law, the Financial Institutions of Myanmar Law and Myanmar Agricultural and Rural Development Bank law were introduced. Savings Banking Law was enacted in June 1992 with a view to enhancing the efficiency of the savings mobilization effort. The new laws have allowed the establishment of local and foreign financial institutions under an atmosphere of competition with supervision and regulation by the central bank. Following the new laws, new financial institutions have begun to appear in Myanmar. Five private banks were opened in 1992³. In January 1993, the first foreign bank to open a branch in Myanmar, the Thai Military bank, opened its representative office in Yangon.

3. They are the Myanmar Citizens Bank Limited, the Cooperative Bank Limited, the Yadanabon Bank Limited, the First Private Bank Limited and the Myawaddy Bank Limited.

In addition, several other measures were taken as part of the ongoing reform process. Interest rates on Treasury Bills and bonds were raised in 1989 to reflect market rates. Myanmar Economic Bank introduced 'call deposits' providing additional instruments for savers beyond the existing savings deposits and savings certificates. The interest rates on fixed deposits were raised in October 1989 while those on savings deposits and savings certificates were raised in July 1992. While interest rates seem to be still under the control of the central bank, the gradual relaxation of restrictions on entry into the Myanmar financial sector may be interpreted as indications of the country's commitment to pursue a programme of financial and economic liberalization in the near future. If the process is allowed to continue steadily, it is expected to generate more competition in the banking system and mobilize resources in an efficient manner based on a more market-oriented system of interest rates than that previously undertaken.

2.5 Nepal

Nepal's financial system comprises of the Central Bank (Nepal Rastra Bank), five commercial banks, non-bank financial institutions such as development banks (Agricultural Development Bank and Nepal Industrial Development Corporation), Provident Fund Corporation, insurance companies, postal savings system, cooperative societies, Credit Guarantee Corporation and the Securities Exchange Centre. The commercial banks dominate the financial system with 80 per cent of total deposits being with them. Of these commercial banks, the two government-controlled commercial banks share between them a major chunk of total deposits.

During the past 2-3 decades, Nepal undertook several measures to develop the financial system and thereby to mobilize a greater amount of financial savings. Apart from creating new institutions, expansion of bank branches was thought to be a good way of both collecting small and scattered savings and achieving a higher degree of monetization of the economy. Consequently, by 1977, all 75 districts of the country were provided with bank branches under a policy sponsored by the Banking Promotion Board set up in 1968. By 1991, the number of people served by a bank branch amounted to nearly 42,000. The seventh plan (1986-1990) however, had a target of 30,000 people for a bank branch.

Nepal also attempted to rationalize its interest rate structure from time to time by adjusting deposit and lending rates. In 1980, interest rates were partially liberalized with minimum rates on deposits and maximum rates on priority lending schemes. In May 1986, the authorities allowed banks freely to set deposit rates at or above minimum rates and freed lending rates (except for a maximum lending rate of 15 per cent for loans to priority sectors). A complete liberalization of interest rates was undertaken in 1989. Following this, several other measures were taken with a view to achieving market interest rates as well as enabling effective monetary management.

During the financial year 1991/92, the basic refinance rate of the Nepal Rastra Bank was raised to 13 per cent while the total liquidity requirement of commercial banks was raised to 36 per cent (which was later reduced to 34 per cent in 1992/93). In order to mop up excess liquidity in the economy, the NRB issued debentures on auction basis, during the year. In a bid to improve the financial and management aspects of the two largest commercial banks in Nepal namely, Nepal Bank Ltd. and Rastriya Banijya Bank, the second phase of the Commercial Banks' Programme Analysis and Strategy Study (CBPASS) was implemented. This phase of the study is expected to address the issues such as the recovery of overdue loans, restructuring of the credit procedures, consolidation of the manpower policy and management information systems.

There were also indications that the financial sector was being opened up for more competition. A policy on setting up of finance companies was formulated, and four (4) new finance companies came into operation during the financial year 1992/93. The first private bank in Nepal, Himalayan Bank Ltd., was established and another private bank, Everest Bank Ltd., was registered. The policy of opening bank branches only on the basis of commercial considerations was also introduced during the year.

In order to meet the credit needs of the poor more efficiently and effectively, two new rural development banks were established⁴. Attention was paid to the development of the capital market as a major source for domestic resource mobilization. As such, some measures were

4. Currently, a Rural Credit Survey is being undertaken with the assistance of the Asian Development Bank.

taken in this direction. A study on the capital market development with technical cooperation from the Asian Development Bank was initiated. Permission was granted to Nepal Industrial Development Corporation to issue Negotiable Certificates of Deposits with five years maturity period and carrying 14 per cent annual rate of interest. One public limited liability company was allowed to raise funds by issuing debentures. In the meantime, measures were also taken to provide better services to the customers of financial institutions. For instance, directives were issued to commercial banks to simplify and improve the loan procedures. Individual customer credit limits and priority sector credit limits were increased and an Industrial Refinance Fund was set up. Banking Acts were revised where necessary to accommodate some of the measures undertaken during the last 2-3 years.

There were clear indications that Nepal is moving towards a liberalized financial system although there still exists some non-market credit allocation mechanisms such as the NRB Refinance Scheme. Also it might be worthwhile to see whether the rural development banks could compete with other commercial banks on an equal footing. Most important, the success of the reforms would be dependent on the proper management of other macroeconomic aggregates particularly budget deficits and inflation.

2.6 Philippines

The financial system of the Philippines is composed of the Central Bank, the commercial banks, thrift institutions, specialized government banks, rural banks, and non-bank financial institutions. Commercial banks with larger and diversified portfolios of assets and liabilities dominate the activities of the financial system. The new branching policy effected in 1991 has enabled the commercial banks to expand their branches from 1,863 in 1990 to 2,077 at the end of the first quarter of 1992. The introduction of the modified universal banking system in 1980 also saw the commercial banks assuming a larger role in domestic resource mobilization. The thrift institutions consisting of savings banks, private development banks, stock, savings and loan associations had 674 branches, while the two specialized government banks had 76 banking units, and, rural banks, 1,109 units at the end of March 1992. Non-bank financial institutions (NBFIs) consisting of investment houses, finance companies, investment companies securities dealers/brokers, fund managers, lending investors, private insurance companies, non-stock

savings and loan associations, pawnshops and venture capital corporations, dominate the financial system in terms of the number of branches which totaled to 24,450 at the end of the first quarter 1992, although they are the second largest in terms of total assets and liabilities.

During the past two decades, the financial savings of the Philippines grew rapidly in response mainly to the financial reforms and other policy measures which were undertaken during that period. Total deposits mobilized by the banking system has increased continuously as shown in Table 3.1. Introduction of the universal banking system, interest rate deregulation, rationalization of Central Banks discount window facilities, lifting of the moratorium on establishment of new banks (1991) and liberalization of bank branching policy together with strengthening of the regulatory framework of financial institutions were some of the reasons responsible for this improvement.

Based on a World Bank - IMF joint survey in 1979, a series of financial reforms were pursued in the Philippines beginning in 1980. These reforms aimed at the mobilization of domestic savings particularly for the requirement of long-term funds and to increase the efficiency in the financial intermediaries through the development of financial and capital markets. Among these new measures, the introduction of the universal banking system and the deregulation of interest rates beginning in 1981 were considered most important. In July 1981, ceilings on all deposit rates were lifted while those on medium and long-term lending were lifted in October 1981. The remaining ceilings on short term lending rates were eliminated at the end of 1982.

The reform package of 1980 included specific measures to enhance the efficiency of financial institutions by increasing the scope for more competition and allowing the expansion of the scale of operation. Further, banks and other financial institutions were encouraged to merge or consolidate in order to become strong and stable. The government also raised the minimum capital requirements and approved 100 per cent investment by commercial banks in savings and private development banks. Automation of financial services expanded⁵ while computeriza-

5. The first Automated Teller Machine (ATM) was introduced in 1983.

tion of banking activities intensified the competition in banking, particularly in deposit mobilization.

Interest rate deregulation was a key element in the reform package of 1980. Interest ceilings on savings deposits, Negotiable Order of Withdrawals (NOWs) accounts, deposit substitutes and loans (except those with maturities of less than 2 years) were removed in July 1981 while interest rate ceilings on short term loans were lifted in January 1983 reaching a state of almost complete liberalization of interest rates. At the same time, the central bank's rediscount facility was rationalized with a view to encouraging commercial banks to mobilize funds through other sources. The central bank also reduced the reserve requirements on short term deposits in order to increase the loanable funds of commercial banks and to reduce intermediation costs.

The financial reforms process of the Philippines was temporarily interrupted during 1983-1985 as a result of the deterioration in the economic and political situation in the country as well as due to the financial crises and management problems faced by some financial institutions. The reforms were resumed in 1987 with some structural adjustment loans from the World Bank. They basically focus on the improvement of the legal and supervisory framework for the financial system, strengthening of the banking system, reducing the intermediation costs and improvement in the mobilization of long-term credit. In effect, they consisted of a follow-up on the financial reforms undertaken in the early 1980s.

2.7 Singapore

Singapore's financial system comprises the Monetary Authority of Singapore (MAS), commercial banks which are categorized as Full License Banks, Restricted License Banks and Off-Shore License Banks, and others which include merchant banks, finance companies, the Post Office Savings Bank (POSB), insurance companies and the Central Provident Fund (CPF).

Traditionally, Singapore has been a domestic and regional banking and financial centre which reflected in part, its geographical location and its role as an entrepot. Beginning in the late 1960s, its role expanded and attempts were made to develop the financial sector as a major growth industry in its own right. By late 1970s, Singapore emerged as one of the major financial capitals in the world.

Being a major international financial centre, Singapore has a well developed, technologically advanced financial system with a large number of financial instruments in which depositors can place their funds. The interest rates are guided by those in the other major financial centres in the world. The rapid development of the financial system of Singapore was made possible by a series of policy measures undertaken particularly during the 1970s. In 1970, the then prevailing policy of not permitting entry of new foreign banks and financial institutions was reversed. In 1971, the Monetary Authority of Singapore was established and took over the supervision, control and licensing of all financial institutions in Singapore.

Other measures that helped in the development of the financial system in Singapore are, (a) the progressive relaxation of exchange controls culminating in complete liberalization in 1978, (b) provision of a variety of fiscal incentives to promote the growth of financial activities and the development of new financial instruments, (c) the relaxation or removal of restrictive practices to encourage healthy competition and growth in the financial industry and (d) the expansion of the pool of expertise in the financial industry through developing training facilities and adopting liberal entry requirements for skilled personnel. Studies have reported, however, that Singapore's financial market is characterized by policies to protect local financial institutions from excessive competition as well as management of the Singapore dollar so that it is not exposed to fluctuations on international financial markets⁶. Nevertheless, the important fact is that Singapore experienced a rapid expansion in the financial system leading to larger financial savings during the past two decades. It has the highest savings rate in the world.

2.8 Sri Lanka

Sri Lanka's financial system consists of the central bank, commercial banks, development banks, non-bank financial institutions, contractual savings institutions and investment and advisory type institutions. Following the liberalization of the economy in 1977, the branch network of the commercial banks was expanded and foreign banks were also allowed to open branches in the country. Between

6. Financial and Capital Markets in Asia, FAIR, September 1991.

1980 and 1991, the number of commercial bank branches increased from 489 to 763, while the total number of branches of both banks and non-banks increased from 1605 to 2061 during the same period.

The expansion of branch network of financial institutions was accompanied by a set of financial reforms such as the deregulation of interest rates, strengthening of the regulatory framework and introduction of new financial instruments. Following the deregulation of 1977, several financial sector reforms were undertaken particularly since 1988. Major reforms were in the areas of monetary policy management, interest rate deregulation and strengthening of regulatory frameworks, all of which were aimed at creating a more market-oriented financial structure and monetary management in the country.

In monetary policy, the major thrust was placed on Open Market Operations (OMOs). In order to facilitate OMOs, attempts were made to improve the efficiency of the Treasury Bills (T Bills) market. T Bills of long-term maturity (up to 12 months) were introduced and primary dealers to deal in T Bills were appointed. The auctioning procedure for T Bills was streamlined by disallowing the captive sources⁷ from bidding and restricting the "Tap System"⁸ to individuals. The captive sources were given a weighted average rate determined by the non-captive sources. Apart from the improvements in the T Bills market, a Monetary Operations Unit (OMU) was set up within the Central Bank for the purpose of efficient management of short-term liquidity and reserve money.

In the area of interest rate deregulation, several measures were taken. First, the T. Bills rate was allowed to be determined primarily on the basis of the interplay of market forces. In order to provide more information to the bidders, the Central bank would announce the weighted average yield rates for the most recent transactions and the amounts available for the current auction. In the secondary T Bills market, the differences between the discount rates and rediscount rates were narrowed. Meanwhile, refinance rates in respect of a number of credit facilities were adjusted in a bid to move towards market interest rates.

7. Such as the Employee Provident Fund, National Savings Bank and the Insurance Companies.

8. Under the Tap System, treasury bills were offered at rates based on the weighted average for the previous week and were available for purchase at Central Bank Regional Offices as well as authorised commercial banks and money brokers.

Ensuring financial viability of commercial banks and non-bank financial institutions in the country received top priority in recent years. This followed the failure of several non-bank financial institutions (NBFIs) and the emergence of severe financial difficulties among some major commercial banks in recent years. In order to prevent further failures and to ensure the viability of financial institutions primarily through the strengthening of the regulatory framework, several measures were taken. First, the legal provisions relating to commercial banks were consolidated into one general banking legislation namely, Banking Act No 30 of 1988. With the enactment of the Debt recovery Act of 1990, it is expected that the loan recovery process will be expedited as the legal barriers that hitherto existed in the legal framework which resulted in the delays in loan recovery were removed. A Credit Information Bureau (CIB) was set up in 1990, in order to collect information relating to borrowers from lending institutions and to provide such information to the share holder financial institutions of the CIB.

Finance Companies Amendment Act of 1988 strengthened the supervisory and regulatory powers of the central bank over the finance companies. The Act required all finance companies in Sri Lanka to register with the Central Bank and to meet minimum levels of 'issued' and 'paid up' capital⁹ and liquid assets¹⁰. Interest rate ceilings had to be imposed on NBFIs in order to prevent excessive competition. The finance companies were also required to maintain capital funds of not less than 10 per cent of total deposit liabilities. Limits were imposed on loans to single borrowers¹¹. Limits were also imposed on lending to directors of financial institutions in order to prevent mismanagement of funds.

The most important reforms in the banking sector in recent years related to the restructuring of the two state-owned commercial banks, the Bank of Ceylon and the Peoples' Bank¹². The basic parameters of the restructuring programme involved recapitalization, transfer of

9. Not less than Rs. 5 million.

10. Minimum holding of liquid assets would not be less than 15 per cent of deposit liabilities.

11. Such loans should not exceed 10 per cent of capital funds.

12. The two banks together hold over 60 per cent of the assets of the entire banking system, but have recently been found to be technically insolvent. Under the restructuring programme for the two banks, a budgetary provision of Rs. 24 billion has been set apart in the 1993 budget.

selected bad loans and removal of administrative and legislative constraints. The two banks have also been given a fair degree of autonomy so that they can approve their annual budgets, determine staff cadres and salary scales and purchase goods and services in accordance with their own procedures without the approval of the government.

Additionally, new prudential regulations and capital requirements were introduced to improve the viability of the banking system. The government also announced a gradual removal of the turnover taxes on banking and NBFIs with a view to reducing the cost of financial intermediation and enhancing the domestic resource mobilization process.

The capital market was another area which received much attention from the authorities during the recent years. Among the measures to deepen the capital market of the country were the removal of barriers to share ownership of listed companies by foreigners, removal of the capital gains tax on listed shares, removal of exchange control regulations allowing foreigners to bring in and out foreign exchange for the purpose of investing in shares of listed companies through the Share Investment External Rupee Accounts (SIERAs), establishment of a Central Depository System (CDS) to improve the efficiency of share trade, settlement and registration process¹³ and granting authority for the Unit Trusts to operate in Sri Lanka which will enhance the investment opportunities for small savers.

Further liberalization of exchange control regulations allowed the non-resident Sri Lankans and foreign nationals to open Numbered Accounts¹⁴ and Sri Lankan residents to open Resident Foreign Currency Accounts (RFCAs) with any commercial bank. Furthermore, money changers were also allowed to operate so that conversion of foreign currencies to other foreign currencies will be facilitated.

13. Which among other things would simplify procedures and gives immediate credit to the buyers on the settlement and minimise frauds.

14. Secret numbered accounts to which foreign exchange in designated currencies could be credited. The source of funds is immaterial and funds can be used for any purpose.

The monetary policy of the central bank continued to be an integral part of the reform process and greatly facilitated the reforms already in place during 1992 as well. While moving away from direct to indirect instruments of monetary control, the central bank placed heavy emphasis on open market operations as well as statutory reserve requirements (SRR) as major instruments of monetary policy. The central bank refinance rate was rationalized and revised upwards in order to reduce distortions in the interest rate structure and move towards market interest rates. The extension of the reserve requirement of commercial banks to cover all deposit liabilities including foreign currency deposits has made the SRR an effective monetary policy instrument. This measure was also thought to be conducive to the implicit policy of sustaining short-term interest rates high.

2.9 Taiwan

The financial system of the Republic of China, Taipei consists of the Central Bank; the deposit money banks comprising domestic as well as branches of foreign banks, medium business banks, credit cooperative associations, credit departments of farmer's associations; investment in trust companies; insurance companies; finance companies and postal savings system. In terms of scale as well as scope of financial activities, deposit money banks dominate the financial system.

Over the past two decades or so, the savings mobilized through the financial system in the Republic of China, Taipei have expanded substantially owing primarily to the higher rates of economic growth, low inflation and interest rate deregulation resulting in high real interest rates, bank branch expansion programme and external trade surplus. As can be seen from Table 2, the total deposits of the banking system increased from 22 per cent of GDP in 1970 to 70 per cent of GDP in 1991. The number of deposit money bank branches increased from 882 in 1970 to 1396 in 1989. The number of post offices that collected savings increased from 619 in 1970 to 1,181 in 1989.

Several measures were taken in recent years to liberalize the financial market in Taiwan. Until 1989, Taiwan's interest rates were strictly controlled by the Central Bank. Upper limits had been set for deposits of different types and terms and upper and lower limits for loans of different terms had been fixed. Actual interest rates were usually close to the upper limits owing to the chronic shortage of funds. However,

following the G-5 meeting in 1985, there was a surge in the inflow of foreign funds which created an over supply of capital. This led to a decline in interest rates even below the minimum level set by the central bank; and, for a period, banks rejected large time deposits. As a response to these developments, a system of posting standard loan interest rates was implemented in 1985. In 1986, deposit rates were partially deregulated¹⁵.

With the revisions to the Banking Law in July 1989, the Central Bank abolished the regulations controlling interest rates on deposits and loans. Under the new system, deposit rates are to be posted at the counter and are applicable to all customers equally. On the loans side, the standard loan interest rates are to be posted and actual rates are determined based on the standard rates.

In a bid to reduce the activities of the unorganized private financial market¹⁶ and to attract such funds into the organized market, banking activities were expanded. With basically the same objective in mind, the revised Banking Law allowed the establishment of new private banks. It also liberalized foreign banks' operations with regard to trust business, savings deposits and long term (over seven years) loans. With the deregulation of interest rates and the liberalization of foreign exchange market, the Central Bank's control over the financial market appears to be changing from a direct role to an indirect one. At the same time, the authorities are promoting the structural enhancement and independent operations of financial institutions. The main tools to accomplish this are the modification of the reserve ratio, financial adjustment through treasury bills and the regulation of the ratio of banks' own capital (8 per cent or above). The banks are also strongly encouraged to adopt and strengthen healthy loan policies. Since the banking law of 1989 stipulated that only commercial banks are permitted to accept deposits, it is expected that a large volume of funds that had been circulating in the "underground" financial market will be diverted to the organized financial market.

15. Financial and Capital Markets in Asia, FAIR, Tokyo, 1991.

16. Some experts estimate that organized financial institutions account for only 60-65 per cent of Taiwan's total financial market and the remaining are accounted for by the unorganized operations. See Financial and Capital Markets in Asia, p.142.

2.10 Thailand

The financial system of Thailand consisting of the Central Bank, commercial banks, finance companies such as finance and securities firms, investment trust companies and real estate finance firms and other formal institutions such as the government affiliated special banks. In addition, it might be worthwhile to mention, that there are also informal but well known organizations such as mutual financing associations as well as unauthorized organizations called "Chit Funds" (or "share game" in Thai)¹⁷. Commercial banks and finance companies account for about 80 per cent of total deposits mobilized by the system.

Thailand has been pursuing a policy of financial deepening since the late 1970's. They ranged from interest rate deregulation to expansion of financial institutions in scope of activities and in number while improving and strengthening the regulatory framework. They also included measures to deepen the money and capital markets. For instance, in 1980, interest rate ceilings on financial institutions were freed from the 15 per cent rate imposed by Civil and Commercial Code of 1924. Since then, the interest rate was set by the Minister of Finance on the advice of the Bank of Thailand (BOT). The BOT encouraged the commercial banks to introduce the Bangkok Inter-Bank Offered Rate (BIBOR) as a reference for the pricing of floating rate loans to customers. The controls on the opening of Letters of Credit (LCs) were also lifted in the same year. In 1986, interest rate ceilings on credit to priority sectors were lifted. In 1989, the interest rate ceilings on commercial banks' time deposits of more than 1 year maturity were removed followed by the relaxation of ceilings on other types of deposits of commercial banks as well as finance companies and credit companies. In March 1990, interest rate ceilings on time deposits with a maturity of one year and below were abolished. At the same time, the maximum interest rate for loans was raised from 15 per cent to 16.5 per cent (and to 19 per cent in November 1990). The financial institutions now have the flexibility to adjust their interest rates in line with market conditions.

17. According to the household savings surveys carried out by the Bank of Thailand, in 1980, 16.2 per cent of total deposits and 40.4 per cent of total loans were in the informal market.

Several steps were taken to strengthen the structure and viability of financial institutions since 1979. By amending the Commercial Banking Act of 1962, legislation was brought to broaden the base of the share ownership of commercial banks in 1979. Meanwhile, when some financial institutions were ridden by crises in the 1980s, the monetary authorities took immediate action by dispatching experts from the Ministry of Finance while the BOT provided management guidance and emergency finance and set up a fund to cover deposit withdrawals from bankrupt finance companies. In November 1985, the so-called three finance laws, namely, the Bank of Thailand Law, the Commercial Bank Law and the Finance, Securities and Real Estate Finance Law, were revised to strengthen the Finance Ministry's supervisory power. Punitive provisions including dismissal of directors have been legislated against illegal loans by commercial banks and finance companies.

In 1984, the BOT imposed a minimum margin loan requirement at 25 per cent for finance companies granting margin loans. In order to improve the loan structure of commercial banks, the maximum overdraft loan limit to any one person was fixed at Baht 50 million in 1985. Financial institutions' portfolio management was relaxed to a minimum level necessary to maintain stability and solvency of the financial system. The BOT also sought to improve the methods of supervision, examination and monitoring the operation of financial institutions in line with Bank for International Settlements (BIS) capital adequacy requirements beginning January 1993. In this respect, commercial banks are required to maintain a capital to risk asset ratio of 7 per cent. The finance companies are expected to adopt the same ratios by 1993.

Measures were also taken to move towards a more market-based monetary management. In 1979, the Repurchase Market was established to help develop the money market. Since then, the repurchase market in government securities became the main channel for the BOT's open market operations. In 1987, the BOT initiated sales of its own bonds to mop up excess liquidity in the banking system. In 1991, financial institutions were required to maintain liquidity reserve ratios in place of the reserve requirement ratio and allow commercial banks to hold other liquid assets such as BOT securities, debentures, bonds or other debt instruments issued by government or government-sponsored organizations as approved by BOT, as part of their liquidity reserves.

A joint private-public "Small Industries Credit Guarantee Fund" was set up in 1984 to provide credit guarantees to small industries with fixed assets less than Baht 10 million. A Financial Institutions Development Fund (FIDF) was set up within the BOT in 1985 with the purpose of increasing the flexibility in giving financial assistance to financial institutions in distress. In 1988, BOT's rediscount facilities were reformed whereby commercial banks received 50 per cent refinance at 3 per cent - 5 per cent rate of interest while borrowers are charged 10 per cent interest. For this, a maximum credit limit for each bank was set by a credit line which is reviewed every six months. In 1992, the BOT adjusted the rural credit requirement to cover more related occupations.

Adjusting the exchange rate by pegging it to a basket of currencies was done in 1984 to strengthen the competitiveness of the country's exports and to provide more flexibility in response to developments in the international exchange markets.

Mergers of finance companies were encouraged by offering incentives for newly merged companies to open branches¹⁸. In the same year, the BOT recommended to the smaller banks to concentrate on particular regions and introduced the "mini-branch" concept to save on the cost of operation of a full-fledged branch. The commercial bank branch opening requirement in rural areas has also been relaxed as well as the government bond holding requirement to fulfill the branch opening condition from the previous level of 16 per cent of total deposits to 9.5 per cent, 8 per cent, 7 per cent and 6.5 per cent, the last in November 1992.

The scope of operation of financial institutions was expanded to allow greater competition in the supply of financial services¹⁹. The scope of activities of commercial banks and finance companies was expanded in 1987 to include custodian services, loan syndication, acquisition, merger

18. Previously, finance companies could open only one branch.

19. In addition to allowing commercial banks to act as selling agent for public debt instruments, arranger, underwriter and dealer in debt instruments, and acting as financial adviser in the mergers, acquisition and take-over cases, finance companies and securities companies were permitted to operate leasing services, act as selling agent for public debt instruments, as well as arranger, underwriter and dealer for debt instruments and act as mutual fund supervisor.

and consolidation, advisor and feasibility studies. In order to enable the credit companies to efficiently mobilize funds from the public through the issuance of promissory notes, in 1986 credit companies were allowed to reduce the maturity of such notes from 3 years to 1 year without prematured redemption.

The Securities Exchange Act of 1974 was amended in 1984 enabling the Securities Exchange of Thailand (SET) to have a better control of the trading activities. Under these changes, all insider trading must be recorded in the SET. The Securities and Exchange Act B.E. 2535 (1992) has been promulgated to supervise securities businesses, foster the development and issuance of financial instruments and protect savers and investors. Commercial banks and finance companies have been permitted to issue Negotiable Certificates of Deposits (NCDs). In 1992, seven new companies were awarded mutual funds management licenses. Plans have also been drawn to develop the cheque clearing system and inter-bank fund transfer system in order to enhance the efficiency of the payments system.

To ensure continuity of the reform process, the financial reforms plan was incorporated in the BOT's Three-Year Plan (1990-1992). During the plan period, a series of measures were taken to further deregulate interest rates and liberalize exchange controls by freeing all current account transactions and reducing restrictions in capital movements. Controls on new branch opening were relaxed and the scope of activities for financial institutions and securities companies was expanded. The banks were given concessions on the maintenance of liquidity ratios. Also, rural credit definition was broadened to include further activities. Continuation of this financial reform process is an important feature of the second Three-Year Plan (1993-1995), which also envisages to develop Thailand into a major regional financial centre.

The growth of financial savings in Thailand particularly those of the commercial banks as observed in Table 3.1, is closely linked to the rapid economic growth as well as the financial deregulation process mentioned above. With these reforms, it is expected that the role of the unorganized financial market will be reduced to an insignificant one.

III. Financial Deepening

The phases and the degrees of financial liberalization vary greatly across SEACEN countries and so are the degrees of financial deepening. Since financial reforms are relatively new to most of these countries, sufficient number of data points may not be available for a post-reform period to make any meaningful analysis. Nevertheless, an attempt is made here to examine some key indicators of financial deepening as well as the data permit.

Table 3.1 indicates that, in general, interest rate liberalization has a positive association with the growth of financial savings²⁰. This is particularly so with the high income countries in the region. For example, the highest deposit to GDP ratio is reported in Singapore followed by Taiwan, Thailand and Malaysia. In fact, in Singapore, deposits with commercial banks have even exceeded the country's GDP in 1991. In the relatively low income countries in the group, the level of financial savings is rather low and grows at a relatively slower pace. The data thus show that financial deepening is also associated with income growth.

Tables 3.2 and 3.3 present some indicators of financial deepening. In Table 3.2, per capita GNP, the ratios of M1 and M2 to GNP, total assets of the financial institutions as well as the market capitalization/GNP ratios are given. According to Table 3.2, Singapore has the highest GNP per capita followed by Taiwan, Korea, Malaysia and Thailand in 1990. The growth of income is also very high in these countries. While the differences between the nations are relatively insignificant in the M1/GNP ratio as M1 is essentially the means of payment, M2/GNP ratio, total assets of financial institutions and total market value of stocks to GNP ratio are far more important in revealing the differences in the level of financial deepening. Going by these yardsticks, the aforementioned countries seem to have reached a higher degree of financial deepening than the others. This confirms the view that the higher the per capita GNP, the greater the difference in the level of financial deepening.

Opening bank branches in unbanked areas is part of financial reforms aimed at increasing financial savings while bringing the

20. A further discussion on the real interest rate movements is given under the heading "Real Interest Rates".

banking habit to such areas. If banks are thin on the ground, then, the unorganized markets tend to thrive. Financial reforms are expected to decrease the volume of transactions in the unorganized (informal) market and divert the funds to the organized market. Table 3.2 has some data on banking density and ratio of currency to M1. The latter ratio may be indicative of the scale of activities in the informal markets as transactions in these markets are based on currency rather than on cheques or other financial instruments. According to the data, very large unorganized financial markets appear to exist in Myanmar, Nepal, Philippines, Sri Lanka and Thailand. In these countries, the ratios have in fact increased between the two years, perhaps due to increased consumption activities. Taiwan has the lowest ratio indicating a very small unorganized market²¹. Also, it appears that the countries with high currency/M1 ratios are generally associated with low banking density ratios.

In general, Indonesia (except in 1991), Korea, Malaysia, Singapore and Taiwan depict increased competition and greater financial deepening. Other countries show either high negative spreads (Myanmar) or high positive spreads (Philippines, Sri Lanka and Thailand) following or during interest rate liberalization (see Table 2.4). According to research undertaken in recent years with regard to the causes of differences in performances after financial reforms in countries in East and South East Asia, Africa and more recently, the former socialist countries in Eastern Europe and former Soviet Republics, institutional developments, macroeconomic stability and timing and sequencing of liberalization have been identified as some of the factors that may inhibit the performance of a financial liberalization programme. In the following section, we first review the level of real interest rates and examine the relevance of these factors to the behaviour of real interest rate spreads in the SEACEN countries.

IV. Real Interest Rates

Table 3.1 and Charts 3.1 to 3.10 show the movement of real interest rates and deposits of the banking system for the SEACEN countries. It will be observed that the countries with relatively more

21. This is somewhat contrary to the observation referred to in footnote 16, but consistent with the understanding that unorganized financial activities are virtually banned.

Table 3.2

Indicators of Financial Deepening

Country	Per Capita GNP US \$ a/		M1/GNP (Nominal)		M2/GNP (Nominal)		Total Assets of Financial Institution/ Nominal GNP		Market Capitalization of Listed Stocks/ Nominal GNP
	1980	1990	1980	1990	1980	1990	1980	1990	
Indonesia	468	577	0.11	0.13	0.18	0.45	0.46	0.97	n.a.
Korea	1594	5662	0.10	0.09	0.34	0.40	0.91	1.04	n.a.
Malaysia	1715	2283	0.19	0.22	0.54	0.77	0.88	1.55	0.27
Myanmar	176	533	0.21	0.22	0.26	0.29	1.21	1.51	n.a.
Nepal	125	148	0.12	0.16	0.23	0.37	0.37	0.59	0.01
Philippines	673	730	0.09	0.08	0.23	0.28	0.67	0.74	0.02
Singapore	4955	13125	0.25	0.24	0.66	0.96	1.83	2.45	0.57
Sri Lanka	278	458	0.14	0.12	0.30	0.29	0.74	0.66	0.004
Taiwan	2332	7880	0.27	0.45	0.64	1.44	1.23	2.15	n.a.
Thailand	683	1408	0.11	0.09	0.39	0.74	0.69	1.11	0.30

a/ Period average exchange rates were used to convert local currency into US\$.

Source: *ADB Key Economic Indicators*, 1992.
SFS, The SEACEN Centre.

Table 3.3
Indicators of Financial Deepening

Country	Population Million		No. of Bank Branches		No. of Bank Branches Per 1000 Persons		Ratio of Currency in Circulation to M1	
	1980	1990	1980	1990	1980	1990	1980	1990
Indonesia	148.04	171.58	5999	7971	0.04	0.05	0.43	0.38
Korea	38.12	0.00	n.a.	2333	n.a.	0.05	0.49	0.44
Malaysia	13.76	17.76	398	998	0.03	0.06	0.49	0.41
Myanmar	33.11	40.79	n.a.	n.a.	n.a.	n.a.	0.92	0.90
Nepal	14.63	18.92	241	439	0.02	0.02	0.63	0.69
Philippines	48.10	60.70	3364	3637	0.07	0.06	0.45	0.70
Singapore	2.28	2.60 a/	307	408 a/	0.13	0.16 a/	0.51	0.47
Sri Lanka	14.75	16.99	877	919	0.06	0.05	0.44	0.52
ROC, Taipei	17.64	20.22	541	762	0.04	0.04	0.28	0.18
Thailand	46.72	56.34	1478	2143	0.03	0.04	0.64	0.70

a/ Figure is for 1988.

Source: ADB Key Economic Indicators, 1992.
 SEACEN Financial Statistics, The SEACEN Centre, 1992
 Open Market Operations: Its Nature and Extent in the SEACEN Countries, The SEACEN Centre, 1991.
 Annual Report, Bank of Korea, 1991.
 Annual Report, Bank Negara Malaysia, 1992.
 Monthly Statistical Bulletin, Nepal Rastra Bank, July 1992.
 Financial Structure of Singapore, Monetary Authority of Singapore, 1991.
 Annual Report, Central Bank of Sri Lanka, 1991.
 Statistical Year Book, Central Bank of China, 1992.

stable real interest rates also have a steadier growth in their financial savings/GDP ratios. Examples of such cases are Malaysia, Singapore, Taiwan and Thailand. Price stability was the key to achieving stable real interest rates in these countries. Real interest rates in Nepal and Sri Lanka fluctuated heavily due mainly to changes in inflation rates, and did not indicate a strong association with financial savings. As shown in the regression results in chapter 2, nominal interest rates rather than the real interest rates are significant in explaining national savings in these countries. All countries show appreciable initial response in financial savings following interest rate liberalization.

The empirical evidence on the effects of interest rates on national savings is inconclusive. In some developing countries, higher interest rates associated with a financial liberalization program seem to have had a positive effect on financial savings. This does not necessarily indicate an increase in total savings but a switch from investment in non-financial assets to financial savings. Increase in savings may well be due to the implementation of other macroeconomic stabilization programmes such as reduction in budget deficits, exchange rate stabilization or due to a diversion of funds from the unofficial market to the official market following a financial reforms programme.

While the relationship between interest rates and savings is still debatable, there is little disagreement about the existence notably until the late 1980s of financial repression leading to major distortions in the economies of most developing countries. Singapore, Malaysia and Sri Lanka were early to recognize it and implement interest rate reforms, while Korea for a long time had been maintaining high, though administered, interest rates. Philippines and Indonesia followed programmes of interest rate liberalizations beginning in early 1980s and Sri Lanka intensified its liberalization in late 1980s. Nepal in 1986 and Myanmar in 1988 started programmes of liberalization. Taiwan and Thailand achieved positive real interest rates in the 1980s owing to financial reforms and macroeconomic stability. The SEACEN countries have thus recognized the need to liberalize the financial markets which would lead, among other things, to market determination of interest rates. The interest rates will then turn to positive levels in real terms and enhance savings and investment under stabilized macroeconomic conditions. While macroeconomic stability differed from country to country, the actual interest rates in many developing countries, however, were far from being market-oriented despite reforms. There were several reasons for it.

The low interest rates that persisted in many developing countries allowed the government to extract seigniorage and reduce the cost of financing the budget deficits. In countries like Malaysia, Nepal, Philippines and Sri Lanka, "target groups" and "priority" sectors and regions featured quite frequently in government programmes which required the existence of a system of administered loan rates that are generally much lower than the market rates. In these cases, the interest rate was used more as an instrument of development and income policy rather than an instrument of monetary policy. Besides, as Shaw (1973) pointed out, there was a belief that financial institutions extract monopoly rents and, in the eyes of the policy makers, it justified government intervention in the financial sector through the use of ceilings on credit and interest rates. Shaw also mentioned the ineffective control that the authorities have over monetary growth as a rationale for financial repression²².

Financial liberalization should lead to real positive interest rates in order to encourage financial savings. While too high real rates will discourage investment and growth, very low real rates will not make a significant impact on savings. There is no consensus as to how high the real interest rate would need to be in order that both saving and investment objectives will be fulfilled. It should depend on many factors such as the current level of savings and investments, the level of development of the economy, the priorities and objectives in government policy, macroeconomic stability and how low the current interest rates are. Some authors have defined real interest rates as being high if they are positive by three (3) or more percentage points²³. How high is too high, however, is not yet clear. One way to address this issue is to compare the deposit rates with lending rates and examine the real interest rate spreads. Financial reforms leading to greater competitions should reduce spreads as financial institutions compete for funds and increase efficiency. Smaller spreads mean greater competition and financial deepening. Very high spreads may indicate that financial institutions are collecting monopoly rents. Table 3.4 presents real deposit rates and real lending rates and the resulting spreads for the SEACEN countries for the period 1980-1991.

22. Shaw, (1991).

23. See Galbis (1993).

Table 3.4

Real Interest Rates and the Spread

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Indonesia												
Real Deposit rate	-6.92	1.55	-0.93	5.44	9.20	13.28	6.03	7.55	12.22	11.75	7.81	11.56
Real Lending Rate 1/						14.32	9.76	9.75	14.11	13.19	9.14	11.19
Real Spread						1.04	3.73	2.20	1.89	1.44	1.33	-0.37
Korea												
Real Deposit Rate	-10.57	-6.41	0.47	4.06	7.53	7.32	7.00	6.80	2.71	4.07	1.29	0.64
Real Lending Rate 2/	-9.20	-2.10	3.78	6.60	7.70	7.50	7.20	7.00	3.15	5.30	1.40	0.70
Real Spread	1.37	4.31	3.31	2.54	0.17	0.18	0.20	0.20	0.44	1.23	0.11	0.06
Malaysia												
Real Deposit Rate	2.14	1.19	4.41	5.11	6.59	7.16	6.24	3.35	2.25	2.58	4.50	3.46
Real Lending Rate 3/	3.50	2.28	6.47	7.90	8.91	11.79	11.30	8.86	6.99	5.85	5.73	4.94
Real Spread	1.36	1.09	2.06	2.79	2.32	4.63	5.06	5.51	4.74	3.27	1.23	1.48
Myanmar												
Real Deposit Rate	1.89	2.19	-2.64	-3.01	-2.23	-4.06	-6.20	-17.88	-11.69	-13.87	-10.18	
Real Lending Rate 4/	7.40	7.70	2.72	2.32	3.16	1.16	-1.28	-16.82	-8.07	-19.13	-13.91	
Real Spread	5.51	5.51	5.36	5.33	5.39	5.22	4.92	1.06	3.62	-5.26	-3.73	
Nepal												
Real Deposit Rate	2.00	-1.23	1.90	-1.49	6.87	9.03	-2.93	-0.71	1.26	5.83	0.67	1.78
Real Lending Rate 5/	0.20	-3.40	0.40	-3.40	4.60	6.70	-0.90	1.70	3.90	8.70	3.50	5.20
Real Spread	-1.80	-2.17	-1.50	-1.91	-2.27	-2.33	2.03	2.41	2.64	2.87	2.83	3.42
Philippines												
Real Deposit Rate	-3.55	-0.09	3.40	3.76	-21.95	-2.65	10.62	5.97	2.98	2.00	5.92	-2.44
Real Lending Rate 6/		4.02	8.05	9.30	-23.66	5.15	16.56	9.51	7.30	7.23	9.90	4.24
Real Spread		4.11	4.65	5.54	-1.71	7.80	5.94	3.54	4.32	5.23	3.98	6.68
Singapore												
Real Deposit Rate	1.93	0.60	3.17	5.44	4.05	4.43	4.72	3.12	2.44	2.13	1.93	0.76
Real Lending Rate 2/	5.14	3.53	5.54	7.74	6.76	6.77	7.46	5.67	4.58	3.88	3.99	4.14
Real Spread	3.21	2.93	2.37	2.30	2.71	2.34	2.74	2.55	2.14	1.75	2.06	3.38
Sri Lanka												
Real Deposit Rate	-4.84	3.48	10.01	9.65	4.63	16.37	5.56	5.85	1.32	8.07	-0.41	6.95
Real Lending Rate	3.90	14.10	19.10	14.00	16.40	28.60	22.00	25.30	19.00	23.50	13.50	21.80
Real Spread 7/	8.74	10.62	9.09	4.35	11.77	12.23	16.44	19.45	17.68	15.43	13.91	14.85
Real Spread 8/						-2.97	1.24	0.65	-0.32	-2.17	-3.39	0.35
Taiwan												
Real Deposit Rate	-5.47	-2.36	7.98	7.15	8.33	7.52	4.80	4.46	3.79	3.47	5.16	5.36
Real Lending Rate 2/	-5.51	-2.15	7.73	7.15	8.27	8.11	6.43	6.23	5.60	5.19	6.06	5.79
Real Spread	-0.04	0.21	-0.25	-0.00	-0.06	0.59	1.63	1.77	1.81	1.72	0.90	0.43
Thailand 9/												
Real Deposit Rate	-8.15	-1.51	5.47	7.03	11.01	7.89	5.10	4.34	5.45	3.99	8.96	5.49
Real Lending Rate 2/	-1.76	6.30	13.76	13.79	17.36	15.83	13.19	12.45	11.16	9.70	11.13	13.30
Real Spread	6.39	7.81	8.29	6.76	6.35	7.94	8.09	8.11	5.71	5.71	2.17	7.81

Notes: Real Deposit Rate = 12 Months Deposit Rate - Inflation Rate, Real Lending Rate = Lending Rate - Inflation Rate, Real Spread = Real Lending Rate - Real Deposit Rate.

Following lending rates were used. 1/. Investment rate. 2/. Prime Lending Rate. 3/. Average Lending Rate. 4/. Working capital loans of state corporations. 5/. For both fixed and working capital. Average of the maximum for agricultural purposes. 6/. Average for all maturities. 7/. Loans and overdrafts. Includes loans and overdrafts secured by gov't securities, shares of joint stock co's, stock in trade, immovable property and other. 8/. Weighted average prime lending rates. 9/. Ceilings on loans and overdrafts. This is the average for 'priority' and 'other' sectors. For 1984 and 1985, the two rate differ by 1.5% points. For other years, the rates are the same.

Source: Table 2.1 and SEACEN Financial Statistics, July 1992.

As Table 3.4 shows, interest rate liberalization has allowed the real deposit rates to increase to positive levels. A notable exception is Myanmar, where all commercial banks were state-owned during the period under review and the nominal interest rates were fixed at remarkably low levels. In Malaysia, interest rates were positive throughout the liberalization period due mainly to successful control of inflation. In Nepal and the Philippines, inflation was high and variable from time to time which resulted in occasional negative real rates. Negative rates in 1986 and 1987 and low rates thereafter in Nepal are also due to insufficient liberalization undertaken.

Table 3.4 reports that in Indonesia, the spread is small and turned to negative in 1991 owing to a lower increase in the lending rate than the deposit rate in that year. Korea has the lowest real spread followed by Taiwan during this period. In Malaysia, the spreads were relatively high during 1985-1989 (about 4.5 per cent) but decreased to little over 1 per cent thereafter. During 1980-1986, Myanmar's financial institutions were enjoying a high real spread but the situation changed since then and the spread became negative in 1989 and 1990. Nepal has shown that interest rate liberalization has helped the financial institutions by turning the negative spreads to positive ones since 1986. Philippines and Thailand have fairly large real spreads while Sri Lanka reports unusually high real spreads when lending rate is defined as the average of the maximum rates applicable to various categories of loans and overdrafts. Conversely, the use of prime lending rate gives a totally different picture of negative spreads²⁴. Singapore on the other hand, has consistently maintained positive but relatively low spreads during the entire period.

In sum, the size and the behaviour of real interest rate spreads is different from one SEACEN country to another in most cases. The exceptions are Malaysia, Singapore and Taiwan where a common trend can be observed. While the nature and the degree of financial liberalization may also vary, the differences in performance may depend to a large extent on the behaviour of several other factors. For instance, the nature and the level of competition among financial institutions, macroeconomic stability and the timing and sequencing

24. Sri Lanka data on lending rates must be used with caution. There can be many lending rates even within the same category. The assumption here is that the financial institutions would charge the maximum interest rate for each category of loans.

of financial reforms may have an important bearing on the outcome of a financial reforms programme. The following section will discuss these factors in relation to interest rate spreads in SEACEN countries.

4.1 Institutional Developments

Financial markets in most developing countries are little developed and the number of financial institutions is small. In many cases, a few banks hold a large proportion of the assets and liabilities of the entire banking system representing an oligopolistic structure in the financial system. This can lead to a situation of monopoly power and/or implicit collusion in the financial sector. For instance, in Indonesia, Nepal, Philippines, Sri Lanka and Thailand, more than 50 per cent of the total assets of the banking sector is held by a few commercial banks, and in some cases, they are government-owned. In Thailand, almost 70 per cent of the total assets of the commercial banking sector (29 banks) is held by five (5) locally incorporated banks²⁵. In a near monopolistic or oligopolistic situation such as this, financial institutions are inclined to increase fees and the spread between deposit and loan rates. This outcome is more likely when there are powerful bankers' associations and weak bank supervisory authority. If there are ceilings on loan rates, the financial institutions tend to increase fees. If fees are included in the ceilings, they ask for larger collateral which the borrowers have to deposit with them at low or no interest. Since the competition is thin, the interest rate spread will widen. High transaction costs arising primarily from high administrative and default costs also add to the increasing spreads. Macroeconomic instability, weak prudential bank supervision and lack of technical expertise are said to further increase the default costs and increase the spreads significantly.

Pricing warfare among oligopolistic financial institutions can take place when the market is subject to intense competition. If the bank supervisory authorities do not act in time to arrest predatory behaviour, especially by large institutions, pricing warfare could lead to high real deposit interest rates as financial institutions try to keep ahead of competing institutions in attracting deposits. It could also lead, in some

25. Commercial Banks in Thailand 1993, Bangkok Bank Public Company Limited, p.12.

cases, to the abnormality of negative spreads between lending and deposit rates. This abnormal situation has reportedly taken place in Turkey during the financial liberalization in 1982-84²⁶.

Government policy regarding the financial sector is crucial in the determination of spreads. Credit ceilings and selective credit policies tend to favour well-established institutions which are sometimes already cartelized and such institutions will try to preserve their market share even by preventing entry of new comers to the market. Further, the governments in many developing countries would want to set up special development banks to finance specific activities or regions in the economy. Often, these institutions have monopoly power in the services they engage in and the resulting market segmentation could increase their ability to extract rent by increasing spreads. The need to exercise strong banking skills such as examining the creditworthiness of borrowers becomes trivial because the market shares are more or less fixed under such conditions.

4.2 Macroeconomic Stability

Macroeconomic stability is required in order to achieve good results from financial liberalization. A stable macroeconomic environment with positive economic growth, moderate or low inflation, a stable exchange rate and a sound balance of payments situation will undoubtedly facilitate the transition to interest rate freedom (Galbis, 1993). McKinnon (1973), Fry (1988) and Hanson and Neal (1985) and many others have repeatedly stressed the importance of this factor. In the case of Asian successes and Latin American failures, Fry (1988) considers price stability, fiscal discipline and policy credibility as the key factors. Dornbusch and Reynoso (1989) note that a high and unstable inflation quite often increases the demand for financial liberalization²⁷ which might further increase inflation if the government runs a budget deficit and the exchange rate is depreciating rapidly. This will further complicate the budgetary position. When exchange rate depreciates rapidly, the cost of servicing foreign debt will increase. If governments resort to money creation, it will fuel inflation. The behaviour of macroeconomic variables, particularly that of inflation, monetary and

26. See Galbis, 1993.

27. Expecting higher interest rates to compensate for inflation.

fiscal position and the external current account would be important in explaining the outcome of an interest-rate liberalization programme.

Tables 3.5 and 3.6 provide data on some important macroeconomic variables namely, inflation (Table 3.5), monetary and fiscal variables and the current account (Table 3.6). According to Table 3.5, inflation in Indonesia was high and variable until 1983, the year of interest rate liberalization. Since then, it remained at single digit levels until 1990 during which time real interest rates in Indonesia were positive. In 1991, however, inflation accelerated and the real spreads became negative. Korea experienced very high inflation rates during the 1970s and until 1981. Korea's efforts to stabilize the economy resulted in inflation coming down to single digit levels during the 1980s. As a result, Korea was able to maintain positive real interest rates and spreads during this period. Malaysia is known for its commendable management of inflation which has remained in single digit levels for almost two decades since 1974; and, most of the time, even below 5 per cent level. Its real interest rates and spreads were also positive as a result.

Myanmar had experienced a phase of high inflation until 1974 and a phase of low inflation during 1975-1986 followed by a further spell of high inflation during 1987-1990. During this last period, inflation averaged over 20 per cent resulting in negative real interest rates and spreads. In Nepal, during 1980-1983, real spreads were negative due to high inflation. The negative spreads during 1984-85 were mainly due to higher increases in deposit rates than lending rates. In 1986, inflation increased to 16 per cent causing the negative spread in that year followed by a period of positive spreads. Financial reforms started in 1986 also caused changes in real interest rates during the following years. Philippines had two periods of high inflation, 1979-85 and 1989-91. The movement of real interest rates in the Philippines was largely influenced by the movement of inflation rates. Nevertheless, except for 1984, when inflation shot up to 50 per cent, in all other years, the real spreads had been positive and high owing to very high lending rates. Low deposit interest rates in 1991 has caused a negative real deposit rate but a very high real spread.

Singapore, like Malaysia, has a credible policy of managing inflation. It started a programme of financial liberalization much earlier than others and for a long time, its interest rates have followed those in major international financial markets. They were also positive in real

Table 3.5
Inflation in SEACEN Countries

Year	Indonesia	Korea	Malaysia	Myanmar	Nepal	Philippines	Singapore	Sri Lanka	Taiwan	Thailand
1970	8.94	15.40								
1971	2.30	14.00	1.60	2.19			1.68	2.70		0.25
1972	25.99	11.70	3.32	7.51		8.41	2.39	6.30	3.01	5.05
1973	27.33	3.00	10.47	25.19		16.42	19.39	9.70	8.17	15.38
1974	33.27	24.30	17.43	25.36		34.10	22.41	12.30	47.47	24.38
1975	19.71	25.40	4.43	31.64	16.80	6.88	2.70	6.70	5.24	5.36
1976	14.21	15.30	2.62	22.34	-0.70	9.12	-1.91	1.30	2.50	4.13
1977	11.82	10.00	4.74	-1.18	2.70	10.00	3.17	1.10	7.04	7.48
1978	6.68	14.50	4.99	-5.99	11.20	7.30	4.85	12.20	5.77	7.95
1979	30.25	18.20	3.54	5.63	3.50	17.50	3.95	10.80	9.75	9.87
1980	17.10	28.70	6.72	0.60	9.80	18.20	8.46	26.10	19.01	19.76
1981	7.34	21.60	9.70	0.30	13.40	13.10	8.30	17.90	16.34	12.70
1982	10.02	7.10	5.83	5.28	10.40	10.17	3.79	10.90	2.96	5.24
1983	11.95	3.40	3.70	5.68	14.20	10.03	1.24	14.00	1.35	3.71
1984	9.08	2.30	3.90	4.84	6.20	50.40	2.64	16.60	-0.02	0.89
1985	4.38	2.50	0.32	6.84	4.10	23.08	0.43	1.40	-0.17	2.42
1986	9.14	2.80	0.72	9.28	15.90	0.79	-1.36	8.00	0.70	1.81
1987	9.25	3.00	0.87	24.82	13.30	3.79	0.43	7.70	0.52	2.55
1988	5.59	7.10	1.96	16.07	11.10	8.70	1.55	14.00	1.28	3.84
1989	6.11	5.70	2.85	27.13	6.30	12.23	2.37	11.50	4.41	5.30
1990	9.94	8.60	2.63	21.91	11.50	14.18	3.48	21.50	4.13	6.00
1991	10.04	9.30	4.39		9.80	18.67	3.38	12.20	3.62	5.70
Average										
70-75	19.59	15.63	7.45	18.38	16.80	16.45	9.71	7.54	15.97	10.08
76-80	16.01	17.34	4.52	4.28	5.30	12.42	3.70	10.30	8.81	9.84
81-85	8.55	7.38	4.69	4.59	9.66	21.36	3.28	12.16	4.09	4.99
86-91	8.35	6.08	2.24	19.84	11.32	9.73	1.64	12.48	2.44	4.20

Sources: SEACEN *Financial Statistics*, 1991 and Country Chapters on Domestic Resource Mobilization in the SEACEN Countries.

Table 3.6

Key Macroeconomic Indicators

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	70-75	76-80	81-85	86-91
Indonesia																										
Growth of M2	41.8	48.5	42.0	47.1	36.2	33.0	19.0	21.7	37.1	47.3	26.3	21.7	24.0	22.3	29.1	19.5	22.5	24.2	39.1	44.6	17.5	43.1	31.6	24.7	27.9	
Growth of Dom. Credit	49.1	24.4	66.3	28.5	69.7	17.8	4.0	39.5	4.6	-6.0	-46.0	99.7	12.3	13.1	37.5	25.4	41.4	42.1	48.3	98.3	18.9	-97.6	12.0	35.7	39.1	
Budget Deficit/GDP Ratio	-4.0	-2.5	-2.6	-2.4	-1.6	-3.7	-2.1	-5.5	-2.8	-2.4	-2.0	-1.9	-2.4	1.4	-1.0	-3.5	-0.8	-5.1	-2.1	-0.4	0.0	-2.6	-2.9	-1.2	-1.5	
Curr. Ac./GDP Ratio	-3.4	-4.0	-3.0	-2.5	-3.6	-2.4	-4.1	1.9	4.2	-0.6	-0.6	-5.8	-7.7	-1.2	-2.1	-4.9	-2.8	-1.7	-1.2	-2.8	-3.3	-4.2	0.2	-3.6	-2.8	
Korea																										
Growth of M2	20.8	33.8	36.4	24.1	28.2	33.5	39.7	35.0	24.6	26.9	25.0	27.0	15.2	7.7	15.6	18.4	19.1	21.5	19.8	17.1	21.9	28.7	31.9	18.1	19.6	
Growth of Dom. Credit	28.9	29.0	20.6	52.6	32.5	22.7	24.0	45.4	35.7	40.6	31.1	25.1	16.0	13.1	17.7	14.6	16.3	11.6	22.8	24.8	22.4	34.5	33.7	20.6	18.8	
Budget Deficit/GDP Ratio	-0.8	-0.3	-3.8	-0.5	-2.1	-2.0	-1.4	-1.7	-1.2	-1.7	-2.2	-3.5	-3.0	-1.0	-1.2	-1.2	-0.1	0.4	1.6	0.2	-1.7	-1.6	-1.7	-1.9	-0.0	
Curr. Ac./GDP Ratio	-7.0	-8.6	-3.4	-2.2	-10.6	-8.9	-1.1	0.0	-2.2	-6.4	-8.5	-6.7	-3.5	-2.0	-1.5	-1.0	4.4	7.5	8.1	2.4	-0.9	-3.1	-6.8	-3.6	-2.9	
Malaysia																										
Growth of M2	13.0	25.6	31.0	15.4	14.8	27.7	16.4	17.9	24.1	26.2	17.9	16.3	9.4	11.4	6.7	11.0	3.8	6.7	15.2	7.4	12.8	19.6	22.4	12.3	9.5	
Growth of Dom. Credit	19.3	27.2	49.3	21.1	18.5	16.5	18.3	24.2	10.3	60.5	35.0	21.6	16.1	18.5	5.8	8.9	3.9	5.3	19.9	19.2	17.5	27.1	25.9	19.4	12.4	
Budget Deficit/GDP Ratio	-4.2	-5.8	-5.0	-5.6	-5.0	-4.1	-4.6	-4.1	-4.9	-4.9	-4.9	-17.9	-19.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	-16.1	
Curr. Ac./GDP Ratio	0.2	-2.5	-4.9	1.4	-5.7	-5.5	5.2	0.7	-7.4	-1.2	-9.9	-13.5	-11.2	-4.9	-2.0	-0.5	4.6	5.2	-0.6	-4.1	9.7	-2.8	-2.5	-4.5	-0.2	
Myanmar																										
Growth of M2	4.6	19.3	20.6	22.2	18.7	11.0	4.3	15.3	16.6	17.0	20.4	13.2	15.5	17.7	1.8	31.3	-0.7	20.9	32.2	37.7		17.1	12.8	13.0	10.4	
Growth of Dom. Credit	11.7	24.3	2.4	17.8	23.8	8.8	7.8	18.6	19.7	13.0	27.7	19.2	21.5	13.9	14.0	33.2	0.8	12.0	-0.8	7.0		16.0	13.6	19.3	10.4	
Budget Deficit/GDP Ratio	0.0	0.0	-5.8	-3.0	-2.9	-0.5	0.7	0.6	2.4	1.2	1.7	0.7	0.6	-0.2	-0.8	-2.5	-2.3	-3.2	-4.4	-5.6		-1.9	0.9	0.4	-3.6	
Curr. Ac./GDP Ratio	-2.9	-1.9	-2.1	-0.2	-0.2	-2.2	-0.8	-2.4	-4.7	-6.7	-5.9	-5.3	-8.3	-5.6	-3.4	-3.1	-3.7	-2.4	0.0	0.0		-1.9	-4.1	-5.1	-1.2	
Nepal																										
Growth of M2	19.0	16.7	28.6	17.1	11.9	28.9	21.0	19.7	15.8	17.3	19.1	21.1	20.1	13.0	20.0	19.4	22.1	22.1	21.0	18.5	22.7	18.7	20.5	18.7	21.0	
Growth of Dom. Credit	84.2	102.8	34.8	67.1	46.0	8.8	32.5	38.5	22.1	22.2	18.5	25.2	31.5	18.9	30.3	19.0	11.4	20.9	20.3	13.7	17.7	67.0	24.8	21.9	17.2	
Budget Deficit/GDP Ratio	-2.4	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	
Curr. Ac./GDP Ratio	0.0	0.0	0.0	0.0	0.0	1.3	-0.1	-1.6	-0.6	-2.0	-2.0	-3.0	-6.0	-4.0	-4.3	-4.7	-4.9	-9.5	-8.5	-8.0	-6.1	-1.2	-4.6	-3.8	-4.6	
Philippines																										
Growth of M2	15.8	13.9	23.5	16.3	13.8	18.5	30.0	24.0	12.6	22.1	17.9	21.6	56.5	17.3	9.7	1.8	13.3	24.6	30.1	22.5	17.3	16.7	21.4	21.6	18.3	
Growth of Dom. Credit	11.9	15.1	13.0	40.2	31.3	26.8	20.0	24.3	25.3	21.7	23.3	23.6	31.7	3.7	-5.4	-14.8	-10.6	6.0	21.5	30.8	-2.6	22.3	23.6	15.4	5.0	
Budget Deficit/GDP Ratio	0.1	-0.4	-2.0	-1.2	0.4	-1.2	-1.7	-1.8	-1.2	-0.2	-1.3	-4.0	-4.2	-1.9	-1.8	-4.9	-2.4	-2.9	-2.1	-3.5	-2.1	-0.7	-1.2	-2.8	-3.0	
Curr. Ac./GDP Ratio	-0.7	-0.0	0.1	4.4	-1.4	-6.0	-3.6	-4.5	-5.1	-5.4	-5.3	-8.0	-7.9	-3.5	-0.3	3.1	-1.3	-1.0	-3.4	-6.1	-2.3	-0.6	-4.9	-5.0	-1.8	
Singapore																										
Growth of M2	9.3	25.6	15.5	13.5	13.5	17.9	12.7	6.6	10.8	18.8	24.5	22.4	15.9	11.9	6.2	3.8	10.0	19.8	13.5	22.5	20.0	12.4	116.4	14.7	12.1	
Growth of Dom. Credit	63.3	50.2	79.5	16.6	16.4	38.0	10.3	17.9	27.1	53.3	89.6	-0.0	42.6	14.7	-8.8	1.1	10.0	4.3	5.2	12.3	13.9	23.9	29.3	27.6	7.8	
Budget Deficit/GDP Ratio	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	
Curr. Ac./GDP Ratio	-30.5	-32.2	-17.1	-12.5	-19.8	-10.4	-9.6	-4.5	-5.8	-7.8	-13.3	-10.6	-3.5	-3.5	-2.0	-6.0	1.8	-0.8	3.6	8.0	61.4	-20.4	-4.2	-4.9	4.9	
Sri Lanka																										
Growth of M2	10.6	15.6	2.8	12.0	3.5	32.5	39.6	31.4	42.8	28.7	25.9	25.4	20.9	16.0	12.8	4.2	15.4	14.9	13.3	15.4	22.9	8.9	35.0	19.0	14.3	
Growth of Dom. Credit	8.4	5.0	-3.8	20.3	7.1	31.3	38.0	23.0	40.7	67.5	26.7	21.1	16.6	-1.5	20.0	10.0	15.9	28.2	9.2	16.6	9.9	7.4	40.5	16.6	15.0	
Budget Deficit/GDP Ratio	-6.6	-8.2	-7.7	-5.2	-3.2	-4.6	-8.3	-4.4	-12.4	-12.0	-18.3	-12.4	-14.0	-10.6	-6.8	-9.7	-10.1	-8.7	-12.7	-7.4	-9.5	-6.2	-11.1	-10.7	-9.4	
Curr. Ac./GDP Ratio	-2.6	-1.5	-4.3	-0.9	-3.8	-2.9	-0.2	3.5	-2.4	-6.8	-16.4	-10.0	-11.9	-9.2	-0.9	-7.0	-6.5	-4.9	-5.7	-5.9	-3.7	-2.2	-4.5	-7.8	-4.9	
Taiwan																										
Growth of M2	28.8	32.5	29.8	24.8	28.0	26.0	32.0	31.0	9.5	21.9	18.6	24.3	26.4	20.1	23.4	25.3	26.6	17.9	15.3	14.7	13.7	28.8	24.1	22.6	18.9	
Growth of Dom. Credit	27.3	17.7	56.9	31.5	32.7	16.3	25.7	29.7	17.2	28.8	20.4	20.4	14.8	11.9	7.9	3.4	11.9	36.4	29.9	16.9	26.6	53.2	23.6	15.0	20.9	
Budget Deficit/GDP Ratio	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	-2.2	
Curr. Ac./GDP Ratio	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
Thailand																										
Growth of M2	16.5	23.9	22.3	20.5	16.3	21.8	20.0	19.6	14.1	22.4	16.1	24.1	23.3	20.2	14.3	13.0	20.4	18.2	26.3	26.7	19.8	19.9	19.6	18.9	20.7	
Growth of Dom. Credit	22.6	19.7	28.1	19.2	25.7	20.1	28.6	28.4	20.6	18.2	17.2	21.5	26.3	17.8	8.4	6.0	17.8	15.6	19.8	26.8	15.5	23.1	23.2	18.3	16.9	
Budget Deficit/GDP Ratio	-3.7	-4.7	-4.2	0.9	-2.1	-4.0	-3.3	-3.6	-3.7	-4.9	-3.4	-6.6	-4.0	-3.5	-5.5	-4.4	-2.3	0.7	3.1	4.8	4.4	-2.8	-3.9	-4.6	1.1	
Curr. Ac./GDP Ratio	-3.5	-2.4	-0.6	-0.4	-0.6	-4.1	-2.6	-5.6	-4.8	-7.6	-6.4	-7.4	-2.8	-7.3	-5.1	-4.0	0.7	-0.6	-2.5	-3.4	-8.9	-8.3	-2.0	-5.4	-5.3	

Source: International Financial Statistics, IMF, Various Issues.

terms as inflation was kept at very low levels. Sri Lanka's inflation rates had been generally higher since 1978. The revision of interest rates in 1978 enabled Sri Lanka to achieve positive real interest rates during the following years. But its lending rates were unusually high compared to deposit rates resulting in large real spreads. Taiwan also has a successful record of controlling inflation. Except during the years of oil crises when inflation accelerated, its real interest rates and spreads were consistently positive. During 1982-1984, real spreads in Taiwan turned negative despite low (in 1982/83) or negative (in 1984) inflation. This was caused by larger increases in deposit rates. The inflation record of Thailand is also a successful one. However, its real interest rates, particularly the lending rates were rather high resulting in large real spreads compared to many other SEACEN countries. During the period under review, interest rates in Thailand have been administered and maintained at relatively high levels.

The relationship between real interest rates, inflation and spreads can be summarized as in Table 3.7. The table shows some special tendencies. First, low inflation countries tend to have low real interest rates, except in the case of Korea and Thailand. Conversely, high inflation countries have high real interest rates. Second, low inflation countries have low real spreads, except in the case of Thailand. Third, countries with high real interest rates tend to have high real spreads. Since financial liberalization leading to greater competition should reduce spreads, low spreads are preferred to high spreads. The coun-

Table 3.7

Level of Real Interest Rates, Inflation and Spreads

Country	Real Interest Rates		Inflation		Real Spreads	
	High	Low	High	Low	High	Low
Indonesia	Yes	-	Yes	-	-	Yes
Korea	Yes	-	-	Yes	-	Yes
Malaysia	-	Yes	-	Yes	-	Yes
Myanmar	-	Yes	-	-	-	-
Nepal	Yes	-	Yes	-	Yes	-
Philippines	Yes	-	Yes	-	Yes	-
Singapore	-	Yes	-	Yes	-	Yes
Sri Lanka	Yes	-	Yes	-	Yes	-
Taiwan	-	Yes	-	Yes	-	Yes
Thailand	Yes	-	-	Yes	Yes	-

tries with low real spreads in our sample are, Indonesia, Korea, Malaysia, Singapore and Taiwan. They can be regarded as being successful in interest-rate liberalization. Although Korea's real interest rates are high, its inflation as well as the real spreads are low. Therefore, high interest rates in Korea may be tolerable. In Indonesia, positive but not too high real interest rates can be achieved by bringing down inflation. Myanmar is a special case where interest rates were abnormally low which requires urgent attention. It also appears to be losing control over inflation particularly since 1987. Freeing of interest rates and controlling inflation should be given priority in Myanmar. Nepal, Philippines and Sri Lanka show similar characteristics to each other such as high real interest rates, high inflation rates and high real spreads. In these countries, first of all, inflation should be brought under control. It will then help bring down interest rates, particularly the lending rates, to sustainable levels. Thailand's high interest rates and low inflation rates yield high real spreads which may be narrowed by freeing the interest rates.

It has often been pointed out that repressed financial markets in developing countries are typically the consequence of high budget deficits. They are a major threat to disinflation. Financing of large fiscal deficits by the inflation tax necessitates high reserve requirements and low interest rates on deposits to maintain the base on which the inflation tax is collected. According to Table 3.4, Korea, Malaysia, Singapore, Taiwan and Thailand were able to maintain lower and stable inflation rates during the 1980s. Indonesia was also successful in this effort since 1983, but inflation began to reach double-digit level in 1991. In general, these countries were associated with lower budget deficits and lower current account deficits as well as lower real interest rate spreads. On the other hand, Nepal, Philippines and Sri Lanka with high and variable inflation rates are associated with higher budget deficits, current account deficits and generally large interest rate spreads. Myanmar is an exception where real spreads are negative, deposit and loan rates are fixed at very low levels while inflation began to soar during 1987-1990. The lesson to be learned from these examples is that governments should immediately regain control over their fiscal deficits. It will help control inflation as well. They should reduce deficits to levels compatible with price stability. The measures may include expenditure cuts, tax reforms and the improvements on the tax collecting mechanism.

The relative stance of monetary and fiscal policies is important when liberalizing interest rates. In a situation of tight monetary policy, a lax fiscal policy may put downward pressure on the prices of government securities with a consequent effect of increasing market interest rates. If the government borrows from the commercial banking system in competition with the private sector, it can lead to a rise in lending rates. In countries with relatively underdeveloped securities markets, large budget deficits are financed through forced borrowing from the Central Bank and commercial banks. The consequent expansion in money and credit may be sufficient to reduce or eliminate the impact of the budget on real interest rate. As seen in Tables 3.4 and 3.6, in Sri Lanka with the largest budget deficit/GDP ratio for the SEACEN countries for 1986-1991, the credit expansion was not as severe as in others, but the real lending rates have increased dramatically. While the reasons for this are complex and requires detailed study, the possibility that financial institutions are attempting to cover losses caused by forced lending and bad loans cannot be discounted.

In contrast to the case of Sri Lanka, in many other countries, even small budget deficits are associated with large credit expansion and low real interest rates. Examples are Indonesia, Korea, Myanmar and Nepal. Philippines offers a case where a larger budget deficit is associated with credit expansion and an increase in real interest rates. This may imply that factors other than budget deficits may have caused the high lending rates. The oligopolistic nature of the financial system may be a possible reason. In budget-surplus countries such as Singapore and Taiwan, there was no need to borrow from the banking system thus minimizing the government influence on interest rates. The real interest rates and spreads in these countries remained low but sufficient to achieve the objectives of interest rate liberalization. Thus the experience shows that expansionary fiscal policies result in an expansion of the money supply with consequent inflationary pressures and distortions in the interest rate structure. Liberalization of interest rates should, therefore, be undertaken in an environment of monetary and fiscal discipline. Once fiscal and monetary discipline is restored, and inflation is under control, experience has shown that financial liberalization has clearly led to greater financial deepening as demonstrated by Malaysia, Singapore and Taiwan.

4.3 Timing and Sequencing

Timing and sequencing of financial liberalization is another important issue. It is crucial for the overall success as well as for the determination of interest rates following the reforms. The first issue regarding sequencing is when to undertake financial reforms in a series of macroeconomic and structural reforms? The second issue is which of the financial reform measures should be undertaken first, which one second, and so on. Regarding the first issue, two competing views have emerged in recent literature: one is the "orthodox" (technocratic) approach and the other is the "political economy" approach.

The basic idea of the orthodox approach is that well informed and benevolent governments try to maximize some social utility function subject to the existing administrative and technological constraints. Thus the technocratic approach aims at identifying the welfare-cost minimizing reform sequence. In contrast, the proponents of political economy approach would argue that authorities have to be viewed as a group of self-interested individuals who maximize their own utility. Facing the threat of being dismissed from office or not being reelected, policy makers are to a large extent influenced by interest group activities. The pro- or anti- reform attitude of individuals or groups depends on their expected welfare under the alternative regimes. A large number of individuals may put a high weight on the immediate results of the reform efforts. It is the behaviour of the more short-sighted individual that will determine the development of political constraints. As a result, the government's discount rate may be higher than that of society as a whole (Lal, 1987). According to these political considerations the first measures to be implemented should benefit a majority and only hurt little in order to reduce political constraints. Roland (1990) draws the conclusion that "sequencing tactics require that phases of transition are ranked in order of decreasing popularity and increasing political difficulty (Norbert Funke, 1993).

Policy credibility may, however, help sequence the reform policies in the right order if such order is clearly known. A policy lacks credibility if private expectations about future policies deviate from the government's explicit or implicit announcement of future policy measures. As a result, private agents are reluctant to adjust to welfare increasing policy measures in the intended direction or with the desired intensity. If reform credibility is high, it may be advisable to start with

politically more difficult tasks. In contrast, if reform credibility is low, it may be advisable to start with politically more feasible measures (Funke, 1993).

While most authors favour early financial reforms for developing countries, there is broad agreement that financial reforms prior to fiscal and monetary reforms would be inconsistent and incredible. They should at least go together with fiscal and monetary reforms if not later so that the public would foresee the government's anti-inflationary stance. Delaying financial reforms would also increase private doubts about the governments true objectives.

The first step in sequencing financial liberalization should be to restore macroeconomic and financial stability. Restoring financial stability might also involve restructuring and strengthening of financial institutions which might take several years to complete. Therefore, it is important to start this process at the beginning of the liberalization programme. The second step involves the development of indirect monetary instruments and the strengthening of the regulatory framework and prudential bank supervision. Following this, authorities can take measures to enhance the competition in the financial sector and leveling the field for all players in the market. This might also include privatising of state-owned banks. Finally, all direct controls on interest rates and credit ceilings should be abolished. These measures need be followed in an environment of effective bank supervision. If any doubts occur regarding the effectiveness of any particular measure, the authorities should be free to take the necessary remedial measures. Credit ceilings may be a temporary measure to resort to in case of such emergency (Turtleboom, 1991). A feasible sequencing of a financial liberalization programme is summarized in Table 3.8.

Latin American countries provide examples of what can happen when the financial sector is liberalized too quickly during a period of macroeconomic instability. In these countries, financial liberalization undertaken under severe macroeconomic imbalances, and weak bank supervision led to weaknesses and uncertainties in the financial system, including "distress borrowing" which in turn led to very high real interest rates and eventually to accumulation of non-performing assets. It is therefore essential that while macroeconomic imbalances are being corrected, financial institutions must be restructured and strengthened to be able to meet the challenges of financial reforms before they are undertaken.

Over the past 15 years or so, SEACEN countries have adopted a series of financial reforms, not necessarily in the same order as in Table 3.8. While Malaysia, Singapore and Taiwan achieved macroeconomic stability earlier and undertook the reforms gradually, Sri Lanka started with interest rate deregulation in 1978 as part of a larger structural adjustment and liberalization programme. The question of restructuring ailing financial institutions started to receive attention during the latter part of 1980s particularly after the collapse of a large number of finance companies. Nepal and Philippines also bring examples of continuing problems in financial institutions. The Philippine financial system suffered several bank failures in the early 1980s. Except for a few years in mid-1980s in the Philippines, these countries were also not able to achieve a sustainable stability in the balance of payments or in their government budgets. With substantially large numbers of bad loans and non-performing assets, the financial institutions in these countries have raised the real interest rate spreads to cover up the losses. This aspect, however, needs further study.

V. Summary and Conclusion

In sum, the developments that have taken place in the financial systems in the SEACEN countries during the past 2 decades point clearly to a move towards creating more competitive environments and market-based policies aimed primarily at increasing efficiency in the financial system and enhancing the level of saving and investment. In many cases, interest rate liberalization has allowed interest rates to reach real positive levels resulting also in enhanced financial savings. The number of financial institutions has increased tremendously and so has the number of branch offices of such institutions. This has helped not only in bringing the banking habit to a wider section of population, but also in helping mobilize small and scattered savings. The laws governing the establishment of foreign banks or branches continued to relax during the period and the number of financial instruments in which to invest continued to expand. At the same time, regulatory authorities have intensified action to safeguard the interests of the depositors/investors while maintaining the solvency of the respective financial institutions. All of these developments in the institutional set up appear to have contributed to the increasing level of financial savings in the SEACEN countries.

While financial savings in all SEACEN countries show an increasing trend in general, whether it is due to interest rate liberalization is not quite clear. The growth in financial savings is lower in low-income SEACEN countries than that in high income SEACEN countries. Data also indicate that financial deepening is associated with the growth and the level of per capita income. Also, it appears that large informal financial markets still exist in Myanmar, Nepal, Philippines, Sri Lanka and Thailand, despite financial reforms. These are the countries with low banking density ratios. Further reforms to minimise the curb market activities is therefore required. Indonesia, Korea, Malaysia, Singapore and Taiwan depict increased competition and greater financial deepening.

Although interest rate liberalization has resulted in positive real interest rates, real interest rate spreads in countries like Philippines, Sri Lanka and Thailand are still very large. The differences in the performance, may be explained by the differences in institutional development, macroeconomic stability and in the timing and sequencing of financial reforms.

Table 3.8

FEASIBLE SEQUENCING OF A FINANCIAL LIBERALIZATION PROGRAM

STEP 1 Restoration of Macroeconomic and Financial Stability Reduce fiscal deficits Tighten monetary and credit policies Stabilize balance of payments and restore appropriate exchange rates Restructure or liquidate defunct financial institutions											
STEP 2 <table><tr><td>Development of Indirect Monetary Instruments</td><td>Strengthening of the Regulatory Environment and Bank Supervision</td></tr><tr><td>Introduce or reactivate indirect monetary instruments</td><td>Establish rules and guidelines for loan classification, provisioning for bad debts, interest rate capitalization, capital adequacy, and limits on loan concentration.</td></tr><tr><td>Liberalize interest rates on these instruments</td><td></td></tr><tr><td>Set up auctioning procedures</td><td></td></tr><tr><td>Introduce central bank refinancing facilities</td><td></td></tr></table>		Development of Indirect Monetary Instruments	Strengthening of the Regulatory Environment and Bank Supervision	Introduce or reactivate indirect monetary instruments	Establish rules and guidelines for loan classification, provisioning for bad debts, interest rate capitalization, capital adequacy, and limits on loan concentration.	Liberalize interest rates on these instruments		Set up auctioning procedures		Introduce central bank refinancing facilities	
Development of Indirect Monetary Instruments	Strengthening of the Regulatory Environment and Bank Supervision										
Introduce or reactivate indirect monetary instruments	Establish rules and guidelines for loan classification, provisioning for bad debts, interest rate capitalization, capital adequacy, and limits on loan concentration.										
Liberalize interest rates on these instruments											
Set up auctioning procedures											
Introduce central bank refinancing facilities											
STEP 3 Enhancement of Competition Among Banks Extend more bank licenses Allow foreign banks Allow nonbank financial institutions to compete with banks Privatize banks											
STEP 4 Removal of Direct Controls Fully liberalize lending and deposit rates Abolish direct credit ceilings											

Sources: Partially based on Mirakhor and Villanueva (1990) Wong (1991), and Leite and Sundararajan (1990).

Bart Turtleboom (1991), "Interest Rate Liberalization: Some Lessons from Africa: IMF Working Paper No: WP/91/121. Washington D.C., P. 10a.

Chapter 4

POLICY IMPLICATIONS AND CONCLUDING REMARKS

Savings are crucial for economic growth and development. With inadequate domestic savings, domestic investment will have to be financed from external sources. The level of external financing, or the current account deficit of the balance of payments, represents the investment-savings gap. Many SEACEN countries have been facing investment-savings gaps of one form or another in recent years, except Singapore and Taiwan. While the 'gaps' indicate the increasing investment requirements, they also represent inadequate savings mobilization efforts by the countries. Public sectors in many SEACEN countries have failed to generate savings surpluses. Although households sectors comprise bulk of the national savings, imperfections in financial and capital markets have resulted in lower household savings ratios in many SEACEN countries.

The level and the nature of investment-savings gap (Chapter 1), the impact of financial liberalization (Chapter 3) and our regression results (Chapter 2) imply that most of the SEACEN countries need to make further effort in creating a policy environment which will lend support to the promotion of savings mobilization. It would be impossible to generalize a set of policy implications and conclusions for all SEACEN countries because of the immense diversity in all respects among the ten SEACEN countries. The country chapters in this report provide specific conclusions regarding the respective countries. At best, our conclusions might suggest, in general, the broad areas in which further policy actions need to be taken to improve domestic savings mobilization, without contradicting the specific conclusions of the respective country chapters.

First and foremost, economic growth should receive top priority in policy since without growth, incomes will be low and savings will also be low. Therefore, attention must be focused on the long term growth and increase in the permanent income which to a large extent determines the level of national savings. The long-term growth potential of the economies must be pursued intensively by a strategy of promoting technological developments, developing economic infrastructure and improving the competitiveness of the manufacturing

sector with substantial export orientation. In other words, an export-oriented growth strategy should be effectively pursued to achieve a higher level of national savings. The experiences of Korea, Malaysia, Singapore and Taiwan indicate that financial deepening following financial liberalization is also facilitated by or associated with growth of incomes.

National savings appear to be a little responsive to the movements of interest rates. Understandably, in some cases the response is negative indicating that high interest rates can reduce investment, income and thus savings. Since national savings is a residual, it may have no relevance to the movement of interest rates either. Although financial savings may respond to positive real interest rates, one should not place too much emphasis on it as the rate of increase in the interest rate to generate a significant increase in savings may be substantial¹. In some countries, real interest rates are still very low and sometimes negative despite financial reforms, owing either to low levels of nominal interest rates or to high rates of inflation or both. This may indicate the existence of a repressed financial market condition. Since low real returns discourages savings, attention must be focused on increasing the real interest rates. One way of doing so is to free the nominal interest rates from their artificially held levels caused by direct intervention by authorities. This will include the rationalization or elimination of concessionary lending schemes and forced investment schemes sponsored by the authorities. It cannot be concluded with certainty, however, that interest rate liberalization per se will lead to higher level of savings.

Maintaining price stability is the other way to maintain positive real interest rates. In fact, containing inflation will cure many economic ills of SEACEN countries. It will have salutary effects, among other things, on real interest rates, savings, investment and fiscal and monetary management. Pressures for wage increases will diminish when inflation is low. Therefore, governments must first assign top priority to reduce inflation. Monetary policy measures can be used to control demand pressures arising from excess money but such measures should ensure that the level of investment is not adversely affected. Governments should downsize their expenditures and reduce deficits which

1. Besides, interest rate elasticity of savings may be low in countries where compulsory savings occupy a major share in financial savings.

require inflationary financing. Attempts should also be taken to contain cost-push factors in inflation. Wage increases should be restrained and be limited to the increases in productivity. When inflation is under control and long-term macroeconomic stability is achieved, interest rate liberalization can increase financial savings. This is the experience of Malaysia, Korea, Singapore, Taiwan and Thailand.

Interest rate deregulation must be done with caution as very high nominal interest rates could discourage investment and growth thereby defeating the objective of increasing savings. High interest rates could create agitation and demand for non-market credit allocations such as the central bank refinance schemes while acting as a hindrance to the development of an active capital market. In some countries, real lending rates and real spreads appear to be too high. Large spreads are a symptom of inefficiency in financial intermediation process and probably an outcome of several factors such as imperfections in the institutional set-up and the level of competition, macroeconomic instability and improper timing and sequencing of financial reforms, among others. Since high lending rates and spreads discourage private sector investment, reduce their competitiveness in the world markets and reduce employment and growth, immediate attention must be paid to identify the causes of high lending rates and large spreads and treat the causes².

There is empirical evidence to suggest that wealth has a negative impact on savings. For example, real estate speculation in some countries has led to undesirable effects on savings. The sudden increases in real estate prices and the increase in the unearned windfall income realized from them may well cause not only an increase in consumption resulting in lower savings but also cause inflationary pressures in the economy. One should therefore guard against excessive consumption resulting from increasing wealth. Relevant adjustments in property taxes or capital gains taxes may discourage such heavy consumption. At the same time, an increase in the supply of housing units may stabilize housing prices and take some pressure off the real estate markets.

Evidence show that financial savings are positively related to the level of financial intermediation and development. Therefore,

2. Increase in interest rates in the formal credit markets will almost certainly be followed by an increase in lending rates in the informal credit markets as well.

measures must be taken to reduce the cost of financial intermediation. This can be done by improving the competition in the financial market³, introducing the latest technological advancements such as computerized banking, providing financial services of good quality and by introducing innovative financial instruments. In improving competition, the factors that bring about unequal competition between banking institutions and non-bank financial institutions must be eliminated. It is also important that local and foreign financial institutions are treated on equal basis especially with regard to regulatory measures.

The financial policies pursued by countries should be conducive to financial and capital market deepening if it were to stimulate further economic growth. Firstly, it is necessary to tap the savings, that is, to get funds out of the unorganized financial markets or out of holdings in tangible forms into more advanced forms of financial instruments so that the funds could be redistributed for productive investments. There must also be a spectrum of long-term financial instruments for people to invest in, or else, there could be a mismatch between long-term investment opportunities and the sources of funds for such investments. Taxes on financial instruments should be reduced or completely eliminated as they will only increase the cost of financial intermediation while not contributing much to government revenue.

In order to ensure that funds are mobilized efficiently, it is necessary that the financial system, comprising mainly of the financial institutions, is sound and efficient. They should also ensure the organization and development of the market infrastructure including modern banking facilities and the "state of the art technology" in financial services. In such an environment, domestic resource mobilization can be achieved fundamentally by the competitive market mechanism. This has been the understanding behind the moves towards financial liberalization by the SEACEN countries in recent years.

Since there is evidence that population dependency ratios affect savings, measures need be taken to reduce such dependency by way of promoting more employment opportunities and reducing the rapid growth in population. Also, the graying of a population with very low

3. Number of financial institutions or their branches can be increased if it is viable to do so and foreign banks may be allowed to establish branches in the country.

population growth rates will have a negative effect on savings in the long run. Therefore, countries in such situations need to plan ahead and ensure a steady flow of skilled personnel into the work force.

Capital markets have been an important source of resource mobilization. Yet, their growth has been slow due to factors such as limited number of listed companies and shares, shortcomings in the fiscal package, institutional barriers, the lack of institutional investor and impediments in legislation. Correction of these shortcomings should receive priority of the respective authorities. At the same time, the possibility of developing the bond and long-term securities markets to tap the long-term funds particularly of the institutional sector must be explored. A major impediment to the development of the market for long-term securities in some countries is the pre-emption of a large share of financial savings by government. In those countries, the captive sources are required to invest their funds in government paper at lower than market rates. This not only deprives the securities market of a large potential investor but also distorts the interest rate structure. Therefore, efforts must be made to (i) provide appropriate legal status, (ii) establish a competitive interest rate structure, (iii) establish secondary markets (iv) increase the number of participants such as the Provident Funds, Pension Funds, Corporations and Insurance Companies (v) setting up of a dealer network, and (vi) list bonds and securities in the stock exchange. However, needless to mention, a good balance in the macroeconomic policies and long-term political stability are essential for the development of efficient capital and bond markets.

Low savings in many SEACEN countries are caused by heavy consumption, particularly by the government with consequences on the balance of payments as well. The resulting savings investment-savings gaps are generally financed by foreign savings which when not utilized properly lead to debt problems requiring additional foreign borrowings. Thus the debt problem gets compounded. In order to avoid this, unnecessary consumption must be discouraged. It is argued that availability of foreign savings can discourage domestic savings mobilization effort. If the governments have to resort to external sources, it must be restricted to foreign direct investment and grants which will be used for investment purposes. Then it will raise income and savings. External borrowing at commercial rates must be avoided.

When government resorts to deficit financing, a significant share of financial resources is claimed by government usually at very low cost, crowding out a large amount of potential investment by the private sector. Therefore, the countries with very low savings rates should first reduce their government fiscal deficits and maintain financial discipline as a first step. Such fiscal discipline will allow the private sector to invest rather than finance budget deficits. Therefore, efforts must be made to improve public sector savings through intensifying tax collection activities, prioritizing and reducing excessive government expenditures and reducing the burden of state enterprises on government budget by privatization, restructuring and/or changing the financial policies of such enterprises. The availability of large amounts of foreign resources (either loans or grants) should not make governments complacent and reduce efforts at mobilizing domestic savings and in maintaining financial discipline. They should endeavour to downsize their unproductive expenditure and increase efficiency in tax collection. The revenues thus generated should be used to increase productive capacity in the economy.

Policy credibility is important in undertaking a series of financial reforms. If reform credibility is high, governments can undertake even drastic economic reform policy measures even if they are politically difficult. It will enhance private sector confidence regarding the government's future course of action, its anti-inflationary stance, and its true objectives and goals enabling them to make a greater contribution to investment and growth. Governments, therefore, ought to indicate their true commitment to growth and development by undertaking the necessary and required policy measures.

The domestic resource mobilization effort can become meaningless if the resources mobilized by the financial institutions with much difficulty and cost are given out to favoured parties or given under concessionary or non-market rates or for forced investment programmes. If so, it will be a waste of funds and quite discouraging for financial deepening. In addition, it will render monetary management difficult. Therefore, financial institutions must be allowed, without undue interference by the authorities to invest in the productive sectors of the economy at market rates of interest. The financial institutions must build and maintain public confidence in themselves by ensuring financial soundness at all times. This will be facilitated by close monitoring, supervision and regulation by the central bank or the monetary authority.

There are a few other areas which need greater attention. The first issue relates to the question: "do we know enough about the level of national savings?". It is believed that the Gross National Products (GNPs) in most countries are grossly underestimated. This will cast doubt on the accuracy of data on the level of national savings. The derivation of national savings i.e., as a residue from income and consumption, is another disputed issue. A disaggregation of savings into its component sectors and sub-sectors and adding them up will give a more accurate picture but data are hardly available for such an exercise. A first step in the direction of creating a more reliable data base, therefore, would be to carry out household surveys on a regular basis. Once reasonably reliable and good data sets are available, more basic research should be carried out to examine the volatility and the determinants of savings in each country.

A few SEACEN countries have experienced national savings and/or government savings surpluses in recent years giving a sense of relief. This situation should not lead to complacency and resort to increased consumption as they have to be prepared for future eventualities. Governments should make provision for long-term contingent liabilities created or to be created by itself. Besides, in a situation where the country's competitive edge is being threatened every minute, the accumulation of savings would provide added insurance against future uncertainties.

The compulsory savings schemes (such as the Employee's Provident Fund or the E.P.F.) are a major component of national savings in many SEACEN countries. These are also a source of non-inflationary financing for the government budget deficits. However, since the government budgets are generating surpluses in some of these countries and they do not need to rely very much on E.P.F., greater flexibility can be introduced to these "funds" providing more benefits to the contributors and allowing the funds to diversify their investments rather than putting all their money in government paper. Meanwhile, studies should be carried out to examine whether there is a significant substitution between compulsory and voluntary savings as it has often been discussed that contributors would save more and benefit more by investing their funds in more profitable ventures if the monies deducted for compulsory savings schemes are given to them. If there is a substitution, voluntary savings would increase which will also have a dampening effect on lending rates and spreads as the demand for funds would now be less.

Finally, it must be noted that the analysis in this study focused on the importance and on the level of savings and investment. An equally important issue is the efficiency of investment. It is in the interest of the low savings countries to first examine their investment 'portfolio' and ensure that savings are used for generating more output or to increase productive capacity of the country. They should ensure that Incremental Capital Output Ratios (ICORs)⁴ which measure the efficiency of investment are as low as possible. The I.M.F. has observed falling ICORs for 'high growth' countries during the past decade, indicating increasing efficiency of investment. Such improvement in ICORs was possible due to dynamic private sector in these countries. The low income/low growth countries should also pursue policies to encourage private sector investment. Micro-level examination of whether investment projects are properly identified and whether proper follow-up is being conducted by the lending institutions would prove useful in learning how savings are being utilized. Once a correct mechanism to employ savings in productive investments is set in motion, more savings would generate more output. If, on the other hand, savings are used for current consumption or to finance budget deficits continuously, then the purpose of mobilization of additional savings would be defeated.

4. In the absence of ICORs, the share of investment goods in total imports would provide a rough guide as to how much of savings are being used for various types of investment.

References

1. Arrieta, Gerardo M. Gonzales, "Interest Rates, Savings, and Growth in LDCs: An Assessment of Recent Empirical Research" *World Development*, Vol. 16, No. 5, 1988, pp. 589-605.
2. Asian Development Bank, "National Savings, Financial Development and Economic Growth", *Improving Domestic Resource Mobilization Through Financial Development*, Manila: Asian Development Bank, 1985.
3. Central Bank of Sri Lanka, *Growth and Social Progress in Sri Lanka*, Statistics Department, Colombo, 1991.
4. Collins, S.M., "Savings Behavior in Ten Developing Countries", *NBER Conference on Savings*, Maui, 6-7 January 1989.
5. Deaton, A., "Savings in Developing Countries: Theory and Review", *Proceedings of the World Bank Annual Conference on Development Economics*, 1989, pp. 61-96, Washington, D.C.: World Bank.
6. Dickey, D.A. and W.A. Fuller, "Distribution of Estimators for Autoregressive Time Series with a Unit Root", *Journal of the American Statistical Association*, 74, 1979.
7. Duesenberry, J.S., *Income, Savings and the Theory of Consumer Behaviour*, Cambridge, M.A.: Harvard University Press, 1949.
8. Engle R.F. and C.W.J. Granger, "Long-run Economic Relationships: Readings in Cointegration", *Advanced Texts in Econometrics*, Oxford University Press, 1991.
9. Foundation for Advanced Information and Research, *Financial and Capital Markets in Asia*, The Committee for the Development of Financial and Capital Markets in the Asia-Pacific Region, Japan, September 1991.
10. Friedman, M., *A Theory of the Consumption Function*, Princeton, N.J.: Princeton University Press, 1957.
11. Fry, Maxwell, "Flexibility and Finance in Developing Countries", *IFGWP-93-06*, Birmingham, June 1993.

12. Fry, Maxwell J., *Resource Mobilization and Financial Development in Nepal*, Kathmandu: Centre for Economic Development and Administration (EDA), 1974.
13. Fry, Maxwell J., "Savings, Investment and the Current Account Imbalances: A Malaysian and East Asian Perspective", International Finance Group, University of Birmingham, IFGWP-93-05, June, 1993.
14. Fry, Maxwell, "The Right Interest Rate Policy for Rapid Economic Growth", FGWP-92-05, Birmingham, July 1992.
15. _____, "Monetary Policy and Domestic Saving in Developing ESCAP Countries", *Economic Bulletin for Asia and the Pacific*, vol. XXIX, no. 1, June 1978.
16. _____, "Money and Capital or Financial Deepening in Economics Development?", *Journal of Money, Credit and Banking* 10, November 1978, pp. 464-475.
17. _____, "Saving, Investment, Growth and the Cost of Financial Repression", *World Development* 8, 1989, pp. 317-327.
18. _____, *Money, Interest, and Banking in Economic Development*, Baltimore: John Hopkins University Press, 1988.
19. _____, "Domestic Resource Mobilization in Developing Asia, Four Policy Issues", *Asian Development Review*, vol. 9, no. 1, 1991, ADB: Manila, pp. 15-39.
20. Funke, Norbert, "Timing and Sequencing of Reforms: Competing Views", Kiel Working Paper No. 552. Kiel Institute of World Economics, January 1993.
21. Galbis, Vicente, "High Real Interest Rates Under Financial Liberalization. Is there problem?", IMF Working Paper WP/93/7, International Monetary Fund, January 1993.
22. Galbis, V., "Interest Rate Management: The Latin American Experience in Savings and Development", *Quarterly Review*, no. 1, Milan, Italy: Centre for Assistance of African Countries (FINAFRICA), 1981.

23. Gersovitz, M., "Saving and Development", Handbook of Development Economics, 1989.
24. Giovannini, A., "The Interest Elasticity of Savings in Developing Countries: The Existing Evidence", World Development 11 (7), 1983, pp. 601-607.
25. _____, "Saving and the Real Interest Rate in LDCs", Journal of Development Economics, vol. 18, 1985, pp. 197-217.
26. Gregorio Jose De and Pablo E. Guidotti, "Financial Development and Economic Growth", IMF Working Paper WP/92/101, International Monetary Fund, December 1992.
27. Gupta, Kanhaya Lal, "Aggregate Savings, Financial Intermediation, and Interest Rate", Review of Economic and Statistics, vol. 69, 1987, pp. 303-311.
28. _____, and Islam M. Anisul, Foreign Capital, Savings and Growth: An International Cross-Section Study, Dordrecht, Holland: D. Reidel Pub., 1983, p. 174.
29. Hammer, Jeffrey S., "Population Growth and Savings in LDCs: A Survey Article", World Development 14, May 1986, pp. 579-593.
30. _____, "Population Growth and Savings in Developing Countries: A Survey", World Bank Staff Working Papers, no. 687, Washington, D.C.: The World Bank, 1985, p. 33.
31. International Monetary Fund, "World Economic Outlook", May 1993. Washington D.C.
32. Kotlikoff, Lawrence J., What Determines Savings, Cambridge, 1989.
33. Lahiri, A.K., "Dynamics of Asian Savings: The Role of Growth and Age Structure", IMF Working Paper, no. 88/49, Washington, D.C., 1988.
34. Lans Borenberg A. and Owen Evans, "National and Personal Saving in the United States: Measurement and Analysis of Recent Trends", IMF Staff Papers, vol. 37, no. 3 (September 1990), Washington D.C.

35. Lee, Jung Soo, *Improving Domestic Resources Mobilization Through Financial Development: Sri Lanka*, Manila: Asian Development Bank, April 1987.
36. Leff, N.H., "Dependency Rates and Ratings Rates", *American Economic Review* 59, December 1969, pp. 886-896.
37. Leff, N.H. and Kazuo Sato, "Modelling the Demand for Foreign Savings in Developing Countries: Testing a Hypothesis with Latin American Data". *Journal of Development Studies*.
38. Mason, A., "National Saving Rates and Population Growth: A New Model and New Evidence", in D.G. Johnson and R. Lee, ed., *Population Growth and Economic Development: Issues and Evidence*, Madison, WI: University of Wisconsin Press, 1986.
39. _____, "Saving, Economic Growth and Demographic Change", *Population and Development Review*, vol. 14, no. 1, 1988.
40. MicroTSP Users Manual ver 7.0b, 1990.
41. Monetary Authority of Singapore, *Annual Report 1990/91*, Singapore.
42. McKinnon, Ronald I., *Money and Capital in Economic Development*, Washington D.C.: The Brookings Institution, 1973.
43. _____, "Savings Propensities and the Korean Monetary Reform in Retrospect", *Money and Finance in Economic Growth and Development*, New York: Marcel Dekker, Inc., 1976.
44. Mikesell, R.F., and J.E., Zinser, "The Nature of the Savings Function in Developing Countries: A Survey of the Theoretical and Empirical Literature", *Journal of Economic Literature* 11, 1973, pp. 1-26.
45. Modigliani, F. and A.K. Ando, "Tests of the Life Cycle Hypothesis of Savings", *Bulletin of the Oxford University, Institute of Economic Statistics*, vol. 19, 1957, pp. 99-124.
46. Morisset, Jacques "The Impact of Foreign Capital Inflows on Domestic Savings Reexamined: The Case of Argentina", *World Development*, vol. 17, no. 11, 1989, pp. 1709-1715.

47. Nam Sang-Woo, "What Determines National Savings. A Case Study of Korea and the Philippines" World Bank Working Papers, WPS205, Washington D.C., May 1989.
48. Newlyn, W.T., "The Effect of Aid and Other Resource Transfer on Savings and Growth in Less Developed Countries: A Comment", *Economic Journal*, September 1985.
49. Ng Beoy Kui, The Development of Capital Markets in the SEACEN Countries, The SEACEN Centre, Kuala Lumpur, 1989.
50. Oh, Jung-Gun, "Causality Between Interest Investment and Saving", Paper prepared for the 1993 Far Eastern Meeting of the Econometric Society, Taipei, The SEACEN Centre, June 1993.
51. Rhee S.G. and R.P. Chang, Pacific Basin Capital Markets Research, Volumes II and III, North Holland, 1991.
52. Roe, A.R., "High Interest Rates: A New Conventional Wisdom for Development Policy? Some Conclusions from Sri Lanka's Experience", *World Development*, vol. 10, no. 3, March 1982.
53. Rossi, N., "Dependency Rates and Private Savings Behavior in Developing Countries", *IMF Staff Papers*, 1989.
54. Saito, K.W., "The Determinants of Savings Behavior: A Survey of the Evidence", *Studies in Domestic Finance*, no. 35, Washington, D.C.: The World Bank, 1977.
55. Schmidt Hebbel, Klaus, Steven B. Webb and Giancarlo Corsetti, "Household Saving in Developing Countries: First Cross Country Evidence", *The World Bank Economic Review*, vol. 6, no. 3, 1992, pp. 529-547.
56. Shaw, E.S., *Financial Deepening in Economic Development*, New York: Oxford University Press, 1973.
57. Singh, Balvir, Helmar Drost, and Ramesh C. Kumar, "An Empirical Evaluation of the Relative, the Permanent Income and Life Cycle Hypotheses", *Economic Development and Cultural Change*, vol. 26, no. 2, January 1978, pp. 281-305.

58. Smith, Roger S., "Factors Affecting Saving, Policy Tools, and Tax Reform: A Review", *IMF Staff Papers*, vol. 37, no. 1, March 1990, pp. 1-70.
59. Talib Azizah, *Monetary Policy in the SEACEN Countries: An Update*, The SEACEN Centre, Kuala Lumpur, 1993.
60. The SEACEN Centre, "SEACEN Financial Statistics", *SFS series no. 1*, July 1991, and no. 2, July 1992.
61. The World Bank, *Sustaining Rapid Development in East Asia and The Pacific*. Washington D.C., March 1993.
62. Turtleboom, Bart., "Interest Rate Liberalization Some Lessons from Africa", *IMF Working Paper*, WP/91/121, International Monetary Fund, December 1991.
63. Vittas Dimitri, "Policy Issues in Financial Regulation", *World Bank Working Papers*, WPS910, Washington D.C., May 1992.
64. Weerasekera, Y.M.W.B., "Inflation in Sri Lanka: A Causality Analysis", *Staff Papers*, no. 46, The SEACEN Centre, November 1992.
65. Wijewardena, W.A., "Domestic Resource Mobilization in Sri Lanka", Paper presented at the SEACEN Seminar on Domestic Resource Mobilization in SEACEN Countries, in Kathmandu, Nepal, September 1988.
66. William, E. James, *Domestic Resource Mobilization through Financial Development: Nepal*, Manila: Asian Development Bank, February 1984.
67. Williamson, J., "Why Koreans Save So Little", *Journal of Development Economics*, June 1979, pp. 343-362.
68. Yusuf, Shahid and Kyle R. Peters, "Savings Behaviour and Its Implications for Domestic Resource Mobilization: The Case of the Republic of Korea", *World Bank Staff Working Paper*, no. 628, Washington D.C.: The World Bank, April 1984.

PART II

COUNTRY CHAPTERS:

INDONESIA

KOREA

MALAYSIA

MYANMAR

NEPAL

PHILIPPINES

SINGAPORE

SRI LANKA

REPUBLIC OF CHINA, TAIPEI

THAILAND

Chapter 5

DOMESTIC RESOURCE MOBILIZATION IN INDONESIA

by

Tarmiden Sitorus
Akuan Mansyur

I. Introduction

Savings behavior is a crucial element in the process of economic development. A high and sustained rate of economic growth requires that a high level of savings be channelled into domestic capital formation (investment). In other words, savings are needed to maintain and expand the capital stock to make sure that the capital stock grows in proportion to a growing population. In the absence of significant flows of foreign savings, more resources for investment have to come from increased national savings. Recently, a number of developing countries have assigned a larger role to the private sector in mobilizing domestic resources to reduce their dependency on foreign savings.

In this chapter we examine mobilization of domestic savings in Indonesia. The next section presents an overview of the developments in domestic savings mobilization in the country over the last two decades. The significance of foreign sources to finance domestic investment is also discussed. Sections III and IV cover analyses of the role of financial system as well as capital market in domestic resource mobilization. In section V, we attempt to examine the behavior of savings in the country. In particular an empirical test of factors affecting savings receives a good deal of attention. The last section reviews the study.

II. Overview

Like in many developing countries, Indonesia experiences inadequacy of domestic saving to finance its domestic investment. Foreign sources in the form of external borrowing, either by public or private, as well as foreign direct investment and portfolio investment have, therefore, been used to supplement domestic sources to fund the

country's economic development programs. From the macroeconomic point of view, external sources of financing could be considered as the way to finance the saving-investment gap, while from the microeconomic side, foreign financing is a complementary source to finance the growth oriented development projects. Based on this concept, the measure of saving-investment gap may be reflected in the country's current account deficit. The development of the saving-investment gap is presented in Table 5.1.

Table 5.1**SAVINGS-INVESTMENT GAP, 1970-1991**

Year	Gross Domestic Savings as % of GDP	Gross Domestic Capital Formation of GDP	Savings-Investment Gap		
			Total	Government	Private
1970	9.11	13.69	-4.57	-3.66	-0.91
1971	10.76	15.39	-4.64	-3.42	-1.21
1972	14.22	18.29	-4.07	-2.71	-1.37
1973	12.73	17.43	-4.70	-2.64	-2.05
1974	16.44	16.35	-0.09	1.16	-1.25
1975	16.19	19.82	-3.63	-3.64	-0.02
1976	17.76	20.19	-2.42	-1.69	-0.74
1977	19.46	19.61	-0.15	-1.86	1.71
1978	17.36	20.00	-2.65	-1.32	-0.32
1979	22.15	20.39	1.76	-0.97	2.73
1980	23.94	20.33	3.61	1.11	2.50
1981	23.17	23.69	-0.51	-1.17	0.65
1982	19.19	24.67	-5.49	-4.94	-0.54
1983	17.53	25.08	-7.55	-3.93	-3.62
1984	20.15	22.40	-2.25	1.08	-3.33
1985	20.83	23.06	-2.23	-1.77	-0.46
1986	19.01	24.13	-5.12	-4.22	-0.90
1987	21.83	24.82	-2.99	-4.00	1.01
1988	24.05	25.90	-1.84	-2.52	0.68
1989	25.95	27.30	-1.35	-2.25	0.90
1990	26.55	29.57	-3.02	1.36	-4.39
1991	26.14	29.73	-3.59	-0.58	-3.01
Average					
1970-80	16.37	20.15	-3.78		
1981-91	24.44	28.03	-3.59		

During the last two decades, it appeared that, except in the years of oil boom in 1974, 1979 and 1980, the level of domestic investment always exceeded that of domestic saving. After implementation of monetary reform in 1983, Indonesia was successful to a certain extent in financing its domestic investment as indicated by narrowing saving-investment gap, except for 1986 when the drop in oil price occurred. But in the last two years, the gap again widened considerably. This phenomena was associated with the investment boom following the major reform in the financial sector as well as in the field of trade and investment. A large amount of domestic investment was financed by an increase in commercial foreign borrowings. The economy, however, became overheated: high inflation rate at around 10 percent, very rapid monetary expansion, and widening deficit in the current account of the balance of payments. To cope with this problem, the Indonesian government has undertaken a number of corrective measures.

For more than two decades, the government sector played an important role in the process of economic development, especially in financing the current account deficit through foreign borrowings with soft terms and conditions. As is widely known, Indonesia's economy in the mid- 1960s was confronted with severe economic conditions: hyperinflation, economic slowdown, and political instability. After the new government took power in 1968, the economic stabilization programs were undertaken. These include rescheduling some of the public debt and encouraging new capital inflows to support a better foundation for sustainable economic development. In coping with the economic problems, a group of donor countries and international financial institutions coordinated by the Dutch government set-up a forum of the Inter-Government on Indonesia (IGGI) to ensure a long-term coordinated source of financial assistance for Indonesia. During 1967-1970, Indonesia received a significant amount of financial support from the IGGI with soft terms and conditions, including repayment period of 25 years with 7 year grace period and low interest rates. Since then, Indonesian government continued to receive concessional foreign borrowings. More recently, private sector foreign borrowings also tended to increase as the government launched a series of deregulation measures to enhance economic efficiency through greater private sector's participation.

It is acknowledged that the foreign capital flows have largely contributed to the Indonesian economic development. The economy

has grown sustainably high for the last two decades. However, the increasing outstanding foreign debt has led to an increasing pressure on the balance of payments as indicated by the increased debt service ratio (the ratio of debt service to total exports of goods and services). As we can see from Table 5.2, debt service ratio over the last five years was well above 20 per cent. Concerned about the negative impact of increases in foreign debt, the Indonesian government continued to pursue a prudent external debt management policy and placed high priority on concessional borrowings while keeping the external debt service burden at a manageable level.

Table 5.2**EXTERNAL DEBT, 1970-1990**

Year	Debt Outstanding (in million US\$)	Debt Service Ratio (in per cent of exports)
1970	2,778.1	5.6
1971	3,254.6	7.8
1972	3,617.3	5.4
1973	4,425.7	3.6
1974	4,851.0	2.0
1975	8,443.1	2.8
1976	10,303.5	4.3
1977	11,528.5	9.9
1978	13,037.7	9.6
1979	13,568.8	7.0
1980	17,570.1	5.7
1981	18,847.0	6.7
1982	23,438.0	9.6
1983	27,257.0	10.5
1984	29,665.0	12.6
1985	35,130.0	16.4
1986	41,554.0	27.4
1987	49,503.0	27.1
1988	50,685.0	28.9
1989	51,976.0	23.7
1990	62,818.0	21.8

The heavy reliance on foreign sources to finance domestic investment cannot be sustained over the long run, since it would lead to an adverse impact on the economic growth. Therefore, in order to reduce a country's dependence on foreign capital and foreign ownership of domestic assets, it is necessary to raise domestic saving. During 1970s, the Indonesian government paid little efforts to mobilize domestic saving. The level of domestic saving was relatively low, on average, around 16 per cent of GDP (see Table 5.1), as compared with more than 20 per cent in industrial countries in the same period. Stringent monetary policy undertaken during 1970s was not in favor of domestic saving mobilization. Real interest rates as the main impetus to encourage domestic saving mobilization was negative. These developments were partly attributed to the system of liquidity credits that led not only to a misallocation of resources over the years but also to the distortion of interest rates because of subsidized lending to borrowers. Throughout the 1980s, Indonesia has implemented corrective policy measures designed to accelerate domestic saving mobilization by increasing the role of market forces in determining interest rates, improving credit allocation and the overall scale of financial intermediation. These efforts have largely contributed to the increased domestic saving during 1980s, on average at around 25 per cent of GDP. As was intended, the growth of private saving showed an increasing trend, while that of government remained fairly stable, hence the share of private sector in domestic saving mobilization has been increasingly important.

Privatization through a series of deregulations during 1980s has brought about a greater role of private sector in the economic development process. Especially since the major reform in the area of finance in 1988, private saving has grown substantially high. This reform, coupled with other policy adjustments in trade and investment has boosted domestic private investment. As a result, investment-saving gap of the private sector during the last two years was widened (see Table 5.1).

III. The Role of Financial System in Domestic Saving Mobilization

The financial system plays an important role in influencing the financial resources mobilization. Therefore, efforts have been made to enhance the development of the financial system, including financial

institutions and financial markets. The financial institutions in Indonesia comprise of the central bank, commercial banks, rural banks, and non bank financial institutions (NBFIs) including insurance, leasing company, venture companies and others. Commercial banks dominated the financial system, both in total assets and in the mobilization of public funds.

As mentioned earlier, during the 1970s domestic resource mobilization was very low. The financial system was still in early stages of development, and the financial policy as well as fiscal policy paid very little attention to enhancing mobilization of domestic saving. Stringent monetary policy implemented in the 1970s until early 1980s distorted the financial market. The Bank Indonesia liquidity credits scheme has led to the distortion of interest rates because of largely subsidized lending to borrowers. The authorities regulated both deposits and lending rates on state banks, and apparently the real interest rates for certain periods was negative, hence discouraging people to hold saving in bank deposits. Financial saving mobilized by the banking system in the forms of time and saving deposits was very low. In financing its domestic investment, the Indonesian economy benefitted much from a huge amount of foreign exchange earned from oil boom in the mid and the end of 1970s. The need for mobilization of domestic savings became apparent in the early 1980s when the economy was confronted by world recession and falling oil prices.

Throughout 1980s, Indonesia launched a series of financial reforms designed to increase the role of market forces in the determination of interest rates, the allocation of credit and the overall scale of financial intermediation. This, in turn, would enhance mobilization of domestic saving. These financial reforms have been motivated by a desire to improve efficiency and soundness of the financial system and were taken in the context of a strong growth oriented adjustment program. The financial reform has, inter alia, led to a considerable strengthening of the financial sector and in particular, to the rapid growth of time and savings deposits as well as loans made by the banking sector.

The financial reform begun in 1983, covering the removal of interest rates regulation and credit ceilings. The direct monetary management was replaced by indirect control through reserve money management. The conduct of reserve money management is done mainly through open market operation. Two money market instruments, namely

certificates of Bank Indonesia (SBIs) and money market securities (SBPUs), were introduced. Monetary management, by this way, can be implemented without reducing the capacity of banking system to mobilize financial savings. Following this reform, the movement of interest rates were left to the market forces, although to a little extent an element of intervention still existed through the continuing liquidity credits scheme. Interest rates moved upward very quickly from the outset (see Table 5.3), and the growth of time and savings deposits accelerated.

Table 5.3

INTEREST RATES, 1970-1991 */

Year	Nominal Interest Rate	Inflation	Real Interest Rate
1970	23.20	8.94	14.26
1971	22.70	2.30	20.40
1972	18.20	25.99	-7.79
1973	15.00	27.33	-12.33
1974	20.70	33.27	-12.57
1975	21.70	19.71	1.99
1976	21.80	14.21	7.59
1977	16.60	11.82	4.78
1978	14.20	6.68	7.52
1979	14.10	30.25	-16.14
1980	14.20	17.10	-2.90
1981	14.60	7.34	7.26
1982	14.70	10.02	4.68
1983	14.70	11.95	2.74
1984	16.00	9.08	6.92
1985	18.00	4.38	13.62
1986	15.39	9.14	6.25
1987	16.78	9.25	7.53
1988	17.73	5.59	12.14
1989	18.63	6.11	12.52
1990	17.30	9.94	7.36
1991	23.03	10.04	12.99

*/ Interest rates on three-month time deposits (weighted average).

The second major financial reform was launched in October 1988. This reform has a wide range of objectives, including the acceleration of domestic saving, the promotion of non-oil exports, the efficiency of banks and other financial institutions, the effectiveness of monetary policy, and the climate for the development of the capital market. As regard funds mobilization, the new policy measures provide opportunities to establish new banks and bank branches, and broaden the range of deposit instruments. Another important measure is the reduction of reserve requirements from 15 per cent to 2 per cent. Following this reform, the number of banks and their branch network in Indonesia grew very fast, speeding up the mobilization of public funds (see Table 5.4), as well as private financial savings as indicated by a sharp increase in time and savings deposits with banks, which more than doubled within two years (see Table 5.5).

In line with the financial reforms, the Indonesian government also undertook tax reforms since 1984. The adjustments of the taxation system were aimed not only at mobilizing domestic saving but also at promoting a more equal income distribution. Various incentives on interest rates, subsidies, tax treatment, and others, to promote time and savings deposits were introduced. These efforts successfully increased the amount of bank sources of funds. Along with this development, tax receipts, whether from direct or indirect taxes, increased substantially. In the fiscal year of 1984/85, tax receipts was only Rp4.8 trillion, gradually rose to Rp19.0 trillion in 1990/91, or an increase of around 27 per cent per year. And as a percentage of GDP, the tax receipts also increased, from 6.8 per cent in 1984/95 to 12 per cent in 1990/91. The government saving, representing the difference between domestic revenues and routine expenditures, grew substantially at 22.7 per cent per year. The increased government saving has led to a reduction in government dependence on foreign borrowing to finance its investment.

As an ongoing part of the financial reform process, in January 1990, the government undertook to phase out the liquidity credit system with a reduction in the amounts eligible for subsidized rediscount and the adoption of market-related interest rates to the end borrower. As moving toward more market mechanism in the Indonesian financial market, the interest rates will play a greater role in maintaining the balance between financial savings and investments.

Table 5.4**NUMBER OF FINANCIAL INSTITUTIONS**

	1988	1989	1990	1991
Commercial banks:				
– State banks	5	5	5	5
– National private banks	63	88	106	126
– Foreign/joint venture	11	23	28	29
Development banks:				
– State banks	1	1	1	1
– Regional development bank	27	27	27	27
– Private development bank	1	1	1	1
Saving banks:				
– State bank	1	1		1
– Private banks	2	2	2	2
Rural banks	7706	7748	8516	8296
Non-banks financial inst.	13	13	13	13
Financing companies				
– Leasing companies	83	120	120	120
– Venture Capital co.	36	26	26	26
– Factoring companies	38	38	38	38
– Credit Card companies		26	26	26
– Consumer Finance co.	41	41	41	41
Insurance companies				
– Social Insurance	5	5	5	5
– Life Insurance	25	37	37	37
– Indemnity Insurance	68	84	84	84
– Reinsurance	4	4	4	4
– Pawnshops	480	505	505	505

Table 5.5**TIME AND SAVING DEPOSITS WITH BANKS**

Year	Outstanding (Billion Rupiahs)	Change (Billion Rupiahs)	%
1970	80.10	30.30	60.84
1971	145.30	65.20	81.40
1972	216.00	70.70	48.66
1973	315.70	99.70	46.16
1974	512.80	197.10	62.43
1975	705.00	192.20	37.48
1976	994.00	289.00	40.99
1977	1,122.00	128.00	12.88
1978	1,286.00	164.00	14.62
1979	1,810.00	524.00	40.75
1980	2,655.00	845.00	46.69
1981	3,127.00	472.00	17.78
1982	3,897.00	770.00	24.62
1983	6,984.00	3,087.00	79.21
1984	9,339.00	2,355.00	33.72
1985	13,002.00	3,663.00	39.22
1986	15,942.00	2,940.00	22.61
1987	20,895.00	4,953.00	31.07
1988	27,463.00	6,568.00	31.43
1989	38,580.00	11,117.00	40.48
1990	60,794.00	22,214.00	57.57
1991	72,764.00	11,970.00	19.69

Table 5.6**DEVELOPMENTS IN THE JAKARTA STOCK EXCHANGE**

	1988	1989	1990	1991
Stocks				
Number of issuers	24.0	57.0	122.0	133.0
Total value (Rp billion) 1/	153.0	2,010.0	7,593.0	9,176.0
Transactions				
In billion Rp.	31.0	990.0	7,301.0	5,768.0
Certificates (million)	7.0	96.0	702.0	1,005.0
Composite stock price inded	305.1	399.7	417.8	247.3
Bonds 2/				
Number of issuers	7.0	22.0	23.0	24.0
Value (Rp billion) 1/	856.0	1,495.0	1,890.0	2,215.0

1/ End of period.

2/ Including parallel bourse.

IV. The Role of Capital Market in Domestic Resource Mobilization

The role of the capital market in Indonesia in channeling the flow of funds is still minor, although in the past few years it has been increasing as a result of recent policy initiatives. Nevertheless, the ratio of the value of shares and bonds to GDP remains very small. The development of the stock exchange market as measured by the number and value of transactions can be seen in Table 5.6.

The stock exchange in Indonesia was opened for the first time in 1912, during the Dutch colonization. But it was closed during the Japanese occupation and the struggle for independence. The stock exchange in Jakarta was reopened in 1952 and continued to operate until 1958. The nationalization of foreign enterprises, especially Dutch companies, followed by the exit of Dutch nationals in 1958, contributed to the demise of this stock exchange market. During 1958 until mid 1970s, the development of stock exchange market was inhibited by several factors such as unstable and low economic growth, high rates of inflation, and public's unfamiliarity with its functions and benefits. In 1976, the government reopened the stock exchange market in Jakarta. The government set up two agencies to guide and regulate the operation of the stock exchange market, namely the Capital Market Policy Board, the Capital Market Executive Agency (BAPEPAM). The BAPEPAM assumed the same function as those of the Securities and Exchange Commission in the United States. In addition, a state-owned investment trust company (PT Danareksa) was established.

Since its inception, however, the number of companies listed on the stock exchange market increased very slowly. As of March 1987, only 24 companies were listed in the stock exchange, of which three companies were listed as bond issuers. In order to speed up the development of the capital market, the government, since 1987, has launched a package of deregulation measures. The policy measures cover, among other things, the simplifications of procedures of listing requirements for the regular stock exchange; easing of restrictions of foreign investors to be involved in the stock exchange; the establishment of over the counter (OTC) bourse with greater simplifications of procedures and requirements; the establishment of securities companies that engage in underwriting, brokerage and dealing of securities; the establishment of a private stock exchange; the opening of stock exchanges in cities other than Jakarta.

After the deregulations took effect, the capital market grew rapidly. During 1989 and first semester of 1989, there were 97 new companies listed in the stock exchange, and at the end of 1991, the number of companies listed was 167, with 1,173 billion shares and bonds with nominal value of Rp 11.4 trillion.

V. Factors Affecting the Mobilization of Domestic Savings

5.1 The Model

In examining savings behavior in Indonesia, we have applied general theories of savings with special consideration given to the unique characteristics of savings behavior in this country. In the literature, the main determinants of savings include income, wealth, rates of returns, foreign savings, and demographic variables.

No doubt, income is essential for determining savings because income is spent, saved or some combination of the two. The level of per capita income is hypothesized to have a positive effect on the rate of savings. Individuals at subsistence and low income levels may be able only to save very little, if anything. Those who have higher income may be able to save more. As income rises, the marginal propensity to save would rise. Current disposable income per capita at constant prices is chosen in this study.

It is well-known that wealth has a positive impact on consumption, and a negative impact on savings. But the absence of good measurements of wealth in many developing countries preclude a plausible analysis. In our study, as a rough approximation of financial wealth, we have tried to use both total domestic credits (DC) and total domestic liquidity (M2).

McKinnon hypothesizes that higher real interest rates have a positive impact upon saving, investment and thus output, because money and capital are complementary. At low interest rates, people would not want to hold much money or other financial assets, and therefore, they would not want to have much financial saving. But traditional approaches argue that the effect of higher interest rates on private savings is ambiguous, since an increase in the real return on savings has two offsetting effects. On the one hand, a higher real interest rate decreases

the present cost of future consumption, so that it is attractive to consume less today and more tomorrow, thus save more today. On the other hand, it is no longer necessary to save as much to achieve a target level of future's consumption, so that a higher real interest rate allows greater consumption today and tomorrow, and thus save less today. The effect of the real interest rates on savings becomes an empirical matter. In our work, 3 month-deposits rates have been used to measure nominal interest rates, and the real interest rates are the nominal rates adjusted for inflation (measured by percentage changes in consumer price index).

According to the life-cycle models, the rate of savings will be affected by the rate of growth in per capita income, the stock of wealth, and various demographic variables such as life expectancy, the normal age of retirement, age distribution, family size, the share of population that is of working age and is working, and the dependency ratio. The dependency ratio - the number of people under age of 15 and over 65 as a share of total population - has been used in our model. Foreign savings as indicated by the current account deficit is also included as an explanatory variable. All variables are in reals, the nominals adjusted for consumer price index.

5.2 Measurements Problems

In this study some problems regarding concepts and measurements of domestic saving are encountered. The first is whether to use a "national" or "domestic" concept of savings. As is known, national saving measures a country's own efforts, whether at home or abroad, to mobilize resources for investment, while domestic savings reflects only the country's efforts at home. When net factor income from abroad is negative, not all domestic saving is available to finance domestic investment. In this study, the concept of domestic has been used since we are concerned with the country's effort to mobilize resources at home. Secondly, the domestic concept is more appropriate when we are to study disaggregated savings. The third problem is the nonavailability of disaggregated data. In the case of Indonesia, it is not possible to split domestic saving into three sectors: government, corporate and household. It is, however, possible to split savings into government and private sectors. Private savings is the sum of corporate and household savings. Data on aggregate saving is derived from the national accounts as a residual, employing the national income identity,

i.e. the excess of domestic investment over savings is equal to the current account deficit of the balance of payments. The gross concept has been used rather than the net concept because the very arbitrary nature of depreciation allowances is used to calculate investment. The accuracy of measurement is therefore limited. And it is not surprising if the result of empirical study of determinants of saving is not satisfactory. The derivation of disaggregated data is presented in Table 5.6.

The derivation of domestic saving and its breakdown on government and private sector is based on the concept of the national account identity, as follows:

$$(1) \text{ SAD} - \text{INV} = \text{EXP} - \text{IMP} + \text{NFI}$$

$$(2) \text{ SAD} = \text{SAG} + \text{SAP}$$

$$(3) \text{ SAG} - \text{ING} = -(\text{DEB} + \text{NCG})$$

where

SAD = gross domestic saving

INV = gross domestic capital formation

EXP = exports

IMP = imports

NFI = net factor income from abroad

SAG = gross government saving

SAP = gross private saving

ING = government investment

DEB = net government borrowing from abroad

NCG = net government borrowing from domestic financial system

Data on domestic investment is approximated by gross domestic capital formation, while data on government investment is derived from budget, that is development expenditures minus fertilizer subsidies. Data on gross domestic saving is derived from the Indonesia's national income accounts. According to the national income identity, the gap between domestic saving and domestic investment is equal to the surplus/deficit on the current account of the balance of payments. Using data for the current account balance and data for capital formation, one can calculate the level of domestic saving. The obvious way to find the split between government and private saving is to define government saving and government gross fixed capital formation first, and then to derive the private sector residually. The government gross saving is derived from budget in such a way that the difference between government

saving and government investment is equal to the financial flows to the government. The financial flow to the government are put equal to net foreign borrowing plus change in the government accounts with the monetary system. Private saving is calculated by subtracting government saving from total domestic saving. The results are shown in Table 5.7.

Table 5.7

DOMESTIC SAVINGS AS PERCENTAGE OF GDP

Year	Gross Domestic Savings	Gross Government Savings	Gross Private Savings
1970	0.09	0.00	0.09
1971	0.11	0.00	0.10
1972	0.14	0.02	0.13
1973	0.13	0.02	0.11
1974	0.16	0.04	0.12
1975	0.16	0.04	0.12
1976	0.18	0.08	0.10
1977	0.19	0.07	0.12
1978	0.17	0.07	0.11
1979	0.22	0.06	0.16
1980	0.24	0.10	0.14
1981	0.23	0.07	0.16
1982	0.19	0.04	0.15
1983	0.18	0.04	0.13
1984	0.20	0.08	0.12
1985	0.21	0.06	0.15
1986	0.19	0.03	0.16
1987	0.22	0.02	0.19
1988	0.24	0.03	0.21
1989	0.26	0.03	0.23
1990	0.27	0.07	0.19
1991	0.26	0.05	0.21

5.3 Estimation Results

It is not surprising that the results of estimation is not satisfactory since the accuracy of saving data is limited. Cointegration tests and estimation of error-correction models were not conducted because the time series were too short to yield meaningful results. Instead, we have used the ordinary least squares technique. The model has been transformed into a semilog-linear relationship. The results of estimation (using MicroTSP) are reported as follows:

$$(1).LSRT = -8.480 + 0.515 LNNP + 0.477 LM2R - 0.545 INT \\ (-8.019) \quad (2.462) \quad (3.731) \quad (-2.876)$$

$$+ 0.111 LFSC + 1.453 LDEP \\ (3.895) \quad (3.990)$$

$$R^2 = 0.947$$

$$DW = 2.359$$

$$(2).LSRP = -10.952 + 1.721 LINC - 0.224 LCRD - 0.999 INT \\ (-3.343) \quad (3.125) \quad (-1.613) \quad (-2.911)$$

$$- 0.488 LTOT - 0.856 LDEP \\ (-2.314) \quad (-1.840)$$

$$R^2 = 0.913$$

$$DW = 2.346$$

$$(3).LSRG = -31.865 + 0.486 LGRW + 2.791 LNNP - 3.017 LCSG \\ (-2.133) \quad (1.107) \quad (2.672) \quad (-0.986)$$

$$- 1.990 INT - 0.769 LTAX \\ (-2.514) \quad (-0.774)$$

$$R^2 = 0.700$$

$$DW = 0.890$$

where: SRT = Gross domestic savings (ratio to GDP)
SRP = Gross private savings (ratio to GDP)
SRG = Gross government savings (ratio to GDP)
CSG = Government consumption

- NNP = Permanent income (3-year moving average of current income as a proxy) per capita
 INC = Current disposable income per capita
 GRW = Economic growth (change in GDP at constant prices)
 M2R = Domestic liquidity per capita
 CRD = Credit from the monetary system per capita
 INT = 3-month deposits rates adjusted for inflation
 FSC = Foreign savings (current account deficit) per capita
 TOT = Terms of trade
 TAX = Taxes received (ratio to GDP)
 DEP = Ratio of population below 15 and above 65 years old to population between 15-65 year old
 L represents natural logarithm.
 All data series are in real terms.

The above results show that the estimated relationships for both aggregate and private savings are reasonably good. R^2 is highly satisfactory for equations (1) and (2). Coefficients of explanatory variables for aggregate savings are all statistically significant from zero at five per cent level. The coefficient of real interest rate is however significantly negative. With a number of alternatives for interest rate data series (nominal or real, 3-month or 12-month deposit rates) and modified relationships, we are unable to find a significantly positive interest rate effect on savings rate, both for aggregate and for sectoral data. This finding is contrary to that of many country studies. Fry (1986, p. 65), for example, found a positive effect of real deposit rate on national savings for 14 Asian countries. Yusuf and Peters (1984, p. 21) produced a real deposit rate coefficient exceeding 1 for Korea over the period 1965-1981. Our finding may suggest that the financial reform in Indonesia that resulted in positive real interest rates has contributed negatively to the accumulation of domestic savings (in real terms). The negative income effect on savings of increased wealth due to higher interest rates may have outweighed the substitution effect which raises domestic savings. The financial reform was undoubtedly successful in mobilizing financial savings but not for domestic savings as in the national account concept.

Income coefficients appear to be significantly positive for all estimations. Aggregate and government savings rates are quite sensitive to changes in permanent income, measured by 3-year moving average of current disposable income per capita, while private saving is

responsive only to current income per capita. The coefficients of dependency ratio show mixed results. That for the private savings has its expected negative sign, while that for aggregate and government savings show positive signs. This conflicting sign may be attributed to the lack of accurate population figures. Our estimates of dependency ratio should be regarded as the third best. On top of that, reliable data series for employment are not available.

For the private sector as in equation (2), coefficients of current income, interest rates and terms of trade are all statistically significant at five per cent level, but that of terms of trade has the wrong sign. Their magnitude are large enough to warrant much policy significance. As shown in equation (3), only permanent income per capita and real interest rates appear to be statistically significant in explaining variation in the government savings. The response of government savings on changes in tax ratio is not at all significant. This is contra-intuitive since higher tax revenues support the government's ability to save and thus to invest. From this finding, one may suggest that the tax reform introduced by the government in 1984 that had led to an increase in tax revenues contributed less to the formation of domestic savings.

VI. Concluding Remarks

In this chapter we have assessed major factors affecting mobilization of domestic savings in Indonesia. Although the empirical findings are not fully satisfactory, they give us rough indications about the behavior of savings in the country. It is suggested that income per capita played a predominant role in the accumulation of savings. Marginal propensity to save of population is largely influenced by per capita income. Therefore, to promote domestic savings it is necessary to maintain higher economic growth as the main source of increase in per capita disposable income. In addition, the population dependency ratio as one factor affecting the private savings may also be reduced by promoting more employment opportunities and discouraging the growth of non-productive population through a more extensive family planning.

The negative effect of real interest rate on savings suggests that interest rate policy aiming at achieving higher real interest rates would not be effective in mobilizing domestic savings. On the one hand, higher

real interest rates would have a positive effect on financial savings, but, on the other hand, if the interest rate is too high, domestic investment would be discouraged, output growth would thus be retarded. An interest rate policy may do more harm than good to the economy. But it is too premature to conclude that the financial reform contributed nothing to the accumulation of domestic savings in Indonesia. The lag effect may exist in this phenomenon. This will be left to further study.

Bibliography

1. Fry, Maxwell J., "Money, Interest, and Banking in Economic Development", *Baltimore: The Johns Hopkins University Press*, 1988.
2. Fry, Maxwell J., "Terms-of-Trade Dynamics in Asia: An Analysis of National Saving and Domestic Investment Responses to Terms-of-Trade Changes in 14 Asian LDCs", *Journal of International Money and Finance*, 5(1), March 1986, pp. 57-73.
3. Schmidt-Hebbel, Klauss and Steven B. Webb, "Public Policy and Private Saving", in *Adjustment Lending Revisited*, edited by Vitorio Corbo and Standly, Fisher *The World Bank*, 1992.
4. Smith, Roger S., "Factors Affecting Saving, Policy Tools, and Tax Reform", *IMF Staff Papers*, 37(1), March 1990, pp. 1-70.
5. Suseno and S.A. Tarihoran, "Development of the Capital Market in Indonesia", in *The Development of Capital Markets in the SEACEN Countries*, edited by Ng Beoy Kui (The SEACEN Centre, 1989).
6. "The Measurement of Private Saving and Private Investment", *Bank Indonesia Research Note No. 18*, March 1989.
7. Yusuf, Shahid and R. Kyle Peters, "Savings Behavior and Its Implication for Domestic Resource Mobilization: The case of the Republic of Korea", *Washington, D.C.: World Bank Staff Working Paper No. 628*, April 1984.

Chapter 6

DOMESTIC RESOURCE MOBILIZATION IN KOREA

by

Sihwan Kim

I. An Overview of the Developments in Domestic Savings Mobilization

1.1 Definitions and the Measurement of Domestic Savings

Economic growth is achieved through the increase in production factors and productivity. Among production factors, capital has long been recognized as a major component in the process of long-term economic growth, directly by its increase as an input and indirectly through the changes in technology implemented when new capital is put to use. Capital formation depends largely on a series of investment activities which is financed by both domestic and foreign resources.

Savings are generally defined as the residual of income minus consumption during the specific period. From the viewpoint of savers, they can be classified into real savings, in the form of equipment or real estate, and financial savings, in the form of deposits or securities. Net financial savings, however, become zero in the national economy, because the financial savings of one sector are exactly equivalent to the financial dissavings of other sectors: in general, households as the surplus sector possess positive financial savings but firms as the deficit sector hold negative financial savings. Only real savings are, therefore, represented as the increase in the net assets of the national economy through investment.

According to where they are raised, savings are divided into domestic savings and foreign savings. Domestic savings are subdivided into household savings, firm savings and government savings, while foreign savings mean borrowings from foreign countries.

Savings are defined as total savings or net savings, according to the definition of national income. Total savings are the sum of net savings

and allowances for consumption of fixed capital. The saving ratio, the ratio of saving to income, is also used to compare the public's level of saving with its income. Two kinds of saving ratio, total saving ratio and net saving ratio, are measured. Total savings and total saving ratio are preferred to net savings and net saving ratio in recent essays on savings, investment and economic growth.

1.2 The Role and Significance of Domestic Savings

In underdeveloped economies, a vicious circle of poverty - low income, low savings, low investment and, in turn, low income - repeats itself endlessly. Capital accumulation through domestic savings is required to achieve the economic growth to break out of the vicious circle of poverty in these economies.

According to the method by which they are raised, domestic savings can be divided into voluntary savings and involuntary savings, which take place through monetary or fiscal policies using tax, the issuance of government bonds, and the central bank's powers of money creation. At the outset of economic development, the resources for economic development rely heavily on involuntary savings. Involuntary savings, however, have their limits and adverse effects: involuntary savings through increased taxes meet tax resistance on the part of the public; those through issuance of government bonds repress private voluntary savings; and those through the money creation of the central bank cause inflation. Resource mobilization from abroad has its own limits and side effects, because it worsens the balance of payments position. Moreover, foreign savings must be redeemed by domestic savings at some stage in the future.

Overall, voluntary domestic savings assure persistent capital accumulation without adverse or side effects, so that they play a pivotal role in stable and sustained economic growth. Harrod-Domar's growth equation¹ also shows that rapid economic growth reflects the positive influence of a high saving ratio. In addition, savings allow households to improve the quality of their life, based on the life-cycle hypothesis that households save during their working years in order to finance consumption during the period of retirement.

1. Growth rate = Saving ratio/Marginal fixed capital output ratio

1.3 Introduction to Domestic Savings in Korea

1.3.1 Savings and Investment

First of all, the saving ratio and the investment ratio need to be examined in order to grasp the investment-saving gap. The investment ratio has shown a steady increase, recording 35 40 per cent per year in recent years as against around 30 per cent per year in the 1970-80s. The saving ratio also increased rapidly to about 35 per cent per year since the mid 1980's from approximately 20 per cent per year in 1975.

Despite the rapid increase in the saving ratio, an investment-saving gap has continued due to the more rapid increase in investment ratio. The investment-saving gap was customarily supplemented by foreign savings, causing a serious foreign debt problem in the mid-1980s. During the period of 1986-89, the saving ratio exceeded the investment ratio, so that the debt service ratio(DSR) has been reduced to single digit since 1989. Since 1990, however, domestic savings have again fallen short of total investment and the investment-saving gap has returned to the same pattern as that displayed in the years up until 1985. Once again a leading issue in Korea is how to increase domestic savings so as to satisfy investment needs without inducing foreign savings.

1.3.2 Domestic Savings by Sector

Among the total savings, household savings have occupied the largest portion of total savings. The share of household savings in total savings increased from 42.1 per cent in 1975 to 47.8 per cent in 1990, showing a steadily increasing trend especially since 1987. The share of firm savings has experienced a decreasing trend, dropping from 43.9 per cent in 1975 to 27.9 per cent in 1990. Government savings showed the most rapid growth rate on an annual basis during the period of 1975-90, helped by the balanced government budget. As a result, the share of government savings in total was just below that of firm savings in 1990.

1.3.3 The Role of Financial Institutions and Capital Market

Investment is mainly executed by firms and firms rely for a large part of their investment funds on external sources, borrowings from households or the foreign sector.

Table 6.1**INVESTMENT AND SAVING RATIOS**

(In Per Cent, Billion US Dollars)

	Growth rate	Investment ratio1/(A)	Domestic saving ratio2/(B)	Foreign saving ratio	B/A	Outstanding of total foreign debt3/
1965	5.8	14.1	13.2	-0.2	0.94	0.2
1970	7.6	26.2	19.0	6.9	0.73	2.3
1975	6.4	28.8	18.2	8.9	0.63	8.5 (12.5)
1976	13.1	26.6	24.3	1.1	0.91	10.7 (11.0)
1977	9.8	28.3	27.6	-0.1	0.98	12.5 (10.1)
1978	9.8	32.6	29.7	2.1	0.91	14.8 (12.9)
1979	7.2	33.9	28.4	6.4	0.79	20.3 (14.0)
1980	-3.7	32.0	23.1	8.5	0.72	27.2 (14.4)
1981	5.9	29.9	22.7	6.6	0.76	32.4 (14.3)
1982	7.2	28.9	24.2	3.7	0.84	37.1 (16.2)
1983	12.6	29.2	27.6	1.9	0.95	40.4 (15.7)
1984	9.3	30.3	29.4	1.5	0.97	43.5 (16.6)
1985	7.0	29.9	29.1	1.0	0.97	46.8 (18.6)
1986	12.9	28.9	32.8	-4.5	1.14	44.5 (20.8)
1987	13.0	29.6	36.2	-7.4	1.22	35.6 (30.1)
1988	12.4	30.7	38.1	-8.0	1.24	31.2 (13.2)
1989	6.8	33.5	35.3	-2.3	1.06	29.4 (9.8)
1990	9.3	37.1	36.0	0.9	0.97	31.7 (8.0)
1991	8.4	39.3	36.1	3.1	0.92	39.1 (4.6)

Notes: 1/ Investment/Gross national disposable income.

2/ Savings/Gross national disposable income.

3/ Figures in parentheses represent debt service ratios (DSR).

In Korea, most investment by firms is raised externally through the financial institutions and the capital market. In this process, financial institutions play a key role by raising funds from the household and foreign sector and supplying them to the firm sector. The capital market also helps firms' investment through the direct financing of firms by individuals. The share of investment funds raised through financial institutions and the capital market to the total investment funds of firms stood at above 70 per cent until the early 1980s, whereas internal funding for firms' investment remained below 30 per cent. The share of external sources decreased steadily during the 1980s, recording only 37.4 per cent in 1988, encouraged by the current account surplus. But it increased again from 1989 and amounted to 63.9 per cent in 1990.

Households hold a large part of their savings in the form of financial assets including bonds and stocks issued by firms, thus making those savings available to firms through financial institutions and the capital market. The ratio of financial savings to total household savings recorded around 60 per cent. This ratio was relatively high in the 1980s, compared to the 1970s or earlier. The lower inflation rate in the 1980s was one of the reasons for the inducement of financial savings from the household sector.

II. The Role of Financial System in Domestic Savings Mobilization

2.1 Financial Savings through Financial Institutions

Financial institutions promote domestic savings by providing various financial instruments for savers and induce the efficient use of savings through the function of intermediation between savers and investors. This role of financial institutions grows with economic development, as the needs for investment expand and the intermediation of investment resources. Also, as income rises, there is a tendency to increase the proportion saved by households and to reduce the proportion directly invested in own-capital by firms.

During the past three decades in Korea, the scale of financial savings through financial institutions has greatly increased and the growth of financial savings has outpaced that of GNP. As a result, the ratio of financial savings to current GNP jumped to 121.5 per cent in 1991 from 5.7 per cent in 1965.

Table 6.2
COMPOSITION OF DOMESTIC SAVINGS BY SECTOR

(Billion Won, Per Cent)

	Total Savings	Sector		
		Household	Firm	Government
1975	1,865.5	784.3 (42.1)	819.4 (43.9)	261.6 (14.0)
1976	3,451.1	1,617.4 (46.9)	1,189.8 (34.5)	644.1 (18.7)
1977	5,017.1	2,417.3 (48.2)	1,796.9 (35.8)	802.9 (16.0)
1978	7,331.0	3,737.7 (51.0)	2,314.6 (31.6)	1,278.7 (17.4)
1979	8,928.5	4,152.7 (46.5)	2,767.3 (31.0)	2,008.5 (22.4)
1980	8,702.5	3,362.7 (38.6)	3,388.3 (38.9)	1,951.5 (22.4)
1981	10,627.4	4,284.8 (40.3)	3,844.3 (36.2)	2,498.3 (23.5)
1982	13,062.1	5,251.2 (40.2)	4,719.7 (36.1)	3,091.2 (23.7)
1983	17,343.3	6,641.1 (38.3)	6,382.6 (36.8)	4,319.6 (24.9)
1984	20,996.1	8,616.0 (41.0)	7,710.7 (36.7)	4,669.4 (22.2)
1985	23,037.1	9,126.9 (39.6)	8,908.9 (38.7)	5,001.9 (21.7)
1986	30,090.9	13,424.4 (44.6)	10,946.5 (36.4)	5,720.1 (19.0)
1987	39,045.3	17,373.8 (44.5)	14,311.3 (36.7)	7,360.2 (18.9)
1988	48,683.2	21,920.8 (45.0)	16,315.9 (33.5)	10,446.5 (21.4)
1989	50,234.1	23,652.5 (47.1)	14,770.9 (29.4)	11,810.8 (23.5)
1990	61,900.9	29,579.8 (47.8)	17,288.3 (27.9)	15,032.8 (24.3)
1991	74,498.0	-	-	-
Average annual growth rate				
	26.3	27.3	22.1	31.0

Note: Figures in parentheses are percentage proportions of total savings.

Table 6.3
THE ROLE OF FINANCIAL INSTITUTIONS AND CAPITAL MARKET IN INVESTMENT

(Billion Won, Per Cent)

	Total investment (A)	Firm's investment (B)	Firms' investment raised through financial institutions and the capital market (C)	C/A	C/B
1965	120.9	82.2	42.6	35.2	51.8
1970	693.2	356.3	244.3	35.2	68.6
1975	3,030.1	1,662.7	1,321.4	43.6	79.5
1980	11,788.9	8,323.9	5,951.0	50.5	71.5
1985	22,892.5	15,390.2	7,020.8	30.7	45.6
1986	30,506.3	16,984.0	6,892.6	22.6	40.6
1987	39,953.0	21,507.3	8,353.6	20.9	38.8
1988	49,421.2	23,807.7	8,894.1	18.0	37.4
1989	51,035.7	31,048.3	17,512.9	34.3	56.4
1990	62,218.4	44,377.8	28,357.9	45.6	63.9

Until the early 1970s, banks were the predominant institutions mobilizing financial savings, while non-bank financial institutions, consisting only of trust institutions and life insurance companies played an insignificant role. Various kinds of specialized banks were established in the 1960s to facilitate financial support for strategically important sectors through the more efficient allocation of banking funds. However, in the 1970s, as various non-bank financial institutions were established to induce unorganized curb market funds into the organized financial market, the growth of financial savings through banks started to slow down. This decreasing trend in banks' deposit market share has continued throughout the 1980s and the early 1990s. Among financial savings products offered by banks, the share of negotiable certificates of deposit (CDs) has shown especially rapid growth since they were introduced in 1984. However, the shares of both time and saving deposits and the debentures issued by several specialized banks in total financial savings have declined since the 1970s.

Financial savings through non-bank financial institutions have witnessed strong growth since the early 1970s. This was largely helped by the relatively higher interest rates on the deposits of non-bank financial institutions compared with those of banking institutions. Especially during the 1980s, the growth of financial savings through non-bank financial institutions was remarkable, enabling their share in total financial savings to soar to 71.2 per cent in 1991 from 46.0 per cent in 1980.

By type of non-bank financial institution, trust institutions and life insurance companies have reasserted their original leading positions in mobilizing financial savings. Securities investment trust companies have shown rapid growth since their establishment in 1974. Meanwhile, investment and finance companies and merchant banking corporations, which had grown rapidly following their introduction in the 1970s, have experienced a decrease of their share since the early 1990s, due to the downward adjustment of the limits on their operations and the conversion of some investment and finance companies into banks or securities companies. Other non-bank financial institutions including mutual savings and finance companies, mutual credit facilities and credit unions have kept up a steadily increasing pace, helped by tax incentives or preferential interest rates designed to lure small savers' funds from the curb market.

Table 6.4**THE COMPOSITION OF HOUSEHOLD SAVINGS**

(Per Cent)

	Increasing rate of CPI	Real savings	Financial savings
1975	25.4	38.6	61.4
1976	15.3	39.0	61.0
1977	10.0	27.2	72.8
1978	14.5	41.9	58.1
1979	18.2	52.8	47.2
1980	28.7	43.7	56.3
1981	21.6	27.8	72.2
1982	7.1	19.5	80.5
1983	3.4	39.8	60.2
1984	2.3	42.6	57.4
1985	2.5	44.6	55.4
1986	2.8	35.8	64.2
1987	3.0	33.5	66.5
1988	7.1	41.7	58.3
1989	5.7	42.0	58.0
1990	8.6	34.4	65.6

2.2 Policies to Promote Financial Savings

Policies to promote financial savings have had different characteristics in chronological order. In the 1960s, various measures for voluntary savings were undertaken to promote its development. The government initiated an interest rate reform in 1965: time deposit rate of banks jumped from 15 per cent to 30 per cent per year, while lending rate was a little lower than the time deposit rate. Thereafter, all the banks became important mobilizers of financial savings. They were also relieved to a degree from the tight leash of dependence on central bank credit or government budgetary allocations of aid counterpart funds as primary sources for their lending. In addition, the government introduced involuntary savings, such as self-supporting saving deposits in 1966.

Table 6.5

FINANCIAL SAVINGS BY TYPE OF INSTITUTIONS

(Year-end figures)

(Billion Won, Per Cent)

	Banks	(Time and saving deposits)	(CDs)	(Debentures)	Non-Banks	Total	
1965	30.6 (67.0)	30.6 (67.0)	-	-	15.1 (33.0)	45.7 (100.0)	<5.7>
1970	584.4 (77.1)	576.3 (76.1)	-	8.1 (1.1)	173.1 (22.9)	757.5 (100.0)	<27.2>
1975	2,002.2 (67.3)	1,946.6 (65.3)	-	58.4 (2.0)	972.6 (32.7)	2,974.6 (100.0)	<29.3>
1980	8,991.8 (54.0)	8,577.0 (51.6)	-	414.8 (2.5)	7,661.0 (46.0)	16,652.8 (100.0)	<45.3>
1985	21,667.7 (38.9)	20,246.2 (36.5)	1,080.9 (2.0)	340.5 (0.6)	34,027.3 (61.1)	55,694.9 (100.0)	<71.3>
1990	60,961.7 (29.3)	52,433.7 (25.3)	6,803.5 (3.3)	1,724.5 (0.8)	146,901.8 (70.7)	207,863.1 (100.0)	<120.3>
1991	72,639.9 (28.8)	60,888.4 (24.3)	9,940.0 (4.0)	1,811.5 (0.7)	178,542.9 (71.2)	252,182.8 (100.0)	<121.5>
Average annual growth rate	34.8	33.9	44.7	29.4	43.5	39.3	

Notes: 1 Figures in () are percentage proportions of total financial savings through financial institutions.

2 Figures in < > represent ratio to current GNP.

In the 1970s, following the 1969 reversal of the reform of 1965, the instruments used for voluntary financial savings were diversified and new types of non-bank financial institutions were introduced to attract private savings from the unregulated curb market to the organized financial institutions. Owing to these efforts, a variety of new financial institutions and savings instruments have come into existence. Property formation saving deposits for workers were also introduced during this period.

In the 1980s, various additional saving instruments were steadily introduced and a number of financial institutions, both banks and non-banks, were added. Measures to curb inflation were emphasized to provide a favorable environment for financial savings. Moreover, several measures of financial deregulation, such as the denationalization of commercial banks and the enlargement of financial institutions' powers of internal management, were implemented during this period.

Nowadays, in the early 1990s, we are pursuing policies for the efficient allocation of savings as high economic growth in Korea owes more to the quality or efficiency of investment rather than its quantity. To this end, financial liberalization is being gradually extended.

2.2.1 Establishment of New Types of Financial Institutions

Banking institutions and unregulated financial institutions accounted for the bulk of financial intermediation during the first two decades after the Korean War. Life insurance and money in trust accounted for the lion's share of the non-banking financial sector. In the early 1960s, the government introduced various specialized banks to facilitate financial support for underdeveloped or strategically important sectors: the National Agricultural Cooperative and its member cooperatives, the National Federation of Fisheries Cooperatives and its member cooperatives, the Small and Medium Industry Bank, later renamed the Industrial Bank of Korea in 1987, and the Citizens National Bank. In the latter half of the 1960s, the Korea Exchange Bank and the Korea Housing Bank were established, respectively. In 1983, the National Livestock Cooperatives Federation was added to complete a comprehensive set of specialized banking institutions.

Table 6.6

**FINANCIAL SAVINGS THROUGH
NON-BANK FINANCIAL INSTITUTIONS 1/**
(Year-end figures)

(10 Billion Won, Per Cent)

	Debentures	SITC2/	IFC3/	MIT4/	MSFC5/	MCF6/	CU7/	LIC8/	Others	Total
1965	0.03 (2.0)	-	-	0.8 (50.3)	-	-	-	0.5 (31.8)	0.2 (15.9)	1.5 (100.0)
1970	2.8 (16.2)	-	-	8.0 (45.8)	-	0.7 (4.1)	-	4.0 (23.1)	1.9 (10.9)	17.3 (100.0)
1975	6.7 (6.9)	1.5 (1.5)	25.4 (26.1)	18.7 (19.2)	4.3 (4.5)	12.5 (12.9)	3.8 (3.9)	16.3 (16.7)	8.0 (8.3)	97.3 (100.0)
1980	59.9 (7.8)	63.5 (8.3)	209.8 (27.4)	104.3 (13.6)	40.0 (5.2)	97.4 (12.7)	63.0 (8.2)	114.9 (15.0)	13.2 (1.7)	766.1 (100.0)
1985	253.4 (7.4)	572.4 (16.8)	688.5 (20.2)	392.8 (11.5)	276.5 (8.1)	304.5 (8.9)	196.8 (5.8)	690.9 (20.3)	27.1 (0.8)	3,402.7 (100.0)
1990	739.6 (5.0)	2,222.0 (15.2)	2,189.3 (14.9)	3,057.4 (20.8)	894.0 (6.1)	1,419.7 (9.7)	967.0 (6.6)	3,015.7 (20.6)	184.4 (1.3)	14,690.2 (100.0)
1991	1,295.5 (7.2)	2,592.1 (14.4)	1,767.5 (9.8)	3,802.0 (21.2)	1,202.0 (6.7)	1,873.1 (10.4)	1,301.8 (7.3)	3,889.4 (21.7)	233.9 (1.3)	19,754.3 (100.0)
Average annual growth rate	50.7	59.3	30.4	38.5	42.2	45.6	66.3	41.1	31.2	43.4

Notes: 1/ Figures in parentheses represent shares of each type of institution in total financial savings through non-bank financial institutions.
2/ Securities Investment Trust Companies.
3/ Investment and Finance Companies, Merchant Banking Corporations.
4/ Money in Trust.
5/ Mutual Savings and Finance Companies.
6/ Mutual Credit Facilities.
7/ Credit Unions.
8/ Life Insurance Companies.

Meanwhile, the commercial banking system was also restructured to meet the changing needs of the national economy: local banks were introduced with the prime objective of supporting a regionally balanced development of the national economy, and, matching the rapid increase in trade volume and the internationalization of the Korean economy, foreign banks were allowed to open branch offices from the late 1960s.

Towards the end of the 1960s, it became apparent that the existing banking system was incapable of generating the investment funds required to meet the surging needs of the continued economic development plans. Confronted with this situation, the government sought to diversify the sources of investment funds by introducing various non-bank financial institutions, based on the supply leading hypothesis suggested by H.T. Patrick² in 1966. The Korea Development Finance Corporation, a private development financial institution later renamed the Korea Long Term Credit Bank, was incorporated in 1967 as a long-term financial institution. The Export-Import Bank of Korea was founded in 1976 to facilitate financial support for exports and overseas investment.

With the 1972 promulgation of a Presidential Emergency Decree designed to induce unorganized curb market funds into the organized financial market, three kinds of non-bank financial institutions were introduced or institutionalized. Investment and finance companies were established to engage in short-term dealings in paper issued by business firms. At the same time, existing quasi-financial companies were put on an institutional footing as mutual savings and finance companies to specialize in receiving installment savings and extending petty loans repayable in installments. Merchant banking corporations were introduced in 1976 to induce foreign capital and supply medium- and long-term funds for business enterprises.

Non-bank financial institutions have witnessed strong growth since their establishment, due to the relatively higher interest rates they were permitted to apply and the greater degree of autonomy they enjoyed in management compared with banking institutions, thereby encroaching on the share of banking institutions in the financial market.

2. Patrick, H.T. (1966), "Financial Development and Economic Growth in Underdeveloped Countries," *Economic Development and Cultural Change*, Vol. 14, Univ. of Chicago Press, pp. 174, 1989.

Figure 6.1
INTEREST RATE REFORM AND ITS IMPACT

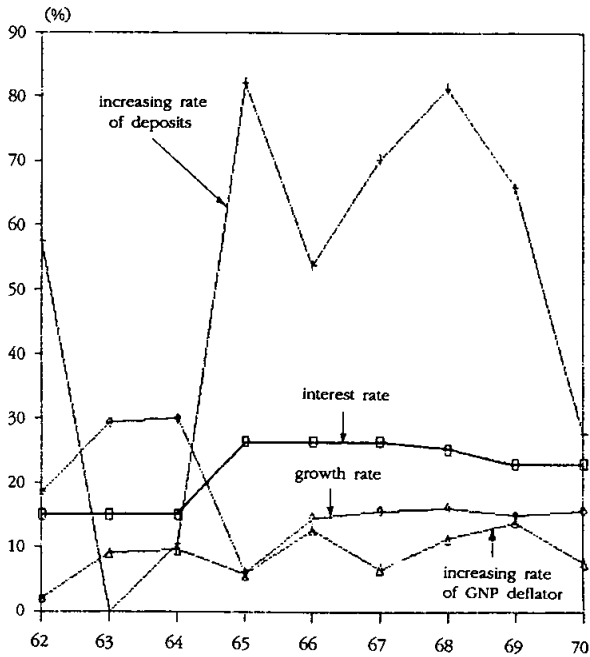
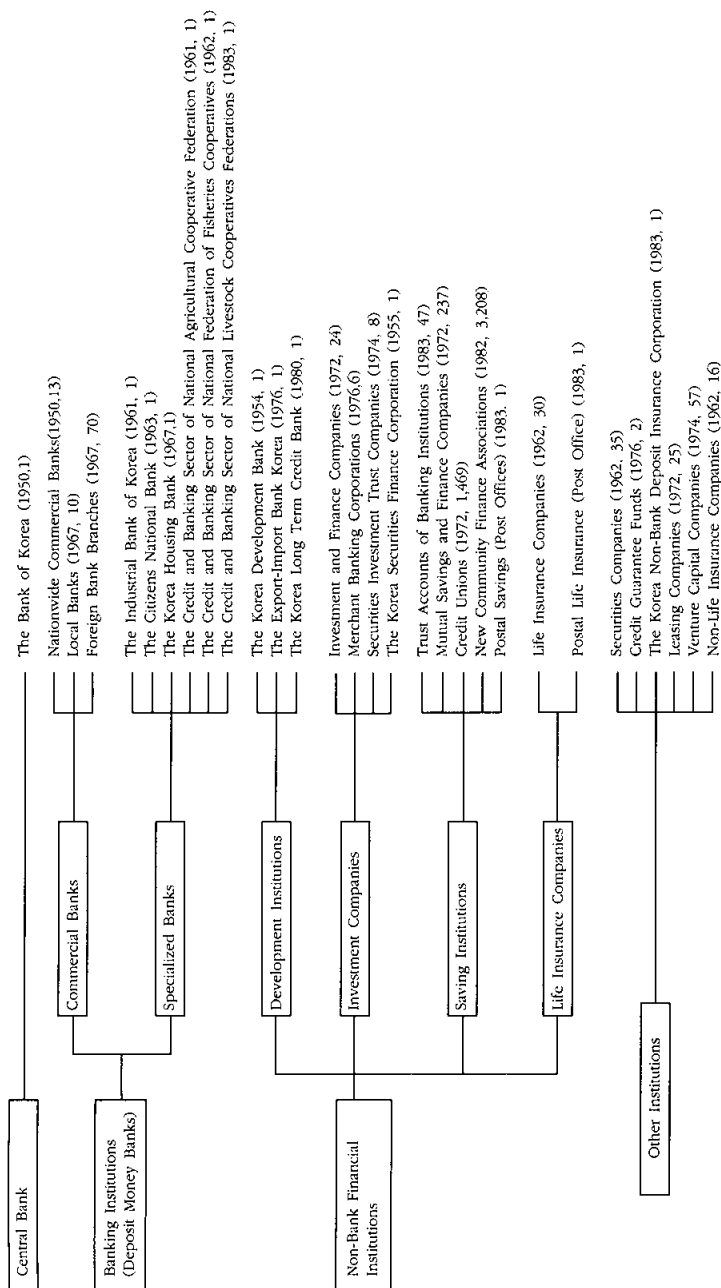


Table 6.7

FINANCIAL INSTITUTIONS KOREA



Note: Figures in parentheses represent the year of its (or their) first establishment and the number of institutions as of the end of August 1992, respectively.

During the 1980s, five commercial banks, six securities investment trust companies, and seventeen investment and finance companies were newly established. But, eight of the investment and finance companies were subsequently converted to banks or securities companies in the early 1990s. Five of them underwent conversion into securities companies, one company was converted directly into a bank and two companies were merged prior to conversion into a bank.

Table 6.8

ESTABLISHMENT OF MAJOR FINANCIAL INSTITUTIONS

	1970-1979	1980-1989	1990-1992.4
Banks	3	5	2
Development institutions	1	1	-
Investment and finance companies	15	17	-8
Merchant banking corporations	6	-	-
Securities investment trust companies	2	6	-
Credit unions	861	425	183
Life insurance companies	1	15	5
Total	889	465	182

2.2.2 Introduction of New Financial Instruments

In line with the establishment of new financial institutions, new financial instruments were also introduced. Investment and finance companies, merchant banking corporations, and securities investment trust companies were permitted to handle a variety of these new

Table 6.9

INTRODUCTION OF NEW SAVING INSTRUMENTS

	Year introduced	Institutions	Annual interest rates1/ (maturity)	Characteristics
Property formation saving deposits for workers	1976	Banks, Securities investment trust companies	15.5% (3 year)	- tax exemption on interest rate - open only to employees whose wages do not exceed 600 thousand won a month
RPs	1977	Banks, Securities companies, Post offices	10.0% (3 month)	- minimum amount is 100 thou sand won
CMA	1984	Investment and finance companies, Merchant banking corporations	15.0% (6 month)	- short-term investment poolings arrangements - minimum amount is 4 million won
CDs	1984	Banks	14.0% (6 month)	- negotiable certificates of deposit unregulated interest rates - minimum amount is 50 million won
Household money in trust	1985	Banks	13.7% (6 month)	- dividend rates are determined by the actual results of fund operations - minimum amount is 10 million won
Preferential saving deposits	1985	Banks, Post offices	12.0% (6 month)	- no restrictions on deposit or withdrawals - higher interest rates are offered than those on other similar deposits - one account per individual
Integrated passbooks with preferential tax treatment	1986	Banks, Post offices, Credit unions, Securities investment trust companies	-	- preferential tax treatment is available to any person transacting under his real name for up to 12 million won, providing an average deposit balance is maintained for more than one year - one account per individual
Company money in trust	1987	Banks	12.8% (6 month)	- no restriction on deposit or withdrawal - dividend rates are determined by the actual result of fund operations
BMF beneficial certificates	1987	Securities companies	12.9% (1 year)	- no restriction on deposit or withdrawal - yields are distributed according to the performance of the fund - deposits are invested in Treasury bills and MBS, etc.

Table 6.9 (Cont'd)

	Year introduced	Institutions	Annual interest rates^{1/} (maturity)	Characteristics
Tax-preference bonds savings for small savers	1990	Specialized banks, Securities companies	17.5% (1 year)	- same as that of integrated passbook with preferential tax treatment
Long-term saving deposits for workers	1991	Banks, Securities investment trust companies	12.5% (3 year)	- tax exemption on interest rates - one account per individual - maximum amount is 500 thousand won per month
Long-term securities deposits for workers	1991	Securities companies	-	- same as that of long-term saving deposits for workers
Savings deposit with special bounty	1992	Banks	10.0% (1 year)	- special bounty payments decided by lot - 10 accounts per individual - maximum amount is 100 thousand won per account

Note: 1/ As of the end of 1991.

financial instruments. Investment and finance companies can issue their own paper, sell the paper³ issued by business firms, and offer Cash Management Accounts (CMA), a product whose yields are determined by the actual result of fund operations; merchant banking corporations can sell beneficiary certificates for securities investment trusts and issue debentures themselves in addition to handling those of investment and finance companies; and securities investment trust companies can sell beneficiary certificates to the public. In parallel with this expansion of non-bank financial institutions, banks were permitted to extend their deposit business to offer negotiable certificates of deposit (CDs) and new deposits providing tax-incentives. In addition, securities companies, which are classed neither as banking institutions nor as non-bank financial institutions, were permitted to handle such new financial savings instruments as repurchase agreement (RPs) and the Bond Management Fund (BMF) beneficial certificates, similar to the bond investment funds administered by the securities investment trust companies. In a further deregulatory move, existing instruments

3. Commercial Paper (CP) in 1981, Guaranteed Commercial Paper introduced in 1984, paper issued by small and medium firms backed by payment guarantees from banks and other financial institutions, and conventional paper were amalgamated into a standard form in 1989.

formerly handled exclusively by one type of financial institutions were also made available to other institutions, as in the case of mutual installment deposits and RPs. Details of major instruments introduced in the last two decades are set out in Table 6.9.

2.2.3 Preferential Taxation and Interest Rates on the Financial Savings

Under the present tax system, interest income is subject to withholding taxes at the rate of 20 per cent in the form of income tax and 1.5 per cent in the form of residence tax. Unless a person deposits under his real name, however, much higher tax rates are imposed on interest accruing from such deposits under the Act concerning Real Name Financial Transactions. Table 6.10 shows the differences in tax rates between real name transactions and those conducted under pseudonyms or assumed names.

Table 6.10
Taxation on Financial Savings
(Per Cent)

	Real name	Pseudonym or assumed name
Income tax rate	20.0	60.0
Residence tax rate	1.5	4.5
Total	21.5	64.5

But some privileges are given to interest income accruing from specific kinds of financial savings with a view to encouraging personal savings and fostering the accumulation of financial assets by those in low income groups. The preferential system on financial savings takes four forms: tax exemption, application of lower tax rates, deduction of taxes payable, and preferential interest rates on special savings.

Tax exemption

There are various kinds of savings schemes whose depositors are fully exempted from all taxes on interest income. The archetypal scheme

Table 6.11

FINANCIAL SAVINGS WITH TAX EXEMPTION

	Maximum amount	Institutions	Eligibility
Installment saving deposits for education (1972)	2 million won in total	Banks, Post offices	- preschool children and students of elementary, middle and high school
All deposits of mutual credit facilities and credit unions (1973)	20 million won in total	Mutual credit facilities, Credit unions	- members of these financial institutions
Share accounts of credit unions, mutual credit facilities and new community finance associations (1976)	10 million won in total	Credit unions, Mutual credit facilities, New community finance associations	- individual in his real name
Property formation saving deposits for workers (1976)	12 thousand won a month	Banks, Securities investment trust companies	- employees whose wages do not exceed 600 thousand won a month - daily laborers who earn 24 thousand won or less - workers employed overseas
Installment savings for house subscription (1977)	100 thousand won a month	Korea Housing Bank	- householders not owing their own housing
Securities savings for workers (1980)	Within 30 per cent of monthly pay up to 500 thousand won a month	Securities companies	- same as those of property formation saving deposits for workers
Savings for workmen's housing (1987)	150 thousand won a month	Banks	- workers who do not own housing - otherwise the same conditions apply as for property formation saving deposits for workers
National corporation's stock trusts (1988)	Double the amount of stocks assigned	Banks	- individuals who want to open an account with this trust at the time of subscribing for stocks of national corporations
Long-term saving deposits for workers (1991)	500 thousand won a month	Banks, Post offices, Securities investment trust companies	- all employees and daily laborers

Table 6.11 (Cont'd)

	Maximum amount	Institutions	Eligibility
Long-term securities savings for workers (1991)	6 million won a year	Securities companies	- all employees and daily laborers
Stock savings for workers (1992)	within 30% of monthly pay up to 5 million won a year	Securities companies	- all employees and daily laborers

Note: Figures in parentheses represent the year introduced.

among them is property formation saving deposits for workers, which was introduced in 1976 to help workers on low incomes to accumulate funds by encouraging them to save voluntarily. So, there are various limits on eligibility, deposit amount and contract period. Other saving schemes on which interest income is free of tax are described in the Table 6.11.

Lower Taxation

This system is that income tax at the reduced rate is applied to some kinds of financial savings. The most well-known of these is the integrated passbook with preferential tax treatment. Preferential tax treatment is afforded to any person accumulating under his real name up to 12 million won of specified kinds of saving deposits, providing that his average deposit balance is maintained for more than one year. A number of saving instruments offering these benefits are handled by banks, post offices, mutual savings and finance companies, and securities investment trust companies.

These benefits also apply in the case of government and public bonds and finance debentures purchased under the same conditions and entrusted to financial institutions for more than one year. In addition, entrustors of money in trust for old-age benefits are entitled to take advantage of the lower income tax rate on interest income accruing from an amount of up to 15 million won in funds deposited.

Table 6.12

SAVINGS DEPOSITS WITH LOWER TAX RATE

	Maximum amount	Institutions	Kinds of Deposits		
			Deferred Deposits	Installment Deposits	Deposits for Loans
Integrated passbooks with preferential tax treatment (1986)	12 million won	Banks	Time deposits	Installment saving deposits	Mutual installment deposits
			Non-specific money in trust	Household preferential installment saving deposits	Housing installment savings deposits
				Specific purpose installment trust	
Integrated passbooks with preferential tax treatment (1986)	12 million won	Post offices	Time deposits	Installment saving deposits	
	"	Mutual credit facilities	Mutual time deposits	Household preferential installment saving deposits	Mutual installments
	"	Securities investment trust companies	Investment fund	Investment fund	
Money in trust for old-age benefits (1987)	15 million won	Banks	Both deferred deposits and installment deposits		
Finance debentures (1990)	12 million won	Banks	Where finance debentures are purchased from banks		
Government bonds, public bonds and finance debentures (1990)	"	Securities companies	Tax-preference bond savings for small savers		

Note: Figures in parentheses represent the year introduced.

Tax Deduction

Under the present tax system, a specified percentage of the amount deposited under specified saving schemes is deducted from taxes payable. Any person depositing with a property formation savings deposits for workers is entitled to this benefit: 15 per cent of the amount deposited each year is deducted from taxes payable during that year; and a 10 per cent deduction is applicable in the case of a depositor in a scheme for securities savings for workers or stock savings for workers.

Higher Interest Rates

This system of preferential interest rates is applied to some kinds of saving deposits to promote financial savings. Property formation saving deposits for workers and household preferential installment savings are typical saving schemes on which higher interest rates are applied than those on general time deposits of banks. Besides banks, many non-bank saving institutions also handle these types of savings.

Table 6.13
SAVINGS DEPOSITS WITH HIGHER INTEREST RATES

	Institutions	Annual interest rates(maturities)	Differential between preferential rate and the rate on banks' time deposits 1/
Property formation saving deposits for workers	Banks,	15.5%(3 years)	#+3.5
	Securities investment trust companies	16.5%(5 years)	#+4.5
Long-term saving deposits for workers	Banks,	12.5%(3 years)	#+0.5
	Securities investment trust companies	13.0%(5 years)	#+1.0
Household preferential installment saving deposits	Banks	13.0%(3 years)	#+1.0
Time deposits	Mutual credit facilities	14.0%(3 years)	#+2.0
Installment saving deposits	"	13.0%(3 years)	#+1.0
Mutual time deposits	Mutual savings and finance companies	15.0%(3 years)	#+3.0

Note: 1/ With a maturity of 2-3 years.

2.2.4 Policies to Promote Domestic Savings in the early 1990s

New financial instruments have been introduced and deposit limits on existing instruments attracting preferential taxation extended in recent years. In January 1991, for example, long-term saving deposits for workers were introduced and the deposit limit on integrated passbooks with preferential tax treatment was raised to 8 million won from 5 million won. In November 1991, the ceiling on long-term saving deposits for workers was extended to 500 thousand won per month and that on long-term securities savings for workers to 6 million won per year. Additionally, the ceiling limits on integrated passbooks with preferential tax treatment and on tax-preference bond savings for small savers were increased to 12 million won and that on money in trust for old-age benefits to 15 million won.

In January 1992, the maximum deposit amount for several savings instruments with tax exemption was increased significantly. All deposits of mutual credit facilities and credit unions were increased from 10 million won to 20 million won; and that on share accounts of credit unions from 5 million won to 10 million won.

In July 1992, new savings schemes designed to reinforce institutional investors' capacity for stock purchase were introduced as part of a series of measures to boost the sluggish stock market. Under these measures, banks were allowed to offer saving deposits with special bounty payments. And securities companies were also given to handle stock savings for workers with tax deduction for a period of one year. Securities investment trust companies were allowed to offer money in trust for old-age benefits for a period of five years. In addition, eligibility restrictions on securities savings for workers were abolished and the maximum deposit amount was raised to 5 million won for a period of one year.

In September 1992, maximum ceiling of preferential saving deposits was extended to 50 million from 20 million and the eligibility of saving deposits was alleviated.

Table 6.14**FINANCIAL SAVINGS THROUGH THE CAPITAL MARKET**

(Year-end figures)

(Billion Won, Per Cent)

	Government and public bonds	Corporate bonds	Stocks	Total
1968	16.8 (64.6)	-	9.2 (35.4)	26.0 <1.6>
1970	27.0 (54.5)	-	22.5 (45.5)	49.5 <1.8>
1975	237.6 (42.5)	61.3 (11.0)	260.6 (46.6)	559.5 <5.5>
1980	1,679.9 (34.6)	1,839.2 (37.9)	1,337.2 (27.5)	4,856.3<13.2>
1985	5,270.0 (33.3)	7,395.6 (46.7)	3,156.4 (19.9)	15,822.0<20.3>
1988	9,129.6 (26.3)	11,885.5 (34.3)	13,665.9 (39.4)	34,681.0<27.5>
1989	11,687.6 (20.9)	16,320.6 (29.2)	27,949.8 (49.9)	55,958.0<39.1>
1990	14,527.2 (20.9)	24,067.8 (34.7)	30,759.2 (44.3)	69,354.2<40.2>
1991	20,176.5 (23.7)	31,382.3 (36.9)	33,446.3 (39.3)	85,005.1<41.0>
Annual average growth rate	36.1	47.7	42.8	42.2

Notes: Figures in () represent percentage proportions of total bonds and stocks.

Figures in < > represent the ratio to current GNP.

Table 6.15**STOCK MARKET**

(Billion Won, Number)

	1975	1980	1985	1988	1989	1990	1991
Capital stock listed	643.4	2,421.4	4,665.4	12,560.4	21,211.5	23,981.6	25,509.6
No. of listed companies	189	352	342	502	626	669	686
No. of shareholders (in thousand persons)	291	753	772	8,541	19,014	1,731	1,432
Total market value	916.1	2,526.6	6,570.4	64,543.7	95,476.8	79,019.7	73,117.8
Value of traded stocks	333.9	1,134.0	3,620.6	58,120.6	18,199.6	53,454.5	62,564.9
Composite stock price index1/	89.7	106.9	163.4	907.2	909.7	696.1	610.9

Note: 1/ January 4, 1980=100, Year-end figures.

Table 6.16**BOND MARKET**

(Billion Won, Number)

	1975	1980	1985	1988	1989	1990	1991
Value of issued bonds	443.5	4,656.4	21,852.5	41,046.6	54,406.4	74,706.2	99,601.6
(Corporate bonds)	74.7	2,252.1	11,807.8	21,970.6	28,651.0	40,018.8	52,759.5
(Government bonds, public bonds and finance debentures)	368.8	2,404.3	10,044.7	19,076.0	25,755.4	34,687.4	46,842.1
Value of listed corporate bonds	52.2	1,659.3	7,263.3	11,521.0	15,395.5	22,068.2	29,241.0
Value of listed government and public bonds	167.9	895.4	4,737.8	22,159.0	28,049.7	29,049.1	32,249.7
Value of traded bonds	13.5	910.7	3,778.9	8,994.1	5,392.5	3,410.8	2,097.8

III. The Role of the Capital Market in Domestic Savings Mobilization

3.1 Overview of the Capital Market

Until the first half of the 1970s, the capital market was not so important as financial institutions in the mobilization of domestic savings. During the late 1970s and early 1980s, however, the capital market showed steady growth and its role in mobilizing domestic resources gradually strengthened, encouraged by government support and the improved environment for securities investment resulting from the strong economic growth. The market was extremely brisk during the period of 1986-1989, reflecting an expanding international trade surplus. Although the market has become inactive and bearish since late 1989, owing to the over-supply of stocks and unfavourable economic environment, the ratio of financial savings through the capital market to current GNP increased to 41.0 per cent in 1991 as against only 1.6 per cent in 1968. There are now 31 securities companies in Korea, including those five converted from previous investment and finance companies. They play a key role in buying and selling securities as intermediaries - both dealers and brokers - between securities issuers and investors.

3.2 Stock Market

The operation of the Korean stock market commenced in 1956 with the establishment of the Korea Stock Exchange. Reviewing the performance of the primary or issue market over the past two decades, the value of newly-issued stock grew by leaps and bounds from 6 billion won in 1969 to 327 billion won in 1978, helped by the continued economic buoyancy as well as by various government measures favoring stock investment and inducing firms to go public. As the economy went into recession in the wake of the second oil shock, however, the annual volume of stock issued declined during the period of 1979-82. But with economic recovery and a series of measures designed to foster the stock market, there was a gradual recovery in the volume of stock issued from 1983 onwards.

Most notably, the market was extremely brisk during the period of 1986-89 reflecting firms' expanding investment acquisitions in a time of high economic growth and an active stock trading market. Since the

Korea Composite Stock Price Index reached a peak of higher than 1,000 (January 1, 1980=100) in April 1989, however, the market has stagnated with the slowdown of economic growth.

In conjunction with the increasing role of the stock market in raising firms' investment funds, greater public participation in the stock market was pursued during the late 1980s. In 1988, two extremely-large government enterprises, the Pohang Iron and Steel Co. (POSCO) and the Korea Electric Power Co. (KEPCO), went public by way of offerings. The proportion of the two enterprises' stocks in the total market value of listed shares on the Korea Stock Exchange stood at 13.6 per cent at the end of April 1992. In 1989, 5 local securities investment trust companies were established at around the same time to encourage public savings in the form of stocks or bonds. In addition, savings through employees stock ownership associations were active, due to anticipations of higher stock prices as well as a tax break of a 13 per cent deduction on such savings.

3.3 Bond Market

There are three types of bonds in Korea: government bonds, public bonds and corporate bonds. Public bonds include local government bonds and government enterprise bonds, both of which are guaranteed by the government. Government bonds and government guaranteed public bonds are issued within a prescribed amount set annually by the National Assembly. Under the Commercial Code, corporate bonds may be issued up to twice the amount of a company's paid-in capital and reserves. At present, repayment of most corporate bonds is guaranteed by financial institutions.

The bond market enjoyed steady growth until the mid-1980s, due mainly to the rapid growth of the market for corporate bonds introduced in 1972. However, during the latter half of the 1980s, issues of corporate bonds were somewhat crowded out by those of Monetary Stabilization Bonds issued by the Bank of Korea to absorb the increased liquidity resulting from the balance of payments surpluses. With the stock market depressed since the latter half of 1989, however, deregulation of corporate bond's initial yields and expanded purchases of them by financial institutions using funds raised from the public through the sale of CDs and other new financial instruments led to a flood of corporate bond issues, galvanizing the bond market into new life.

3.4 Recent Characteristics of the Capital Market

The protracted depression of the stock market since the latter half of 1989 has led the government to take various measures that have sought to counter the market's sluggishness: 1) the increase in the stock purchasing capacity of securities investment trust companies, one of the leading types of institutional investors, through borrowings from government and other financial institutions including banks (December 1989); 2) authorization for the establishment of branches of foreign securities companies (March 1991); 3) raising of the ceiling limits on banks' securities investment (December 1991); and 4) the opening of the Korean stock market to foreign investors (January 1992). In addition, the Securities and Exchange Act was revised in December 1991 to promote fair trading through expansion of the disclosure requirements for firms listed on the Exchange and the strengthening of regulations on insider trading. Fair trading is requisite to attract individual investors, who are often influenced by the market rumors and have no recourse to risk hedging instruments such as stock index futures.

In the bond market, several initiatives are underway to solve the market's problems, such as the narrow range of bond types and the gap between yields in the primary and secondary markets. From July 1992, a new underwriting system, under which bonds are underwritten at a discount or a premium, marked a major step towards the liberalization of interest rates on bonds. The issuance of convertible bonds and bonds with warrants is on an increasing trend nowadays.

IV. Factors Affecting the Mobilization of Domestic Savings

4.1 Model of Domestic Savings

Savings theories have been developed together with the consumption theory, reflecting the fact that savings are the mirror image of consumption. Traditionally, income and interest rate have been considered as major determinants of savings. In addition to these variables, expected inflation, wealth, distribution of income, urbanization, and demographic factors such as the population dependency ratio have also been recognized as determinants of savings.

In this part, we will build a model of the determinants of national savings, considering general theories on savings and Korea's individual characteristics in its savings behavior. The model taken in this paper is restricted to explaining the determination of total savings. This is because sectoral savings data is not readily available for making meaningful time-series studies with sufficient degrees of freedom, therefore, sectoral savings functions cannot be estimated well in Korea.

According to the view of M. Feldstein, the savings of one sector may be crowded out by those of other sectors in many cases.⁴ And total savings are mainly determined by the individual sector.⁵ The estimation of the total savings function, therefore, also has almost the same implications as that of the sub-divided savings function.

We hypothesize total savings function in Korea in the following form. The expected sign of the partial derivatives is indicated on each variable.

$$S = f(Y, i, F, W, P^*, H)$$

+ ? - - - -

where S = Savings

Y = Income

i = Interest rate

F = Domestic credit of financial institutions

W = Wealth

P* = Expected inflation

D = Population dependency ratio

4. Feldstein maintained that an increase of one sector's saving would ultimately crowd out another sector's saving. For example, the increase of firm saving will reduce individual savings and higher government savings will ultimately crowd out private savings. As a result, change of tax policy and dividend policy cannot increase total savings and merely changes the composition of total saving ("Tax Incentives, Corporate Saving and Capital Accumulation in the U. S.," *Journal of Public Economics*, 2, 1973).

5. According to Denison, individual savings and another sector's savings are complete substitutes for each other because the individual is the only economic agent (David, P. A and Scadding, J. L., "Private Saving: Ultrarationality, Aggregation and Denison's Law," *Journal of Political Economy*, March/April, 1974).

Income may be very essential for determining savings, as shown in many articles about savings. Both permanent income and temporary income as determinants of savings will be tested in our case.

Interest rate will be treated as another major determinant of savings. But the sign of interest rate's influence on savings is not pre-determined. The reason, which is well-known in the classical school, is that the price effect of interest rate change is divided into an income effect and a substitution effect which run in opposite directions. Another hypothesis on interest rate may also be significant; in the world of Keynesian economics, a rise in interest rate brings savings down by way of a decrease of investment and, finally, income.

Savings may be influenced by the domestic credit offered by financial institutions to savers, in particular, households. In our model, we assume that an increase in domestic credit brings savings down, because the agents' budget constraints on consumption moves up to the extent of the increase in domestic credit.

Wealth is also entered as one of the factors in the savings equation, simply because the well-known wealth effect has an influence on consumption and, thus, on savings.

The effect of the expected rate of inflation on savings is assumed to be negative. The reason it is negative is that the higher inflation expectations may well cause the increase in current consumption and the decrease of the expected real return on savings.

Improvement of income distribution may decrease savings, because the marginal propensity to save expands in response to an increase in income as maintained by J. M. Keynes. But we exclude this variable, because annual income distribution data is not available. Urbanization is also excluded because the process of urbanization has little effect on the behavior of savings in the sense that the rural areas are geographically and economically very close to the urban areas in Korea.

To estimate the equation more significantly, some variables are transformed on a per capita basis without any change of the original meaning. The variable of interest rate is replaced by the expected real interest rate, so that the variable of expected rate of inflation can be omitted in order to increase the degrees of freedom. In addition,

inestimable variables need to be replaced with their respective proxy variables. Accordingly, the land price index is used in this model as the proxy variable indicating the change of wealth.

4.2 Estimation Results

Using annual data over the period of 1963-91, we estimate the above savings equation. Actual data used are as follows:

S = Total savings/Population

Y_a = $(Y_t + Y_{t-1} + Y_{t-2})/3$, as a proxy of permanent income, where Y_t is gross national disposable income divided by population in the year of t

Y_b = $Y_t - Y_a$, as a variable of temporary income

r = Nominal interest rate - Expected rate of inflation, where nominal interest rate is simple average of banks' one year time deposits interest rate, money in trust interest rate on a maturity of 18 months, and the yield on guaranteed corporate bonds, while the expected rate of inflation is the weighted average of the past three years' rate of increase of the GNP deflator, that is, $(P_{t-1} \times 0.6) + (P_{t-2} \times 0.3) + (P_{t-3} \times 0.1)$

F = Total domestic credit/Population

W = Land price index

D = $(\text{Population} - \text{Total employed})/\text{Total employed}$

Unit root tests were executed on these variables before the estimation (see Table 6.17). This will show that none of the variables is free from the non-stationary time series data. Therefore, traditional regression methods cannot be used on the variables because of the spurious regression problem.

In spite of the unsatisfactory unit root test results, however, traditional regression techniques can be applied to these variables if the

linear combination of each variable is stationary by a cointegration test. Cointegration tests were also executed on these variables and the result shows that the residuals of linear combination were stationary (see Table 6.18).

As a result of the cointegration tests, we estimate our savings function by ordinary linear regression methods. The results estimated by the RATS program are set out below. Figures in parentheses represent t-values. Seeing the estimated equation of S, we can easily perceive that the adjusted R² is fully satisfactory and the t-value of each variable's coefficient is statistically significant except for that of population dependency ratio.

$$S = 126.51 + 0.44(Ya) + 0.59(Yb) + 2.23(r) + 0.11(C) - 3.13(W) - 0.58(D) \\ (0.98) \quad (7.20) \quad (2.99) \quad (2.18) \quad (2.81) \quad (-4.77) \quad (-1.08)$$

$$R^2 = 0.996$$

$$D-W = 1.0$$

$$Q(14) = 20.87$$

Looking at the economic meaning of the estimated equation, we can easily recognize that the signs of the coefficients of all variables except for domestic credit coincide with our presumption. If the "ceteris paribus" condition all explanatory variables are independent of each other - is satisfied, we can find something more important from the above savings function.

Temporary income has a higher multiplier than permanent income, meaning that the marginal propensity of temporary income to savings is higher than that of permanent income. Moreover, the multiplier of real interest rate has positive sign with a value much higher than 1, even though this does not indicate the elasticity of its variable. We can, therefore, agree that savings are highly sensitive to a change in real interest rate. This is not far from the view of S. Yusuf and R. K. Peters (1984)⁶ who produced a real interest rate coefficient exceeding 1 in the Korean saving rate function over the period of 1965-81. It is known from a study by M. J. Fry(1988)⁷ that the coefficient typically lies in the range of 0.1-0.2 in developing countries.

6. Yusuf, S. and R.K. Peters, "Savings Behavior and Its Implications for Domestic Resource Mobilization: The Case of the Republic of Korea", World Bank Staff Working Paper, No. 628, Washington D.C., April 1984.

7. Fry, M.J., "Money, Interest and Banking in Economic Development", The Johns Hopkins Univ. Press, 1988.

Table 6.17**UNIT ROOT TEST RESULTS**(augmented Dickey-Fuller method¹⁾)

Variables	t-value of α
S(Savings)	1.9
Ya(Permanent income)	1.7
Yb(Temporary income)	1.9
r(Real interest rate)	-2.0
F(Domestic credit)	1.9
W(Land price index)	3.3
D(Dependency ratio)	-2.1

Note: 1 $\Delta X_t = \alpha X_{t-1} + \sum_{i=1}^4 \beta_i \Delta X_{t-i} + \epsilon_t$

Table 6.18**COINTEGRATION TEST RESULTS**(Engel-Granger two-step estimation method¹⁾)

	j=4	j=3	j=2	j=1
t-value of γ	-2.9	-2.9	-3.4	-4.7

Note: 1 $\Delta U_t = U_{t-1} + \sum_{i=1}^j \delta_i \Delta U_{t-i} + \epsilon_t$,

where U_t is the residual of savings function in the next page

The fact that the coefficient of land price is high but has negative sign indicates that wealth effect can substantially reduce savings, by increasing consumption to a corresponding extent. In contrast, an increase in domestic credit slightly increases savings, which goes against our earlier presumption.

The function of the household savings is also tested, by using the net personal saving ratio which can be extended back to the 1950s in Korea. Its estimation results during the same period are not far from those of the total domestic savings function.⁸

4.3 Simulation Exercises

The identities and estimated equations are put together to form a complete model, and a dynamic simulation is run to check the performance of the model as an integrated system. The result of the base simulation over the whole period is shown in Figure 6.2.

The correlation coefficient between the actual and predicted values of S is 0.998 and the percent root-mean-squared error (RMSE) is 2.69 percent. The base simulation result turns out to be fairly good so that the estimated savings and the effects of explanatory variables on savings are reliable.

-
8. As in the case of total savings function, unit root test on each variable in the household savings ratio function proved that each variable was non-stationary. However, ordinary linear regression methods could also be used in this estimation in consequence of the satisfactory cointegration test results. Variables and estimation results were set out as below.

Estimated results of the equation were not so satisfactory as those of the total savings function. Some of the coefficients proved to be insignificant. Temporary income was less influential than permanent income, which is the opposite case to the total savings function.

$$S = 38.54 + 0.64(Ya) + 0.35(Yb) + 0.0067(r) - 0.0058(F) + 0.021(W) - 0.17(D) \\ (10.63) \quad (2.91) \quad (2.54) \quad (0.10) \quad (-0.23) \quad (0.58) \quad (-10.8)$$

$$\bar{R}^2 = 0.91$$

$$D - W = 1.43$$

$$Q(14) = 26.17$$

Where S = Net personal saving ratio (net saving of household sector/household disposable income)

Ya = Average of three year's growth rate ($Y_t + Y_{t-1} + Y_{t-2}/3$)

Yb = $Y_t - Y_a$

r = Nominal interest rate - Growth rate of CPI

F = Growth rate of individual's net financial assets

W = Growth rate of land price

D = (Population - Total employed)/Total employed

4.4 Impulse Responses

In addition to the regression model which shows the relation between dependent variable and independent variables, we estimate the impulse response function by using the vector autoregression (VAR) model. The impulse response function is useful for analyzing the effect of any policy variable on specific variables. In our VAR model, the effects of permanent income, temporary income, interest rate and land price on total savings can be analyzed through the impulse response function.

The following figure represents impulse response function of each variable on savings. There are some policy implications that may be drawn from the characteristics of the impulse response function given as below.

Firstly, when permanent income increases by 1 per cent, its positive impact on savings largely operates during the first four years. It is especially noteworthy that its influence on savings is very strong compared with other variables. On the other hand, a change of temporary income is not so influential as one of permanent income. Compared to the scale of the multiplier between permanent and temporary income in the total savings function, we can recognize that a change in temporary income has a valuable impact on savings only in the very short-run, while the effect of permanent income change on savings operates satisfactorily over both the short-run and the long-run.

Secondly, in case that real interest rate goes up 1 per cent, the change in savings reverses in the course of time. An increase in interest rate decreases savings for the first four years but, thereafter, it increases savings. The negative effect seems to be mainly attributable to the sluggishness of investment following the increase in real interest rate. This may result in a decrease of disposable income and, in turn, of savings.

Thirdly, a 1 per cent increase in wealth still has positive effect on savings in the following year, but, thereafter, its effect turns volatile over a long period.

Lastly, the impact of domestic credit on savings turns negative after its positive effect in the initial year, but it dramatically disappears in the long-run.

Figure 6.2
BASE SIMULATION RESULTS (1963-91)

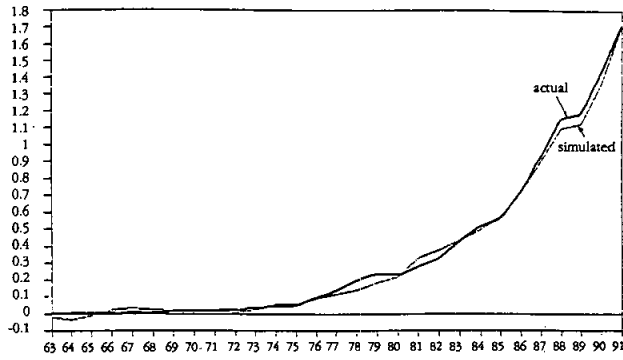


Figure 6.3
CHANGE OF SAVINGS IN RESPONSE TO A 1% INCREASE
IN PERMANENT INCOME

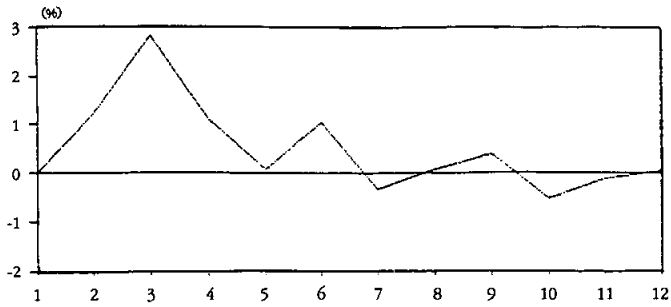
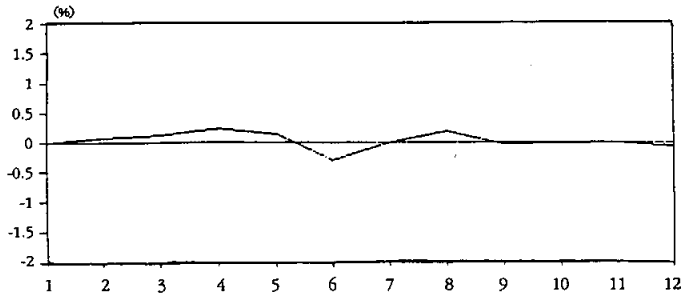


Figure 6.4
CHANGE OF SAVINGS IN RESPONSE TO A 1% INCREASE
IN TEMPORARY INCOME



V. Policy Recommendations

As was demonstrated in chapter IV, domestic savings in Korea are determined by income, real interest rate, wealth, etc.

To promote domestic savings in accordance with the estimated regression results, first of all, economic growth should be maintained at an appropriate and stable level. This is simply because economic growth is the main source for the increase in per capita disposable income. In particular, policymakers should seek to shift their attention away from the recent orientation to achieving higher economic growth in the short-run and focus instead on strengthening long-term growth potential. Only thus can an increase be brought about in permanent income, which is the most valuable determinant of the savings function in the long-run. Therefore, the enlargement of social overhead capital, the reinforcement of the competitiveness of the manufacturing sector and technological development should be intensively pursued to strengthen the long-term growth potential.

The strong effect of real interest rate on savings showed that interest rate policy seems to be potentially important in savings mobilization. On-going interest rate deregulation⁹ will play a positive role in encouraging savings, because deregulation is expected to lead to higher interest rates. However, an overemphasis on higher interest rate may do more harm than good, because the benefits from a small increase in savings may be overshadowed by a decline in investment activities.

Instead, the most important priority for successful interest rate policy is the regaining of price stability, which has been gravely shaken in the last few years. This is because an increase in real interest rate can not be achieved without it. In order to stabilize prices, monetary policy should be operated deliberately in such a way to avoid excess demand pressures on inflation. Tight monetary policy will also increase savings by way of the restriction on domestic credit, in particular, consumer finance. At the same time, the growth of government expenditure should be slow down.

9. More details are presented in Appendix II.

Discouragement of real estate speculation is essential not only for price stabilization but also because of its wealth effect on consumption in that the recent inflationary expectations and wave of heavy consumer spending largely stemmed from the hike of real estate prices and the increase in unearned windfall income consequent upon them. In order to block off possibilities for speculation in real estate and, thus, unearned income, the government has already introduced legislation limiting land ownership and providing for steep increases in property taxes. Under the provisions of this legislation, the possession of housing land in excess of a stipulated area is prohibited and capital gains accruing from the possession of land are taxed heavily. At the same time, implementation of a plan to increase the supply of housing units has been under way since 1988 with the aim of stabilizing housing prices.

So as to control the cost-push factors engendered by wage increases, the government has strongly urged that wage increases be restrained within the bounds set by improved productivity, proposed guidelines for wage increases. In this context, the government this year introduced a total annual wage system under which the rise in total wage payments has been limited to 5% for those employed by government corporations and strongly encouraged large enterprises with relatively higher wage levels to follow suit.

Apart from the policy measures in connection with the factors introduced in our model, there are other policies for financial efficiency which can supply savers with higher interest rates by minimizing the costs of financial intermediation. Various financial services of good quality have to be supplied in order to ensure the smoothness of financial intermediation and to meet the financial demands of households and firms.

In particular, the stock market which has been sluggish for the last 3 years should play a role in mobilizing savings. The reason is simply because the long-run sluggishness of the stock market has produced some serious side-effects on the national economy. That is, the sharp increase in the demand for indirect financing has been one of main factors inducing higher interest rates. For the portfolio diversification, the stock market needs to be broadened and deepened as well as the indirect financial market.

In addition, if competition among financial institutions becomes more intense, financial efficiency as a whole will be augmented in that there are strong externalities in the financial sector. However, the intense competition among financial institutions will lead to different risks that may impede the soundness of management of financial institutions and threaten the safety of the financial system as a whole. In considering how to counteract these risks, rather than simply alleviating or abolishing the regulations on financial institutions, the creativity of financial institutions should be encouraged while supervision and regulation, whose purpose is to ensure the safety and the soundness of financial institutions, should also be strengthened.

Competitive equality among financial institutions should be attained by abolishing regulations that discriminate among financial institutions as follows: firstly, abolishing the factors that bring about unequal competition between banking institutions and non-bank financial institutions; secondly, pursuing balanced development between indirect financing and direct financing; thirdly, ensuring even-handedness in the regulatory treatment accorded to domestic financial institutions and foreign financial institutions.

On the other hand, the Korean saving ratio, which has exceeded 35 per cent in recent years, seems to be relatively high compared with other countries. In this phase, the allocation of resources is as important as the quantitative growth of domestic savings. As the size of the national economy expands and capital accumulation increases, development strategy should lay emphasis on the efficient allocation of resources as well as on their size. Therefore, future policy for domestic resource mobilization should move in the direction of making resource allocation more efficient, while keeping the present high saving ratio.

Figure 6.5

CHANGE OF SAVINGS IN RESPONSE TO A 1% INCREASE
IN INTEREST RATE

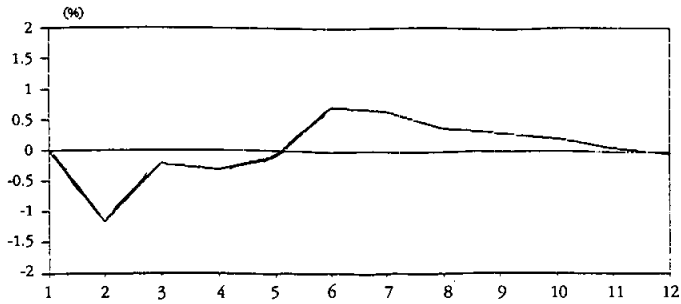


Figure 6.6

CHANGE OF SAVINGS IN RESPONSE TO A 1% INCREASE
IN WEALTH

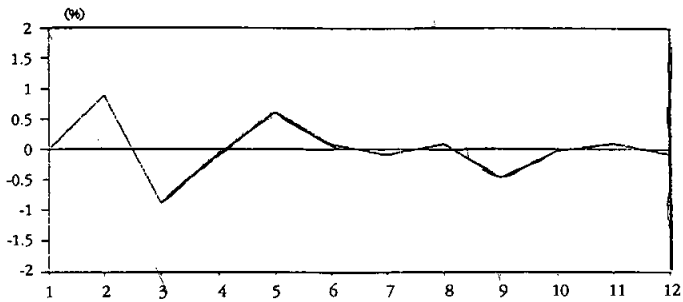
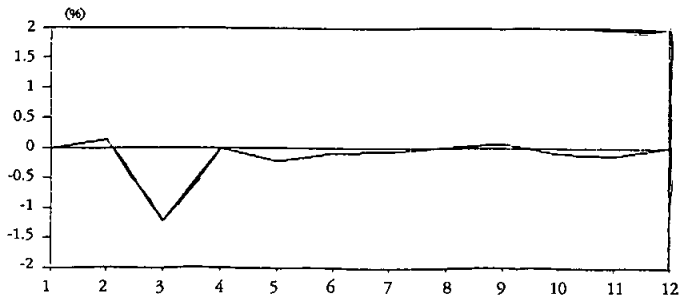


Figure 6.7

CHANGE OF SAVINGS IN RESPONSE TO A 1% INCREASE
IN DOMESTIC CREDIT



THE STRUCTURE OF THE CAPITAL MARKET

1. Stock Market

Public offerings usually require coordination through an underwriting syndicate and a managing group. The role of the managing group is to analyze the status of the company whose stock is being issued and to determine the conditions of the issue. The underwriting syndicate including managing group have a duty to buy all or some of any new issue of stock which is not completely taken up by the public.

Liquidity of issued stock is secured through the stock trading market which can be divided into an exchange market and an over-the-counter market. At present, the Korea Stock Exchange provides only one trading market facility. Odd-lot shares are traded on the over-the-counter market.

Transactions on the Korea Stock Exchange are limited to listed shares. To have its shares listed, a company must file an application with the Securities and Exchange (SEC) which decides on the admissibility of the listing.

The requirements for listing are that: 1) at least five years must have elapsed since incorporation; 2) paid-in capital must be 3 billion won or more, equity capital must be 5 billion won or more, and there must be at least 300 thousand outstanding shares; and 3) 30 percent or more of the outstanding shares must have held by the general public as of the date of the listing application.

2. Bond Market

Bonds can be classified into government bonds and public bonds, and private bonds according to the issuing agent. Depending on collateral and guarantees, they can be subclassified into various types. In Korea, private bonds and guaranteed bonds account for the majority of bond issued.

Appendix 6.1 (Cont'd)

Since the syndicate usually underwrites the whole issue of corporate bonds, companies do not run the risk of being unable to sell their bonds. Securities companies, securities investment trust companies, banking institutions, merchant banking corporations, and investment and finance companies are all entitled to engage in underwriting bonds in the issue market, but most of the underwriting business has customarily been undertaken by securities companies.

Coupon rates and other terms of issuance of corporate bonds have been nominally deregulated since July 1988. In contrast, coupon or discount rates and other terms of issuance for government and government guaranteed public bonds are largely set by the Minister of Finance. There are two kinds of secondary or trading market; an exchange market and an over-the-counter market. The exchange market, however, does not account for the bulk of transactions in contrast to the situation in stock trading.

Prior approval is needed from the Securities and Exchange Commission for bonds to be listed on the Korea Stock Exchange. The requirements for listing corporate bonds are that: 1) the issuer must have a minimum paid-in capital of 500 million won; 2) the par value of the bonds to be issued must be at least 300 million won; 3) and the time since the issuance of the corporate bonds must not exceed one year.

PLAN FOR INTEREST RATE DEREGULATION

	Loans	Deposits	Bonds
Step 1 (second half of 1991-first half of 1992)	. banks' overdraft loan . real commercial bills discounts excluding those rediscounted by BOK . investment and finance companies' commercial paper and trade bill discounts	. banks' CDs . investment and finance companies' sale of large-denomination commercial paper and trade bills, banks' sale of large-denomination real commercial bills	. corporate bonds with maturities over 2 years
Step 2 (second half of 1992-end of 1993)	. all loans of banks and non-banks excluding loans financed by government and BOK rediscount	. long-term deposits with maturities over 2 years (installment deposits of 3 years)	. corporate bonds with maturities less than 2 years . bank debentures with maturities over 2 years
Step 3 (1994-end of 1996)	. loans financed by government and BOK rediscount	. deposits with maturities less than 2 years (except demand deposits) . further deregulation of short-term market products . introduction of financial products linked to market rates such as MMC	. bank debentures with maturities less than 2 years . monetary stabilization bonds
Step 4 (after 1997)		. remaining short-term deposits and demand deposits	. all government and public bonds

DATA RELATED WITH TOTAL SAVING FUNCTION

(Thousand Won, Per Cent)

Year	Total Saving Per Capita	Gross National Disposable Income Per Capita	Permanent Income Per Capita	Temporary Income Per Capita	Real Interest Rate	Domestic Credit Per Capita	Land Price Index	Dependency Ratio
1961		12.1						
1962		13.9						
1963	2.7	19.7	17.2	2.5	(1.6)	2.4	0.9	255.8
1964	3.8	27.2	23.6	3.6	(9.5)	2.5	1.3	258.8
1965	3.9	29.9	28.1	1.8	0.6	3.5	1.8	249.8
1966	6.1	37.2	34.0	3.2	13.5	4.4	2.6	249.5
1967	6.8	44.4	40.8	3.6	18.5	7.7	3.7	245.7
1968	10.0	55.4	50.3	5.1	12.1	13.9	5.3	236.8
1969	15.0	70.2	63.2	7.0	7.6	21.7	7.6	235.1
1970	16.7	88.1	79.5	8.6	7.5	26.8	11.0	230.8
1971	16.9	105.7	96.9	8.8	7.5	41.7	14.2	226.7
1972	21.8	127.2	116.8	10.4	1.4	54.0	18.3	217.3
1973	36.1	160.0	144.7	15.3	0.3	72.7	20.5	206.2
1974	45.0	221.8	193.8	28.0	2.4	106.5	23.0	199.4
1975	52.9	290.8	257.0	33.8	(7.2)	149.9	28.6	198.2
1976	96.2	396.2	347.1	49.1	(7.4)	176.5	35.2	185.5
1977	137.9	499.9	447.9	52.0	(7.0)	225.0	46.1	181.6
1978	198.0	666.6	589.6	77.0	1.2	321.3	73.3	174.0
1979	237.6	836.6	751.9	84.7	0.9	442.3	86.9	174.8
1980	228.2	988.1	910.5	77.6	(3.7)	644.8	100.0	178.6
1981	280.7	1,236.6	1,122.0	114.5	(4.0)	849.9	108.0	176.1
1982	331.5	1,369.8	1,291.7	78.1	(9.5)	1,086.3	114.1	173.5
1983	435.1	1,576.6	1,480.6	96.0	(1.5)	1,276.6	137.7	175.1
1984	519.9	1,768.5	1,671.1	97.4	5.0	1,523.4	157.1	180.0
1985	563.7	1,937.1	1,850.5	86.6	6.7	1,847.3	167.6	172.6
1986	730.9	2,228.4	2,095.0	133.4	6.8	2,179.5	178.5	165.6
1987	938.1	2,591.5	2,417.1	174.4	7.7	2,520.5	187.7	154.2
1988	1,158.5	3,040.8	2,824.8	216.0	7.9	2,885.5	204.3	148.8
1989	1,185.4	3,358.0	3,186.2	171.8	8.7	3,702.8	269.1	142.0
1990	1,445.2	4,014.7	3,720.3	294.4	8.6	4,717.0	325.1	137.7
1991	1,722.2	4,770.8	4,402.7	368.1	5.1	5,995.0	366.7	132.9

DATA RELATED WITH HOUSEHOLD SAVING RATIO FUNCTION

(Per Cent)

Year	Household Net Saving Ratio	Growth Rate of GNP	Growth Rate of Permanent Income	Growth Rate of Temporary Income	Real Interest Rate	Growth Rate of Land Price	Growth Rate of Household's Financial Assets	Dependency Ratio
1961		5.6						
1962		2.2						
1963	4.0	9.1	6.7	2.4	(1.6)	43.5	23.3	256.0
1964	4.1	9.6	8.7	0.9	(9.5)	42.7	39.3	259.0
1965	0.2	5.8	7.3	(1.5)	0.6	42.5	33.3	250.0
1966	5.0	12.7	10.3	2.4	13.6	43.1	41.9	250.0
1967	1.7	6.6	8.3	(1.7)	20.4	43.6	51.0	246.0
1968	3.8	11.3	10.0	1.3	15.6	43.3	61.6	237.0
1969	9.1	13.8	12.3	1.5	12.3	43.5	29.0	235.0
1970	5.8	7.6	9.8	(2.2)	10.9	43.4	14.4	231.0
1971	6.9	8.6	8.8	(0.2)	8.8	29.2	35.5	227.0
1972	8.7	5.1	6.4	(1.3)	0.8	29.1	36.5	217.0
1973	13.4	13.2	10.3	2.9	2.8	12.0	54.8	206.0
1974	11.5	8.1	9.3	(1.2)	10.1	12.1	21.3	199.0
1975	7.4	6.4	7.6	(1.2)	0.2	24.7	26.9	198.0
1976	12.6	13.1	10.6	2.5	(4.6)	23.0	32.1	186.0
1977	15.4	9.8	10.4	(0.6)	(2.9)	30.8	42.4	182.0
1978	18.1	9.8	10.1	(0.3)	6.9	59.1	31.7	174.0
1979	15.9	7.2	8.2	(1.0)	8.5	18.5	19.4	175.0
1980	10.2	(3.7)	0.9	(4.6)	6.3	15.1	15.0	179.0
1981	10.5	5.9	3.1	2.7	(3.5)	8.0	20.6	176.0
1982	12.1	7.2	5.7	1.5	(12.6)	5.6	24.9	174.0
1983	13.5	12.6	10.3	2.3	(3.4)	20.7	12.6	175.0
1984	15.0	9.3	10.1	(0.8)	5.5	14.1	14.2	180.0
1985	14.6	7.0	8.2	(1.2)	8.2	6.7	17.9	173.0
1986	19.0	12.9	10.8	2.1	8.5	6.5	25.4	166.0
1987	21.5	13.0	12.4	0.6	8.3	5.1	32.2	154.0
1988	23.3	12.4	12.6	(0.2)	8.4	8.8	(8.6)	149.0
1989	21.6	6.8	9.1	(2.3)	6.4	32.0	65.8	142.0
1990	22.3	9.3	8.9	0.4	7.0	20.6	22.7	138.0

Appendix 6.3 (Cont'd)

(Thousand Won, Per Cent)

Year	Population	Growth Rate of GNP Deflator	Growth Rate of CPI	INTEREST RATE		
				Banks' Saving Deposits of 1 Year	Money in Trust of 18 Month	Yield on Corporate Bond
1961	25766	14.0				
1962	26513	18.4				
1963	27262	29.3		15.0		
1964	27894	30.0		15.0		
1965	28705	6.2		26.4	32.0	
1966	29436	14.5	10.1	26.4	32.0	
1967	30131	15.6	11.2	26.4	32.0	
1968	30838	16.1	11.0	25.2	27.6	
1969	31544	14.8	12.4	22.8	24.0	
1970	32241	15.6	15.4	22.8	22.8	
1971	32883	12.5	14.0	20.4	22.8	25.5
1972	33505	16.7	11.7	12.0	13.6	19.7
1973	34103	13.6	3.0	12.0	15.6	21.3
1974	34692	30.5	24.3	15.0	15.6	19.7
1975	35281	25.2	25.4	15.0	16.8	20.1
1976	35849	21.2	15.3	16.2	15.0	21.7
1977	36412	16.6	10.0	14.4	18.8	19.6
1978	36969	22.8	14.5	18.6	20.1	22.6
1979	37534	19.6	18.2	18.6	18.6	27.8
1980	38124	24.0	28.7	19.5	8.3	28.2
1981	38727	16.9	21.6	16.2	8.3	26.9
1982	39326	7.1	7.1	8.0	10.3	16.0
1983	39910	5.0	3.4	8.0	10.3	14.2
1984	40406	3.9	2.3	10.0	10.3	15.0
1985	40806	4.2	2.5	10.0	10.3	13.6
1986	41184	2.8	2.8	10.0	10.3	12.8
1987	41575	3.5	3.0	10.0	10.3	12.9
1988	41975	5.9	7.1	10.0	10.3	13.7
1989	42380	5.2	5.7	10.0	10.3	15.2
1990	42869	10.6	8.6	10.0	10.3	18.5
1991	43268	10.9	9.3	10.0	10.3	19.1

DOMESTIC RESOURCE MOBILIZATION IN MALAYSIA

by

Mohd. Afendi A. Rahman

I. Introduction

The Malaysian economy had consistently achieved a high rate of growth with relative price stability, averaging at 6.5 per cent a year (inflation averaged 3.4 per cent) over the last three decades. Throughout the period, Malaysia had basically relied on the use of realistic 5-year plans to implement the development strategy, the main aim being to ensure that sufficient domestic resources will be forthcoming to meet the goals of national development. In this regard, the financial system in general and banking industry in particular, had played a crucial role in mobilising the necessary domestic savings to help finance the development process. However, being a small and open economy it is always subjected to fluctuations in its international terms of trade. As such, their impact on export earnings (and hence, national income) have a significant influence on the rate and level of domestic and national savings.

This paper examines the mobilisation of domestic resources in the process of national development in Malaysia. In particular it attempts to look at the development experience of Malaysia in mobilizing domestic savings. As a background, Section II presents an overview of the savings and investments trend during the 1960-90, emphasizing on the latest development and discusses the measures instituted to bridge the resource gap. In Sections III and IV, an attempt is made to highlight the contribution of the financial system and capital market to the mobilisation of domestic savings, in the past, and more importantly their likely role over the medium term. Section V presents an econometric analysis of the determinants of savings, while Section VI concentrates, with concluding observations.

II. Overview of Savings-Investment Gap

Malaysia had neither a saving-investment gap nor a foreign exchange gap to bridge during the period 1960-80, although there have been periods in between these years where gaps of one type or another had to be bridged on account of cyclical, poor international demand for the nation's exports. However, the 20-year trend was not carried into the 1981-85 period, when the current account in the balance of payments recorded a deficit averaging 8.5 per cent of GNP (reaching a high of 14 per cent of GNP in 1982). This reflected the increasing participation of the public sector in national development (the "big-push"), which contributed significantly to a change in the composition of public/private investment. During the 1981-85 period, public investment rose to reach about the level of private investment's share of 19 per cent of GNP. The amount of public investment had increased from \$3.2 billion (or 44.4 per cent of total investment) in 1981-85. As a result, the nation's external debt rose to \$42.3 billion by the end of 1985 (\$10 billion in 1980), with a debt servicing ratio of nearly 16 per cent (4 per cent in 1980). By the end of 1985, through a deliberate policy of structural adjustment, public investment was reduced to 13.8 per cent of GNP, and the current external payments deficit fell to 2.4 per cent of GNP.

With continued fiscal restraint in the face of improving commodity prices, the current account of the balance of payments had since turned around to register a surplus of 8.9 per cent of GNP in 1987. However, with rapidly rising investment requirements, a savings-investment gap had emerged once again in 1989-90. For the period 1986-90 as a whole, the country still managed to maintain a resource surplus of 1.5 per cent of GNP.

From Table 7.1, three interesting observations on the savings-investment gap should be noted:

- (1) First, the GNS and GDI gap in the 1981-85 period reached a historic high of 8.5 per cent of GNP, a level that was clearly not sustainable. Recognising this, the Government implemented major policy changes to narrow the gap. A vigorous structural adjustment programme was put into place to reorientate the economy back to the path of sustainable growth with price stability.

- (2) Second, with the discipline of continuing fiscal restraint in the face of improving commodity prices, the GNS/GDI gap narrowed; and by 1987, it turned to a surplus equivalent to nearly 9 per cent of GNP. However, with rising investment requirements and increasing consumption, a savings-investment gap had emerged once again in 1989-90.
- (3) Third, traditionally, public savings would be insufficient to finance public investment. In the 1960s and 1970s, this gap was readily bridged from non-inflationary sources, without any significant resort to external borrowing. By the first-half of the 1980s, the absolute size of this gap (at nearly \$18 billion) was about twice that in the 1970s. This gap had since narrowed considerably (\$9.2 billion in 1990), mainly because of higher public savings reflecting the better economic performance.

Table 7.1

SAVINGS-INVESTMENT GAP, 1961-90

Year	GNS	GDI	BOP
			Current Account
1961-65	17.8	18.9	-1.1
1966-70	18.2	16.5	1.7
1971-75	21.1	24.9	3.8
1976-80	30.3	28.1	2.2
1981-85	27.6	36.1	-8.5
1986-90	31.3	29.8	1.5
1986	27.4	27.8	-0.4
1987	33.6	24.7	8.9
1988	33.0	27.5	5.5
1989	30.7	31.2	-0.5
1990	30.1	35.1	-4.0

III. The Role of Financial System

3.1 The Structural Developments

Financial system in Malaysia, comprises institutions in the banking system (including the money market), the capital market and the non-bank financial intermediaries. It has been undergoing tremendous changes since the country gained its independence in 1957. From merely a few foreign banks, mainly the British banks, providing basically trade financing, the financial system has expanded and has become more sophisticated. Accordingly, the roles of the financial institutions have been transformed from that of financing trade to that of mobilising and channelling financial resources more effectively to the growing sectors of the economy. The changing economic environment and other related factors such as the deregulation, are the main underlying factors influencing all this. The broad features of the financial system in Malaysia include the following:

- (1) The banking system, which is the major component of the financial sector, consists of Bank Negara Malaysia, serving as the Central Bank, 36 commercial banks, Bank Islam Malaysia Berhad, 41 finance companies, 12 merchant banks, 7 discount houses and 8 money and foreign exchange brokers, all of which are regulated and supervised by the Central Bank.
- (2) The non-bank financial institutions, which are mainly supervised by other Government agencies. These institutions can be divided into five major groups, consisting of the development finance institutions, the savings institutions, the provident and pension funds, the insurance companies, and a group of other financial intermediaries, comprising building societies, unit trusts and several special investment agencies. The Central Bank took over supervision of the insurance companies with effect from April 1, 1988.
- (3) The capital market, refers to the market in longer-term financial assets, comprising all public and private debt instruments with maturities exceeding one year, corporate stocks and shares (for which there is no fixed maturity period) and commodity futures. In the primary market, new issues of Government and corporate securities are offered directly to the investors.

Secondary transactions in Malaysian Government securities are conducted mainly through the money market, while secondary market trading of corporate securities is carried out in the Kuala Lumpur Stock Exchange (KLSE) and to a lesser extent, the Bumiputra Stock Exchange.

At the time of Independence (1957), the financial system in Malaysia was relatively simple, with the bulk of the loans and advances mainly directed at the financing of external trade. The money and capital markets were non-existent. However, with the encouragement of the Central Bank, banking facilities expanded rapidly, bringing with it widespread development of the banking habit. In early 1959, there were only 23 commercial banks operating a total of 99 banking offices concentrated mainly in the urban areas. Today, there are 37 commercial banks operating a total of 1,050 banking offices throughout the country. In addition, there are 41 finance companies with 603 offices, and 12 merchant banks operating a total of 17 offices in the country. Besides, 1970s also saw the proliferation of a host of development finance and savings institutions to supplement and complement the activities of the banking system.

On the money market, a number of measures had also been instituted by the Central Bank to develop and deepen the market. The more recent measures taken included the introduction of two monetary instruments, the bankers acceptances (BAs) and negotiable certificates of deposit (NCDs) in May 1979. More recently, selected finance companies were allowed to participate in the interbank market to bring more depth to the market, while selected merchant banks were allowed to issue NCDs under their own name. The maximum maturity of NCDs issued had also been extended from three to five years, and at the same time, the banks were allowed to issue floating rate NCDs.

In addition, the Central Bank also promoted the establishment of an active foreign exchange market in Malaysia (after the floating of the ringgit in June 1973). The establishment of the Kuala Lumpur Commodity Clearing House further enhanced the development of a sophisticated financial structure in the country. This was aided by the introduction of financial reforms, taken as early as the beginning of the 1970s to move towards a financial framework that allowed market forces a greater role in the mobilisation and allocation of resources. The most significant of these reforms was the liberalisation on interest rate

determination by market forces in August 1973 for the finance companies and October 1978 for the commercial banks. The more recent was the freeing of BLR from the administrative control of the Central Bank. All these efforts had given rise to the rapid development and increasing sophistication of the financial system resulting in more efficient mobilization and allocation of resources in the country.

The impact of technological developments in communications, fund transfers and electronic banking have also transformed the range and speed of services available to the public in Malaysia. Electronic fund transfers, for example, has facilitated cash management and aided in making available high interest rates on small deposits through easy switching of funds between accounts. The banking hours are also extended beyond the traditional five hours from Monday to Friday and two hours on Saturday to more than 12 hours and in some cases even 24 hours. By the end of 1991, all banks in Malaysia had computerised their operations, particularly in the consumer deposit sector. Since the first automated teller machine (ATM) was installed in 1981, the number of ATMs now in operations has increased to 1,335 at the end of 1991. In order to cut costs and improved efficiency, banks have also teamed up to share ATM networks. The computerisation of banks also facilitated the calculation of interest for saving deposits on a daily basis, which provides a fairer return on savings deposits.

In addition, various attempts have also been made recently by a number of commercial banks and finance companies to increase savings deposits. These focussed mainly on inculcating the savings habit among young children by forming special clubs and giving away educational materials for opening of new savings accounts. Another recent innovation has been the introduction of multi-tier interest rate structure for deposits, where the interest rate rises with the amount of savings deposited.

IV. The Role of Capital Market

Although banks play a major role in attracting savings and directing them towards investment purposes, capital market, currently has a considerable influence in achieving this end. In Malaysia, the capital market transacted all public and private debt instruments with maturities exceeding one year, corporate stocks and shares, for which there is no

maturity period, and more recently commodity futures. Funds raised in Malaysia's capital market have increased steadily over the past decade reflecting, on the one hand, rising income levels and savings, and on the other, the growing demand for long-term funds by both the Government and the corporate sector. Total net new issues of Government securities and stocks and shares, including other corporate securities, rose from less than \$140 million in 1961 (the year following the establishment of a stock exchange in Malaysia) to \$405 million in 1970, \$2.5 billion in 1980 and \$14.9 billion in 1990.

Based on the types of financial assets marketed, the capital market in Malaysia may be divided into two parts: the market in Government securities and the market in stocks and shares, including the corporated securities.

The Malaysian Government Securities (MGS) Market

The MGS market is the largest component of the Malaysian capital market in terms of primary funds raised. The share of net funds raised by the public sector in the domestic capital market has generally exceeded 80 per cent of total net funds raised domestically. The exception was in 1984 when equity issues by the private sector witnessed a boom, thereby reducing the share of funds raised by the public sector. The large size of the MGS market, essentially is a reflection of the size of the Federal Government's domestic debt. However, with the Government's commitment to downsize its role in the economy, it is expected that the growth in Government's debt will decelerate.

Several measures have been taken by the Government to promote the MGS market. Firstly, during the period of the 1960s and 1970s, efforts were made to develop and build up the volume of the MGS. The Government recognised that only with a sufficiently large volume of securities available for tradings will the MGS grow into a healthy and viable market. However, creating the required volume is not a sufficient condition as the securities need to be traded actively in the secondary market. Accordingly, the regulation on interest rates was lifted in 1978 to provide a sufficient movement in interest rates so that this would encourage investors to shift the composition of their portfolios in favour of MGS. Since then, several other measures were taken to improve futher the tradings in MGS, among which are:

- (1) The adoption of "Day-1" clearing for cheque settlement among the banks. The purpose of this measure was to discourage unnecessary volatility in interest rates since an active secondary market requires stability in interest rates. Previously interest rates moved to unreasonably high level as banks scrambled for funds;
- (2) The adoption of principal dealers to underwrite new issues of MGS and create market for them by quoting two-way trading;
- (3) Issuance of MGS with maturities of up to 10 years is now by way of auction. For the time being longer dated issues are still offered on subscription basis to EPF and the National Savings Bank; and,
- (4) The introduction of SPEEDs to facilitate efficient trading of securities as well as settlement and the Scripless Securities Trade System (SSTS) for the purpose of recording the trading of MGS, Treasury bills, Government Investment Certificates, Bank Negara Certificates and Cagamas bonds.

The Equity Market

The buying and selling of shares in Malaysia have been recorded as early as 1870 and represent the first instance of any form of a security market in the country. Since then, there has been a discernible increase in the total amount of net funds raised through the stock market by way of ordinary share issues and loan stocks, particularly in the more recent years of 1983-1984 and 1987-1990. Equity share issues dominate the market. In 1990, funds raised through the stock market amounted to M\$9.3 billion which exceeded the entire amount raised during the preceding 29 years from 1961 to 1989. The record number of 103 new issues in 1990 and another 107 amounting to \$5.4 billion in 1991, reflected the growing tendency for companies to substitute equity capital for bank borrowing, ample liquidity in the system and the impact of the privatisation programme.

As in the MGS market, several measures have been taken to promote the stock market, the major ones are:

- (1) Concept of corporatisation of the stockbroking companies in 1986 and allowing foreigners to have a stake (up to a limit of 49 per cent) in brokering companies.

- (2) Launching of a second board in November 1988 to enable smaller companies with good growth prospects to have access to the capital market.
- (3) Introduction of a Code of Ethics: Guidelines on Share Trading for compliance by the banks, in view of their recent move into the corporatisation of stockbroking companies, which could give rise to conflict-of-interest practices, including grey market trading.
- (4) Allowing property unit trusts to be listed in 1989.
- (5) Implementation of computerised trading support system called "SCORE" in 1989 to increase efficiency and liquidity in the market.
- (6) Allowing Transferable Subscription rights and Warrants to be listed from December 29, 1989.
- (7) The delisting of all Malaysian incorporated companies from the Stock Exchange of Singapore (SES) effective from January 1, 1990, with the aim of establishing the KLSE as an independent exchange.
- (8) The KLSE, on January 2, 1990 implemented the new "daily netting" system to help reduce the physical delivery of shares between broking firms and the Securities Clearing Automated Network Services Sdn. Bhd. (SCANS).
- (9) The Fixed Delivery and Settlement System was launched on February 12, 1990 aimed at building a more organised system pertaining to scrips movements, and also enabling stockbrokers to manage their cash flow better.
- (10) The KLSE launched its Second Board Index on January 2, 1991, to provide investors with an indicator of the performance of the companies listed on this board.
- (11) To ensure that the capital base of the stockbroking firms kept pace with liquidity and interest in the stock market, all

stockbroking firms were required to have a minimum paid-up capital of M\$20 million as from June 1, 1990. This was later extended to December 31, 1990 for brokering firms in the Klang Valley and for those elsewhere, by the end of 1991.

- (12) A set of guidelines for the merging of stockbroking firms was introduced by the KLSE. The objective being to ensure that all merger exercises would be conducted in an orderly manner.

The Private Debt Securities (PDS) Market

Until the second half of the 1980s, there was virtually no private debt securities (PDS) market in Malaysia. The need to develop the market became quite clear and urgent, given the intention of the Government to downsize its operations, and, therefore, reduce its borrowing requirement. The "captive" purchasers of MGS would now need an alternative source of investment. In contrast to the equity and the Government securities markets, the PDS market is still in its early stages of development but new markets and innovative instruments are being promoted and encouraged in order to widen and deepen the capital market.

The first major move by the authorities to promote a private debt securities market was realised with the setting up of Cagamas Berhad, the national mortgage corporation in 1986. The role of Cagamas was to purchase housing loans from the loan originators and "repackage" them into bearer bond issues amounting to M\$2.9 billion, with the tenure ranging from two to five years. The success of Cagamas bonds has encouraged several large corporations (with good credit standing) to raise funds by issuing term notes on a floating or fixed rate basis. Funds raised through debt securities rose from M\$225 million in 1987 to M\$609 million in 1988 and M\$577 million in 1989. The volume of PDS took a big jump to M\$2.1 billion in 1990 and \$2.4 billion in 1991, with more companies resorting to PDS as a means of financing. The emergence of the private debt securities market was assisted by favourable domestic monetary conditions, with ample liquidity and a low and stable interest rate environment during the period 1987 to mid-1990.

In order to facilitate the development in the PDS market, both primary and secondary, the Central Bank has introduced a set of Guidelines in December 1988 for the issuance of such securities. The

objective of the Guidelines was to clarify the basic legal and administrative framework for bond financing and to encourage corporation to raise funds through this channel. Any company wishing to issue bonds will need to seek the approval of the Central Bank. In order to make the market for PDS as viable a market as for the Government securities, the issuance and trading in corporate bonds have been exempted from stamp duty, with effect from January 1989.

As part of the Central Bank's continuing effort to develop the PDS market, a public limited company under the name of Rating Agency Malaysia Berhad (RAM) was incorporated in November 1990. The most important function of this rating agency is to rate all issues of bonds and commercial papers and disseminate widely all appropriate and timely information to potential investors of both the primary and secondary issues of PDS. With a credit rating agency in place to provide professional judgement of a corporations's creditworthiness, there would no longer be a need for over-protective policies on the part of the authorities in approving potential issues. The attractiveness of bond financing vis-a-vis other sources of finance, including bank borrowings or equity financing, will be enhanced since a good rating improves the corporations's prestige, leading to potentially significant savings in funding costs. Moreover, in the rating process, the management of the company being rated receives important signals about its effectiveness and efficiency, which can form the basis for any necessary internal rationalization and external adjustment.

The Government have also approved in principle in October 1990, a proposal to establish the Kuala Lumpur Options and Financial Futures Exchange (KLOFFE). This will further enhance the development in the capital market as it will provide adequate hedging facilities for investors. Financial hedging involves the taking of position in an asset that will have offsetting gains and losses. Thus, a position in MGS, for example, can be hedged by taking an opposite position, in a stock option or a financial futures (interest rate) contract.

V. Determinants of Savings

Various studies have been conducted to look into the determinants of savings. These studies bring together the analysis of consumption choice, labor supply, demographics, economic growth, government policy

and etc. In this section however, the attempt is not to analyse those studies but to build a simple model on the determinants of national savings in Malaysia. General theories and the characteristic of Malaysia's saving behaviour are the basis of the model. The model is also restricted to explain the determination of gross national savings as a ratio of GNP. This is because the breakdown of savings data by components are not readily available, thus making the time-series studies extremely difficult. In the model, the gross national savings ratio function is hypothesized as follows:

$$\text{GNSr} = f(\text{Depr}, \text{GDPg}, \text{IM}, \text{TT}, \text{EPFsr}, \text{Forsar})$$

where GNSr = Gross National Saving Ratio

DEPr = Dependency ratio

GDPg = GDP Annual growth

IM = Interest rate

TT = Terms of trade

EPFsr = EPF savings ratio

Forsar = Foreign savings ratio or Deficit in current account of BOP as ratio of GNP.

The real GDP growth are taken as proxy to income variables. This is to capture the influence of income effect on savings with an expected positive sign. Changes in the terms of trade is also expected to produce a positive impact on savings as an improvement in terms of trade raises profits, thereby increasing the savings rate. The interest rates variable is expected to be either positive or negative as it is theoretically ambiguous. Another important variable that is expected to have a positive impact on GNS ratio is the compulsory savings scheme. It may be argued that compulsory savings is substitutable to voluntary savings, the degree of substitutability is however, entirely an empirical issue. The estimate also analyses the impact of demographic factors on savings, which uses the dependency ratio, measured by the population aged under 15 plus aged over 65 divided by the population aged 15 to 65. This is on the basis that households accumulate wealth prior to retirement and dissave during retirement. As such, it is expected to have a negative impact on the savings rate. Finally, the dependent variable consists of the foreign savings, which is also expected to have negative impact on savings.

Empirical Results

To estimate a savings function, regressions were run for the period 1972-1990 for the GNS ratio against the independent variables as follow:

Independent Variables

Mnemonic

DEPR	Dependency ratio 0.0770720 (-3.0956192)	No. of persons aged below 15 and above 65 as a percentage of the rest of population.
FORSAR	Foreign saving ratio 0.3635269 (-5.304393)	Deficit in the current account of BOP (as % of GNP).
GDPG	Gross domestic product +0.001497 (1.8970455)	Annual growth of GDP.
IM	Deposit rate -0.0049922 (10.165985)	3 month, deposit rate offered by commercial banks.
TT	Terms of Trade 0.0031542 (10.165985)	Terms of trade index.
EPFsr	EPF Saving ratio 2.8874293 (4.7102819)	EPF contribution less withdrawals (as % of GNP)

Figures in parentheses represent t - values.

R^2	= 0.963268
Adjusted R^2	= 0.949140
Sum of squared residuals	= 2.008428
Durbin-Watson stat.	= 2.008428

As expected the estimates showed that the GNS ratio was significantly positive with variables such as, GDP growth and terms of trade. In simple words, a higher GDP growth and an improvement in

the terms of trade would contribute to an increase in GNS ratio in Malaysia.

The EPF savings ratio also appeared to be significantly positive with GNS ratio. To a certain extent, the result showed that compulsory EPF savings have served as imperfect substitute for other forms of voluntary private savings. It suggests that a one percentage point increase in EPF saving ratio would raise the GNS ratio by almost 2.9 percentage points.

The result also yielded the expected signs for dependency ratio and foreign savings. The GNS ratio was significantly negative related to both variables.

To sum-up, of all the independent variables identified in the model, the EPF savings ratio was seen to be the most important variable in explaining the direction of GNS ratio during the period 1972-90. Its impact however, would somewhat be partially offset by the variables such as the dependency ratio as well as the magnitude of foreign savings or the current account deficits. Nevertheless, as Malaysia is experiencing the declining population dependency ratio, the only offsetting effect suggested by the model was the magnitude of the deficit in the current account.

VI. Conclusion

Based on the structure and resource endowment of the economy, Malaysia's high savings rate was a function essentially of factors that are similar to those found in most commodity producing economies. In Malaysia's case, the importance of commodities, the role of public sector expenditure and demographic patterns had been important structural factors which determined the savings pattern. In addition, the mandatory contribution by 80 per cent of the work force to the Employees Provident Fund (EPF) was also important in explaining the savings behaviour (as evidenced from the regression result shown in Section V).

On the financial front, while the process of resource mobilisation has been facilitated by the sound development in financial structure, there is always a need to increase the efficiency of the financial markets

in mobilising private savings more effectively. The objective of financial policies to generate savings is not just to enhance, existing level, but also to enlarge the amount of the financing savings. Lack of sophisticated instruments for short-term investments can lead to an increased outflows to other more progressive financial centres. In order to prevent outflow of funds, financial institutions must keep abreast with developments abroad and need to be more innovative in coming out with new instruments to meet the changing preferences of savers through the widening of the liquidity and maturity spectrum of existing financial instruments and the introduction of new instruments.

Chapter 8

DOMESTIC RESOURCE MOBILIZATION IN MYANMAR

by

Khin Saw Oo

I. Introduction

This paper focuses on the pattern of domestic resource mobilization in Myanmar over the past few years and on the recent and probable trends in the future.

The first section of this paper presents an overview of the developments in domestic resource mobilization in Myanmar. Section II examines the role of the financial system and how financial institutions' development might help raise financial resources. Section III discusses the attempts made of establishing the capital market. Section IV reviews the factors affecting the mobilization of domestic savings. Section V discusses reform measures now being taken, and section VI draws together the findings and some conclusions.

This study is based mainly on the annual budget data and various issues of "Review of the Financial, Economic and Social Conditions of the Union of Myanmar" published by the Ministry of Planning and Finance.

II. Overview of the Developments in Domestic Savings Mobilization in Myanmar

2.1 Role and Significance of Domestic Savings

During the period 1976/77 - 1979/80, real gross domestic product (GDP) of Myanmar increased by over 6 per cent per annum. That impressive overall growth performance during this period was principally due to the rapid expansion in investment which rose from 10.3 per cent of GDP in 1976/77 to 22.3 per cent in 1979/80. But average investment ratio decreased to 19.2 per cent of GDP during the period 1980/81 - 1985/86, then to 11.9 per cent during 1986/87 - 1990/91.

Due to the fall in investment, average economic growth rate for the respective periods were 5.3 per cent and 2.1 per cent. Domestic savings financed the bulk of investment in Myanmar which were supplemented by an increasing amount of foreign savings since mid - 1970s until the recent few years. Domestic savings are a major source of gross national savings to finance investment. Even when there were considerable inflow of foreign resources between 1978/79 and 1987/88, gross domestic savings financed about 75 per cent of gross domestic investment and, in other years, the share was higher.

In late 1988, Myanmar began to implement economic reforms in order to transform the economic system from central planned to market-oriented economy. To be in line with the introduction of market-oriented economic policy, increased domestic resources have to be mobilized to meet the growing expenditures for the development of the necessary infrastructure, for investment in state economic enterprises (SEEs) to improve their performance as well as to convert some of them as joint ventures with the private investors both domestic and foreign and to give assistance to the newly established businesses of the private sector.

2.2 Pattern of Savings

The trend of gross domestic savings (GDS) between 1976/77 and 1981/82 was rising. It rose to a peak of Kyat 7478 million in 1981/82 from Kyat 2599 million in 1976/77. Then the trend of gross domestic savings (GDS) reversed in the downward direction. It declined to Kyat 6959 million in 1982/83 and then to Kyat 5607 million in 1987/88. However, the level of gross domestic savings has risen since 1988/89.

Although the level of gross domestic investment (GDI) was low at about Kyat 2800 million in 1976/77, it had increased gradually since 1977/78. It rose by more than three times to Kyat 10374 million in 1982/83. This increase in gross domestic investment during the late 1970s and early 1980s was due to an increase in the inflow of official development assistance (ODA). But in 1981 export prices of major exports fell and therefore, investment programme had to be cut. Consequently, total investment started to decline to Kyat 8962 million in 1983/84, then to Kyat 7941 million in 1987/88. Following the change in the economic policy of Myanmar in the latter part of 1988/89 the enactment of the Foreign Investment Law has induced foreign capital inflow and the

encouragement of private sector has raised private investment. These measures had positive effects on the level of total investment during recent years.

Table 8.1 shows the gross national savings (GNS), the gross domestic savings (GDS), the gross domestic investment (GDI) and foreign savings for the 1976/77 - 1990/91 period. Their growth paths are charted in Figure 8.1. The gross domestic investment (GDI) is defined here as fixed investment made by both government and private, plus changes in stock. Gross national savings (GNS) is calculated by subtracting foreign savings from gross domestic investment (GDI). Foreign savings is measured as the balance of payments deficit on current account. Gross domestic savings (GDS) can be obtained by deducting net factor income from abroad and net unrequited transfers from gross national savings. Gross domestic savings comes from two sources: government savings and private savings. Public savings are obtained by deducting current expenditure from government revenue and adding the current surplus of state economic enterprises. Private savings is residual item as it is calculated by subtracting public savings from gross domestic savings.

During late 1970s and early 1980s, a rising trend can be observed in Myanmar's savings ratio (defined as GDS/GDP). It rose from 9.5 per cent in 1976/77 to 17.5 per cent in 1980/81. It declined to 14.8 per cent in 1982/83 and then to the lowest level of 8 per cent in 1987/88. But it rose again to 11.3 per cent in 1988/89 and 11.8 per cent in 1990/91. Gross domestic savings has been financing a large portion, between 65 per cent and 99 per cent of gross domestic investment (GDI) during the past years.

Myanmar has an increasing trend of investment - savings gap during 1976/77 - 1982/83. It rose from 0.8 per cent of GDP to the peak level of 7.4 per cent in 1982/83. Its average was about 3.3 per cent of GDP during the period 1983/84 - 1987/88. In 1990/91, the gap has narrowed to 1.7 per cent of GDP. (See Table 8.2)

Gross domestic savings (GDS) are composed of public savings and private savings. Public savings as a percentage of GDP has been declining throughout the period and has even become negative in recent years, due to the continuous rise in public current expenditure. Private savings constituted more than 60 per cent of GDS during the period

Table 8.1

**GROSS DOMESTIC INVESTMENT (GDI),
GROSS NATIONAL SAVINGS (GNS),
GROSS DOMESTIC SAVINGS (GDS),
AND FOREIGN SAVINGS (FS)**

(Million Kyats)

Period	Gross Domestic Investment (GDI)	Gross National Savings (GNS)	Gross Domestic Savings (GDS)	Foreign Savings (FS)	Investment Ratio (%) GDI/GDP	Savings Ratio (%)		GNS GDI	GDS GDI	FS GDI
						GNS/G	GDS/GDP			
1976-77	2836	2586	2599	250	10.3	9.4	9.5	91.2	91.6	8.8
1977-78	3845	3407	3468	438	13.0	11.5	11.7	88.6	90.2	11.4
1978-79	5778	4250	4257	1528	18.2	13.4	13.4	73.6	73.7	26.4
1979-80	7876	6128	6172	1748	22.3	17.3	17.5	77.8	78.4	22.2
1980-81	8293	6721	6771	1572	21.5	17.4	17.5	81.0	81.5	19.0
1981-82	9841	7438	7478	2403	23.0	17.3	17.4	75.6	76.0	24.4
1982-83	10374	6794	6959	3580	22.2	14.5	14.8	65.5	67.1	34.5
1983-84	8962	6876	7008	2086	18.0	13.8	14.1	76.7	78.2	23.3
1984-85	8110	6044	6161	2066	15.1	11.3	11.5	74.5	76.0	25.5
1985-86	8694	6090	6337	2604	15.5	10.9	11.3	70.0	72.9	30.0
1986-87	7478	5728	6030	1750	12.7	9.7	10.2	76.6	80.6	23.4
1987-88	7941	5503	5607	2438	11.6	8.0	8.2	69.3	70.6	30.7
1988-89	9763	8839	8560	924	12.8	11.6	11.3	90.5	87.7	9.5
1989-90	11501	11505	11450	-4	9.2	9.2	9.2	100.0	99.6	-
1990-91 (P.A)20190		18185	17664	2005	13.5	12.1	11.8	90.1	87.5	9.9

Source: Review of the Financial Economic and Social Conditions; Ministry of Planning and Finance.

1978/79 - 1990/91. The private sector savings rose from 3.0 per cent of GDP in 1976/77 to 11.8 per cent in 1981/82. It decreased to 7.5 per cent and 5.5 per cent in 1982/83 and 1986/87 respectively. In recent years, it increased to more than 10 per cent of GDP. Table 8.3 shows the breakdown between the public and private sector savings. (Also charted in Figure 8.2)

Private savings at the banking sector i.e. financial savings, are also important sources of domestic savings in Myanmar. Financial savings are composed of currency outside banks, demand deposits, savings

Figure 8.1

GROSS DOMESTIC INVESTMENT, GROSS NATIONAL SAVINGS,
GROSS DOMESTIC SAVINGS AND FOREIGN SAVING

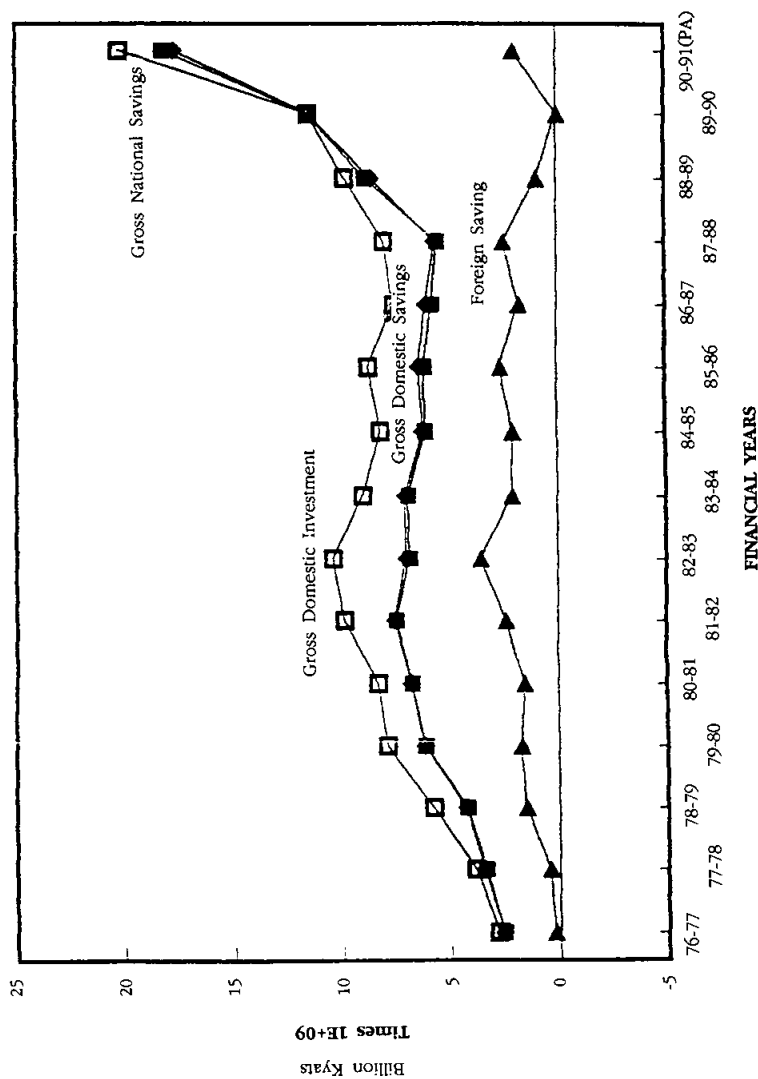


Table 8.2**INVESTMENT-SAVINGS GAP**

(Per Cent of GDP)

Investment-Savings Gap.	
1976-77	0.8
1977-78	1.3
1978-79	4.8
1979-80	4.8
1980-81	4.0
1981-82	5.6
1982-83	7.4
1983-84	3.9
1984-85	3.6
1985-86	4.2
1986-87	2.5
1987-88	3.4
1988-89	1.5
1989-90	-
1990-91 (P.A)	1.7

Source: Calculations based on Table 8.1.

deposits, time deposits and savings certificates. The significant portion of financial savings is made of currency and demand deposits. There was a shift to currency from savings deposits and savings certificates during recent years. This change was due to the above mentioned economic reforms whereby a wider field of opportunities are opened to the private sector to participate in trading and small scale industrial businesses. The ratio of savings deposits including savings certificates to GDP increased during the period 1976/77 - 1988/89. This increase in savings was due to the rise in interest rate on savings deposits in 1975 and 1977.

Table 8.3**SAVINGS BY PUBLIC AND PRIVATE SECTORS**

(Million Kyats)

Period	Gross Domestic Savings		Public Sector Savings			Public Sector Savings		
	Total	% GDP	Total	% GDS	% GDP	Total	% GDS	% GDP
1976-77	2599	9.5	1790	68.9	6.5	809	31.1	3.0
1977-78	3468	11.7	1932	55.7	6.5	1536	44.3	5.2
1978-79	4257	13.4	1481	34.8	4.7	2776	65.2	8.7
1979-80	6172	17.5	2524	40.9	7.2	3648	59.1	10.3
1980-81	6771	17.5	2535	37.5	6.5	4236	62.5	11.0
1981-82	7478	17.4	2408	32.2	5.6	5070	67.8	11.8
1982-83	6959	14.8	3421	49.2	7.3	3538	50.8	7.5
1983-84	7008	14.1	3088	44.1	6.2	3920	55.9	7.9
1984-85	6161	11.5	2463	40.0	4.6	3698	60.0	6.9
1985-86	6337	11.3	2520	39.8	4.5	3817	60.2	6.8
1986-87	6030	10.2	2789	46.3	4.7	3241	53.7	5.5
1987-88	5607	8.2	1104	19.7	1.6	4503	80.3	6.6
1988-89	8560	11.3	-2610	-30.5	-3.4	11170	130.5	14.7
1989-90	11450	9.2	-1380	-12.1	-1.1	12830	112.1	10.3
1990-91 (P.A)	17664	11.8	-1571	-8.9	-1.0	19235	108.9	12.8

Source: Review of the Financial Economic and Social Conditions, Ministry of Planning and Finance.

It shows that the people in Myanmar are responsive to changes in the interest rates of the banking sector i.e. interest rate policy could be used as an effective monetary instrument for the mobilization of domestic resources. The significance of financial savings is discussed further in section III.

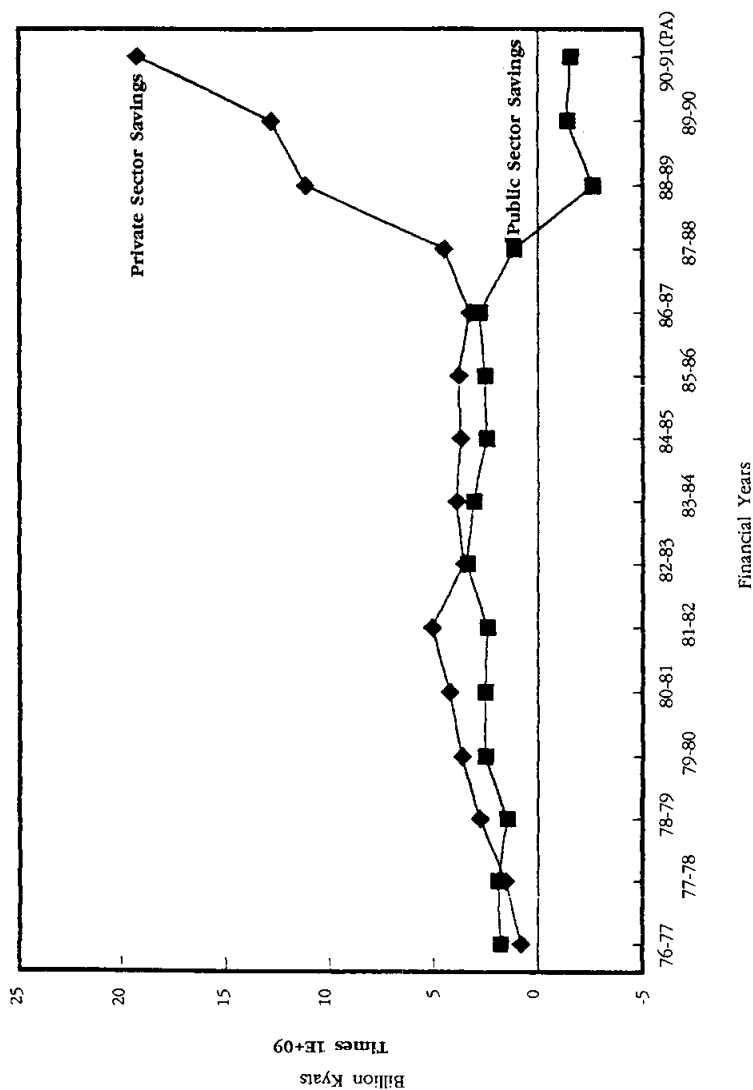
2.3 Sources of Investment

2.3.1 Fiscal Resources Mobilization

The public sector budget in Myanmar comprises those of the Union Government, the state economic enterprises (SEEs) and local authorities. The state budget is the chief instrument through which the public sector mobilizes and allocates resources.

Figure 8.2

SAVINGS BY PUBLIC AND PRIVATE SECTORS



The Union Government includes central authorities, as well as ministries and departments. The Union Government receipts are derived mainly from taxes and customs duties, and the SEEs' contribution to the Union Government. The SEEs play a leading role in government businesses in the areas of production, trade and services. Local authorities consist of municipalities and townships serviced by town and city development committees, but their share in the overall public sector budget is quite small in terms of overall expenditure.

Public sector expenditure in Myanmar increased gradually from 16.3 per cent of GDP in 1976/77 to about 30 per cent in 1982/83 while revenue remained around 17-20 per cent of GDP. Since 1983/84 both expenditure and revenue have declined; the former to 18.1 per cent of GDP and the latter to 10.1 per cent in 1990/91. As a result of revenue decreasing more than expenditure, the fiscal deficit of the public sector increased from about 3 per cent of GDP in 1977/78 to 8 per cent in 1990/91. The ratios of revenue, expenditure and overall deficit of the public sector budget to GDP are shown in Table 8.4.

Table 8.4

**TOTAL REVENUE, TOTAL EXPENDITURE AND OVERALL
BALANCE OF PUBLIC SECTOR BUDGET**

(Million Kyats)

Period	Total Revenue		Total Expenditure		Overall surplus (+)/ Deficit (-)	
	Amount	% of GDP	Amount	% of GDP	% of GDP	
1976/77	4849	17.7	4463	16.3	+	1.4
1977/78	5347	18.1	6124	20.7	-	2.6
1979/80	6817	19.3	9904	28.0	-	8.7
1982/83	9645	20.6	14011	29.9	-	9.3
1983/84	9848	19.8	13551	27.2	-	7.4
1984/85	9689	18.1	13433	25.1	-	7.0
1987/88	9938	14.5	14667	21.3	-	6.8
1989/90	12551	10.1	20278	16.3	-	6.2
1990/91 (P.A)	15153	10.1	27154	18.1	-	8.0

Source: Annual Budget, Ministry of Planning and Finance.

The tax revenue, being the bulk of the receipts of the Union Government contributed largely to the increase in the ratio of total receipts to GDP. The contribution from SEEs' profit has helped to sustain total revenue in the face of sluggish taxes. As a matter of fact contributions of SEEs are income tax. Therefore, although their performance have weakened in recent years, SEEs played an important role in mobilizing the financial resources. The composition of government revenue is shown in the following Table 8.5.

Table 8.5**COMPOSITION OF GOVERNMENT REVENUE**

(Per Cent)

Period	As % of Total Revenue			As % of GDP	
	Tax	SEEs' Contribution	SEEs' Current Surplus	Tax	S Contribution Plus SEEs' Current Surplus
1976/77	49.8	9.0	29.0	8.8	6.7
1977/78	57.9	12.0	16.3	10.5	5.1
1979/80	52.9	20.6	9.4	10.2	5.8
1980/81	49.6	22.9	7.9	9.6	5.9
1981/82	51.9	27.0	5.1	9.9	6.1
1982/83	47.7	20.3	14.4	9.8	7.1
1983/84	46.7	20.9	17.5	9.2	7.6
1984/85	47.5	21.4	15.4	8.6	6.7
1985/86	44.4	18.6	19.2	8.3	7.0
1986/87	38.7	13.6	28.9	7.4	8.1
1987/88	44.0	14.3	20.8	6.4	5.1
1988/89	52.9	24.0	(4.4)	4.5	1.7
1989/90	42.3	17.1	6.0	4.3	2.3
1990/91 (P.A)	62.1	22.7	(5.9)	6.3	1.7

Source: Annual Budget, Ministry of Planning and Finance.

Regarding tax revenue, the indirect tax revenue is the major source of revenue receipts although in recent years the share contributed by direct taxes has been rising significantly. Table 8.6 provides the structure of tax revenue for the period 1976/77 - 1990/91.

2.3.2. Foreign Resource Mobilization

As mentioned above, foreign savings is obtained from the balance of payments account i.e. deficit on current account. For many years the balance of payments of Myanmar shows deficit in its current account. This deficit is associated with deficits in both trade and services accounts. A predominant share of foreign exchange earnings in the current account is derived from merchandise exports rather than from services. Major export items are agricultural produce such as rice, pulses and beans, teak and hard wood and marine products.

Table 8.6

STRUCTURE OF TAX REVENUE

(Million Kyats)

Period	Tax Revenue			Proportion of Total Tax Revenue (per cent)		
	Total	Direct Tax	Indirect Tax	Other Tax	Direct Tax	Indirect Tax
1976/77	2415	141	2151	123	5.8	89.1
1979/80	3608	189	3286	133	5.2	91.1
1980/81	3711	182	3395	134	4.9	91.5
1981/82	4257	195	3868	194	4.6	90.9
1982/83	4602	239	4128	235	5.2	89.7
1983/84	4602	266	4140	196	5.8	90.0
1984/85	4601	313	4087	201	6.8	88.8
1985/86	4622	368	4038	216	8.0	87.4
1986/87	4375	472	3685	218	10.8	84.2
1987/88	4373	480	3690	203	11.0	84.4
1988/89	3426	616	2612	198	18.0	76.2
1989/90	5312	877	4024	411	16.5	75.8
1990/91 (P.A)	9417	2806	5882	729	29.8	62.5

Source: Annual Budget, Ministry of Planning and Finance.

Regarding imports, most of the capital goods imports are construction materials, machinery and transportation equipment. The deficit in trade balance in recent years was largely due to unfavourable movement in the terms of trade. Deterioration in the terms of trade raised the cost of Myanmar's imports and lowered the purchasing power of its exports and hence produced larger deficit in its trade balance.

Services account plays a minor role in foreign exchange earnings. Myanmar transfers account shows a continuous surplus particularly because of remittances of Myanmar's working abroad. But net transfer receipts are not large enough to offset the deficit in trade and services accounts. Table 8.7 shows the current account of the balance of payments of Myanmar.

2.3.3 Financing with Domestic and External Resources

Myanmar tries to finance its balance of payments current account deficit through capital inflows such as official grants and long-term concessionary loans. Sometimes Myanmar has to resort to short-term interbank loans to finance its current account deficit. Due to the policy changes in late 1988, there have been inflows of foreign direct investment in recent years. Table 8.8 provides the net capital inflows in the form of grants, long-term loans and foreign direct investment.

Regarding external borrowing, some part of it goes into debt servicing. Debt service ratio varied between 20-45 per cent of export earnings during the period 1979/80 - 1985/86 and went up to over 50 per cent in 1986/87 and 1987/88 mainly due to increase in loan repayments and shortfalls in export earnings during those years. In 1990/91, it decreased to 9.7 per cent. Debt service ratios are shown in Table 8.9.

Public sector budget deficit is financed by both domestic and external resources. Bank borrowings is the main source of domestic financing. External financing comprises of long-term concessionary loans and commercial bank loans. Table 8.9a shows the financing of public sector budget deficit.

Table 8.7

CURRENT ACCOUNT OF BALANCE OF PAYMENTS

(Million Kyats)

	1976/77	1979/80	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91 (P.A)
Trade account	-214	-1631	-2179	-3311	-1824	-1908	-2236	-1517	-2411	-1274	-561	-2222
Exports 1/	1414	2679	3432	3003	3373	3133	2566	2419	1655	2169	2834	3057
Imports 2/	1628	4310	5611	6314	5197	5041	4802	3936	4066	3443	3395	5279
Service (net)	-23	-74	-184	-105	-131	-41	-120	69	77	71	510	-304
Net factor Income from abroad	-19	-144	-168	-347	-510	-517	-581	-658	-520	-261	-304	47
Unrequited transfers	+6	101	129	183	379	400	333	356	416	540	359	474
Current account deficit	-250	-1748	-2403	-3580	-2086	-2066	-2604	-1750	-2438	-924	+4	-2005
Foreign saving	250	1748	2403	3580	2086	2066	2604	1750	2438	924	-4	2005

1/ Merchandise exports are on shipment basis.

2/ Merchandise imports are on arrival basis.

Source: Review of the Financial, Economic and Social Conditions, Ministry of Planning and Finance.

Table 8.8

FOREIGN CAPITAL INFLOWS (NET)

(Million Kyats)

	1976/77	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90
Long-term capital (net)	183	1946	1109	1842	2399	1462	1161	1221	1327	1364	941	45
Disbursement	447	2375	1565	2465	2944	2185	1956	2161	2367	2071	1394	894
Repayment	264	429	456	623	545	723	795	940	1040	707	453	799
Official grants	179	430	639	429	731	529	504	710	696	686	466	194
Foreign direct investment	-	-	-	-	-	-	-	-	-	-	-	131
Net Capital inflow	362	2376	1748	2271	3130	1991	1665	1931	2023	2050	1407	370
<u>Memorandum item</u>												
Long-term capital (net)	0.7	5.5	2.9	4.3	5.1	2.9	2.2	2.2	2.2	2	1.2	-
Official grants	0.7	1.2	1.6	1	1.6	1.1	0.9	1.3	1.2	1	0.6	0.2
Foreign direct investment	-	-	-	-	-	-	-	-	-	-	-	0.1
Net Capital inflow	1.3	6.7	4.5	5.3	6.7	4	3.1	3.5	3.4	3	1.8	0.3

Source: Review of the Financial, Economic and Social Conditions, Ministry of Planning and Finance.

Table 8.9**DEBT SERVICING RATIO**

(Per Cent of Exports and Services)

Period	Debt Servicing Ratio (per cent)
1974-75	16.6
1975-76	20.9
1976-77	21.2
1977-78	13.6
1978-79	16.5
1979-80	21.6
1980-81	21.1
1981-82	25.9
1982-83	27.8
1983-84	31.6
1984-85	35.5
1985-86	45.8
1986-87	58.4
1987-88	50.9
1988-89	25.6
1989-90	29.5
1990-91 (P.A)	9.7

Source: Review of the Financial, Economics and Social Conditions,
Ministry of Planning and Finance.

III. The Role of the Financial System in Domestic Resource Mobilization**3.1 Development of Financial Structure**

During the 1950s and early 1960s, the financial system consisted of the Union Bank of Burma as the Central Bank of Myanmar with some twenty commercial banks engaged mainly in short term financing of domestic and foreign trade. Of these twenty commercial banks existing in 1948, 18 were foreign banks with head offices abroad.

Table 8.9a**FINANCING OF PUBLIC SECTOR BUDGET DEFICIT**

(Million Kyats)

	1977/78	1979/80	1984/85	1987/88	1988/89	1989/90	1990/91 (P.A)
Overall deficit	-777	-3087	-3744	-4729	-6605	-7727	-12001
Financing	777 (100)	3087 (100)	3744 (100)	4729 (100)	6605 (100)	7727 (100)	12001 (100)
Domestic resources	-274	1292	2720	3679	5802	7680	11569
of which	(-35)	(42)	(73)	(78)	(88)	(99)	(96)
Bank borrowing	-260 (-33)	1349 (44)	2946 (79)	3959 (84)	6314 (95)	8019 (104)	12002 (100)
External resources	1051	1795	1024	1050	803	47	432
Foreign loans (net)	1051 (135)	1795 (58)	1024 (27)	1050 (22)	803 (12)	47 (1)	432 (4)

Note: Figures in parentheses are proportions of total financing to public sector budget deficit.

Source: Annual Budget, Ministry of Planning and Finance.

Then the banking sector expanded gradually. The State Agricultural Bank was established in 1953 to cater to the needs of agricultural finance, and four new commercial banks were also established. The most important of these was the State Commercial Bank, which opened in August 1954. It filled an important gap in the country's financial system because instead of concentrating on financing of internal and external trade, it lent more and more to local industries. Furthermore, by 1963 the State Commercial bank had 40 branches all over the country, while foreign commercial banks confined their activities mainly in Yangon. The Industrial Development Bank Ltd. was established in 1961 to cater to the needs of industrial finance.

Between 1962 and 1988 Myanmar pursued policies designed to transform the economic structure of the country to a centrally planned economy. It was found necessary to reshape and reorganize the banking and financial systems of the country in accordance with its needs and requirements. In February, 1963 all 25 private commercial banks, of which 14 were foreign owned, were nationalized.

After nationalization of banks, arrangements were made to pool the financial resources of the state financial institutions, including banks, savings, insurance and small loans institutions and the Government treasuries, in order to facilitate the mobilization of domestic financial resources.

After the completion of amalgamation of these institutions a monolithic bank called the People's Bank of the Union of Burma was established. It functioned not only as a central bank but also engaged in all banking activities and insurance business through eleven specialized divisions. In October 1972, under the new administrative system the name of the Bank was changed to the Union of Burma Bank.

The Union of Burma Bank was reorganized on April 1, 1976 into a number of separate entities on functional basis under the Bank Law of 1975. The reorganized banking system consisted of the Union of Burma Bank which was the central bank, and three specialized banks, namely the Myama Economic Bank which was responsible for domestic banking, the Myanma Foreign Trade Bank which dealt in international transactions and the Myanma Agricultural Bank which provided agricultural credit. The insurance function was transferred to the then created Myanma Insurance Corporation which operated outside the banking system.

Myanmar's economy is currently being transformed into a market-oriented economy since late 1988. Banking reform measures have been taken so that the banking system will be in harmony with the introduction of market-oriented economic policy. A new bank called the Myanma Investment and Commercial Bank was established in September 1989 with a view to providing both domestic and foreign banking services, particularly for the convenience of foreign investors.

3.2 Present Financial Structure

Present financial structure of Myanmar includes banks consisting of the Central Bank, four State-owned banks and a non-bank financial institutions namely the Myanma Insurance.

3.2.1 Financial Institutions

The Central Bank of Myanmar

The Central Bank of Myanmar, as the central bank of the State, is responsible for acting as advisor to the Government on economic matters, issuance of currency, acting as banker to the Government and financial institutions, formulating and implementing monetary policy, managing the international reserves of the State, implementing exchange rate policy, controlling foreign exchange transactions, licensing, inspecting, supervising and regulating other financial institutions.

The Myanma Economic Bank

The Myanma Economic Bank engages in general commercial and development banking business. Its functions include accepting current, time and savings deposits, issuing savings certificates, providing various types of loans to economic enterprises and individuals, and underwriting, negotiating and managing debentures and shares. It provides nation-wide banking services through the network of 66 major branches, 192 township branches, 209 small loans agencies and 61 savings agencies.

The Myanma Investment and Commercial Bank

The Myanma Investment and Commercial Bank provides foreign banking facilities as well as local banking and financing services to foreign and local investors participating wholly or in joint ventures, commercial business enterprises, business representatives, importers and exporters in Myanmar.

The Myanma Foreign Trade Bank

The Myama Foreign Trade Bank renders such banking services as accepting deposits in kyats and foreign currencies, giving loans and advances both secured and unsecured, issuing, accepting, discounting, buying, selling and collecting various types of securities such as bills of exchange, sales and purchases of travellers cheques and foreign currencies, and all matters relating to letters of credit, international transfer of funds and bank guarantee.

The Myanma Agricultural and Rural Development Bank

The Myanma Agricultural and Rural Development Bank provides loans to State-owned agricultural organizations, livestock organizations, co-operatives, private persons, village banks, farmers, entrepreneurs and labourers. Its main aim is to effectively support the development of agricultural, livestock and rural enterprises by promoting banking services and mobilization of savings in rural areas. It has a nation-wide net-work of 14 regional offices, 164 township branches, 48 agencies and 12228 village banks.

3.2.2 Non-bank Financial Institutions

The Myanma Insurance

Myanma Insurance, a State-owned organization, is the sole insurance organization in Myanmar and presently engages in the following insurance businesses;

- (a) Life Insurance
- (b) Marine Insurance
- (c) Aviation Insurance
- (d) Fire Insurance
- (e) Engineering Insurance
- (f) Compulsory Motor Vehicle Third Party Liability Insurance and Comprehensive Motor Insurance
- (g) Miscellaneous Insurance

With a network of 33 branches established throughout the country, Myanma Insurance fully satisfies overall demand for insurance coverage necessitated by the growth and diversity of the economic activities taking place under the policy of moving towards market economy in Myanmar.

As in the case of other insurance enterprises in most other countries, Myanma Insurance has an ambitious and efficient reinsurance programme under which large risks written are ceded to financially strong and well established reinsurers worldwide. Premium rates charged are reasonable as compared with those existing elsewhere.

With a view to meeting the ever-growing requirements of its customers, Myanma Insurance has recently unveiled a new programme

whereby insurance can be effected in a freely convertible currency i.e., if premium is paid in a freely convertible currency the claim would be met with the same type of currency.

As Myanma Insurance, backed by internationally reputable and renowned reinsurers, is capable of meeting all the insurance needs within Myanmar, economic enterprises in Myanmar can effect their insurance requirements with the Myanma Insurance.

IV. Trends and Structure of Savings Mobilized through Financial Institutions

4.1 Financial Savings

Financial savings are mobilized through financial institutions and held in the form of financial assets. In Myanmar financial assets comprise currency, demand deposits, savings deposits and savings certificates. Financial savings which involves the acquisition of financial assets constitutes the link between financial development and the mobilization of domestic resources.

There is an increasing trend of financial savings in recent years in Myanmar. But a significant proportion of these financial savings is made up of currency and demand deposits, which are non-income yielding assets. Table 8.10 provides the details of financial savings in Myanmar for the 1976/77 - 1990/91 period. During this period, GDP at current prices increased six fold but financial savings increased by eight times. The percentage share of currency to total financial savings declined to about 61 per cent in 1985/86 from 83 per cent in 1976/77. It decreased further to 49 per cent in 1987/88 due to the demonetization of some currency notes in that year. It rose to above 60 per cent in recent years. The share of private savings at banking sector (quasi-money)¹ rose from 9.4 per cent in 1976/77 to 33.7 per cent in 1985/86 then declined to 23.7 per cent in 1990/91.

Total financial savings increased by an average annual growth rate of 14.8 per cent during the period 1976/77 - 1986/87 and 18.1 per cent

1. Quasi-money = Saving deposits + time deposits + savings certificates.

Table 8.10

FINANCIAL SAVINGS

(Million Kyats)

Period	Currency		Demand Deposit		Quasi-money		Total
	amount	% of total	amount	% of total	amount	% of total	
1976/77	5298	83.08	481	7.54	598	9.38	6377
1977/78	5409	81.57	494	7.44	728	10.98	6631
1978/79	6379	79.57	563	7.02	1075	13.41	8017
1979/80	7317	76.07	648	6.74	1654	17.19	9619
1980/81	8275	73.80	671	5.58	2257	20.22	11213
1981/82	9163	69.76	822	6.26	3150	23.98	13135
1982/83	9781	66.10	970	6.56	4046	27.34	14797
1983/84	11248	65.44	994	5.78	4945	28.77	17187
1984/85	12571	63.76	1161	5.89	5983	30.35	19715
1985/86	12240	60.82	1104	5.49	6781	33.69	20215
1986/87	17035	64.95	1445	5.51	7746	29.54	26226
1987/88	9539	49.03	1502	7.72	8413	43.25	19454
1988/89	16890	65.57	1207	4.69	7660	25.74	25757
1989/90	23218	66.30	2082	5.95	9721	27.75	35021
1990/91	35140	68.89	3778	7.41	12088	23.70	51006
Average annual growth rate				(percentage)			
1976/77 - 1986/87	11.8		10.4		27.0	1	4.8
1987/88 - 1990/91	19.8		27.2		11.8		18.1

Source: Central Bank of Myanmar.

during 1987/88- 1990/91 whereas the private savings at the banking sector increased by an average annual growth rate of 27 per cent and 11.8 per cent during those respective periods. Thus, the private sector holds large amount of cash balance for business activities opened to them in the latter period. Total financial savings as indicated by the broadly defined money (M_2) looks rather high owing to a sizeable share of currency in circulation outside banks. The ratio of M_2 to GDP having peaked in 1986/87 slowed down for three years before slightly increasing again in 1991.

The ratio of money supply (M_1) to GDP is stable around 20-30 per cent during this period. The ratio of quasi-money ($M_2 - M_1$) to GDP

had, however, been rather low as compared with M_2 ratio. It was also considerably lower than the ratio of M_1 to GDP while it moved up slowly from 2.2 per cent in 1976/77 to 9.9 per cent in 1983/84. The average ratio during 1984/85 - 1987/88 was about 12 per cent and it started to decline to 10.1 per cent in 1988/89, then to 8.1 per cent in 1990/91. (See Table 8.11)

Table 8.11

**FINANCIAL SAVINGS RELATION TO GROSS
DOMESTIC PRODUCT**

(Per Cent)

Period	M2/GDP	M1/GDP	Quasi-money/ GDP
1976/77	23.3	21.1	2.2
1977/78	22.4	19.9	2.5
1978/79	25.2	21.8	3.4
1979/80	27.2	22.5	4.7
1980/81	29.0	23.2	5.8
1981/82	30.6	23.3	7.3
1982/83	31.6	23.0	8.6
1983/84	34.5	24.6	9.9
1984/85	36.8	25.6	11.2
1985/86	35.9	23.8	12.1
1986/87	44.4	31.3	13.1
1987/88	28.3	16.1	13.2
1988/89	33.8	23.7	10.1
1989/90	28.1	20.3	7.8
1990/91 (P.A)	34.0	25.9	8.1

1/ M_1 = Currency in circulation + demand deposits.

Source: Review of the Financial, Economic and Social Conditions,
Ministry of Planning and Finance and Central Bank of
Myanmar.

4.2 Savings Mobilized by the Myanma Insurance

The funds of the Myanma Insurance mainly come from the life insurance, marine and aviation insurance, fire and engineering insurance, and compulsory motor vehicle third party liability insurance. Contribution to the State from net profit of Myanma Insurance is one of the main sources of domestic savings. Table 8.12 provides the detail of income, expenditure and contribution to the state of the Myanma Insurance.

V. Policy Measures and Reforms in the Mobilization for Domestic Savings

5.1 Measures Taken in the Fiscal Area

Prior to 1988, measures have been taken to increase revenue through broadening of tax base, cost recovery of public services and improvement in tax administration. In addition, the Commodities and Services Tax was introduced with the aim of increasing the government revenue.

Guidelines for Operating on Commercial lines to be used by all state economic enterprises (SEEs) in the various ministries were established in 1975/76. The SEEs were to stand on their own feet and those enterprises which have insufficient funds were to borrow money from the Myanma Economic Bank. The establishment of those commercial guidelines, together with the revision of prices of the SEEs, accounted for the considerable improvement in the financial position of SEEs for two consecutive years 1976/77 and 1977/78.

However, the new financial management programme was introduced at the beginning of 1989/90. Under this new programme, the debts of the SEEs were converted into Government equity. The SEEs have to pay all their receipts into the State Fund Account (SFA) and they obtain the necessary funds for their expenditures from the SFA within the provision in the public sector budget. It is not necessary to borrow from the banks.

Moreover, with the introduction of market oriented economic policy many reform measures have been taken in the fiscal area.

Table 8.12**MYANMA INSURANCE: INCOME, EXPENDITURE
AND CONTRIBUTION TO THE STATE**

(Million Kyats)

	1976/77	1979/80	1984/85	1989/90	1990/91 (P.A)
Total Income: of which	167	268	387	344	523
Life insurance	32	40	44	39	43
Marine & aviation	51	105	117	98	165
Fire & engineering	21	39	71	71	107
Motor vehicle third party liability	60	75	107	129	195
Total Expenditure	74	109	138	121	119
Contribution to the State	8	50	102	206	272

Source: Annual Budget, Ministry of Planning and Finance.

To raise domestic savings, measures have been taken in order to increase revenue by broadening the tax bases and improving efficiency of the tax administration and collection. Furthermore, the Commercial Tax Law covering both the state and private sectors was introduced in 1990 to replace the Commodities and Services Tax which covers only the state sector and producers' co-operatives. Income Tax Law and the Profit Tax Law have been amended. The tax rates have been adjusted to be more inductive to production of goods and services, and to be more cost-effective and to encourage corporate savings. Water tax for domestic use was introduced and other municipal taxes, tolls on highways and bridges were raised. In addition, tax amnesty programmes were introduced under which black money would become freely usable funds after paying nominal amount of taxes and thereby

increasing amount of investable resources. Streamlining of customs tariff has been made and constant reviews are being made on tax structure. A detailed comparison of taxable-income threshold, personal allowances and rate of tax before and after reforms is provided in Table 8.13.

To enhance the surplus of SEEs, central control has been relaxed by giving the managing directors more autonomy in management, encouraging them to take initiatives and relaxing price control.

The State-owned Economic Enterprises Law was enacted in March 1989. This law allows SEEs to form joint ventures with both domestic and foreign investors. However, there is still a need to improve the efficiency of SEEs and to privatize those SEEs which are running at a loss. In this regard joint venture corporations have been formed between the SEEs and local and foreign private entrepreneurs as an initial step towards increasing private participation in these areas.

5.2 Measures Taken to Attract Foreign Investment

In order to attract foreign investment, the Union of Myanmar Foreign Investment Law was enacted in November 1988 and the procedures relating to the law and the types of economic activities allowed for foreign investment have also been announced. Foreign investors are allowed to establish wholly-owned foreign enterprises or joint-ventures with a minimum foreign equity of 35 per cent of the total capital. The minimum amount of foreign capital for an enterprise is, at present, fixed at US\$100,000. Policy towards foreign resources implies that, in future, funding would be mainly in the form of equity instead of loans.

The State-owned Economic Enterprises Law, enacted in March 1989, prescribes 12 economic activities which the Government has the sole right to carry out. However, the Government may permit any of these economic activities to be carried out by joint-ventures between the Government and any person or any economic organization; and in some cases enterprises wholly owned by private individual or economic organization will be permitted subject to certain conditions.

A foreign investor who invests and operates under the Foreign Investment Law has the right to enjoy many economic benefits such as tax incentives provided in the said Law, repatriation of profits and withdrawal of the legitimate assets on winding up of his business. There

Table 8.13**INCOME TAX**

(A detailed comparison of taxable-income threshold,
personal allowances and rates of tax before and
after reforms)

Particular	Before reforms	After reforms Effective from the assessment year (1989-90)
Maximum amount of income not chargeable to tax (threshold)		
Income from salaries	K 10000	K 15000
Income of Co-operatives Societies	K 10000	K 10000
Others (Private Sector)	K 8000	K 10000
Basic Allowance		
All (except companies)	20% of net income sub- ject to a maximum of K 6000	20% of net income sub- ject to a maximum of K 6000
Wife Allowance		
All individuals (except) on-resident foreigners)	K 2000	K 2500
Children Allowance		
Under 5 years of age	K 400 for each child	K 500 for each child
Over 5 but not above 10 years	K 500 for each child	K 600 for each child
Over 10 but not above 15 years	K 600 for each child	K 800 for each child
Over 15 years	K 800 for each child	K 1000 for each child
Tax Rates		
(a) Resident Companies	50%	30%
(b) Enterprises Operating under the Foreign Investment Law (1988)	-	30%
(c) Foreign organization operating under special permission in State-sponsored projects.	40%	30%
(d) Individual foreigners engaged under special permission in State-sponsored projects.	25%	20%
(e) On income earned abroad by non-resident citizens (on gross income)	10%	10%

Table 8.13 (Cont'd)

Particular	Before reforms	After reforms Effective from the assessment year (1989-90)
(f) On income from salaries	Progressive rates ranging from 4% to 30%. (At 30% on income exceeding K 40000)	Progressive rates ranging from 3% to 30%. (At 30% on income exceeding K 75000)
(g) Individual and bodies of individuals other than those than mentioned above	Progressive rates ranging from 4% to 50%. (At 50% on income exceeding K 30000)	Progressive rates ranging from 3% to 50%. (At 50% on income exceeding K 150000)
(h) Non-resident foreigners (individuals and bodies of individuals such as a branch of a foreign company)	60% or the tax payable at the progressive rates mentioned in (g) above, whichever is greater.	35% or the tax payable at the progressive rates mentioned in (g) above, whichever is greater.
(i) Co-operative Societies	Progressive rates ranging from 2% to 50%. (At 50% on income exceeding K 100000)	Progressive rates ranging from 3% to 30%. (At 30% on income exceeding K 75000)
(j) State Economic Enterprises	50% (Before 1976-77 assessment year)	30%
Capital gains		
Residents	10%	10%
Non-residents foreigners	60%	40%

is also an unequivocal State guarantee against nationalization and expropriation. Regarding tax incentives, an enterprise covered by the Foreign Investment Law is entitled to a tax holiday period of three years, beginning from the year in which its commercial operations commence, and to a further reasonable period if the Foreign Investment Commission thinks it necessary. In addition, the enterprise may enjoy any or all of the following exemptions and reliefs:

- (a) exemption or relief from income tax on profits on the amount of reinvestment if it is made within one year;
- (b) grant of accelerated depreciation on capital assets;
- (c) 50 per cent relief from income tax on incomes accrued from exports;
- (d) exemption and relief from customs duty or other internal taxes or both on imported capital goods during the time of construction and on imported raw materials for the first 3 years' commercial production;
- (e) the right to carry forward losses for 3 consecutive years;
- (f) the right to pay income tax on behalf of foreigners employed and the right to deduct such payment from the assessable income;
- (g) the right to deduct expenses on research and development from the assessable income; and,
- (h) the right to transfer foreign currency permitted by the Commission.

Moreover, the income tax rate applicable to such investors after the holiday period is fixed at 30 per cent, which is about the lowest rate prevailing in comparison with those applied in many other developing countries. Furthermore, there will be no withholding tax.

5.3 Measures Taken to Promote Private Savings

The Private Industrial Enterprises Law was enacted in 1990 in order to promote small, medium and large scale industries in the private sector.

For the promotion of cottage industries, the Promotion of Cottage Industries Law was enacted in October 1991. Wider participation of the private sector is expected to raise the level of domestic savings.

5.4 Monetary Policy and Measures Taken in the Financial Sector

Prior to 1963, interest rate policy was used as an instrument to mobilize and allocate the domestic financial resources. During the centrally planned period (1963-1988), the main instruments of monetary policy in Myanmar were the 'cash plan' and the 'credit plan' which sought to control the increase in money supply and to allocate credit in accordance with the priority system of the annual economic plan. Interest rates played only a limited role in regulating and allocating credit but were important in mobilizing savings.

Reforms of financial sector were introduced to be in harmony with market-oriented economic policy which was adopted in late 1988. The present financial structure has been streamlined and restructured. A new bank called the Myanma Investment and Commercial Bank was established in September 1989 in addition to the existing State-owned banks to provide both domestic and foreign banking services particularly for the convenience of foreign investors. Issue of treasury bills and bonds to the public at attractive rates compatible with the market conditions was reviewed by the Central Bank of Myanmar. In October 1989, interest rates for treasury bills and treasury bonds were raised.

Myanma Economic Bank has extended the options for savers beyond savings deposits and savings certificates by introducing call deposits and raising the interest rate on fixed deposits. More saving branches are opened and saving facilities are extended. In addition, interest rates on savings deposit and savings certificate were raised effective July 1, 1992. Interest rate structure of banking sector is provided in Table 8.14.

Myanmar nationals had also been permitted to hold foreign currency accounts at the Myanma Foreign Trade Bank and Myanma Investment and Commercial Bank. With the objective of the enhancement of foreign exchange earnings the Central Bank of Myanmar issued Foreign Exchange Certificates on 4th February 1993. Myanmar nationals and foreigners who own legitimate foreign exchange earnings, in addition to tourists, can exchange Foreign Exchange Certificates with US dollar

or Pound Sterling in order to enable more widespread use of Foreign Exchange Certificates.

In July 1990, the Central Bank of Myanmar Law, the Financial Institutions of Myanmar Law and the Myanmar Agricultural and Rural Development Bank Law were enacted. Rules and procedures relating to the said Laws were issued in April 1991. Furthermore, Savings Banks Law was enacted in June 1992, with the aim of enhancing the efficiency of the mobilization of financial resources.

The new banking laws allow the establishment of local and foreign private financial institutions such as commercial banks, investment or development banks, finance companies and credit societies. Emphasis is on higher efficiency through competition under appropriate regulation and supervision of the central bank, and the greater use of monetary policy to maintain monetary stability and to enhance resource mobilization. The laws also include enabling provisions to permit joint ventures in banking business and to allow foreign banks to operate in Myanmar. In accordance with the new banking laws, five private banks have already been opened during 1992. They are the Myanmar Citizens Bank Limited, the Co-operative Bank Limited, the Yadanabon Bank Ltd., the First Private Bank Limited, and the Myawaddy bank Ltd. The Thai Military bank is the first foreign bank, which opened a representative office in Yangon in January 1993.

In order to enhance the efficiency of the financial system, the Small Loans Department was separated from the Myanmar Economic Bank and was created as a new financial institution under the Notification no. 65/92 of Ministry of Planning and Finance, on 10 August 1992. The name of this financial institution is Myanmar Small Loans Enterprise, which will be granted the licence to operate as a finance company by the Central Bank of Myanmar in accordance with the provisions of the Central Bank of Myanmar Law, 1990.

The main objective of establishing the Myanmar Agricultural and Rural Development Bank under a separate law is to effectively support the development of agricultural, livestock and rural socio-economic enterprises by promoting banking services and mobilization of savings in rural areas. Provisions have been made in the law to convert this bank into a full fledged commercial bank when banking habits becomes more widespread in the rural areas.

Table 8.14

SELECTED INTEREST RATES, 1975 TO DATE

(Per Cent Per Year)

	Apr. 1975 - Nov. 1977	from Nov. 1977	1989	Present Rate
Bank Rate	4.00	4.00	11.00 1/	11.00
Treasury Bills and Bonds				
3 months Treasury Bills	1.00	1.00	4.00 1/	4.00
3 years Treasury Bonds	2.50	2.50	10.00 2/	10.00
5 years Treasury Bonds	3.00	3.00	10.50 2/	10.50
Deposit Rates				
Call deposits	0.25	0.25	3.00 2/	3.00
Fixed deposits				
Three months	0.50	1.00	8.50 2/	8.50
Six months	0.75	1.50	9.00 2/	9.00
Nine months	2.00	2.00	9.50 2/	9.50
Savings bank accounts				
Basic rate	6.00	8.00	8.00	10.00 9/
Premium on 3-year minimum balance	2.00	2.00	2.00	
Savings certificates				
Twelve-year maturity	7.60	10.90	10.90	12.00 9/
Lending rates				
Cooperatives				
Working capital loans 3/	6.00	8.00	15.00 1/	16.50 9/
Term loans 4/	7.00	9.00	12.00 1/	14.50 9/
Private sector				
Agriculture				
To village banks 5/	6.00	8.00	13.00 7/	13.00
To farmers 6/	12.00	12.00	18.00 7/	18.00
Car purchase loans	7.00	9.00	15.00 1/	15.00
House repair and other loans	8.00	10.00	15.00 1/	5.00 8/
Small personal loans	24.00	24.00	36.00 1/	36.00

1/ Effective from September 1989.

2/ Effective from October 1989.

3/ Overdrafts are charged 0.5 per cent above loan rates.

4/ The present rate is 14.5 per cent for 5-10 years loans and 15 per cent for up to 5 years loans.

5/ Lending rate of the Myanmar Agricultural and Rural Development Bank.

6/ Relending rate of village banks.

7/ Effective from 1989/90 lending season.

8/ Effective from 2 February 1990.

9/ Effective from 1 July 1992.

Source: Central Bank of Myanmar.

Agricultural credit of the Myanma Agricultural and Rural Development Bank expanded substantially not only by raising per acre lending rates for paddy and beans and pulses but also by providing credit for industrial crops. Similarly, lending for term loans for purchase of draught cattle, carts etc. were raised. New loans for orchard cultivation and livestock breeding are also introduced in 1991/92. There has also been an increase in bank credit to the private sector reflecting a substantial increase in loans to the co-operatives and expansion of private commercial credit in line with changes in the economic policy of the Government. In other words, the authorities pursue a selective expansionary policy.

VI. The Role of the Capital Market in Domestic Resource Mobilization

As Myanmar is changing from a centrally planned towards a market oriented economy, substantial amount of capital is needed to be mobilized particularly from the private sector. Establishment of a capital market is considered to be essential for this task.

A small stock exchange existed in Yangon prior to 1930 and it was very active in the 1930-35 period. It was a small one with about 25 scripts covering stocks and shares of 51 companies related to such businesses as oil, tin, copper and rubber in Myanmar. The majority of these companies were registered abroad. There were 7 brokerage firms as members, and all of them were Europeans. In addition to these brokers there were about 30 sub-brokers. The stock market that existed at that time appeared to be somewhat disorganized and very underdeveloped. The economy of Myanmar, as measured by its GDP, is now more than forty-three times of its pre-war size. And unlike the pre-war situation, most of the major enterprises operating in Myanmar nowadays are incorporated in Myanmar.

Up till the end of March 1992, 1316 Myanmar companies and 133 foreign companies and branches had registered in Myanmar. In addition, there are 12 joint venture corporations formed by the government and domestic private sector with a total authorized capital of Kyat 12466 million (See Table 8.15). There are also joint-venture corporations formed by the government and foreign enterprises with a total authorized capital of K 2261 million. The shares of the companies

mentioned above are not yet tradable publicly. However, it is the policy of the government to sell the shares held by the government to the private sector when conditions are appropriate. When such sales occur, it will be desirable to have a functioning stock market so that sales of these shares can be carried out in an efficient manner. Furthermore, the shares in private hands may also be traded in the market. Of course these companies will have to be public companies. There are sufficient justifications for the establishment of a stock market in Myanmar. On the basis of the present trend of the Myanmar economy, a stock market is likely to come into being in Myanmar in the near future.

VII. Factors Affecting the Mobilization of Domestic Savings

7.1 Factors Affecting Savings Behaviour

Myanmar's savings behaviour may be explained by permanent income (measured by a 3-year moving average of nominal GDP), per capita GDP, financial savings, level of exports, inflation (consumer price index), and dependency ratio. In other words, the growth rate of GDP, potential GDP (measured by the ratio of actual GDP to its 3 year moving average), real interest rate on savings deposit and foreign savings are considered to be important determinants of the aggregate savings.

Gross national savings of Myanmar is usually a few percentage point below gross domestic savings because of the net factor payment abroad. Such payments are financed from domestic savings and therefore, excluding these payments results in underestimation of domestic resource mobilized. For this reason, in this study, emphasis is on gross domestic savings rather than gross national savings.

We construct a model of Myanmar's savings behaviour in logarithmic form over the period 1976/77 - 1990/91. All eleven variables viz. permanent income, growth rate of GDP, potential GDP, per capita GDP, real interest rate on savings deposit, consumer price index, total financial savings, foreign savings, dependency ratio, level of exports and ratio of taxes to GDP are included in our initial regressions. All the regressions are run using ordinary least squares method (OLS). The results of the regressions are shown in Table 8.16.

Table 8.15

**TYPE OF BUSINESS AND CAPITALIZATION OF STATE-DOMESTIC
PRIVATE SECTOR JOINT VENTURE CORPORATIONS**

(As of March 31, 1992)

Name	Type of Business	Total Authorized Capital (K. million)	Private Sector Capital (K. million)	Remarks
JVC (1)	Export	50	25	-
JVC (2)	Rice	100	50	-
JVC (3)	Printing & Publishing	100	55	-
JVC (4)	Non-rice agriculture products	100	55	Mandalay based
JVC (5)	Construction	50	25	-
JVC (6)	Marine	500	250	-
JVC (7)	Medical Services	500	300	Including K. 125 million for foreign investors
JVC (8)	Herbal Medicine	50	35	-
Northern Shan State JVC	General	10	5	Shares reserved for residents of northern Shan State
The Union of Myanmar Economic Holdings Limited	Holding company	10,000	6,000	Shares reserved for armed forces person- nel and veterans
Myanmar Architectural & Engineering Consult	Engineering Services	6.2	2.5	
Myanmar Citizens Bank Limited	Banking Business	1,000	550	
Total		12,466.2	7,347.5	

According to these results, the permanent income, per capita GDP, real interest rate, level of exports, and total financial savings are positive and significant, (see equations 1 to 5). The consumer price index and dependency ratio are negative and significant, (see equations 2 and 5). However, the growth rate of GDP, potential GDP, and amount of foreign savings, are not significant. (see equations 1, 3 and 6).

Public sector savings regression revealed that the relationships of real interest rate and the consumer price index are negative and significant. The relationship between the ratio of taxes to GDP and public sector savings is positive and significant, (see equation 7).

7.2 Factors Affecting Financial Savings

The rising level of financial savings reflects the growing importance of the financial sector in Myanmar. The financial savings regressions showing the relationships between permanent income, per capita GDP, consumer price index and the real interest rate on savings deposit are shown in Table 8.17.

According to those results, permanent income and the per capita GDP are positive and highly significant. The regression equations indicate the relationships between the consumer price index and both total financial savings and private sector savings at the banks (quasi-money) are negative and significant. The relation between the real interest rate and (a) total financial savings is negative and significant but, (b) quasi - money is not significant. This rather unusual result over the period under study reflects the rapidly increasing private financial savings, especially savings deposits and savings certificates, even though there has been no changes in interest rates on savings deposit and savings certificate since 1977.

VIII. Policy Recommendations

With the introduction of market oriented economic policy, Myanmar has taken a series of reform measures to encourage savings and investment in recent years. The followings are some of the measures taken in order to raise domestic savings and additional measures could be made to strengthen the efforts of domestic resource mobilization.

Table 8.16

SAVINGS REGRESSIONS (1976/77 - 1990/91)
(Logarithmic Estimates)

Aggregate Savings

1. $\ln s = -1.1736 + 1.3438 \ln y_p + 0.1147 \ln r + 0.0289 \ln f$
(5.0519) (2.4561) (1.2298)
 $R^2 = 0.7999$ $SEE = 0.1775$ $DW = 1.6309$ $F_{3,11} = 14.6575$
2. $\ln s = 25.025 + 0.8624 \ln x - 6.0459 \ln dep$
(5.2738) (-4.7586)
 $R^2 = 0.6405$ $SEE = 0.1731$ $DW = 1.0685$ $F_{2,12} = 10.6899$
3. $\ln s = 3.153 + 0.0516 \ln g + 0.5688 \ln d$
(0.3742) (4.5107)
 $R^2 = 0.6338$ $SEE = 0.287$ $DW = 1.6126$ $F_{2,12} = 10.3845$
4. $\ln s = -2.4698 + 0.6016 \ln y + 0.6055 \ln x$
(4.9619) (2.8671)
 $R^2 = 0.8000$ $SEE = 0.2121$ $DW = 1.4059$ $F_{2,12} = 24.001$
5. $\ln s = -2.8567 + 1.5034 \ln y - 1.0258 \ln p$
(3.3984) (-4.8526)
 $R^2 = 0.7387$ $SEE = 0.2424$ $DW = 0.8111$ $F_{2,12} = 16.9621$
6. $\ln s = 4.2043 + 0.7183 \ln y - 0.6971 \ln y_t$
(4.8446) (-0.1591)
 $R^2 = 0.6647$ $SEE = 0.2746$ $DW = 1.8416$ $F_{2,12} = 11.8945$

Public Sector Savings

7. $\ln s_g = 33.4387 - 1.1015 \ln r - 11.4653 \ln p + 11.3244 \ln tx$
(-1.6792) (-2.7177) (1.8417)
 $R^2 = 0.8519$ $SEE = 2.7357$ $DW = 1.3465$ $F_{3,11} = 21.0914$

Where;

Dependent Variables

- S = Gross domestic savings
 S_g = Public sector savings

Independent Variables

- g = GDP growth rate (at current price)
 y = Permanent income (3-year moving average of the nominal GDP)
 y_r = Potential GDP (Ratio of actual GDP to its 3-year moving average)
 y_p = Per capita GDP (at current price)
 r = Real interest rate on savings deposit
 p = Inflation (Consumer price index)
 d = Total financial savings (Total liquidity - M2)
 f = Amount of foreign savings
 dep = Dependency ratio
 x = Level of exports
 tx = Ratio of taxes to GDP
-

Note: t - values are in parenthesis.

** Significant at the 0.10 level

Table 8.17

FINANCIAL SAVINGS REGRESSIONS (1976-77 - 1990/91)

(Logarithmic Estimates)

1.	$\ln q = -22.2652 + 4.1102 \ln y - 3.1152 \ln p$ (8.2667) (-5.0057)			
	$R^2 = 0.9325$	$SEE = 0.2714$	$DW = 0.9269$	$F_{2,12} = 82.8889$
2.	$\ln q = -0.273 + 1.1748 \ln y_p - 0.1488 \ln r$ (1.8997) (-1.2642)			
	$R^2 = 0.7584$	$SEE = 0.4592$	$DW = 0.2183$	$F_{2,12} = 18.8344$
3.	$\ln d = -5.0446 + 1.6919 \ln y - 0.7952 \ln p$ (3.7899) (-1.4230)**			
	$R^2 = 0.8561$	$SEE = 0.2446$	$DW = 2.4984$	$F_{2,12} = 35.6956$
4.	$\ln d = 3.7934 + 0.8195 \ln y_p - 0.1299 \ln r$ (4.4130) (-3.6591)			
	$R^2 = 0.9451$	$SEE = 0.1398$	$DW = 1.6914$	$F_{2,12} = 103.2896$

Where:

- q = Quasi-money (Private sector savings at the banks)
 - d = Total Financing savings (total liquidity - M_2)
 - y = Permanent income (3-year moving of the nominal GDP)
 - y_p = Per capita GDP (at current price)
 - p = Inflation (Consumer price index)
 - r = Real interest rate on savings deposit
-

Note: t values are in parenthesis

** Significant at the .10 level

8.1 Savings Mobilization in the Public Sector

8.1.1 Measures to Increase Savings of the Union Government

Actions have been focused on revenue raising measures including, as we have mentioned earlier, replacement of the Commodities and Services Tax by the Commercial Tax to cover private sector production and services activities, revision of some other taxes and duties, introduction of tax amnesty programmes, and improvement in tax administrations. There was a substantial increase in Union Government revenue in 1990/91 which was attributable to these measures. Revenue from direct taxes are increasing due to the increased private businesses in trade and production. Further reforms are being introduced and

directed toward improvement in tax administration, broadening the tax base, increasing the elasticity of the tax system and also moves would be made with a view to making income tax coverage more comprehensive and sales taxation more general.

On the expenditure side, as a result of unavoidable capital expenditure required for the reconstruction, revitalization and moving towards a market economy at a fairly fast pace, there was some increase in overall budget deficit. Current account deficit also remains high and therefore there is no corresponding increase in public savings in spite of impressive achievement on the taxation front. Thus, public sector expenditures are being reviewed and on-going projects and works are given priority in order to reduce the budget deficit. But further rationalization of government expenditures is needed.

8.1.2 Measures to Increase the Savings of State Economic Enterprises (SEEs)

To improve the performance of SEEs, central control has been relaxed by giving the managing directors more autonomy in management and by relaxing price control. Managing directors are encouraged to take initiatives as well as to introduce innovations in production and marketing; their efforts are linked to rewards. However, there is still a need to improve the efficiency and profitability of the SEEs. Further liberalization measures such as increased managerial autonomy on procurement, investment, employment and output pricing, and acceleration of establishment of joint ventures with the private investors are needed. Moreover, various options such as alternative management, privatization, or diversification may be considered for each enterprise on a case by case basis with a view to developing a suitable programme of re-organization and transformation of SEEs.

8.2 Measures to Promote Savings in the Private Sector

8.2.1 Interest Rate Policy

We have mentioned above that, during the late 1970s when interest rates on savings deposit and savings certificate were raised, private savings deposits increased significantly, and that some interest rates were raised in 1989 on treasury bills and bonds, and fixed deposits, and interest is also paid on newly introduced call deposits.

The rising trend of private savings shows that interest rate policy is an effective monetary instrument in Myanmar for the mobilization of domestic resources. Therefore, interest rates should be adjusted from time to time so that these will move toward positive real interest rates. Accordingly, interest rates on savings deposit and savings certificate were raised to 10 per cent and 12 per cent, respectively, effective from 1 July 1992.

8.2.2 Development in Financial Sector

Increased attention needs to be paid to the development of the financial sector to mobilize savings and provide efficient channels of intermediation. New banking rules have been issued to implement the banking laws of 1990. The new laws make the Central Bank more independent and also strengthen its regulatory and supervisory powers. It is believed that these provisions will enhance the efficiency and effectiveness of monetary control. Steps have been undertaken to allow the private banks to be established. Furthermore, a more competitive system would be developed in the banking sector in order to mobilize the financial resources. Diversified capital and money market would be established with a view to enabling the investors to obtain resources also from the nonbank sectors.

A crucial need in Myanmar is for the establishment of an efficient rural financial system since Myanmar is an agricultural economy. One of the requirements of such a system is the need to link the mobilization of rural savings with rural credit. As always, the main obstacle of expanding banking services to the rural area is high cost of operation. We have mentioned before that there are 12228 village banks in Myanmar, but they depend entirely on the credit provided by the Myanma Agricultural and Rural Development Bank and they are not yet able to provide banking services throughout the year. It is the objective of the Myanma Agricultural and Rural Development Bank to help the village banks to accumulate capital of their own and to enable them to provide banking services which are needed for rural development. That is one of the reasons why the Myanma Agricultural and Rural Development Bank was established under a separate law. Provisions have been made in the law to convert this bank into a commercial bank when banking habits have been established on a sound footing in the rural areas.

8.2.3 Other Measures

Due to increase in private investment, there is substantial increase in bank credit to the private sector. However, access to bank credit is limited and inadequate to meet their needs, especially small enterprises who have to borrow from the informal sector at high interest rates. Therefore, establishment of special banks to cater for the needs of small enterprises is necessary. Another option is to forge a link between the formal and informal money market.

Although Myanmar is endowed with ample natural resources, more attention is required in the development of human resources who have the necessary skills to work in a modern market economy. Thus, training programmes and workshops are organised in areas such as export business, industrial management, product development and marketing. Some of these seminars, workshops, and training courses for private entrepreneurs are financed by the UNDP. Availability of qualified human resources is also indispensable in attracting foreign investment. In this connection, it is expected that expertise in management and entrepreneurship could be developed adequately to meet the requirements of the changing environments. For the moment, in order to obtain qualified human resources, domestic human resources have to be supplemented with experts, technicians and skilled workers from abroad.

With regard to foreign investment, significant progress has been achieved since the enactment of the Foreign Investment Law in late 1988. Up to the end of June 1992, there are 45 number of enterprises permitted under the Foreign Investment Law and their total foreign investment amounted to about US \$635 million.

As mentioned earlier, Myanmar has also adopted measures such as improving infrastructure, creating favourable conditions for foreign investors, promoting efficiency of the banking sector, encouraging private sector investment, and human resource development that would contribute significantly to domestic resource mobilization. Therefore, we believe that all these various measures would enable Myanmar to mobilize adequate domestic resources for a successful economic transformation and maintenance of a sustained economic growth.

IX. Conclusion

The ratios of investment and domestic savings to GDP are increasing in recent years although these ratios are still below the level of early 1980s. Investment and domestic savings rates have to be increased if Myanmar is to raise its growth rate of real GDP sufficiently so that per capita income will increase.

Efforts are now being made to improve public sector savings through intensifying tax collection activities, introducing priority system for government expenditures, changing financial policies of public enterprises, and opening up the economy to foreign and private entrepreneurs.

Private savings must also be raised and channelled to productive investments and the financial sector must play a major role in this task. Measures to improve its capability to mobilize more and more resources have been initiated, but further reform measures are still needed. For example, additional measures are required in order to make the banking system more competitive, to create prerequisites for the establishment of financial markets and to adjust the interest rate from time to time in the direction of real positive level.

Experiences of mobilization of domestic resources in Myanmar during the period covered by this study show that there is a considerable scope for increasing savings rate. Therefore, it is believed that opening of economic opportunities to the private sector and the various financial and fiscal reforms would generate the necessary high rate of domestic savings for a stable and sustained economic growth in the future.

Bibliography

1. Jetha, Nizar, Shamshad Aktar and Govinda Rao, "Domestic Resource Mobilization in Pakistan: Selected Issues", *World Bank Staff Working Paper*, No. 632, Washington, D.C.: The World Bank, February 1984.
2. Rana, Pradumna B., Improving Domestic Resource Mobilization through Financial Development: Bangladesh, *Manila: Asian Development Bank*, July 1986.
3. United Nations, "Mobilization of Domestic Resources in a Least Developed Country: The Case Study of Maldives", *Economic Bulletin for Asia and the Pacific*, Vol. 37, No. 1, 1986.
4. Philip Erquiaga, Improving Domestic Resource Mobilization through Financial Development: Indonesia, *Asian Development Bank Staff*, Paper No. 40, November, 1987.
5. Yusuf, Shahid and Kyle R. Peters, "Savings Behaviour and Its Implications for Domestic Resource Mobilization - The Case of the Republic of Korea", *World Bank Staff Working Paper*, No. 628, Washington, D.C.: The World Bank, April 1984.
6. U Tun Wai, "Burma's Currency and Credit: Orient Longman Ltd., 1962.
7. Brief on Development of Financial Structure in Myanmar: Central Bank of Myanmar, August 1990.
8. Guide to Foreign Investment in Myanmar: Part II, *The Union of Myanmar Foreign Investment Commission*, 1990.

DATA USED FOR REGRESSION ANALYSIS

Period	Gross Domestic Savings (Kyat million)	Growth Rate of Nominal GDP (%)	Permanent Income Savings (Kyat million)	Potential GDP Ratio (%)	Consumer Price Index (1986=100)	Nominal Interest Rate	Real Interest Rate on Savings Deposit (%)	Total Financial Savings (K.million)
1976-77	2599	16.82	26841	99.99	73.7	6.0	-8.9	6377.0
1977-78	3468	7.99	29615	99.59	70.9	8.0	11.8	6631.0
1978-79	4257	7.37	32250	100.38	68.1	8.0	12.0	8017.0
1979-80	6172	11.11	35247	98.88	71.9	8.0	2.4	9619.0
1980-81	6771	9.27	38940	100.34	71.9	8.0	8.0	11213.0
1981-82	7478	11.06	42766	100.17	72.7	8.0	6.9	13135.0
1982-83	6959	9.17	46504	100.26	76.5	8.0	2.8	14797.0
1983-84	7008	6.43	50077	99.75	80.8	8.0	2.4	17187.0
1984-85	6161	7.57	53136	100.62	85.1	8.0	2.7	19715.0
1985-86	6337	4.46	56205	101.29	90.4	8.0	1.7	20215.0
1986-87	6030	5.43	61238	100.99	103.7	8.0	-6.7	26226.0
1987-88	5607	16.38	67990	102.45	126.5	8.0	-14.0	19454.0
1988-89	8560	10.98	89869	94.79	155.0	8.0	-14.5	25757.0
1989-90	11450	63.51	116961	100.27	191.7	8.0	-15.7	35021.0
1990-91	17664	20.3	150404	100.44	233.7	8.0	-13.9	51006.0
1991-92	24317	17.73	171630	98.52	301.8	8.0	-21.1	66791

(Provisional)

DATA USED FOR REGRESSION ANALYSIS

Year	Level of Exports (Kyat million)	Foreign Savings (Kyat million)	Dependency Ratio (%)	Public Sector Savings (K. million)	Per Capita GDP (at current) Price	Ratio of Taxes to GDP (%)	Quasi Money (K. million)
1976-77	1414	250	46.57	1790	389	8.8	598
1977-78	1728	438	46.23	1932	936	10.5	728
1978-79	1842	1528	45.88	1481	976	10.0	1075
1979-80	2679	1748	46.45	2524	1061	10.2	1654
1980-81	3176	1572	46.43	2535	1135	9.6	2267
1981-82	3432	2403	44.74	2408	1250	9.9	3150
1982-83	3003	3580	46.39	3421	1338	9.8	4046
1983-84	3373	2086	45.26	3088	1395	9.2	4945
1984-85	3133	2066	43.69	2463	1474	8.6	5983
1985-86	2566	2604	43.41	2520	1510	8.3	6781
1986-87	2419	1750	43.16	2789	1562	7.4	7746
1987-88	1655	2438	42.92	1104	1782	6.4	8413
1988-89	2169	924	42.68	-2610	1940	4.5	7660
1989-90	2834	-4	42.80	-1380	3014	4.3	9721
1990-91	3057	2005	42.45	-1571	3677	6.3	12088
1991-92	3211	2235	42.09	-2967	4249	4.5	14484
(Provisional)							

Chapter 9

DOMESTIC RESOURCE MOBILIZATION IN NEPAL

by

Tula Raj Basyal

I. An Overview of the Developments in Domestic Saving Mobilization

1.1 Role and Significance of Domestic Saving

Nepal is one of the least developed countries in the world. She is beset with many characteristic features of underdevelopment which are working as impediments to further growth and development. The per capita GNP in 1990 is US\$ 170, average annual growth rate between 1965-1990 is 0.5 per cent, the lowest among the SEACEN countries (Table 9.1), the agricultural sector alone contributes around 60 per cent of GDP and employs 80 per cent of labor force, whereas the industrial sector, which accounts for not more than 10 per cent of GDP, provides employment for less than 5 per cent of manpower. Due mainly to the low level of GDP, the consumption ratio is the highest among all the SEACEN countries. This generally leads to reduction in the level of saving and the need for increased reliance on foreign saving to finance development.

As evident from Table 9.1, Nepal had, among all the SEACEN countries, the lowest gross domestic saving ratio (8 per cent), lowest ratio of the exports of goods and services (12 per cent) and the highest negative resource balance (gross domestic saving minus gross domestic investment) at 10 per cent in 1990. In such a background, in the quest for increasing the rate of economic growth and fulfilling the growing aspirations of the people through higher level of investment relative to saving, Nepal experienced sharpest rise in the external outstanding debt/GNP ratio among the SEACEN countries, with the ratio jumping to 53.0 per cent in 1990 from 10.4 per cent in 1980, a surge of more than four times. Total external debt as a percentage of exports of goods and services was also the highest, at 402.6 per cent, in 1990.

Table 9.1

STRUCTURE OF DEMAND

	Nepal	Sri Lanka	Indonesia	Philippines	Thailand	Malaysia	Rep of Korea	Singapore
1. Per Capita GNP, \$ (1990)	170	470	570	730	1,420	2,320	5,400	11,160
2. Average Annual Growth Rate (%) (1965-90)	0.5	2.9	4.5	1.3	4.4	4.0	7.1	6.5
3. Structure of Demand (Distribution of GDP, %)								
a) General Govt. Consumption:								
1965	-	13	5	9	10	15	9	10
1987	11	10	10	8	12	16	11	12
1988	10	10	9	9	11	14	10	11
1989	11	10	9	9	10	14	10	11
1990	12	9	9	9	10	13	-	11
b) Private Consumption:								
1965	100	74	87	70	72	61	83	80
1987	78	77	61	76	62	47	52	48
1988	80	78	65	73	63	49	51	48
1989	82	78	53	73	61	52	52	46
1990	80	76	54	75	57	54	63 1/	45
c) Gross Domestic Investment:								
1965	6	12	8	21	20	20	15	22
1987	21	23	26	15	26	23	29	39
1988	20	23	22	17	28	26	30	37
1989	19	21	35	19	31	30	35	35
1990	18	22	36	22	37	34	37	39
d) Gross Domestic Saving:								
1965	0	13	8	21	19	24	8	10
1987	11	13	29	16	26	37	38	40
1988	10	13	25	18	26	36	38	41
1989	7	12	37	18	29	34	37	43
1990	8	15	37	16	34	33	37	45
e) Exports of Goods & Services:								
1965	8	38	5	17	16	42	9	123
1987	13	25	26	23	30	64	45	-
1988	13	26	25	25	34	67	41	-
1989	13	27	26	25	36	74	34	191
1990	12	30	26	28	38	79	32	190
f) Resource Balance:								
1965	-6	1	0	0	-1	4	-7	-12
1987	-10	-11	3	1	0	14	8	0
1988	-10	-10	4	1	-2	10	9	4
1989	-12	-9	2	-1	-2	4	3	8
1990	-10	-8	1	-6	-3	-1	-1	6
4(a) Total External Debt as a Percentage of Exports of Goods and Services:								
1980	85.5	123.4	94.2	212.3	96.8	44.6	130.6	-
1990	402.6	209.8	229.4	229.2	82.0	55.9	44.0	-
4(b) Total External Debt as a Percentage of GNP:								
1980	10.4	46.1	28.0	53.8	26.0	28.0	48.7	-
1990	53.0	73.2	66.4	69.3	32.6	48.0	14.4	-

1/ Including government consumption.

Source: *World Development Reports*, World Bank.

Therefore, in order to achieve high and sustained rates of economic growth, Nepal especially is very much in need of substantial rise in the level of domestic resources to finance the required investments besides enhancement in the quality of such investments. In fact, in Nepal, during the past three decades, investment relative to saving was maintained at an unsustainably high level. In particular, the level of investment increased sharply during the 1980s, with more than half of all domestic investment financed from external sources. The poor domestic saving rate prompted a continuing heavy reliance on foreign sources for investment. Excess reliance on borrowing to meet increasing government expenditure due to limited revenue mobilization has thus resulted in increasing debt stock and debt servicing obligations.

Foreign capital has been very dominant in Nepal's plan financing. During the fifth (1976 - 1989), the sixth (1981 - 1985) and the seventh (1986 - 1990) plan periods, foreign grants and loans financed the total development expenditure of the government to the extent of 47.3 percent, 48.1 per cent and 59.5 per cent respectively. This shows a distinctly upward trend in the reliance on foreign resources and, consequently, the downward share of the revenue surplus in meeting the development expenditure. A large chunk of the development expenditure is meant for government consumption, resulting in relatively lower level of government investment out of the given development expenditures. The share of investment in development expenditure has ranged between 47.0 per cent in 1991 to 74.7 per cent in 1981, with the average share at 63.8 per cent during the period 1975 - 1991. The deteriorating level of revenue surplus as a percentage of development expenditure, which slumped to 19.8 per cent in 1991 from 47.8 per cent in 1975, also signifies the declining performance of the government revenue vis-a-vis the regular expenditure (see figures 9.1 and 9.2 for the overall budget deficit). As the average share of revenue surplus as a percentage of development expenditure for the entire period is 28.1 per cent, the rest 71.9 per cent of the development expenditure had to be financed through borrowing, leading to enhanced internal as well as external indebtedness of the government.

The share of total foreign assistance in Nepal reached 7.0 per cent of GDP in 1991 from 2.9 per cent in 1976, with the share of bilateral and multilateral sources as percentage of GDP being at 1.9 per cent and 1.0 per cent in 1976 and 2.8 per cent and 4.2 per cent in 1991 respectively (Table 9.3). This shows a significant rise in the multilateral source

of assistance as compared to the bilateral source over the period. Similarly, the grants - GDP share, which was 1.7 per cent in 1975, came down to 1.6 per cent in 1991. The loan - GDP share, on the other hand, rose from 0.6 per cent in 1975 to 5.4 per cent in 1991. As a percentage of total foreign assistance also, the respective shares of grants and loans were 73.1 per cent and 26.9 per cent respectively in 1975.

Over the period, the share of grants decelerated and that of the loans spurted with their shares at 22.2 per cent and 77.8 per cent respectively in 1991. Bilateral grants and loans, which formed 65.4 per cent of the total foreign assistance in 1976 slipped to 40.1 per cent in 1991, whereas the multilateral component rose from 35.6 per cent to 59.9 per cent during the same period (Table 9.4). Given the increased grants and concessionary elements in the bilateral assistance as compared to the multilateral one, such a drastic shift in the nature of foreign assistance could put additional constraint on the budget and economy of the recipient country if the resources are not put to their maximum use.

The substantial rise in the public investment, from 3.3 per cent of GDP in 1975 to 7.1 per cent in 1991 as compared to the slower increase in the private investment, from 11.2 per cent in 1975 to 13.0 per cent in 1991, is also reflected in the increased total expenditure of the government during the period 1975 - 1991. As a percentage of GDP, regular expenditure increased to 7.2 per cent in 1991 from 3.3 per cent in 1975 whereas the development expenditure marked a substantial increment, with the share rising from 5.8 per cent in 1975 to 15.2 per cent in 1991. The total expenditure of the government has accordingly shot up to 22.4 per cent of GDP in 1991 from 9.1 per cent in 1975 (Table 9.5).

The government revenue, on the other hand, rose modestly, from 6.1 per cent of GDP in 1975 to 10.2 per cent in 1991, resulting in an overall budget deficit of 12.2 per cent of GDP in 1991 from 3.0 per cent in 1975 (Table 9.6).

Among the sources of financing the overall budget deficit, the share of grants went down to 16.9 per cent of total deficit from its share of 56.0 per cent in 1975. However, external loans, which financed 20.6 per cent of the deficit in 1975, recorded a phenomenal rise over the years and financed 48.8 per cent in 1991 (Table 9.7).

Table 9.2**GOVERNMENT DEVELOPMENT EXPENDITURE AND ITS FINANCING**

(Million Rupees)

Year 1/	Government Investment	Development Expenditure	Share of Investment in Development Expenditure(%)	Revenue Surplus (Revenue minus Regular Expenditure)	Revenue Surplus as a Percentage of Development Expenditure
1975	546	967.2	56.5	461.9	47.8
1976	681	1,238.8	56.0	441.1	35.6
1977	739	1,498.3	49.3	490.8	32.8
1978	1,186	1,808.0	65.6	715.1	39.6
1979	1,226	1,978.8	62.0	770.2	38.9
1980	1,701	2,308.6	73.7	717.9	31.1
1981	2,039	2,731.1	74.7	1058.0	38.7
1982	2,418	3,726.9	64.9	1,045.1	28.0
1983	2,964	4,982.1	59.5	844.5	17.0
1984	3,341	5,163.8	64.7	1,135.8	22.0
1985	3,938	5,488.7	71.7	1,010.5	18.4
1986	4,393	6,213.1	70.7	1,060.5	17.1
1987	5,156	7,378.0	69.9	1,839.9	24.9
1988	6,228	9,428.0	66.1	2,673.3	28.4
1989	9,022	12,328.8	73.2	2,100.7	17.0
1990	7,719	12,997.5	59.4	2,615.7	20.1
1991	7,510	15,979.5	47.0	3,159.6	19.8

1/ All the years in this and the ensuing tables end in the mid-July.

Table 9.3

BILATERAL AND MULTILATERAL GRANTS AND LOANS

(Million Rupees)

Year	Grants and Loans		Total	Grants	Loans	Percentage Share of Foreign Assistance (Grants and Loans) in Total Government Exp.
	Bilateral	Multi- lateral				
1975	-	-	386.8 (2.3)	282.8 (1.7)	104.0 (0.6)	25.6
1976	330.7 (1.9)	174.9 (1.0)	505.6 (2.9)	359.7 (2.1)	145.9 (0.8)	26.4
1977	370.9 (2.1)	186.0 (1.1)	556.9 (3.2)	392.5 (2.3)	164.4 (0.9)	23.9
1978	456.7 (2.3)	391.7 (2.0)	848.4 (4.3)	466.6 (2.4)	381.8 (1.9)	31.7
1979	538.8 (2.5)	450.6 (2.0)	989.4 (4.4)	599.3 (2.7)	390.1 (1.8)	32.8
1980	846.4 (3.6)	494.1 (2.1)	1,340.5 (5.7)	805.6 (3.4)	534.9 (2.3)	38.6
1981	858.1 (3.1)	704.1 (2.6)	1,562.2 (5.7)	868.9 (3.2)	693.3 (2.5)	38.2
1982	909.5 (2.9)	813.7 (2.6)	1,723.2 (5.5)	993.3 (3.2)	729.9 (2.3)	32.1
1983	947.2 (2.8)	1,128.7 (3.3)	2,075.9 (6.1)	1,090.1 (3.2)	985.8 (2.9)	29.7
1984	983.2 (2.5)	1,564.3 (4.0)	2,547.5 (6.5)	876.6 (2.2)	1,670.9 (4.3)	34.3
1985	1,156.3 (2.6)	1,520.1 (3.4)	2,676.4 (6.0)	923.4 (2.1)	1,753.0 (3.9)	31.9
1986	1,481.1 (2.9)	2,010.4 (4.0)	3,491.5 (6.9)	1,120.6 (2.2)	2,370.9 (4.7)	35.6
1987	1,078.4 (1.8)	2,236.1 (3.8)	3,314.4 (5.6)	1,078.0 (1.8)	2,236.0 (3.8)	28.8
1988	2,261.6 (3.3)	2,826.9 (4.1)	5,088.5 (7.4)	1,994.2 (2.9)	3,094.3 (4.5)	36.1
1989	1,707.7 (2.2)	3,959.2 (5.1)	5,666.9 (7.3)	1,478.2 (1.9)	4,188.7 (5.4)	31.5
1990	2,553.9 (2.8)	3,892.2 (4.3)	6,446.1 (7.1)	1,807.8 (2.0)	4,638.3 (5.1)	32.8
1991	2,939.9 (2.8)	4,400.5 (4.2)	7,340.4 (7.0)	1,629.9 (1.6)	5,710.5 (5.4)	31.2

Note: Figures in parantheses indicate percentages of the corresponding GDP.

Table 9.4**BILATERAL AND MULTILATERAL GRANTS AND LOANS**

(Per Cent of Total Foreign Assistance)

Year	Grants and Loans			Share of	
	Bilateral	Multilateral	Total	Grants	Loans
1975	-	-	100.0	73.1	26.9
1976	65.4	35.6	100.0	71.1	28.9
1977	66.6	33.4	100.0	70.5	29.5
1978	53.8	46.2	100.0	55.0	45.0
1979	54.5	45.5	100.0	60.6	39.4
1980	63.1	36.9	100.0	60.1	39.9
1981	54.9	45.1	100.0	55.6	44.4
1982	52.8	47.2	100.0	57.6	42.4
1983	45.9	54.4	100.0	52.5	47.5
1984	38.6	61.4	100.0	34.4	65.6
1985	43.2	56.8	100.0	34.5	65.5
1986	42.4	57.6	100.0	32.1	67.9
1987	32.5	67.5	100.0	32.5	67.5
1988	44.4	55.6	100.0	39.2	60.8
1989	30.1	69.9	100.0	26.1	73.9
1990	39.6	60.4	100.0	28.0	72.0
1991	40.1	59.9	100.0	22.2	77.8

Table 9.5

**REGULAR AND DEVELOPMENT
EXPENDITURE OF THE GOVERNMENT**

Year	Percentage Distribution			Per cent of GDP				
	Regular Expen- diture	Develop- ment Expen- diture	Total Expen- diture	Regular Expen- diture	Develop- ment Expen- diture	Total Expen- diture	Govern- ment Revenue	Over Deficit Expendi- - Reven
1975	36.1	63.9	100.0	3.3	5.8	9.1	6.1	3.0
1976	35.3	64.7	100.0	3.9	7.1	11.0	6.4	4.6
1977	35.7	64.3	100.0	4.8	8.7	13.5	7.7	5.8
1978	32.4	67.6	100.0	4.4	9.1	13.5	8.0	5.5
1979	34.5	65.5	100.0	4.7	8.9	13.6	8.2	5.4
1980	33.5	66.5	100.0	5.0	9.9	14.9	8.1	6.8
1981	33.3	66.7	100.0	5.0	10.0	15.0	8.9	6.1
1982	30.5	69.5	100.0	5.3	12.0	17.3	8.6	8.7
1983	28.6	71.4	100.0	5.9	14.8	20.7	8.4	12.3
1984	30.6	69.4	100.0	5.8	13.1	18.9	8.7	10.2
1985	34.6	65.4	100.0	6.5	12.4	18.9	8.8	10.1
1986	36.6	63.4	100.0	7.1	12.3	19.4	9.2	10.2
1987	35.9	64.1	100.0	7.0	12.4	19.4	10.1	9.3
1988	33.2	66.8	100.0	6.8	13.7	20.5	10.7	9.8
1989	31.5	68.5	100.0	7.3	15.9	23.2	10.0	13.2
1990	33.9	66.1	100.0	7.3	14.3	21.6	10.2	11.4
1991	32.1	67.9	100.0	7.2	15.2	22.4	10.2	12.2

1/ Without Grants.

Table 9.6

FINANCING OF OVERALL BUDGET DEFICIT

Per cent of GDP					
Year	Overall Deficit (Expenditure minus Revenue)	Grants	External Debt	Internal Debt	Change in Cash Balance (-) Surplus
1975	3.0	1.7	0.6	0.6	0.1
1976	4.6	2.1	0.8	1.1	0.6
1977	5.8	2.3	1.0	1.7	0.8
1978	5.5	2.4	1.9	1.2	-
1979	5.4	2.7	1.8	0.9	-
1980	6.8	3.4	2.3	0.8	0.3
1981	6.1	3.2	2.5	0.9	-0.5
1982	8.7	3.2	2.4	1.6	1.5
1983	12.3	3.2	2.9	3.0	3.2
1984	10.2	2.2	4.2	4.0	-0.2
1985	10.1	2.1	4.0	4.0	-
1986	10.2	2.3	4.9	2.8	0.2
1987	9.3	2.2	4.5	2.8	-0.2
1988	9.8	3.0	5.5	1.7	-0.4
1989	13.2	2.2	7.3	1.7	2.0
1990	11.4	2.2	6.5	2.4	0.3
1991	12.2	2.1	5.9	4.3	-0.1

Figure 9.1

Government Revenue and Expenditure

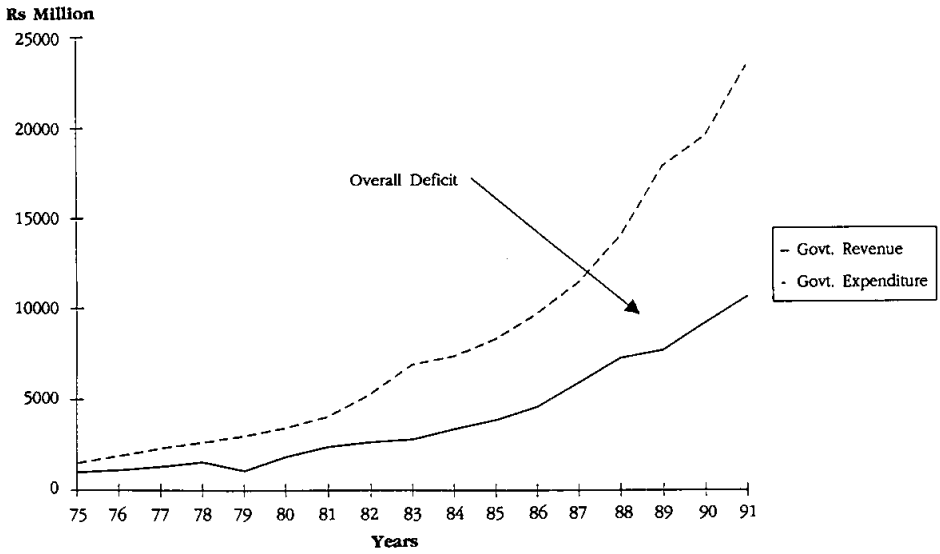
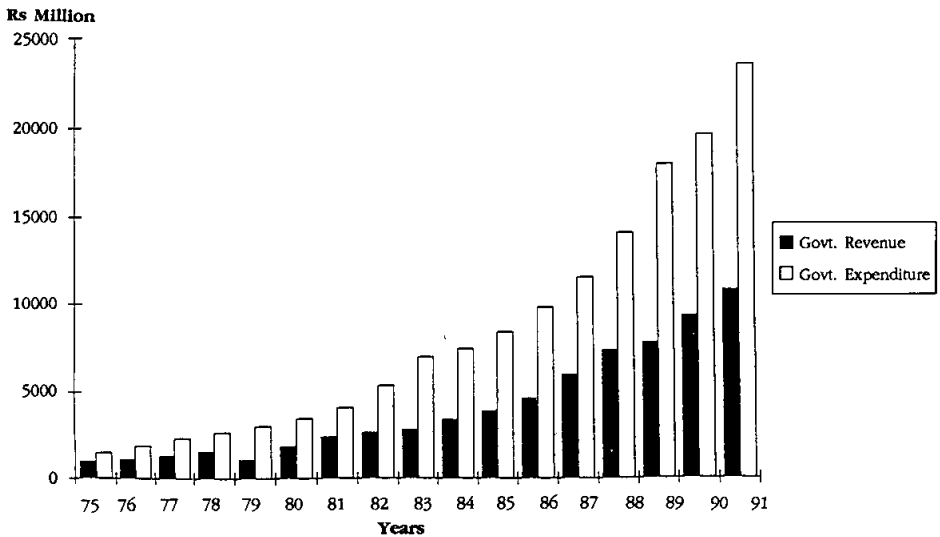


Figure 9.2

Government Revenue and Expenditure



Internal loans, which financed 19.8 per cent of deficit in 1975, shared 35.5 per cent of the deficit in 1991. Over the 17-year period (1975-1991), as average percentages of GDP, regular expenditure shared 5.7 per cent and development expenditure 11.5 per cent (total expenditure 17.2 per cent). The government revenue financed only 8.7 per cent, resulting in an overall deficit of 8.5 per cent of GDP, with the foreign grants, external debt and internal financing contributing 2.5 per cent, 3.5 per cent and 2.5 per cent in terms of GDP. This shows that foreign resources financed more than 70 per cent of the overall budget deficit during the period.

As a direct consequence of the increasing reliance on foreign assistance in general and foreign loans in particular to meet the widening overall budget deficit as detailed above, the external debt stock of the government rose from Rs 346.1 million (2.1 per cent of GDP) in 1975 to a whopping Rs 58,460.9 million (55.5 per cent of GDP) in 1991. External debt stock as a percentage of the exports of goods and services rose from 21.9 per cent in 1975 to 382.1 per cent in 1991. This means a compounded annual increment rate of 19.6 per cent during the period. Besides, external debt servicing as a percentage of the exports of goods and services is also witnessing significant rises, with a low 0.7 per cent in 1975 to 7.1 per cent in 1991 (Table 9.8).

With the impending maturity of additional loans in the near future, the debt servicing is likely to be a serious problem unless significant domestic resource mobilization effort is carried out, while at the same time, maintaining a prudent level of budget deficit and enhancing the resource allocative efficiency substantially through pursuance of suitable macro-economic policies. In addition to the external debt, the internal debt as percentage of GDP also rose markedly, from 3.1 per cent in 1975 to 19.2 per cent in 1991. Despite such phenomenal increment in the internal debt stock, the share of internal debt in total debt stock fell from 59.8 per cent in 1975 to 25.7 per cent in 1991, with the corresponding share of external debt stock rising from 40.2 per cent in 1975 to 74.3 per cent in 1991 (Table 9.9). This is an indication of the tremendous leap in the external debt stock of the government during the period.

As regards the terms and conditions of foreign capital as outlined in Table 9.10, in 1990, the average interest rate was 0.9 per cent, maturity

Table 9.7**FINANCING OF OVERALL BUDGET DEFICIT**

(Per Cent Distribution)

Year	Overall Deficit	External Financing			Internal Financing ^{1/}
		Grants	Loans	Total	
1975	100.0	56.0	20.6	76.6	23.4
1976	100.0	45.1	18.3	63.4	36.6
1977	100.0	39.0	16.3	55.3	47.7
1978	100.0	42.7	34.9	77.6	22.4
1979	100.0	49.6	32.3	81.9	18.1
1980	100.0	50.7	33.6	84.3	15.7
1981	100.0	51.9	41.5	93.4	6.6
1982	100.0	37.0	27.2	64.2	35.8
1983	100.0	26.3	23.8	50.1	49.8
1984	100.0	21.8	41.5	63.3	36.7
1985	100.0	20.6	39.2	59.8	40.2
1986	100.0	22.8	48.5	71.3	28.7
1987	100.0	23.2	48.9	72.1	27.9
1988	100.0	30.7	56.5	87.2	12.8
1989	100.0	16.4	55.4	71.8	28.2
1990	100.0	19.0	57.4	76.4	23.6
1991	100.0	16.9	48.8	65.7	34.3

1/ Internal loan and change in cash balance.

Table 9.8
OUTSTANDING EXTERNAL DEBT AND ITS SERVICING

Year	Outstanding External Debt (Rs Million)	Outstanding Debt		External Debt Services as Percentage of Exports of Goods & Services
		As Percentage of GDP	As Percentage of Exports of Goods & Services	
1975	346.1	2.1	21.9	0.7
1976	477.2	2.7	24.4	0.8
1977	629.4	3.6	29.7	0.8
1978	972.3	4.9	44.5	0.9
1979	1,320.9	5.9	48.2	0.8
1980	1,807.3	7.7	62.6	0.8
1981	2,451.3	9.0	66.6	1.6
1982	3,177.8	10.3	83.9	2.0
1983	4,717.6	14.0	129.0	2.6
1984	6,321.1	16.1	147.3	3.0
1985	9,203.2	20.7	168.4	3.5
1986	10,330.2	20.5	157.3	4.3
1987	15,171.9	25.6	198.2	6.4
1988	20,826.0	30.2	233.7	6.6
1989	29,216.9	37.7	280.9	6.7
1990	36,800.9	40.5	319.0	9.7
1991	58,460.9	55.5	382.1	7.1

Table 9.9
TOTAL GOVERNMENT DEBT STOCK

Year	Total Debt	Internal Debt	External Debt	Internal Debt as Percentage of GDP
1975	100.0	59.8	40.2	3.1
1976	100.0	57.9	42.1	3.8
1977	100.0	59.8	40.2	5.4
1978	100.0	54.3	45.7	5.9
1979	100.0	50.1	49.9	6.0
1980	100.0	44.6	55.4	6.2
1981	100.0	36.5	63.5	5.2
1982	100.0	36.9	63.1	6.0
1983	100.0	37.3	62.7	8.3
1984	100.0	40.4	59.6	10.9
1985	100.0	39.4	60.6	13.5
1986	100.0	40.4	59.6	13.9
1987	100.0	35.9	64.1	14.4
1988	100.0	34.7	65.3	16.1
1989	100.0	29.6	70.4	15.8
1990	100.0	27.4	72.6	15.3
1991	100.0	25.7	74.3	19.2

Table 9.10

**AVERAGE TERMS OF NEW COMMITMENTS AND
OTHER DETAILS OF EXTERNAL DEBT**

Year	Interest Rate (%)	Maturity (Years)	Grace Period (Years)	Grant Element (Per cent)	Short-term Debt/Total External Debt 1/ (EDT)(%)	Concessional Debt/ EDT (%)	Multilateral Debt/EDT
1970	2.8	26.9	6.2	53.1			
1980	0.8	45.9	10.1	81.2	3.4	75.7	62.0
1983	1.8	38.2	9.4	70.9	17.7	76.2	65.7
1984	1.8	39.3	8.1	68.9	5.1	88.4	77.9
1985	1.6	42.1	8.8	73.1	3.9	88.5	77.2
1986	1.8	39.9	9.0	71.7	2.7	87.3	74.3
1987	3.1	32.5	8.2	59.1	1.9	84.4	70.4
1988	0.9	39.6	10.0	78.5	2.0	82.0	69.5
1989	0.9	39.2	10.1	78.9	1.3	85.7	73.8
1990	0.9	40.2	10.3	79.2	1.2	89.2	77.9

1/ Including short-term and use of IMF credit. The total external debt (EDT) of US\$1,621 million in 1990 was composed of:

(Million US Dollars)

Long-term debt outstanding 1/:	1,557
Public and publicly guaranteed	1,557
Official creditors	1,449
Multilateral	1,262
Concessional	1,258
IDA	667
Non-concessional	4
Bilateral	187
Concessional	187
Private creditors	108
Bonds	0
Commercial banks	0
Other private	108
Private non-guarantee	0
Use of IMF credit	44
Short-term credit	20
Total External Debt	1,621

1/ Central Government 1,444; Public Corporation 109

Source: *World Debt Tables*, 1991-92: External Debt of Developing Countries, Volume 2, Country Tables, World Bank, 1991.

period 40.2 years, grace period 10.3 years and a grant element of 79.2 per cent. Out of the total external debt, short-term debt was 1.2 per cent, concessional debt 89.2 per cent and multilateral debt 77.9 per cent. There is no private non-guaranteed long-term debt obligation of Nepal.

1.2 Definition and Concept of Domestic Saving

Nepal adopts the United Nations System of National Accounts (SNA). Gross domestic product by industrial origin is computed on the basis of the following originating sectors:

- 1) Agriculture, Fisheries and Forestry
- 2) Mining and Quarrying
- 3) Manufacturing:
 - a) Modern
 - b) Cottage
- 4) Electricity, Gas and Water
- 5) Construction
- 6) Trade, Restaurants and Hotels:
 - Trade
 - Restaurants and Hotels
- 7) Transport, Communications and Storages
- 8) Financial and Real Estate
- 9) Community and Social Services:
 - Public
 - Extra Territorial
 - Private Services

Addition of indirect tax less subsidy, which is calculated for agricultural and non-agricultural sectors, to the GDP by industrial origin gives GDP at market price. Exports and imports of goods and non-factor services are available from the balance of payments summary. Gross capital formation both in the public and private sectors along with the change in stock is calculated, the sum of which is regarded as total investment. The consumption figures for the public sector are also available. When total resources available (GDP at market prices plus imports of goods and non-factors services) are equated with the total uses of the resources, the information of which is estimated as above, i.e. exports of goods and non-factor services plus investment plus public consumption, the residual is the private consumption. As

memorandum item, gross domestic saving is GDP at market prices minus total consumption. Gross domestic saving added to net factor income from abroad and net current transfer gives gross national savings.

Therefore, the accuracy of saving estimates is directly dependent on the accuracy of the data on investment, consumption and exports and imports of goods and non-factor services. As private consumption is estimated as a residual, the accuracy of this figure cannot be independently verified. As a result, not only is the detection of statistical discrepancy possible, there are also difficulties in estimating the gross fixed capital formation and change in stock due to data limitations. Information on the composition of consumption expenditures among services, non-durables and durable are not available. The saving components - foreign, public and private - are not calculated in the national accounts summary. The question of the private saving being subdivided into its business and household components is thus far-off. Therefore, the measurement problems of the public, private and total saving are substantially large. Besides, the problems of over and under-invoicing of imports and exports as well as other ways of capital flight and the magnitudes thereof provide bias to the estimates. The exchange, trade and tax systems must also have had some impact on the preciseness of data included in the estimates of national accounts and measurement of saving.

1.3 Domestic Saving Mobilization

The average annual compound growth rate of domestic saving in Nepal between 1975 and 1991 is 9.3 per cent from Rs 1,662 million to Rs 6,864 million in absolute amounts (Table 9.11).

The growth rate of investment, in contrast, is 14.6 per cent per annum, with the saving-investment gap rising by 20.3 per cent, compounded annually. As can be observed from Table 9.12, the saving/GDP ratio in 1991 was 6.5 per cent with the investment/GDP ratio at 20.1 per cent, resulting in a record saving gap/GDP ratio of 13.6 per cent in that year. Although the public saving/GDP ratio has been negative for most of the years, private saving gap was at its highest in 1991.

Table 9.13 shows the domestic investment and the inter-sectoral flow of funds during the three five-year period (1976-1990). The table

Table 9.11

GROWTH OF DOMESTIC SAVINGS AND INVESTMENT

(Million Rupees)

Year	Gross Domestic Saving									
	Total		Public		Private		Investment		Nominal GDP	
	Amount	Annual Growth %	Amount	Annual Growth %	Amount	Annual Growth %	Amount	Annual Growth %	Amount	Annual Growth %
1975	1662	-	-249	-	1911	-	2402	-	16571	-
1976	2040	22.74	-178	-28.51	2218	16.06	2632	9.58	17394	4.97
1977	2332	14.31	63	-135.39	2269	2.30	2768	5.17	17280	-0.66
1978	2540	8.92	111	76.19	2429	7.05	3507	26.70	19732	14.19
1979	2585	1.77	-77	-169.37	2662	9.59	3514	0.20	22215	12.58
1980	2591	0.23	315	-509.09	2276	-14.50	4270	21.51	23351	5.11
1981	2974	14.78	497	57.78	2477	8.83	4808	12.60	27307	16.94
1982	3078	3.5	42	-91.55	3036	22.57	5314	10.52	30988	13.48
1983	2887	-6.21	-574	-1466.67	3461	14.00	6628	24.73	33761	8.95
1984	3886	34.6	-235	-59.06	4121	19.07	7351	10.91	39390	16.67
1985	6239	60.55	-454	93.19	6693	62.41	10184	38.54	44417	12.76
1986	5887	-5.64	-489	7.71	6376	4.74	10599	4.08	50428	13.53
1987	7321	24.36	-595	21.68	7916	24.15	12898	21.69	59246	17.49
1988	7604	3.87	-1161	95.13	8765	10.73	15237	18.13	68858	16.22
1989	7366	-3.13	-1409	21.36	8775	0.11	17108	12.28	77534	12.60
1990	5560	-24.52	-1107	-21.43	6667	-24.02	16476	-3.69	90825	17.14
1991	6864	23.45	244	-122.04	6620	-0.70	21163	28.45	105300	15.94

Table 9.12

TOTAL INVESTMENT, DOMESTIC SAVINGS AND SAVINGS GAP

(Million Rupees)

Year	GDP	Saving			Investment 3/			Saving-Investment Gap		
		Total 1/	Public 2/	Private	Total 1/	Public 2/	Private	Total 1/	Public 2/	Private
1975	16,571	1,662 (10.0)	-249 (-1.5)	1,911 (11.5)	2,402 (14.5)	546 (3.3)	1,856 (11.2)	740 (4.5)	795 (4.8)	(55) (0.3)
1976	17,394	2,040 (11.7)	-178 (-1.0)	2,218 (12.7)	2,632 (15.1)	681 (3.9)	1,951 (11.2)	592 (3.4)	859 (4.9)	(267) (1.5)
1977	17,280	2,332 (13.5)	63 (0.4)	2,269 (13.1)	2,768 (16)	739 (4.3)	2,029 (11.7)	436 (2.5)	676 (3.9)	(240) (1.4)
1978	19,732	2,540 (12.9)	111 (0.6)	2,429 (12.3)	3,507 (17.8)	1,186 (6.0)	2,321 (11.8)	967 (4.9)	1,075 (5.4)	(108) (0.5)
1979	22,215	2,585 (11.6)	-77 (-0.4)	2,662 (12.0)	3,514 (15.8)	1,226 (5.5)	2,288 (10.3)	929 (4.2)	1,303 (5.9)	(374) (1.7)
1980	23,351	2,591 (11.1)	315 (1.3)	2,276 (9.7)	4,270 (18.3)	1,701 (7.3)	2,569 (11.0)	1,679 (7.2)	1,386 (6.0)	293 (1.3)
1981	27,307	2,974 (10.9)	497 (1.8)	2,477 (9.1)	4,808 (17.6)	2,039 (7.5)	2,769 (10.1)	1,834 (6.7)	1,542 (5.7)	292 (1.0)
1982	30,988	3,074 (9.9)	42 (0.1)	3,036 (9.8)	5,314 (17.1)	2,418 (7.8)	2,896 (9.3)	2,236 (7.2)	2,376 (7.7)	(140) (0.5)
1983	33,761	2,887 (8.5)	-574 (-1.7)	3,461 (10.2)	6,628 (19.6)	2,964 (8.8)	3,664 (10.8)	3,741 (11.1)	3,538 (10.5)	203 (0.6)
1984	39,390	3,886 (9.9)	-235 (-0.6)	4,121 (10.5)	7,351 (18.7)	3,341 (8.5)	4,010 (10.2)	3,465 (8.8)	3,576 (9.1)	(111) (0.3)
1985	44,417	6,239 (14)	-454 (-1)	6,693 (15)	10,184 (22.9)	3,938 (8.9)	6,246 (14.0)	3,945 (8.9)	4,392 (9.9)	(447) (1.0)
1986	50,428	5,887 (11.6)	-489 (-1)	6,376 (12.6)	10,599 (21)	4,393 (8.7)	6,206 (12.3)	4,712 (9.4)	4,882 (9.7)	(170) (0.3)
1987	59,246	7,321 (12.4)	-595 (-1.0)	7,916 (13.4)	12,898 (21.8)	5,156 (8.7)	7,742 (13.1)	5,577 (9.4)	5,751 (9.7)	(174) (0.3)
1988	68,858	7,604 (11)	-1161 (-1.7)	8,765 (12.7)	15,237 (22.1)	6,228 (9.0)	9,009 (13.1)	7,633 (11.1)	7,389 (10.7)	244 (0.4)
1989	77,534	7,366 (9.5)	-1409 (-1.8)	8,775 (11.3)	17,108 (22.0)	9,022 (11.6)	8,086 (10.4)	9,742 (12.5)	10,431 (13.4)	(689) (0.9)
1990	90,825	5,560 (6.1)	-1107 (-1.2)	6,667 (7.3)	16,476 (18.1)	7,719 (8.5)	8,757 (9.6)	10,916 (12.0)	8,826 (9.7)	2,090 (2.3)
1991	105,300	6,864 (6.5)	244 (0.2)	6,620 (6.3)	21,163 (20.1)	7,510 (7.1)	13,653 (13.0)	14,299 (13.6)	7,266 (6.9)	7,033 (6.7)

1/ Gross domestic saving (i.e., GDP - consumption of the government and the non-government sectors).

2/ Excess of public current revenues over current spending, i.e., public consumption.

3/ Including the stock adjustment.

Note: Figures in parentheses indicate percentages of the corresponding GDP. Amounts within parantheses under the private sector of the saving-investment gap column are surpluses.

Table 9.13 (a)

**DOMESTIC INVESTMENT AND INTER-SECTORAL FLOW OF FUNDS
DURING THE THREE FIVE-YEAR PERIODS (1976-1990)**

(Per Cent of GDP)

Resources	Public Sector	Private Sector	Total
Investment:			
1976-80	5.4	11.2	16.6
1981-85	8.3	10.9	19.2
1986-90	9.3	11.7	21.0
Financed by:			
1. Own Savings			
1976-80	0.2	12.0	12.2
1981-85	-0.3	10.9	10.6
1986-90	-1.3	11.4	10.1
Net Borrowing Requirement:			
1976-80	5.2	(0.8)	4.4
1981-85	8.6	-	8.6
1986-90	10.6	0.3	10.9
2. Saving Gap Met Through Borrowing:			
2.1 From Private Sector			
1976-80	0.8	-0.8	-
1981-85	-	-	-
1986-90	-	-	-
2.2 From Rest of the World:			
1976-80	4.4	-	4.4
1981-85	8.6	-	8.6
1986-90	10.6	0.3	10.9

Table 9.13 (b)

INTER-SECTORAL FLOW OF FUNDS

Year	Sector	Investment	Financed by Own Savings	Borrowing Requirement	Savings Gap Met Through		
					Private Sector	Rest of the World	Total
1975	Public Sector	3.3	-1.5	4.8	0.3	4.5	4.8
	Public Sector	11.2	11.5	-0.3	-0.3	-	-0.3
	Total	14.5	10.0	4.5	-	4.5	4.5
1976	Public Sector	3.9	-1.0	4.9	1.5	3.4	4.9
	Public Sector	11.2	12.7	-1.5	-1.5	-	-1.5
	Total	15.1	12.7	2.4	-	3.4	3.4
1977	Public Sector	4.3	0.4	3.9	1.4	2.5	3.9
	Public Sector	11.7	13.1	-1.4	-1.4	-	-1.4
	Total	16.0	13.5	2.5	-	2.5	2.5
1978	Public Sector	6.0	0.6	5.4	0.5	4.9	5.4
	Public Sector	11.8	12.3	-0.5	-0.5	-	-0.5
	Total	17.8	12.9	4.9	-	4.9	4.9
1979	Public Sector	5.5	-0.4	5.9	1.7	4.2	5.9
	Public Sector	10.3	12.0	-1.7	-1.7	-	-1.7
	Total	15.8	11.6	4.2	-	4.2	4.2
1980	Public Sector	7.3	1.3	6.0	-	6.0	6.0
	Public Sector	11.0	9.7	1.3	-	1.3	1.3
	Total	18.3	11.1	7.2	-	7.2	7.2
1981	Public Sector	7.5	1.8	5.7	-	5.7	5.7
	Public Sector	10.1	9.1	1.0	-	1.0	1.0
	Total	17.6	10.9	6.7	-	6.7	6.7
1982	Public Sector	7.8	0.1	7.7	0.5	7.2	7.7
	Public Sector	9.3	9.8	-0.5	-0.5	-	-0.5
	Total	17.1	9.9	7.2	-	7.2	7.2
1983	Public Sector	8.8	-1.7	10.5	-	10.5	10.5
	Public Sector	10.9	10.2	0.6	-	0.6	0.6
	Total	19.6	8.5	11.1	-	11.1	11.1
1984	Public Sector	8.5	-0.6	9.1	0.3	8.8	9.1
	Public Sector	10.2	10.5	-0.3	-0.3	-	-0.3
	Total	18.7	9.9	8.8	-	8.8	8.8
1985	Public Sector	8.9	-1.0	9.9	1.0	8.9	9.9
	Public Sector	14.0	15.0	-1.0	-1.0	-	-1.0
	Total	22.9	14.0	8.9	-	8.9	8.9
1986	Public Sector	8.7	-1.0	9.7	0.3	9.4	9.7
	Public Sector	12.3	12.6	-0.3	-0.3	-	-0.3
	Total	21.0	11.6	9.4	-	9.4	9.4
1987	Public Sector	8.7	-1.0	9.7	0.3	9.4	9.7
	Public Sector	13.1	13.4	-0.3	-0.3	-	-0.3
	Total	21.8	12.4	9.4	-	9.4	9.4
1988	Public Sector	9.0	-1.7	10.7	-	10.7	10.7
	Public Sector	13.1	12.7	0.4	-	0.4	0.4
	Total	22.1	11.0	11.1	-	11.1	11.1
1989	Public Sector	11.6	-1.8	13.4	0.9	12.5	13.4
	Public Sector	10.4	11.3	-0.9	-0.9	-	-0.9
	Total	22.0	9.5	12.5	-	12.5	12.5
1990	Public Sector	8.5	-1.2	9.7	-	9.7	9.7
	Public Sector	9.6	7.3	2.3	-	2.3	2.3
	Total	18.1	6.1	12.0	-	12.0	12.0
1991	Public Sector	7.1	0.2	6.9	-	6.9	6.9
	Public Sector	13.0	6.3	6.7	-	6.7	6.7
	Total	20.1	6.5	13.6	-	13.6	13.6

shows an average investment of 16.6 per cent of GDP in the fifth plan (1976-80), 19.2 per cent in the sixth (1981-85) and 21.0 per cent in the seventh (1985-90). With the domestic saving financing 12.2 per cent, 10.6 per cent and 10.1 per cent of the investment ratio, the net external borrowing requirement was 4.4 per cent, 8.6 per cent and 10.9 per cent during three plan periods respectively [Table 9.13 (a) and (b)].

During the seventh plan period, the private sector had to rely on the foreign saving to the extent of 0.3 per cent. But this ratio went up significantly to 6.7 per cent in 1991, with the own savings of the private sector financing 6.3 percentage points out of the investment ratio of 13.0 per cent. The public sector had to depend on the foreign saving for the whole period, with the public saving ratios during the sixth and the seventh plans being in the negative at 0.3 per cent and 1.3 per cent respectively.

Tables 9.14 - 9.17(b) and figures 9.3, 9.4, 9.5 and 9.6, show the gross domestic saving, gross domestic investment, saving-investment gap and total saving and investment. Accordingly, during 1975-1991, the public, private and total saving as percentages of GDP averaged respectively at -0.5, 11.2 and 10.7 per cent, the corresponding public, private and total investment being at 7.4 per cent, 11.4 per cent and 18.8 per cent, resulting in the saving-investment gap of 7.9 per cent in public sector, a surplus of 0.2 per cent in private sector and a total saving investment gap of 8.1 per cent. The private sector recorded saving-investment surpluses in all the years except for 1980, 1981, 1983, 1988, 1990 and 1991, whereas the public sector experienced saving-investment gaps for all the years from 1975 through 1991.

Table 9.17 (b) depicts the financing components of total investment, which shows that, for the period under study, public saving contributed negatively to the total investment with 2.5 per cent, whereas the private saving shared 60.5 per cent of the investment. The domestic saving, therefore, constituted 58.0 per cent and the rest, 42.0 per cent of the investment, was financed by foreign saving. The foreign saving component was the highest in 1991 and 1990, with the shares reaching 67.6 per cent and 66.2 per cent respectively. It was the lowest in 1977 with the figure reaching a low of 15.7 per cent.

Table 9.14**GROSS DOMESTIC SAVING**

Year	Per Cent Distribution			Per Cent of GDP		
	Public	Private	Total	Public	Private	Total
1975	-15.0	115.0	100.0	-1.5	11.5	10.0
1976	-8.7	108.7	100.0	-1.0	12.7	11.7
1977	2.7	97.3	100.0	0.4	13.1	13.5
1978	4.4	95.6	100.0	0.6	12.3	12.9
1979	-3.0	103.0	100.0	-0.4	12.0	11.6
1980	12.2	87.8	100.0	1.3	9.7	11.1
1981	16.7	83.3	100.0	1.8	9.1	10.9
1982	1.4	98.6	100.0	0.1	9.8	9.9
1983	-19.9	119.9	100.0	-1.7	10.2	8.5
1984	-6.0	106.0	100.0	-0.6	10.5	9.9
1985	7.3	107.3	100.0	-1.0	15.0	14.0
1986	-8.3	108.3	100.0	-1.0	12.6	11.6
1987	-8.1	108.1	100.0	-1.0	13.4	12.4
1988	-15.3	115.3	100.0	-1.7	12.7	11.0
1989	-19.1	119.1	100.0	-1.8	11.3	9.5
1990	-19.9	119.9	100.0	-1.2	7.3	6.1
1991	3.6	96.4	100.0	0.2	6.3	6.5

Figure 9.3
Savings

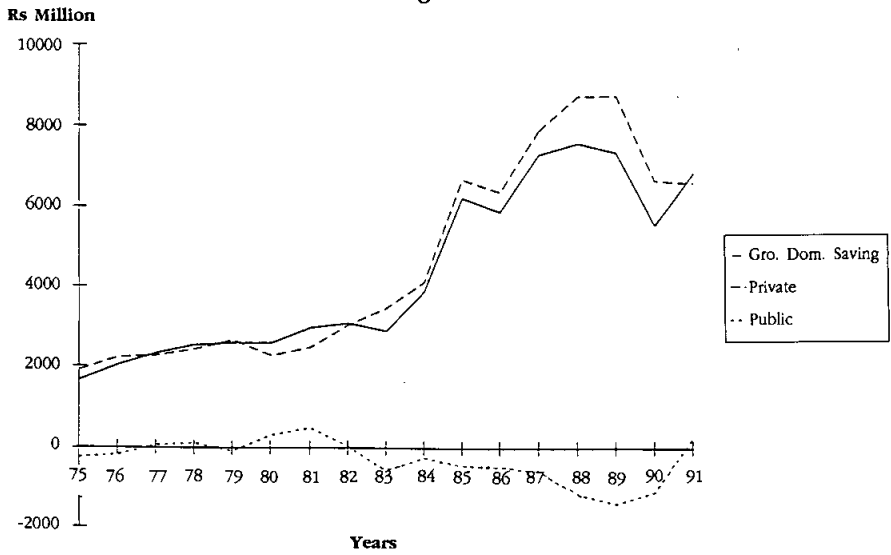


Figure 9.4
Savings

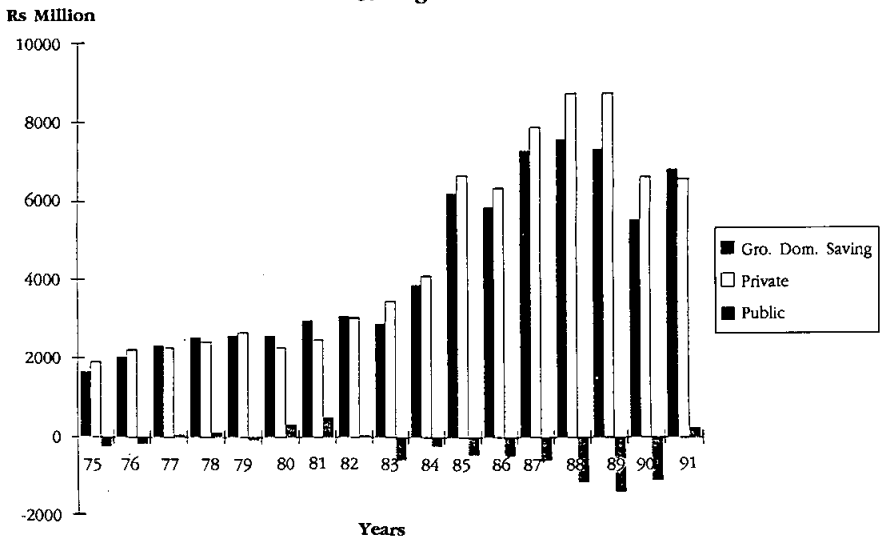


Table 9.15

GROSS DOMESTIC INVESTMENT

Year	Per Cent Distribution			Per Cent of GDP		
	Public	Private	Total	Public	Private	Total
1975	22.7	77.3	100.0	3.3	11.2	14.5
1976	25.9	74.1	100.0	3.9	11.2	15.1
1977	26.7	73.3	100.0	4.3	11.7	16.0
1978	33.8	66.2	100.0	6.0	11.8	17.8
1979	34.9	65.1	100.0	5.5	10.3	15.8
1980	39.8	60.2	100.0	7.3	11.0	18.3
1981	42.4	57.6	100.0	7.5	10.1	17.6
1982	45.5	54.5	100.0	7.8	9.3	17.1
1983	44.7	55.3	100.0	8.8	10.8	19.6
1984	45.4	54.6	100.0	8.5	10.2	18.7
1985	38.7	61.3	100.0	8.9	14.0	22.9
1986	41.4	58.6	100.0	8.7	12.3	21.0
1987	40.0	60.0	100.0	8.7	13.1	21.8
1988	40.9	59.1	100.0	9.0	13.1	22.1
1989	52.7	47.3	100.0	11.6	10.4	22.0
1990	46.8	53.2	100.0	8.5	9.6	18.1
1991	35.5	64.5	100.0	7.1	13.0	20.1

Table 9.16

SAVING-INVESTMENT GAP 1/

Year	Per Cent Distribution			Per Cent of GDP		
	Public	Private	Total	Public	Private	Total
1975	107.4	(7.4)	100.0	4.8	(0.3)	4.5
1976	145.1	(45.1)	100.0	4.9	(1.5)	3.4
1977	155.0	(55.0)	100.0	3.9	(1.4)	2.5
1978	111.2	(11.2)	100.0	5.4	(0.5)	4.9
1979	140.3	(40.3)	100.0	5.9	(1.7)	4.2
1980	82.5	17.5	100.0	5.9	1.3	7.2
1981	84.1	15.9	100.0	5.6	1.1	6.7
1982	106.3	(6.3)	100.0	7.7	(0.5)	7.2
1983	94.6	5.4	100.0	10.5	0.6	11.1
1984	103.2	(3.2)	100.0	9.1	(0.3)	8.8
1985	111.3	(11.3)	100.0	9.9	(1.0)	8.9
1986	103.6	(3.6)	100.0	9.7	(0.3)	9.4
1987	103.1	(3.1)	100.0	9.7	(0.3)	9.4
1988	96.8	3.2	100.0	10.7	0.4	11.1
1989	107.1	(7.1)	100.0	13.4	(0.9)	12.5
1990	80.9	19.1	100.0	9.7	2.3	12.0
1991	50.8	49.2	100.0	6.9	6.7	13.6

1/ Figures in parentheses are saving-investment surpluses.

Table 9.17 (a)**INVESTMENT AND SAVINGS**

(Million Rupees)

Year	Total Investment	Saving		
		Public	Private	Foreign
1975	2,402	-249 (-10.4)	1,911 (79.6)	740 (30.8)
1976	2,632	-178 (-6.8)	2,218 (84.3)	592 (22.5)
1977	2,768	63 (2.3)	2,269 (82.0)	436 (15.7)
1978	3,507	111 (3.2)	2,429 (69.2)	967 (27.6)
1979	3,514	-77 (-2.2)	2,662 (75.8)	929 (26.4)
1980	4,270	315 (7.4)	2,276 (53.3)	1,679 (39.3)
1981	4,808	497 (10.3)	2,477 (51.5)	1,834 (38.2)
1982	5,314	42 (0.8)	3,036 (57.1)	2,236 (42.1)
1983	6,628	-574 (-8.6)	3,461 (52.2)	3,741 (56.4)
1984	7,351	-235 (-3.2)	4,121 (56.1)	3,465 (47.1)
1985	10,184	-454 (-4.1)	6,693 (65.7)	3,945 (38.7)
1986	10,599	-489 (-4.6)	6,376 (60.1)	4,712 (44.5)
1987	12,898	-595 (-4.6)	7,916 (61.4)	5,577 (43.2)
1988	15,237	-1,161 (-7.6)	8,765 (57.5)	7,633 (50.1)
1989	17,108	-1,409 (-8.2)	8,775 (51.3)	9,742 (56.9)
1990	16,476	-1,107 (-6.7)	6,667 (40.5)	10,916 (66.2)
1991	21,163	244 (1.1)	6,620 (31.3)	14,299 (67.6)

Note: Figures in parentheses denote the percentage share of respective total investment.

Figure 9.5

Saving - Investment Gap

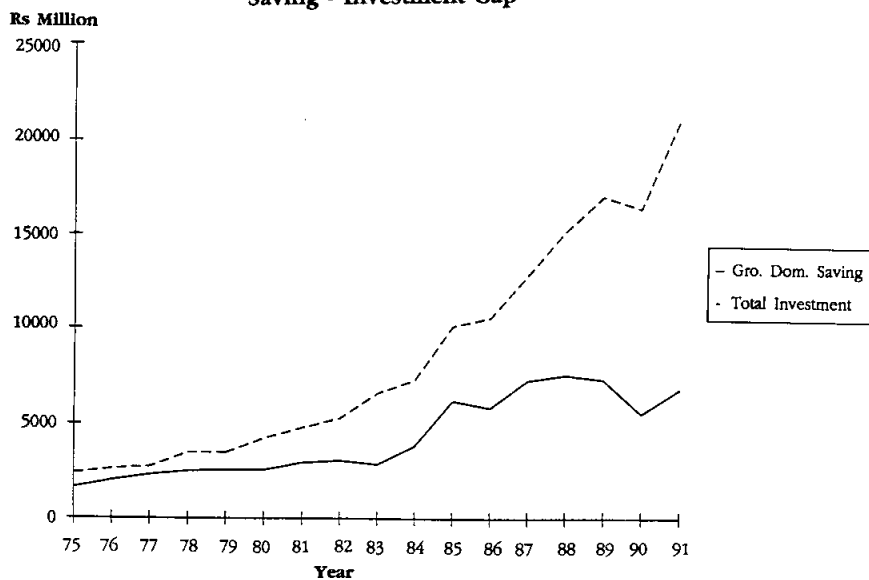


Figure 9.6

Saving - Investment Gap

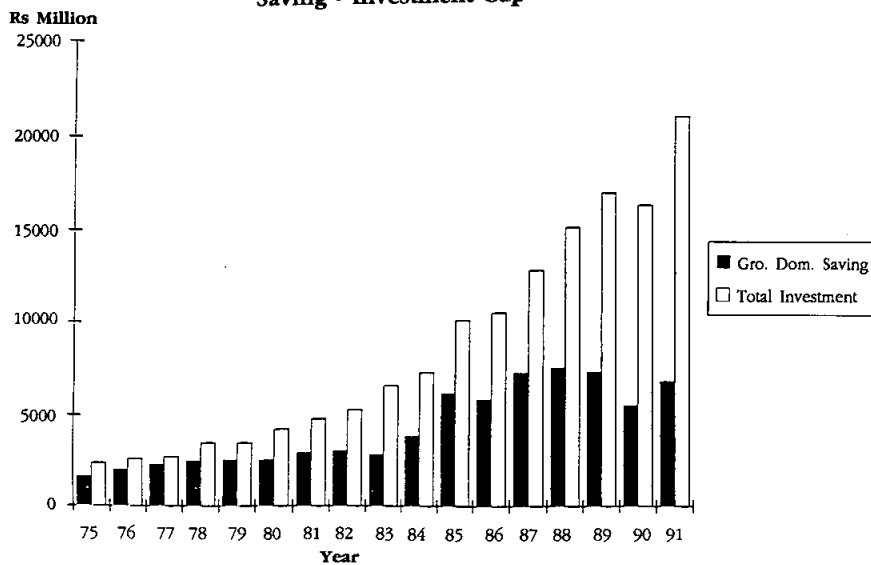


Table 9.17 (b)**INVESTMENT AND SAVING COMPONENTS**

Year	Percentage Distribution of Investment				
	Domestic Saving			Foreign Saving	Total Investment
	Public	Private	Total		
1975	-10.4	79.6	69.2	30.8	100.0
1976	-6.8	84.3	77.5	22.5	100.0
1977	2.3	82.0	84.3	15.7	100.0
1978	3.2	69.2	72.4	27.6	100.0
1979	-2.2	75.8	73.6	26.4	100.0
1980	7.4	53.3	60.7	39.3	100.0
1981	10.3	51.5	61.8	38.2	100.0
1982	0.8	57.1	57.9	42.1	100.0
1983	-8.6	52.2	43.6	56.4	100.0
1984	-3.2	56.1	52.9	47.1	100.0
1985	-4.4	65.7	61.3	38.7	100.0
1986	-4.6	60.1	55.5	44.5	100.0
1987	-4.6	61.4	56.8	43.2	100.0
1988	-7.6	57.5	49.9	50.1	100.0
1989	-8.2	51.3	43.1	56.9	100.0
1990	-6.7	40.5	33.8	66.2	100.0
1991	1.1	31.3	32.4	67.6	100.0

In Nepal, the domestic resource mobilization scenario during the eighth plan (1992 - 1997) does not look satisfactory especially in the government sector. As provided in the Approach Paper to the plan, the total investment outlay for the plan period is estimated at Rs 166 billion at 1991/92 prices. Of this, Rs 106 billion (64 per cent) will be invested by the private sector and the remaining Rs 60 billion (36 per cent) is proposed to be invested by the government. Although the share of government investment in the eighth plan period is proposed at 36 per cent as compared to 41 per cent in the seventh plan, the government continues to be a net dissaving, with the public dissaver in the eighth plan estimated at Rs 20.8 billion. As the private sector savings will be Rs 114 billion, there is thus a foreign saving component of Rs 72.8 billion (i.e., 43.8 per cent of the gross investment). The government dissaving in the eighth plan will, therefore, accelerate to an average of 12.5 per cent of the total plan investment as compared to the dissaving of 6.3 per cent in the seventh plan. The private sector saving is estimated to rise to an average of 68.7 per cent from 54.2 per cent in the seventh plan. As a result, the foreign saving component will come down to 43.8 per cent in the eighth plan from 52.2 per cent in the former plan.

Regarding consumption, as contained in Table 9.18, during 1975-1991, public consumption grew at an annual compounded rate of 14.2 per cent, private consumption by 12.3 per cent and total consumption by 12.5 per cent. This reflects the highest rate of growth in the public consumption. As a percentage of GDP, public, private and total consumption during the period averaged at 9.2 per cent, 80.1 per cent and 89.3 per cent respectively. There is a 3.5 percentage point increase in the total consumption ratio, from 90.0 per cent in 1975 to 93.5 per cent in 1991 compared to the 1.1 percentage point increase in the private and 2.4 percentage point increase in the public consumption ratio during the same period.

With respect to the composition of investment, during 1975-1991, in terms of compounded annual increment rate, total investment rose by 14.6 per cent, gross domestic fixed capital formation also by 14.6 per cent (public 17.9 per cent and private 13.3 per cent) and increment in stock by 13.9 per cent (Table 9.19).

Similarly, as a percentage of GDP, total investment rose to 20.1 per cent in 1991 from 14.5 per cent in 1975, gross fixed capital formation

increased to 18.7 per cent from 13.4 per cent (public share grew to 6.6 per cent from 3.0 per cent and private to 12.1 per cent from 10.4 per cent) and stock increased to 1.4 per cent from 1.1 per cent during the period under observation. On an average, as a percentage of GDP, total investment during the period was at a level of 18.7 per cent, gross fixed capital formation at 17.1 per cent (public 6.7 per cent and private 10.4 per cent) and stock increment at 1.6 per cent. Therefore, out of the total capital formation during the period, the shares of public and private sectors were respectively at 39.0 per cent and 59.0 per cent on an average basis. Of the total investment, however, the share of the public sector was 35.7 per cent, that of the private sector 55.9 per cent (total gross fixed capital formation 91.6 per cent) and the stock increment constituted 8.4 per cent during the whole period.

II. The Role of the Financial System in Domestic Saving Mobilization

2.1 Role of Central Bank and Financial Institutions

Development of a sound financial structure is a sine-qua-non to the growth of an efficient financial intermediation system in general and the promotion of saving mobilization is an effective manner in particular. The role of the central bank in this process of financial development is of utmost importance. Besides the central bank, the five commercial banks, the non-bank financial institutions which include two development banks - Agricultural Development Bank (ADB) and Nepal Industrial Development Corporation (NIDC) - Provident Fund Corporation, insurance companies, postal saving system, cooperative societies, Credit Guarantee Corporation and Securities Exchange Centre form the institutional dimension in the formal sector, besides the widespread unorganised/informal financial sector. The financial system is dominated by the banking system, with the commercial banks constituting around 80 per cent of total deposits and two government-controlled commercial banks sharing a major chunk of the total deposits.

The history of financial and monetary development in Nepal is not very old. It was in 1937 that the first commercial bank (Nepal Bank Ltd.) was established. The central bank was established in 1956. There were only 9 commercial bank branches at the time of the setting up

Table 9.18**PUBLIC, PRIVATE AND TOTAL CONSUMPTION**

(Million Rupees)

Year	Public		Private		Total	
	Amount	Annual Growth %	Amount	Annual Growth %	Amount	Annual Growth %
1975	1,257 (7.6)	-	13,652 (82.4)	-	14,909 (90.0)	-
1976	1,294 (7.5)	2.9	14,060 (80.8)	3.0	15,354 (88.3)	3.0
1977	1,260 (7.3)	-2.6	13,689 (79.2)	-2.6	14,949 (86.5)	-2.6
1978	1,471 (7.4)	16.7	15,721 (79.7)	14.8	17,192 (87.1)	15.0
1979	1,889 (8.5)	28.4	17,741 (79.9)	12.8	19,630 (88.4)	14.2
1980	1,565 (6.7)	-17.2	19,195 (82.2)	8.2	20,760 (88.9)	5.8
1981	1,922 (7.0)	22.8	22,411 (82.1)	16.8	24,333 (89.1)	17.2
1982	2,638 (8.5)	37.3	25,272 (81.6)	12.8	27,910 (90.1)	14.7
1983	3,416 (10.1)	29.5	27,458 (81.3)	8.6	30,874 (91.4)	10.6
1984	3,644 (9.2)	6.7	31,860 (80.9)	16.0	35,504 (90.1)	15.0
1985	4,371 (9.8)	20.0	33,807 (76.1)	6.1	38,178 (86.0)	7.5
1986	5,133 (10.2)	17.4	39,408 (78.1)	16.6	44,541 (88.3)	16.7
1987	6,570 (11.1)	28.0	45,355 (76.5)	15.1	51,925 (87.6)	16.6
1988	8,511 (12.4)	29.5	52,743 (76.6)	16.3	61,254 (89.0)	18.0
1989	9,186 (11.8)	7.9	60,638 (78.2)	15.0	69,824 (90.0)	14.0
1990	10,394 (11.5)	13.2	74,871 (82.4)	23.5	85,265 (93.9)	22.1
1991	10,486 (10.0)	0.9	87,950 (83.5)	17.5	98,436 (93.5)	15.4

Note: Figures in parentheses indicate percentages of the respective GDP.

Figure 9.7
Government Consumption and Revenue

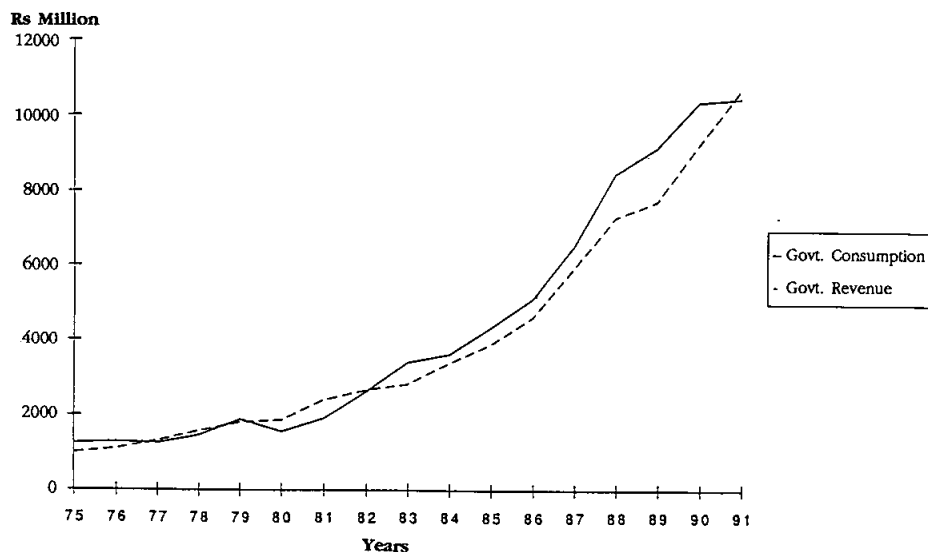


Figure 9.8
Government Consumption and Revenue

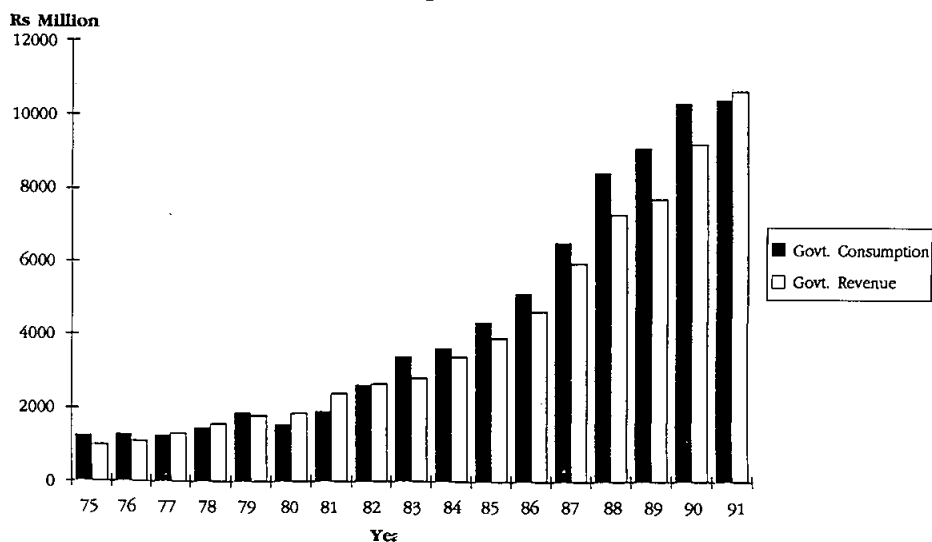


Table 9.19

TOTAL INVESTMENT AND ITS COMPONENTS

Year	Percentage Distribution					Percentage Distribution				
	Gross Fixed Capital Formation			Change in Stock	Total Investment	Gross Fixed Capital Formation			Change in Stock	Total Investment
	Public	Private	Total			Public	Private	Total		
1975	21.0	71.5	92.5	7.5	100.0	3.0	10.4	13.4	1.1	14.5
1976	24.0	68.8	92.8	7.2	100.0	3.6	10.4	14.0	1.1	15.1
1977	24.9	68.3	93.2	6.8	100.0	4.0	10.9	14.9	1.1	16.0
1978	31.7	62.2	93.9	6.1	100.0	5.6	11.1	16.7	1.1	17.8
1979	32.4	60.5	92.9	7.1	100.0	5.1	9.6	14.7	1.1	15.8
1980	34.3	51.9	86.2	13.8	100.0	6.3	9.5	15.8	2.5	18.3
1981	37.9	51.5	89.4	10.6	100.0	6.7	9.0	15.7	1.9	17.6
1982	46.8	56.0	102.8	-2.8	100.0	8.0	9.6	17.6	-0.5	17.1
1983	44.4	54.8	99.2	0.8	100.0	8.7	10.8	19.5	0.1	19.6
1984	42.7	51.3	94.0	6.0	100.0	8.0	9.6	17.6	1.1	18.7
1985	35.7	56.5	92.2	7.8	100.0	8.2	12.9	21.1	1.8	22.9
1986	37.4	51.6	89.0	11.0	100.0	7.9	10.8	18.7	2.3	21.0
1987	36.7	55.0	91.7	8.3	100.0	8.0	12.0	20.0	1.8	21.8
1988	36.0	52.0	88.0	12.0	100.0	8.0	11.5	19.5	2.6	22.1
1989	38.9	43.4	82.3	17.7	100.0	8.6	9.6	18.2	3.9	22.1
1990	41.0	46.4	87.4	12.6	100.0	7.4	8.4	15.8	2.3	18.1
1991	33.1	60.1	93.2	6.8	100.0	6.6	12.1	18.7	1.4	20.1

of the central bank in the country. One of the primary objective of the central bank was the mobilization of capital for development, thereby encouraging trade and industry, besides the promotion of banking system in Nepal. The first decade of its establishment was mainly devoted to the abolition of the dual currency system. There was also the stark need for the development of an organised system of banking and financial institutions which could act as precondition to the successful operation of monetary policy of the central bank as there was absence of an organised and institutionalized system of monetary and financial operations. So, Nepal Rastra Bank (NRB) made substantial contribution in the setting up and operation of many of the financial institutions through the provision of financial assistance to the extent possible. NIDC was established in 1959 to provide financial and technical assistance in setting up, modernization and expansion of industrial units in the private sector. It is the only government institution specializing in meeting the long-term and short-term financial requirements of the industrial sector.

In Nepal, a financial institution to provide institutional agricultural credit was established as a cooperative bank in 1963. But the individual farmers outside the cooperatives were not covered by it as its lending operations were confined to cooperative members only. After the implementation of the land reform program in 1964, a Land Reform Savings Corporation was established to manage the substantial amount of rural savings generated under the compulsory savings scheme of the land reform. Both of these institutions were later merged with the Agricultural Development Bank which was set up in 1968 in order to meet the need for an institution with a broader financial and operational framework so that the large agricultural credit requirements of the nation could be satisfied. The ADB/N supplements its capital resources with borrowing from NRB, foreign sources and deposits from the public.

The Provident Fund Corporation (PFC) was established in 1962 with a view to mobilizing saving through the development of contractual saving facilities. It has the primary duty of regulating and managing provident funds of government and other offices. PFC collects 10 per cent of salary of the employees and also the same percentage of contributions made by the employees. The resources thus collected are then invested by the Corporation.

With the increased banking needs of the economy, the second commercial bank, Rastriya Baniija Bank, came into existence in 1966 with 100 per cent government ownership, whereas the Nepal Bank Ltd., the first commercial bank, had 51-per cent government ownership.

The National Insurance Corporation (NIC) was set up in 1968 to carry out insurance activities in the country. It is the only insurance company allowed to provide life insurance in addition to general insurance business in Nepal. The investment portfolio of the insurance companies and that of the PFC consists primarily of government development securities, commercial banks' time deposits and treasury bills.

The Credit Guarantee Corporation (CGC) was established in October 1974 with the aim of ensuring smooth channeling of the flow of credit to the priority sector (agriculture, cottage industries and services), for which it guarantees loans extended by the commercial banks.

Established in August 1976, the main objective of the Securities Exchange Centre (formerly Securities Marketing Centre) is to facilitate a ready market for the transactions in the shares and securities.

In order to promote the saving habit among the rural population without easy access to ordinary banking facilities, postal saving offices were set up since fiscal year 1981/82. Although the postal saving offices are spread all over the 75 districts of the country, with their number rising to 101 with 10,913 deposit holders, the volume of deposits with the postal saving offices remained around 5 million rupees in mid-July 1990.

The financial liberalization process in Nepal commenced with the first joint-venture bank - Nepal Arab Bank Ltd. - being set up in 1984 which was followed by the establishment of Nepal Indo-Suez Bank in 1986 and Nepal Grindlays Bank in 1987. Fifty per cent share capital of each of these banks is owned by their respective parent companies whereas the balance 50 per cent is shared by Nepalese financial institutions and the general public. Another measure towards financial reform was taken in July 1984 when Agricultural Development Bank branches were permitted to collect deposits from the public. This was a significant innovation in the financial development process as a

development bank was allowed to conduct commercial banking business. This measure substantially reduced the excessive dependence of ADB/N on central bank resources for its lending operations.

The government budget for the fiscal year 1990/91 had provided for the setting up of Citizen's Investment Fund as a measure for mobilization of domestic saving as it was felt that enhanced mobilization of savings, apart from increasing investment and domestic saving, would also bring about positive impact on price situation by reducing the excess liquidity in the economy and demand pressure on consumer goods. It was stated that a certain portion of the salary of all the civil servants, employees in the public enterprises and other agencies or general individuals would be deposited in this fund. The establishment of such a scheme, it was believed, would promote family welfare as well as supplement saving schemes that could provide for a more secure future. In this context, until it acquired legal standing, provision was made to compulsorily deposit 5 per cent of the salary (later made voluntary) in the account of the Citizen's Investment Fund maintained in NRB. After it was made voluntary, with some of the employees withdrawing their savings, the Fund had a saving of Rs 8.7 million by the end of first nine months of FY 1990/91. The amount dropped to Rs 2.5 million (a fall of 71.3 per cent) up to the same period this year, despite such savings being exempted from income tax and earning an annual interest rate of 15 per cent. The Fund is now being operated through the Securities Exchange Centre.

As regards the commercial bank branch expansion policy of NRB, it was believed that such a policy, besides increasing the sphere of monetization, would also contribute significantly towards channeling small and scattered savings into the banking net and making their optimal uses through better investments. Branch expansion was regarded as a pre-requisite to the expansion of banking services so essential for mobilizing greater amount of financial savings in the economy. A Banking Promotion Board was set up in 1968 with the objective of expanding the banking network and providing at least one commercial bank branch in each of the 75 districts of the country. The NRB also pursued a policy of compensating at a specified ratio the loss suffered by the commercial banks, and also provided, without interest, working capital funds for encouraging the commercial banks to open branches in places as directed by the NRB under the banking development program. By mid-July 1977, all the districts in Nepal came under banking net.

Although the seventh plan (1986-1990) had put a target of increasing the number of bank branches in order to serve 30,000 people by a bank branch, the actual result as in mid-July 1990 has been a bank branch for a total of 41,196 people. The figure has risen to 41,864 people per bank branch in 1991.

NRB pursued an interest rate policy with a view to mobilizing savings to the maximum extent possible, and thereby lessening aggregate demand, making productive use of the mobilized savings and correcting the external imbalances. NRB also made necessary changes in the interest rates applicable to deposits and lendings of the financial institutions from time to time. However, as the rate of interest prevailing then was not positive due to higher rate of inflation, people did not find any attraction for the monetary saving. But lower rate of lending was responsible for the excessive increase in the demand for credit and also for the diversion of the savings for unproductive investments. There was adverse impact on the price and balance of payments position due to increased demand for domestic credit. Instead of pursuing control policies for the solution of such distortions, it was thought preferable to encourage more savings and contract the aggregate demand itself. Accordingly, a major revision took place in the deposit and loan rates of banks and financial institutions, on April 27, 1975, whereby deposit rate was raised up to 16 per cent and lending rate up to 18 per cent. This revision assured depositors a positive real rate of return on their savings. As an effect of this revision, time deposits became the most significant instrument on the sources side of the commercial banks balance sheets.

Similarly, with a view to rationalizing the interest rate structure of banks and financial institutions and to make it more market-related, the deposit and lending rates of commercial banks were partially liberalized in May 1986 wherein only minimum interest rate on deposits was fixed by the central bank without imposing any ceiling on the maximum rate. Similarly, on the lending side, maximum interest rate on priority sector lending was fixed by the central bank whereas all other lending rates were left at the discretion of the commercial banks themselves. This partial liberalization of interest rates had a positive impact on savings mobilization.

The interest rate reform process was completed when NRB completely liberalized the interest rate structure of banks and financial

institutions, effective August 31, 1989. Accordingly, commercial banks and other financial institutions were left free to determine their own deposit and lending rates. This measure was initiated with a view to provide more options to commercial banks in the mobilization of savings and portfolio management through market-determined interest and lending rates.

The savings (deposits) mobilized through the financial system in Nepal over the years is shown in Table 9.20. Also see figures 9.9 and 9.10.

On the basis of the information, total deposits grew at an annual compounded rate of 22.0 per cent over the period 1975 - 1991, whereas, deposits with commercial banks saw a compounded annual increment rate of 21.6 per cent. Total deposits as a percentage of GDP rose from 8.6 per cent in 1975 to 32.5 per cent in 1991. Deposits with commercial banks witnessed a rise from 7.0 per cent in 1975 to 25.3 per cent in 1991, implying, therefore, that the other deposits grew from 1.1 per cent in 1975 to 7.2 per cent in 1991. So the increment rate of the other deposits is the highest vis-a-vis the increment rates of total deposits and deposits with commercial banks. On an average basis, total deposits as a percentage of GDP during the period was 21.3 per cent. The same percentage for the commercial bank deposits is 17.1 per cent. The difference (4.1 per cent) is the average of other deposits to GDP ratio. Commercial bank deposits averaged 80.3 per cent of total deposits, the balance 19.7 per cent being other deposits during the period. However, other deposits, which had constituted 18.6 per cent of total deposits, grew to 22.2 per cent of the total in 1991. This shows a comparatively higher rise for the other deposits in relation to the commercial bank deposits.

2.2 Policies and Procedures Adopted to Improve Domestic Saving

Besides the emphasis placed on bank branch expansion, increase in the number of banks as well as other financial institutions and competition among them and liberalization of interest rate, etc. as mentioned above, there are some other important measures undertaken which are significant from the point of view of improving domestic saving mobilization.

Table 9.20**DEPOSITS MOBILIZED THROUGH THE FINANCIAL SYSTEM**

(Outstanding in mid-July; Million Rupees)

Year	Total Deposits with Commercial Banks		Other Deposit1/	Provident Funds	Insurance Funds (Premium)	Total Deposits	Total Deposits as Percentage of GDP
	Amount	Share of GDP (%)					
1975	1,166.2	7.0	66.3	177.8	16.8	1,427.1	8.6
1976	1,600.3	9.2	98.1	210.9	17.7	1,927.0	11.1
1977	2,132.9	12.3	125.6	276.5	26.3	2,561.3	14.8
1978	2,517.8	12.8	107.3	350.2	31.2	3,006.5	15.2
1979	2,902.2	13.1	86.3	448.7	35.2	3,472.4	15.6
1980	3,329.7	14.3	77.1	555.5	34.0	3,996.3	17.1
1981	4,143.2	15.2	69.3	820.4	41.5	5,074.4	18.6
1982	4,907.0	15.8	71.6	1,048.6	51.3	6,078.5	19.6
1983	6,286.5	18.6	71.4	1,303.7	65.1	7,726.7	22.9
1984	7,067.0	17.9	75.8	1,580.9	74.8	8,798.5	22.3
1985	8,536.1	19.2	78.4	2,007.0	98.3	10,719.8	24.1
1986	10,275.7	20.4	112.5	2,431.4	138.4	12,958.0	25.7
1987	11,812.4	19.9	79.6	2,978.6	156.7	15,027.3	25.4
1988	14,951.9	21.7	77.7	3,622.5	194.9	18,847.0	27.4
1989	18,954.6	24.5	47.3	4,441.3	216.0	23,659.2	30.5
1990	21,885.0	24.1	234.1	5,335.1	216.1	27,670.3	30.5
1991	26,687.5	25.3	302.5	6,940.9	245.4	34,176.3	32.5

Figure 9.9
Financial Saving

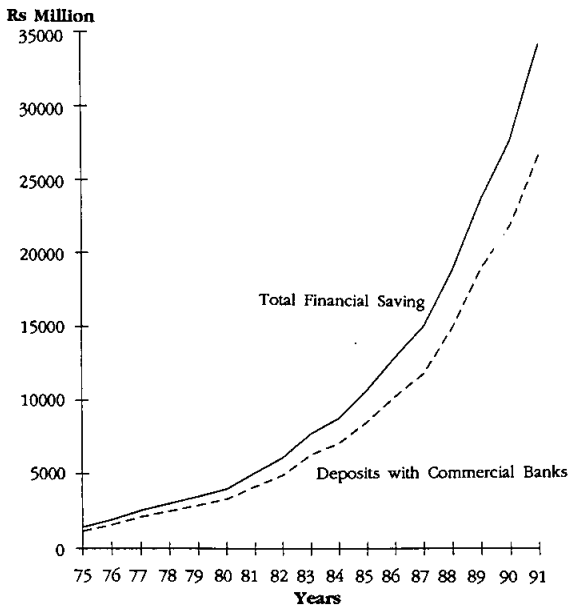
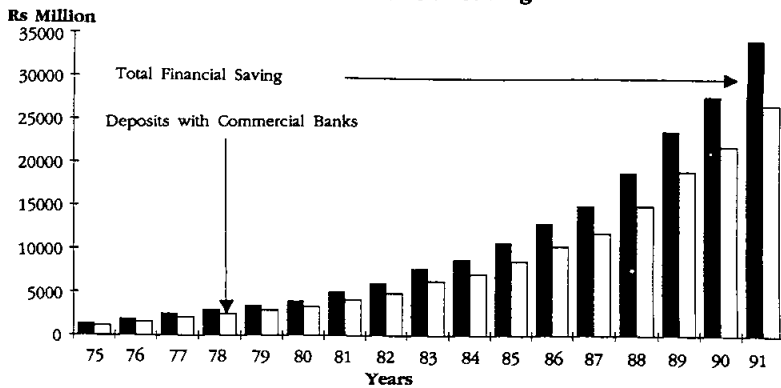


Figure 9.10
Financial Saving



The Structural Adjustment Program (SAP) in Nepal was implemented since FY 1986/87 with the objective of expediting the process of economic development under a sound and stable macroeconomic environment. Maintaining internal and external stability and improving the allocative efficiency of the economy are considered the vital aspects of financial and monetary reform measures under the SAP. The reform measures can be categorized like the control of credit for maintaining the price and balance of payments stability, regular auctions of treasury bills so that the interest rate could be market-related, redesigning of NRB refinance facility, establishment of call money markets, stipulations as to the level of capital adequacy ratio, single borrower limit, credit information bureau, classification of outstanding credit, productive sector credit, implementation of short-term monetary programming, upward adjustment of the interest rate on government overdraft facilities, repayment of government-guaranteed loans, issue of new national savings certificates, change in tax-exemption status for new issues of government securities with maturity period exceeding 182 days and measures to strengthen the financial performance of public enterprises. The stabilization and structural measures implemented since FY 1985/86 were fruitful towards reducing the financial disequilibrium and enhancing the growth performance of the economy. Increased efforts on revenue mobilization and restraint in public expenditures through curtailed outlays for non-essential public expenditure and scaling down of development projects which are of low priority are essential. Regulating excess liquidity in the economy should lower consumption and enhance saving. As public sector expenditure is restrained, it frees more resources to finance activities in the private sector. As a result, the share of public sector in total domestic credit is bound to fall.

An expansionary fiscal policy is associated with more fiscal deficit as the government revenue cannot match the huge expansion in the government expenditure. Bank financing of fiscal deficit raises the money supply, credit supply for the private sector is reduced and inflation directly hits the poorer sections of the society. The SAP has, therefore, a basic objective of maintaining the fiscal deficit at a sustainable level through reduction in unnecessary expenditure and increased revenue.

NRB, in pursuance of its monetary policy exercise, raised the bank rate since May 1991, from 11 per cent to 13 per cent, on commercial bank borrowing from NRB through a basic window, with a view to putting pressure on the commercial banks for upward revision of the

deposit rates. This measure is an indication to the commercial banks to adopt a dear money policy and rely more on their own resources through increased mobilization of deposits rather than on central bank for their requirement of resources. As a result, commercial banks made some upward revision in the interest rate levels, which is bound to have had some positive impact on deposit mobilization.

Open market operations are an important monetary control instrument available to the central bank. After the liberalization of the banking system, NRB has given up direct methods of credit control such as fixation of interest rates and credit ceiling which were the primary methods of credit control since the establishment of NRB. As the commercial banks decide their own interest rates for both deposit as well as lending since August 31, 1989, NRB has, as a substitute to the method of direct credit control, initiated auctioning of short-term treasury bills since November 1988. The system of regular auctioning has pushed up the interest rate on treasury bills up to 9.7 per cent from 5 per cent earlier. The NRB has also started auctioning of NRB bonds on the same terms and conditions as treasury bills. These measures have expanded the market of government securities through the development of a more flexible interest rate structure.

With a view to control abnormally high credit expansion in fiscal year 1991/92, the NRB took a harsh measure to limit the credit creation capacity of commercial banks. The Bank directed the commercial banks to maintain the minimum liquidity of 36 per cent (effective March/April 1992) inclusive of 24 per cent investment either in government securities or in NRB bonds excluding those issued under CBPASS (Commercial Bank Programme Analysis and Strategy Study). It was necessary in a situation when there was excess liquidity in the economy and commercial banks were reluctant to make any effort to mobilize deposits. As a result of these measures, commercial banks have no excess liquidity at present and they are able to mobilize additional resources from the public through upward revision of the interest rates.

As it is historically recognized that expansionary fiscal policy produces many internal and external imbalances in the economy, the monetary and fiscal authorities are cautious not to adopt such policies. The government is committed to controlling the recent spurt in inflation to safeguard external competitiveness and provide stable conditions for sustained economic growth. The positive impact of such policy on domestic resource mobilization should be forthcoming.

It has been envisaged that monetary control will be exercised through indirect instruments, leaving financial institutions free to allocate credit in accordance with market forces. A key consideration will be to maintain positive real interest rates through the use of indirect monetary instruments so as to sustain confidence and discourage capital outflows. The government intends to maintain a broad maturity range of government securities and thereby foster the development of an active domestic capital market. The auctions of treasury bills are now an integral part of a monetary program and the open market operations are a principal instrument of monetary control. The NRB is thus encouraging the deepening of financial markets. All these are assumed to have had significant impact on the financial development and increased financial resource mobilization through the banking system.

The budget for FY 1992/93 provides various measures for correcting the structural constraints impeding the process of domestic resource mobilization. The government is able to curb the artificial rise in prices and restrain its own consumption expenditures. During the current fiscal year, the government has initiated crucial policy reforms to promote industrialization and encourage exports. It has, thus, in pursuance of the liberal economic policy, adopted the partial convertibility in the foreign exchange regime, and promulgated new policies on trade and industry, together with a new foreign investment and one-door mechanism to attract foreign capital and know-how. These policies are believed to have had the potential of promoting the private sector participation in the economically potential areas. Two of the objectives of the budgets for FY 1991/92 and 1992/93 were the maintenance of a pragmatic balance between investment and administrative expenses through the control of the growth of the unproductive expenditure and the augmentation of domestic resource mobilization by making revenue administration simple and efficient.

There is more emphasis placed on timely completion of the development projects and thereby enhance their effectiveness. Administrative reform is considered as essential to make the government machinery slim, efficient, transparent and people-oriented. It is being realised that a successful execution of a project requires attention to be paid to matters like release of funds on time in order to maximize the utilization of development budget, timely evaluation of projects and decentralization of requisite authority essential to carry out the responsibilities entrusted.

The government has given up the practice of accepting foreign aid on an ad hoc basis in all areas. In the past, the country was heavily dependent upon expatriate consultants. Many projects of the past have faulty design and they are proving to be a burden to the government. It has also added to the debt burden of the country. The government is committed to take watchful and rational decisions and play the lead role in the matter of utilizing foreign aid and expatriate consultants.

With a view to eliminating the distortions of the past, it is the government's policy to mobilize foreign aid in productive and socio-economic priority sectors. In recent years, the share of loan in the total foreign aid has been increasing. However, the pace of development has not matched with the inflow of foreign aid in the country. There is a public allegation that foreign aid has been grossly misutilized. In the situation, detailed information regarding foreign aid is being published. Similarly, public will be informed of the real situation regarding foreign aid utilization once an evaluation is conducted upon completion of a project. This measure is considered as a step in the right direction through which misutilization of foreign aid could be prevented with public support.

Proper management of government sector expenditure is indispensable in the context of continuously increasing government sector expenditure and narrow revenue base. It is the policy of the government to review on-going projects from time to time and to take appropriate decisions regarding closing down, trimming down or increasing the size of such projects. Measures which help to reduce unproductive expenditure in the government will be followed.

Actions will be initiated to take periodical information on the status of budget request, budget release and expenditure made by the various development projects and to alert the authorities from ministry to project level on the situation.

The present process of expenditure classification lacks transparency and does not contribute towards realistic valuation of capital expenditure. A major chunk of development expenditure is expended in meeting recurrent administrative activities. As a result, the size of the budget has been increasing year after year without adding any tangible benefits to the common man. Therefore, proper system of classification of expenditure between recurrent and capital will be brought about by

improving the existing classification system so as to ensure proper utilization of public resource and transparency as well as to relate it to development program.

Most of the attempts mentioned above are targeted towards improving the investment efficiency and increasing the return on national investment. However, increased mobilization of internal resources for increasing the level of investment and return on investment remains the primary condition. At present, national saving rate is very low. Thus, the challenge ahead is to increase the national saving and direct the credit flow towards the production-oriented and priority sectors. The following policy measures are being proposed to address this problem:

1. The savings of village level savers, who can save small but fixed proportions, will be mobilized and invested in shares of the organized industry, bonds and government securities. With a view to distributing the profit from such investment to the small savers, the government-owned financial institutions will be allowed to establish mutual companies. The capital of such companies will be divided into units and will be allowed to be exchanged through the secondary market. The service of post office will be utilized in order to sell these units at the village level.
2. The efficiency of the financial institutions, mainly Nepal Bank Limited, Rastriya Banijya Bank, Agricultural Development Bank and Nepal Industrial Development Corporation will be improved. The financial reform program initiated with the objective of increasing the quality of bank investments will continue.
3. Various reform measures will be initiated to develop the money market and to properly manage the liquidity of the economy. Accordingly, regarding the auction of government treasury bills and the securities of the NRB, an arrangement will be made to organize auction outside Kathmandu as well.
4. The apparent uncertainty in the sales through instalment by securing the investment of small savers will be stopped. In order to institutionalize the operation of these activities, "hire purchase or leasing company" will be established. In order to

mobilize internal savings to meet the capital requirements of the public enterprises and private sector industries, necessary arrangement will be made for these institutions to collect time deposits. Also, in view of supporting the development of power, transport and the like sectors, arrangement will be made to authorize the related government and private companies to issue long-term bond. The liberal policy adopted towards establishing financial companies in the private sector will continue. This should enhance the mobilization of internal saving and support significantly in its utilization.

5. With the objective of creating atmosphere for healthy competition in the insurance sector, necessary amendments will be made in the laws so as to promote and manage such services.
6. As regards tax system and its administration, a separate revenue group with a view to running the revenue administration through trained staff, to increase professionalism and to contain the pressure of being transferred from non-revenue groups has come into being with effect from July 16, 1992.
7. Lower rates of taxes than the higher rates are believed to be more effective for tax collection. Similarly, a simpler, transparent process of collection is effective and becomes more of a relief to the people in general; their voluntary participation in tax collection will be enhanced and the tax leakage, in turn, will be limited. Keeping these in mind, the tax rates have been reduced, the revenue administration has been made simpler and transparent which should contribute towards an increase in tax revenue through encouragement of legal transactions.
8. To augment tax revenue, a streamlined procedure will be started from this fiscal year: import valuation process will be made more realistic and practical, attendance of the excise inspector assigned to the factories will be gradually eliminated and self removal system will be applied. In addition, excise rates on several items of the essential consumption have either been reduced or eliminated.

9. On income tax, beginning from this fiscal year, the system of self assessment of taxable income will be allowed under which the industrial, trade, occupational and professional firms with their accounts audited by the recognized auditor can assess their taxable income and pay taxes.
10. In accordance with the policy of broadening of sales tax scope, principles of value added tax on domestic production will be applied on an experimental basis from this fiscal year. Sales tax will be collected at two stages from the factories, dealers, distributors, etc. by requiring them to register as seller. While collecting such sales tax, dealer will be allowed to credit the amount paid to the factory. The factory - appointed dealer or distributor will be registered as a seller.
11. In order to contribute positively in revenue collection through the control of revenue leakages, Revenue Intelligence Division will be structurally strengthened and made effective.
12. In this fiscal year, the organizational structure of the Revenue Administration will be improved to make it more capable and efficient.

III. The Role of the Capital Market in Domestic Resource Mobilization

The capital market consists of primary market and the secondary market. The primary market deals with the selling of new securities when they are first issued by the issuing entities. Since many of the initial buyers of these securities will eventually want to resell them, there is also a secondary market for the previously - issued securities.

As industrialization progresses, it is found useful to establish stock exchange, through which capital can be raised by stock and share issues. Starting up a securities market in a developing country, however, is frequently very difficult ; the necessary judicial and administrative framework is often inadequate or non-existent; industrial companies are strictly private businesses, with the capital concentrated in the hands of the owner's family and a few friends. Inevitably, potential investors will lack confidence in the management of enterprises over which they have

no direct control and whose accounts are often kept secret or fail to reveal the true situation.

Governments in developing countries should, therefore, introduce measures to promote securities markets. A securities market encourages financial development through fostering financial intermediation, and provides liquidity to the owners of financial assets resulting in enhanced rate of saving and investment.

In Nepal, a modern capital market is still a far cry. Over the years there has been a tendency for the share of financial institutions in the total securities transactions to rise further. The underdeveloped status of secondary market is one of the major reasons for the dormancy of capital market in Nepal. Therefore, the establishment of the Securities Marketing Centre in 1976 and its replacement by Securities Exchange Centre (SEC) may be considered as a positive step to assist public limited companies to raise capital through the issue of shares and debentures and to create a market-place where the purchase and sale of securities take place through intermediaries operating on the floor of the exchange.

The Securities Exchange Centre (SEC) Ltd. was established under the Securities Exchange Act, 1983, and in April 1984, it replaced the former Securities Marketing Centre (SMC), which had operated since 1976. Trading under the new law did not start until November 1984. Like the SMC, the SEC is wholly owned by the government and government entities (NRB and NIDC). In comparison with the SMC, the SEC has been given wider functions since, in addition to underwriting and managing new capital issues and transacting in government securities, it has been empowered to list the shares of public limited companies and to provide a secondary market for them, to supervise public companies and to promote a system of professional brokers in due course of time.

The financial system in Nepal still lacks an organised capital market. It is believed that the development of capital market can help to overcome some of the structural deficiencies in the financial system. In particular, the share and bond issues can reduce the vulnerability of companies to sharp changes in the cost and availability of bank credit and provide them with more predictable longer term finance while secondary markets in securities can afford savers liquidity.

The financial instruments transacted in the securities market are shares of public companies, national savings certificates, national development bonds and treasury bills issued by the government and the debentures of the public companies. Prior to the commencement of the Securities Exchange Act in 1983, the Centre was entrusted with the task of developing the secondary market for government securities only. The SEC, from November 1984, thus opened its floor for secondary trading of shares. The Securities Exchange Act made obligatory trading of securities through recognised exchange centre or through its licensed brokers. Presently, the SEC is also involved in transacting companies' shares, providing consultancy services and promoting new issue market.

The corporate bodies are obliged to list their shares and debentures in the market in order to be qualified for the exchange facility. However, HMG bonds issued under the National Debt Act are exempted from such compulsory listing obligation. As Table 9.21 shows, the number of listed companies in the secondary trading of shares has reached 55 in June 1992 from 11 in 1985. The paid-up value of the listed shares is Rs 1,161 million, up from Rs 270 million in 1985. The total market value of such shares in 1992 is Rs 2,120 million. Similarly, the annual turnover of shares has reached Rs 25.0 million in 1992. However, the turnover of shares in the market is still small, less than 2 per cent of market capitalization. Although the number of new issues has increased to 23 and the strength of shareholders 55,000, government bonds market is still dominant in terms of value and the number of transactions in the market.

The bonds presently traded in the market carry coupon rate between 10.5 per cent and 15.5 per cent. The maturity period ranges from 3 years to 15 years. Certain class of bonds are exempted from income tax. Individuals are important groups for investment in bonds which give more than 13 per cent yield. Provident and insurance funds along with the banking sector funds are important source of investments in the government securities.

The SEC has been a pioneering institution involved in the management of public issues made up of corporate bodies. The SEC availed its new issue services to its clients much before November 1984, when the floor was opened for secondary trading of shares. Primary market was regarded by SEC as an important medium of investment

Table 9.21**SECURITIES TRANSACTIONS IN NEPAL**

(Million Rupees, unless otherwise stated)

Year	Secondary Trading of Shares				New Issues	Annual Turnover of Govt. Securities	Number of Shareholders (Cumulative No. in '000)
	No. of Listed Cos.	Value of Listed Shares	Market Capita- lisation	Annual Turnover of Shares	Cumulative No. of Issues		
1985	11	270	360	2	9	270	-
1986	16	341	548	10	11	419	11
1987	23	400	692	8	12	1,200	21
1988	31	482	905	8	16	820	27
1989	36	639	1,401	30	19	480	34
1990	41	745	1,620	25	21	670	51
1991	46	941	1,899	28	22	910	54
1992 1/	55	1,161	2,120	25	23	843	55

1/ Till end-June, 1992.

opportunities for the public. The SEC has so far managed 23 new issues of shares, one issue of preference shares and six issues of debentures. Among the 23 share issues the biggest subscription was worth Rs 72.7 million adding up more than 9,000 shareholders. Foreign banking and other joint venture companies are particularly getting overwhelming response in the market. Of late, prominent private sector business groups are also floating their shares in the market. Individuals have virtually subscribed the majority of the publicly-offered shares. There is a total absence of specialized investment companies as participants in the primary market. New issue market has been gaining confidence of the business community and people as a mechanism for company finance. Presently, majority of the new issues have been administered by the SEC and few issues are managed by the companies themselves.

The SEC's involvement extends beyond the primary and secondary market activities and has significant role to build effective institutional mechanism for the development of securities market. It has made public floatation of shares by involving itself in the formation of some public limited companies. The SEC initiated the formation of Citizen's Investment Fund (CIF) as an important capital market institution. Besides operating mutual saving schemes, the CIF may be involved in other capital market functions like merchant banking, brokerage and venture capital financing.

The SEC, the only stock exchange recognised under the Securities Exchange Act 1983, was initially placed under the Ministry of Industry. From April 1991, HMG decided to shift SEC from the Ministry of Industry to the Ministry of Finance. This has been done in order to integrate securities market with the overall financial development of the country.

Despite the above institutional arrangement, the role and significance of the securities market in Nepal is extremely limited, with the total capitalization of the shares and government securities at 0.6 per cent in 1985 and 0.7 per cent of GDP in 1992. The share of the share market in the annual turnover has fallen from 3.3 per cent in 1985 to 2.9 per cent in 1992. However, the ratio of market capitalization of secondary trading of shares to GDP rose from 0.8 per cent in 1985 to 1.6 per cent in 1992.

One of the important contributing factors for the growth of the equity market is the growth of corporate enterprises, i.e. public limited companies. As Table 9.22 shows, of the total number of industrial licences issued till 1991, the share of sole proprietorships, private limited companies, partnerships and public limited companies was 75.5 per cent, 16.2 per cent, 7.7 per cent and 0.6 per cent respectively.

Table 9.22

TOTAL NUMBER OF INDUSTRIAL LICENSES ISSUED

Year	Proprietorship	Partnership	Private Ltd.	Public Ltd.	Total
1983	628	74	179	5	886
1984	488	65	180	8	741
1985	489	106	228	8	831
1986	440	56	274	9	779
1987	516	85	342	12	955
1988	693	121	464	8	1,286
1989	853	109	449	5	1,416
1990	967	94	440	7	1,508
1991 1/	626	67	440	5	1,138
1991	23,088	2,359	4,937	190	30,574
Total till 1991	(75.5)	(7.7)	(16.2)	(0.6)	(100.0)

1/ First 9 months.

Out of a total of 30,574 licences issued, public limited companies accounted for a low of 190 numbers. This shows the extremely underdeveloped corporate structure in the country. The desire to limit ownership of the industrial and business ventures within a close circle of the family and friends has stood in the way of a smooth development of the public companies and, subsequently, the equity market. Lack of impetus from the government side for the growth of public limited companies has also resulted in the sluggish growth of these companies. As the development of the stock market is closely associated with the growth of public limited companies, the tardy progress in this respect has been mainly responsible for the new issue market of equities to remain underdeveloped. Most of the public limited companies in Nepal are either government-owned or owned by a narrow circle of proprietors. There are very few companies which have publicly gone for raising of the share capital. So the self-financing and financing through intermediaries is the popular source of raising finance by the companies in Nepal. This has also resulted in the deficiency of capital market structure in Nepal. The inclination of the public to hold their assets in the form of real estate, bullion and bank deposits has also hampered the growth of corporate sector and the securities market in Nepal.

The bond market in Nepal is solely the government securities market. The enactment of the Public Debt Act, 1961 allowed the government to raise internal loans through the issuance of securities. The NRB is authorized to carry out the public debt management activities on behalf of the government. The treasury bills were first issued in 1962 and the development bonds in 1964. The national savings certificates were first issued in 1984, with a view to mobilizing resources from the non-banking system by offering attractive returns. But a substantial share (90.87 per cent in mid-July 1991) of the government securities is being held by the financial system in Nepal (See Table 9.23).

As the rate of return on these securities is low compared with alternative investment opportunities, private sector demand of such securities is very low. The individuals owned just 4.23 per cent of the government securities in mid-July 1991.

The auctioning of treasury bills has, however, made their interest rate structure more market-related and flexible. Presently, the commercial banks in Nepal are required to maintain a minimum

Table 9.23**OWNERSHIP STRUCTURE OF GOVERNMENT SECURITIES**

(Million Rupees)

	Outstanding as in mid-July					
	1989		1990		1991	
	Amount	Per Cent	Amount	Per Cent	Amount	Per Cent
Total Government Securities	12,262.6	100.0	13,912.6	100.0	20,245.2	100.0
Nepal Rastra Bank	6,128.4	50.0	7,276.4	52.3	8,861.9	43.8
Commercial Banks	3,763.1	30.7	3,574.3	25.7	7,477.0	36.9
Financial Institutions	1,353.9	11.0	1,775.8	12.8	2,059.3	10.2
Government Business Corporations	80.4	0.6	100.9	0.7	181.7	0.9
Private Business Concerns	196.0	1.6	211.3	1.5	238.2	1.2
Non-profit Institutions	223.2	1.8	419.4	3.0	564.2	2.8
Individuals	517.6	4.2	554.5	4.0	855.3	4.2

liquidity of 36 per cent of deposit liabilities, inclusive of 24 per cent investment either in government securities or in NRB bonds excluding those issued under CBPASS. This is also likely to increase commercial banks' investment in the government securities.

It has been envisaged to exercise monetary control through indirect instruments, leaving financial institutions free to allocate credit in accordance with market forces. A key consideration will be to maintain positive real interest rates through the use of indirect monetary instrument so as to sustain confidence and discourage capital outflows. The government intends to maintain a broad maturity range of government securities and thereby foster the development of an active domestic capital market. The auctions of treasury bills and securities are now an integral part of a monetary programme and open market operations are a principal instrument of monetary control.

With the recent adoption of liberal economic policy, necessity of dynamic capital market has been realized in order to meet the increased demand of capital for the private sector. The existing Securities Exchange Centre established for the development of capital market will be changed institutionally and will be transformed to the stock exchange. Necessary regulatory framework is being made this year to establish a separate Securities Exchange Board that will provide essential policy directions for the Securities Exchange for simplifying the process of issuing the capital in an organized manner. With the objective of making the activities of the stock exchange comprehensive and to support the sales and issue of security, the merchant bank, underwriters, institutional brokers and private parties will be allowed to be established in the private sector. Public limited companies which are listed in the stock exchange and provide at least 15 per cent of the share to more than 100 people in a public offer of shares will be provided a 5 per cent rebate in its corporate tax.

The financial performance of the public enterprises in Nepal is very unsatisfactory. Up to mid-April 1992, the government has already invested Rs 6.70 billion in shares and Rs 18.28 billion in the form of loans to public enterprises, but the return from such huge investment is very negligible. In the FY 1990/91, 25 public enterprises incurred a loss of Rs 2.48 billion while 30 earned profit of Rs 610 million, resulting in the net loss of Rs 1.87 billion. The aggregate loss of these enterprises amounted to 17.4 per cent of the government revenue in that fiscal

year. As the government budget has to bear ultimately the burden of such losses, the deteriorating performance of the public enterprises is, therefore, one of the important causes of the unfavorable public sector saving performance.

In order to address the above problem, there is a policy of gradually handing over the commercial and industrial public enterprises into the private hands. The process of privatization of the three public enterprises is now in its final phase. The experience gained from this will be applied to make appropriate reforms in the policy and process of privatization, and a long-term strategy and plan of action will be formulated in order to privatize other such enterprises. Such a policy is expected to have a significant impact on the growth of corporate structure, securities market development and also relieving the budget from the strains of worsening public enterprise performance.

IV. Factors Affecting the Mobilization of Domestic Saving

4.1 Domestic Saving

In the absence of time-series data for the corporate and household saving separately, saving determinants are identified basically for the domestic and also for the private and public saving on the basis of the following equations, the sample period being 1975-1991. Data used in the regressions are given in Table 9.24.

Equation 1.1

$$\text{GDS/Pop} = a + b (\text{GDPN/Pop}) + C (\text{SF/Pop}) + d (r) + e (\text{BANK})$$

Where,

GDS/Pop = Gross domestic saving/population (per capita GDS)

GDPN/Pop = Nominal GDP/population (per capita GDPN)

SF/Pop = Foreign saving/population (per capita SF)

r = Real interest rate on one-year fixed deposit

BANK = Number of commercial bank branches.

The regression results are as follows:

$$\begin{array}{ccccccc} \text{GDS/POP} & = & -142.150 & + & 0.168 & \text{GDPN/Pop} & -0.922 & \text{SF/Pop} & + & 0.561 & r & + & 0.604 & \text{BANK} \\ & & (-1.88) & & (2.17)^* & & (-2.03)^* & & (0.24) & & (2.43)^{**} & & & \end{array}$$

$$R^2 = 0.79, \quad DW = 2.03, \quad F = 16.29$$

Equation 1.2

$$GDS+ = a + b (GDPN) + C (SF) + d(r) + e (BANK)$$

The regression results appear as below:

$$GDS = -2,204.133 + 0.166 GDPN - 0.882 SF + 11.281 r + 9.460 BANK$$

(-2.10) (2.09)* (-1.84)* (0.274) (2.071)*

$$R^2 = 0.84, \quad DW = 1.95, \quad F = 21.65$$

Equation 1.3

$$GDS+ = a + b (PCGDPN) + C (SF) + d(r) + e (GDPNM2)$$

Where,

PCGDPN = Per capita nominal GDP

GDPNM2 = Income velocity of money

The regression results are as follows:

$$GDS = -1,660.182 + 4.472 PCGDPN - 1.143 SF + 11.743 r - 236.981 GDPNM2$$

(-0.67) (3.49)** (-2.77)** (0.27) (-0.94)

$$R^2 = 0.82, \quad DW = 2.21, \quad F = 19.54$$

Equation 1.4

$$GDS+ = a + b (PCGDPN) + C(SF) + d (P) + e (GDPNM2)$$

Where,

P = Change in consumer price index.

The regression results are produced below:

$$GDS = -1,517.690 + 4.483 PCGDPN - 1.147 SF - 12.815 P - 237.440 GDPN/M2$$

(-0.61) (3.50)** (-2.78)** (-0.28) (-0.94)

$$R^2 = 0.82, \quad DW = 2.21, \quad F = 19.55$$

Equation 2

$$PvtSav+ = a + b (g) + c (SF) + d (PblSav)+ e (M2GDPN)$$

Where,

PvtSav = Private saving

g = Real GDP growth rate

PblSav = Public saving

M2GDPN = Financial deepening ratio

The regression results appear as below:

$$Pvt Sav = -1,322.563 + 112.734 g + 0.061 SF - 1.987 Pbl.Sav + 181.457 M2GDPN$$

$$(-0.81) \quad (1.35) \quad (0.44) \quad (-3.47)** \quad (2.14)*$$

$$R^2 = 0.83, \quad DW = 1.51, \quad F = 20.56$$

Equation 3

$$PblSav+ = a + b (GDPN) + c (AF) + d (Pe)$$

Where,

AF = Foreign assistance

Pe = Expected inflation

The regression results appear as below:

$$PblSav = 120.13 + 0.052 GDPN - 0.621 AF - 80.760 Pe$$

$$(0.23) \quad (2.09)* \quad (-2.47)** \quad (-1.86)*$$

$$R^2 = 0.51, \quad DW = 1.32, \quad F = 6.45$$

Equation 1.1 estimates the per capita savings function. The estimated coefficients for per capita nominal GDP and number of bank branches satisfy the sign conditions and statistical significance at 10 per cent and 5 per cent level respectively. Although the real rate of interest

+ In Rs Million.

** Significant at 5 per cent level.

* Significant at 10 per cent level.

(r) based on the change in consumer price index is positively associated with the per capita GDS, the relationship is not statistically significant. The per capita foreign savings are found to have affected GDS negatively and at 10 per cent statistical significance.

Equation 1.2 , 1.3 and 1.4 estimate GDS in nominal form. On the basis of equation 1.2, GDS is found to be positively associated with nominal GDP, real interest rate and number of bank branches whereas foreign saving has negative impact on GDS. All the relationships are statistically significant at 10 per cent level except for the real deposit interest rate. Equation 1.3 shows statistically significant (at 5 per cent level) positive relationship with per capita nominal GDP and negative relationship with foreign saving. Although the real deposit interest rate coefficient is positive, it is not statistically significant. The income velocity of money ($GDPN/M2$) has an expected coefficient sign but not statistically significant one. It is theoretically assumed the faster $GDP/M2$ falls, the more rapid is the pace of financial development, and consequently, the process of domestic resource mobilization is also expected to be speeded up. Conversely, if the ratio rises, the financial development process is constrained, with the resultant effects on domestic resource mobilization.

Equation 1.4 shows statistically significant positive coefficient for per capita nominal GDP and negative coefficient for foreign saving. The functional relationship with respect to the rate of inflation as measured by the consumer price index has satisfactory sign condition, but it is not statistically significant as is the case with the coefficient of $GDP/M2$.

The private saving function, as estimated in equation 2, shows statistically significant negative relationship with public saving. The coefficient of $M2/GDP$ is also positively significant at 10 per cent level. It thus shows inverse relationship with the public saving and positive relationship with the degree of financial intermediation or financial deepening as measured by $M2/GDP$. Although private saving is also positively associated with real GDP growth and foreign saving, the coefficients are not statistically significant.

The equation 3 shows that the public saving is negatively and also significantly associated with the foreign assistance. Expected inflation has negative impact on public saving, and the coefficient is significant at 10 per cent level. The $GDPN$ has positive effect on public saving as

the coefficient is also significant at 10 per cent level. Although the values of R-2, DW and F are not as expected, the overall relationship among the variables gives some useful information helpful for understanding the interrelationships among the factors bearing on the domestic resource mobilization effort.

4.2 Financial Saving

Financial saving determinants in Nepal are most appropriately specified as follows:

Equation

$$\text{FinSav} = a + b(\text{GDPN/Pop}) + c(\text{BANK}) + d(r^{\text{pc}})$$

Where,

FinSav = Financial Saving/GDP

GDPN/Pop = Nominal GDP/population (per capita GDPN)

BANK = Number of commercial bank branches

r^{pc} = Real interest rate on one-year fixed deposit (based on the expected inflation ^{1/})

The regression results are as follows:

$$\text{FinSav} = 1.878 + 0.002 \text{ GDPN/Pop} + 0.043 \text{ BANK} + 0.193 r^{\text{pc}}$$

(1.84)* (4.63)*** (8.04)*** (1.52)

$$R-2 = 0.97, \quad DW = 1.44, \quad F = 208.47$$

According to the above equation which estimates the financial saving ratio, the estimated coefficients of per capital nominal GDP and the number of commercial bank branches both satisfy the sign conditions and are also statistically significant at 1 per cent level. The real rate of

*** Significant at 1 per cent level.

* Significant at 10 per cent level.

1/ Inflation is measured as a change in CPI as it is more related to consumption and hence saving.

interest based on the expected inflation also satisfies the sign condition although it is not statistically significant (significant at 15.2 per cent level only). Thus, per capita nominal GDP, bank branch expansion and the real rate of interest all have positive relationships with the financial saving ratio.

V. Policy Recommendations

From the foregoing analysis, it becomes clear that the saving performance of the government sector in Nepal is particularly healthy. This has led to a substantial rise in the dependence on foreign saving to finance the increasing government expenditures not matched with an appreciable rise in the domestic resource to finance these expenditures. Even the saving situation of the private sector has become less than satisfactory over the years. As a result, the overall saving gap, which was 4.5 per cent of GDP in 1975, rose alarmingly to 13.6 per cent of GDP in 1991. The saving ratio, in fact, declined to 6.5 per cent of GDP in 1991 from 10.0 per cent in 1975. Investment, however, rose from 14.5 per cent of GDP in 1975 to 20.1 per cent in 1991. Thus the 3.4 percentage point decrease in the domestic saving ratio and the 5.6 percentage point increase in the investment ratio were mainly responsible for the rise in saving-investment gap by 13.6 percentage point during the period.

All this calls for an urgent need for making vigorous efforts for raising resources domestically. As the government saving, performance is particularly bleak over the period, the private sector saving performance has also become very unsatisfactory during the past two years when the saving ratio fell to 7.3 per cent in 1990 and 6.3 per cent in 1991, from 11.3 per cent in 1989. So the trend towards reduced saving performance both in the public and private sectors need to be arrested through adoption of suitable fiscal, monetary and other sectoral policies.

Controlling inflation is very essential to enhance the level of saving because rising inflationary situation raises the consumption level and provides uncertainty for the promotion of investment, growth and saving in the economy. The fiscal deficit, itself being the measure of the government's dissaving, should be curtailed to an acceptable level and should not act as a discouragement to the private sector

Table 9.24

VARIABLES

Year	(Million Rupees)						g(%)	r(%)	BANK (no.)	M2/GDPN %	GDPN/M2 %	FinSav %	GDS/POP (Rs)	GDPN/POP (Rs)	SF/POP (Rs)
	GDS	PbISav	PvtSav	GDPN	SF	AF									
1975	1662	-249	1911	16571	740	386.8	1.47	-6.30	129	12.46	8.00	8.60	129.49	1291.08	57.65
1976	2040	-178	2218	17394	592	505.6	4.40	15.80	173	14.51	6.90	11.10	154.83	1320.13	44.93
1977	2332	63	2269	17280	436	556.9	3.02	9.10	216	18.65	5.40	14.80	172.41	1277.54	32.23
1978	2540	111	2429	19732	967	848.4	4.40	0.70	231	19.12	5.20	15.20	182.92	1421.00	69.64
1979	2585	-77	2662	22215	929	989.4	2.37	8.20	231	20.31	4.90	15.60	181.34	1558.40	65.17
1980	2591	315	2276	23351	-1679	1340.5	2.32	2.00	241	22.63	4.40	17.10	177.05	1595.67	114.73
1981	2974	497	2477	27307	1834	1562.2	8.34	-1.20	263	23.10	4.30	18.60	197.96	1817.68	122.08
1982	3078	42	3036	30988	2236	1723.2	3.78	1.90	284	24.07	4.20	19.60	200.70	2020.61	145.80
1983	2887	-574	3461	33761	-3741	2075.9	2.98	-1.50	357	27.32	3.70	22.90	184.41	2156.56	238.97
1984	3886	-235	4121	39390	3465	2547.5	9.68	5.90	381	26.54	3.80	22.30	243.16	2464.80	216.82
1985	6239	-454	6693	44417	3945	2676.4	6.15	8.10	393	27.68	3.60	24.10	382.43	2722.63	241.82
1986	5887	-489	6376	50428	4712	3491.5	4.30	-2.90	409	30.06	3.30	25.70	353.49	3027.98	282.94
1987	7321	-595	7916	59246	5577	3314.4	3.94	-0.70	428	29.53	3.40	25.40	430.62	3484.85	328.04
1988	7604	-1161	8765	68858	7633	5088.5	7.25	1.30	425	31.11	3.20	27.40	438.14	3967.62	439.82
1989	7366	-1409	8775	77534	9742	5666.9	4.17	5.80	437	34.31	2.90	30.50	415.78	4376.50	549.90
1990	5560	-1107	6667	90825	10916	6446.1	6.10	0.70	439	34.74	2.90	30.50	307.44	5022.12	603.59
1991	6864	244	6620	105300	14299	7340.4	5.55	1.80	441	35.81	2.80	32.50	371.79	5703.61	774.51

Table 9.24 (Cont'd)

Year	Interest Rate on One-year Fixed Deposit (rn)	Inflation Rate (P) (Change in CPI)	Real Interest (r) a/ (based on CPI)	Expected Inflation (Pe) (it*) b/	Real Interest Rate based on it* = rpe
1975	9.50	16.8	-6.3	13.24	-3.3
1976	15.00	-0.7	15.8	11.75	2.9
1977	12.00	2.7	9.1	7.61	4.1
1978	12.00	11.2	0.7	5.75	5.9
1979	12.00	3.5	8.2	5.08	6.6
1980	12.00	9.8	2.0	7.03	4.6
1981	12.00	13.4	-1.2	8.95	2.8
1982	12.50	10.4	1.9	10.04	2.2
1983	12.50	14.2	-1.5	11.90	0.5
1984	12.50	6.2	5.9	10.77	1.6
1985	12.50	4.1	8.1	8.36	3.8
1986	12.50	15.9	-2.9	8.93	3.3
1987	12.50	13.3	-0.7	10.30	2.0
1988	12.50	11.1	1.3	11.96	0.5
1989	12.50	6.3	5.8	10.96	1.5
1990	12.25	11.5	0.7	9.77	2.3
1991	11.75	9.8	1.8	9.36	2.2

Note: The real interest rate (r) is computed as below:

$$a/ \quad r = [(1+rn)/(1+p)-1] \times 100$$

$$b/ \quad it^* = 0.249 \, it + 0.317 \, it-1 + 0.278 \, it-2 + 0.137 \, it-3.$$

Where it^* is the expected rate of inflation in year t ; it , $it-1$, $it-2$ and $it-3$ = Actual rates of inflation in the present and past three years. (The formula for expected inflation - it^* - was as provided by Maxwell J. Fry, Resource Mobilisation and Financial Development in Nepal, 1974, Kathmandu, p.42)

investment through squeezing of resources from the system at a cheaper cost. Efficiency enhancement in government sector investment and drastic reduction in the consumption expenditure of the government are very essential for restoring the fiscal discipline. Unbridled rise in the government consumption not only leaves very little for financing investment but also leads to increased internal and external indebtedness in the process of meeting the resource gap. So there is immediate need for enhancing the revenue/GDP ratio through improved tax administration and the attempt should be to bring in more direct taxes as its share in total tax collection is alarmingly low (16.7 per cent in FY 1990/91). The government's heavy reliance on indirect taxes in the past has been basically due to its inability to collect direct taxes. The budgetary challenge should, therefore, be met through reliance on internal revenue by the government. Internal imbalances in the revenue-expenditure have also contributed to the increased current account deficit and the recourse to foreign saving. With the increase in debt (both internal and external), a large chunk of the regular expenditure has to be spent on the interest and principal repayment as the several debt instruments are being matured, number of loan repayment schedules have started and also the interest payment itself is rising every year in response to increase in the volume of loan amount. In the current fiscal year (1992/93), 36.3 per cent of the total regular expenditure is being set aside for interest and principal repayment. Besides raising the tax revenue substantially, the government should also be able to make maximum utilization of the resources at its command. The wastages, leakages and inefficiency in the resource use, whether by the government or the private sector, is bound to vitiate the growth prospect and debt-servicing capability of the economy. Instead of competing with the private sector for the funds available in the financial system, the government should attempt to meet its resource need through increased revenue mobilization and austerity measures besides making a thorough screening of investment projects. However, the investment in socio-economic infrastructure should not suffer as a result because under-developed infrastructural facilities are destined to affect the private sector investment and future growth of the economy.

The administrative procedural complexity is also identified as one of the key elements in the lower reimbursement and utilization level of foreign assistance in Nepal. During 1987-1991, the actual reimbursement of foreign assistance was 55.4 per cent of what was

committed. As the counterpart fund required for the use of foreign assistance has been estimated at 20 - 25 per cent, domestic resource mobilization by the government is all the more important for enhancing the overall utilization level of foreign assistance. Also, in the recent years, the share of multilateral assistance is growing rapidly, with the loans becoming predominant over the grants. This is also likely to raise the debt- servicing obligation ever further in the future.

Notwithstanding the fact that the agricultural sector, which provides around 60 per cent of GDP, should contribute significantly to revenue, the land tax has remained unchanged for many years. Its relative contribution to the total revenue in recent years has gone down as it constituted only one per cent of total tax revenue in FY 1990/91. So it is highly essential to raise the ratio of land tax to total tax revenue so that it is broadly commensurate with the significance of the agricultural sector in the national economy. There is also need for controlling tax evasion, broadening the tax base, simplifying the administrative procedures, bringing the potential tax payers and new sources of tax into the tax net and making related procedural improvements in order to efficiently mobilize the domestic resources.

Another area of particular concern from the point of view of domestic resource mobilization in Nepal is the extremely bad performance of the public enterprises. The ratio of gross profit/capital employed in FY 1991/92 increased to -4.25 per cent from -1.32 per cent in FY 1989/90 and -5.24 per cent in FY 1990/91. The enormity of the problem can be gauged from the average gross profit/GDP ratio for FY 1990/91 and FY 1991/92 which was 1.53 per cent. Such a situation is not definitely helpful for improvement in the domestic resource mobilization. The privatization program is currently under consideration in order to operate the public enterprises with commercial expediency and to channel private sector capital into them. As many of the public enterprises have to be privatized, those enterprises which are to be retained by the government have to be operated professionally through overhauling of the management. The monopoly situation of the public enterprises has also contributed towards making them more lethargic and inefficient. So privatization, managerial improvement, encouragement of competitive environment and greater freedom in the determination of their goods and services are vital for increasing the rate of return on capital employed in the public enterprises. The privatization process is expected to make significant progress and make

the private corporate sector development in Nepal a reality. Such a situation would also make the capital market more effective and efficient. An efficient capital market, besides promoting the growth and development of the corporate sector, would itself contribute towards increased level of domestic saving because savings would be attracted to the capital market in view of the higher return on the investment which an efficient capital market is capable of providing.

Besides the above, the fiscal, monetary, foreign exchange and other sectoral policies which the government has put into action now should be continued and coordinated action taken to ensure their successful implementation. These policies have an overall thrust of encouraging and improving the private sector participation in economic development, through enhanced private sector investment in those sectors and areas with high competitive strength. Such a policy is bound to raise the domestic saving level ultimately. As savings have not only to be generated sufficiently but also invested appropriately to achieve sustained growth, the type, quality and areas of investment also hold the key to economic progress. And the policies recently adopted to promote private sector investment are, therefore, considered to be in the right direction.

Foreign direct investment also plays a very useful role for speeding up the pace of economic development of a country. The liberal foreign investment and one door policy along with other related policies on industry, commerce and foreign exchange adopted in 1992 are believed to have a substantial positive impact on the foreign direct investment in Nepal. Under the new policy, 100 per cent foreign investment is allowed in medium and large industries, i.e. industries with fixed capital investment exceeding Rs 10 million. Technology transfer will be allowed in the case of cottage and small industries. There will be no nationalization of industries and no interference in pricing and foreign exchange facility will be made in the repatriation of the sale proceeds of shares, dividends and payment of foreign loans, interest and amount received under technology transfer. The implementation of the policy is, therefore, expected to make desirable impact on the inflow of capital, modern technology, managerial and technical skill besides the enhancement of access to international markets, development of competitive business practices, raising of consciousness for productivity improvement and development of industrial culture in the private sector. A foreign investors' meeting is also being organized

this year. It is thought that this meeting will be of considerable significance in attracting greater amount of foreign investment in Nepal. Increased foreign investment could provide the much desired impetus for the capital market development in Nepal.

VI. Major Findings and Concluding Remarks

Improving the resource allocative efficiency and the savings ratio are crucial to a sustained, long-term growth of an economy. Disincentive to savings, in fact, means increase in the consumption ratio. Furthermore, increased consumption ratio has the inevitable consequence of widening the current account deficit and putting pressure on the balance of payments situation as the enlarged saving-investment gap is to be ultimately financed through increased foreign saving. In the absence of the optimum use of such foreign borrowings, the increased debt servicing ratio creates further constraints which requires additional borrowing. The debt problems would thus get compounded, thereby severely restraining and vitiating the smooth process of development. This underlies the need and prominence of internally-generated financial resources on the one hand and the efficient use of all the resources, available both domestically and outside the country.

Therefore, in a country like Nepal, the first prerequisite to sustained growth is to discourage unnecessary consumption and channel increasing amount of resources towards potentially productive sectors of the economy. When the saving - income ratio is itself low, we cannot expect the investment ratio to rise at the required level unless we depend heavily on external sources and deficit financing, which is inflationary and could crowd out private investment as a significant share of the financial resources is claimed by the government at a relatively low cost. The only viable option then is to meet the investment requirement of the economy through greater domestic resource mobilization drive and, at the same time, gradually lessening the degree of external dependence. As the savings ratio improves, emphasis would also have to be placed on the efficiency with which savings are transformed into productive capital. At the same time, the concept of a sound and efficient financial intermediation and productive investment process has to take into active consideration the ultimate impact on the resource allocative mechanism as well.

The savings relationships as identified for Nepal provide that gross domestic saving has a significantly positive association with bank branch expansion policy. The foreign saving, on the other hand, has significantly negative relationship. But the foreign saving has positive but statistically insignificant relationship with the private saving. The public saving, on the other hand, has statistically significant negative coefficient with the foreign assistance as it exert less pressure on the government to increase domestic saving. It can, therefore, be assumed that, with the increased foreign saving, the government would be less inclined to collect more taxes. But in the event the government dissaving still rises, yet it is less compelled to raise resources domestically. This decreases the total saving as the government's dissaving rises more as compared to the private sector's rise in saving in response to the increased foreign saving. The private sector saving is negatively and significantly associated with the government saving because higher tax level reduces the private sector saving while it improves the government saving. The per capita nominal gross domestic product is also found to have had a statistically significant positive impact on the GDS. The coefficient of real growth rate has an expected sign for private sector saving but the relationship is insignificant. Government saving has had a significantly positive association with the nominal gross domestic product. This shows the significance of the GDP in the determination of saving.

Although real rate of interest is not found to have statistically significant positive coefficient, the expected inflation has had a significant negative impact on public saving as government expenditures rise to meet the rising cost due to inflation.

The M2/GDP ratio has expectedly significantly positive impact on the private sector saving. The GDP/M2, which is expected to fall with financial development, has negative coefficient for GDS, meaning thereby that increase in velocity is associated with low level of financial development with its consequent negative impact on saving. But the relationship could not be found to be of statistical significance.

From the above we can conclude that increased effort should be made to mobilize domestic resource and decrease the dependence on foreign saving. But improvement in domestic resource mobilization should not result in the reduced level of private sector saving as it is likely to jeopardize the private sector investment, unless dependence on foreign

saving is raised further. Foreign assistance should also not be an instrument to lessen the domestic resource mobilization endeavor on the part of the government. The best option for the government would be to reduce and maintain the fiscal deficit at a prudent level besides curtailing government consumption significantly. The reform and privatization of the public enterprises could provide additional resources to enhance its investment in socio-economic infrastructure, besides controlling the drain on resources due to their deteriorating financial performance. Private investment in economically most productive sectors of the economy should be encouraged and all obstacles to the flow of resources towards such sectors should be removed through appropriate policy changes. It is not recommended for the government to invest in those sectors and areas where private sector investment is forthcoming, as such policy could crowd out private sector investment and force the private sector to invest in unproductive assets like real estate and gold. From all the considerations like the balance of payments, crowding out effect, efficiency in financial intermediation, rate of return and resource use efficiency, it is very essential for the government to control its dissaving. The basic question, however, is how best the resources could be put to their optimum use, whatever be the source of these resources. But the availability of foreign assistance should not give complacency to the government and reduce effort for increasing domestic resource mobilization. Rather it should proceed with the curtailment of unproductive expenditure and excessive consumption, and improve project selection and fiscal discipline. This again reinforces the need to maintain government saving and establish an environment conducive to increased private sector investment in productive pursuits of the economy.

Bibliography

1. ADB. 1985. Improving Domestic Resource Mobilization through Financial Development. Manila.
2. Aghevli, Bijan B., etc. 1987. "The Role of National Saving in the World Economy: Recent Trends and Prospects". *IMF Occasional Paper*, no. 67. Washington, D.C.: IMF.
3. Aghevli, Bijan B. and James M. Boughton. 1990. "National Saving and the World Economy". *Finance & Development* (June 1990). Washington, D.C.: IMF and IBRD.
4. Black, Stanley W. 1991. "External Resources for Development and International Capital Markets". *Asian Development Review*, vol. 9, no. 1, Manila: ADB.
5. Bovenbery, A. Lans and Owen Evans. 1990. "National and Personal Saving in the United States". *IMF Staff Papers*, vol. 37, no. 3 (September 1990). Washington, D.C.: IMF.
6. Fry, Maxwell J. 1974. Resource Mobilization and Financial Development in Nepal. Kathmandu: CEDA.
7. Fry, Maxwell J. 1991. "Domestic Resource Mobilization in Developing Asia: Four Policy Issues". *Asian Development Review*, vol. 9, no. 1, Manila: ADB.
8. IMF. 1987. Economic Adjustment: Policies and Problems. ed. Sir Frank Holmes. Washington, D.C.
9. Jefferey S. Hammer. 1985. Population Growth and Savings in Developing Countries: A Survey. *World Bank Staff Working Paper*, no. 687. Washington, D.C.: World Bank.
10. Lee Jung Soo. 1987. Improving Domestic Resource Mobilization through Financial Development: Sri Lanka. Manila: ADB.
11. Lindauer, David L. and Ann D. Velenchik. 1992. "Government Spending in Developing Countries: Trends, Causes and Consequences". *The World Bank Research Observer*, vol. 7, no. 1 (January 1992). Washington, D.C.: World Bank.

12. Ministry of Finance. Various Years. *Budget Speeches and Economic Surveys*. Kathmandu.
13. National Planning Commission. 1985. The Seventh Plan (1985-90). Kathmandu.
14. National Planning Commission. 1991. Approach to the Eighth Plan (1992-97). Kathmandu.
15. Naya, Seiji and Pear Imada. 1985. "Development Financing of Developing Asian Countries". *SEANZA Lectures*, 1985. Kathmandu: Nepal Rastra Bank.
16. Nepal Rastra Bank. 1981. Twenty-five years of Nepal Rastra Bank. Kathmandu.
17. Nepal Rastra Bank. Various Years. *Economic Reports, Annual Reports, Quarterly Economic Bulletins, Main Economic Indicators and Economic Review (Occasional Papers)*. Kathmandu.
18. The SEACEN Centre. 1988. *Report on the Seminar on Domestic Resource Mobilization in the SEACEN Countries*. Kuala Lumpur.
19. The SEACEN Centre. 1988. *The Development of Capital Markets in the SEACEN Countries*. ed. Ng Beoy Kui. Kuala Lumpur.
20. William, E. James. 1984. *Domestic Resource Mobilization through Financial Development: Nepal*. Manila ADB.
21. World Bank. *World Development Reports*. 1988, 1989, 1990, 1991 and 1992. New York: Oxford University Press.
22. *World Bank*. 1992 External Debt of Developing Countries, vol. 2, Country Tables. Washington, D.C.
23. Yusuf, Shahid and R. Kyle Peters. 1984. Savings Behavior and Its Implication for Domestic Resource Mobilization: The Case of the Republic of Korea. *World Bank Staff Working Papers*, no. 628. Washington, D.C.: World Bank.

Chapter 10

DOMESTIC RESOURCE MOBILIZATION IN THE PHILIPPINES

by

Myrna P. Putong

I. Overview of the Developments in Domestic Savings Mobilization in the Philippines

1.1 The Role of Domestic Savings in Economic Growth and Development

The economy's ability to achieve and sustain growth is largely dependent on the adequacy of savings to finance capital formation or investment. When savings start to fall short of investment, investment will be restricted thereby affecting economic growth and development.

In general, less developed countries with high level of investments have not relied on domestic savings to close the gap between investments and savings. Investment-savings gap was always financed by foreign savings. However, there is no assurance that increased foreign capital inflows will eventually lead to increased economic growth. To ensure that foreign capital makes a positive contribution to the economy's development and growth, it must be invested in such projects which would produce returns greater than its cost.

In the case of the Philippines, foreign borrowings were not only used to finance domestic investments but were also utilized to finance negative current account balances and the building up of reserves of the banking system especially during the late 1970s and early 1980s. In the 1970s, external funds were readily available and the cost of borrowings were relatively low hence, the Philippines depended almost entirely on foreign funds to finance the persistent investment-savings gap which eventually led to the piling up of external debt reaching as much as 651.0 percent in 1980 from its 1970 level. Real GNP also started to decelerate and by 1984, it turned to -8.7 percent. As external financing almost completely dried up following the international debt problem and the rising interest rates in the early 1980s, the country's

access to foreign borrowings became limited. During this time the Philippines also experienced the worst political and financial crisis which made payments on maturing external obligations more difficult. In 1983, the country declared a debt moratorium when it could no longer afford to service its external debt.

The past experience taught the country a lesson that foreign funds should not be relied upon as major source of financing. Foreign borrowings should only be used as supplement to domestic savings to finance the growing economic requirements of the country. Increased mobilization of domestic savings is also made more important in the light of recent findings regarding the declining trend in national saving rates of major industrial countries which may eventually affect the availability of foreign capital.

1.2 Foreign Capital Inflows

In the Philippines, investment activity was made possible by the significant financial support the country has received from external sources. This was particularly true in the 1970s and early 1980s when foreign borrowings were incurred largely to realize higher investment growth which was restricted by inadequate domestic savings. Between 1970 and 1982 or the pre-crisis period, Philippine external debt increased by \$22.4 billion while during the succeeding period (1982 to 1991), the increase was only about \$5.3 billion (Table 10.1). The country incurred large borrowings during the 1970-1982 period not only to close the investment-savings gaps but also to finance the substantial current account deficits at that time which reached as much as \$3.2 billion in 1982 (Table 10.2). A significant portion of the foreign borrowings was also used to beef up the reserves of the banking system. During the period, foreign investments, as a major source of foreign capital inflows were also very low in relation to foreign borrowings. In 1980 alone, the share of foreign investments to total foreign capital inflows was only 6.9 percent while foreign borrowings was 93.1 percent of total. The magnitude of foreign borrowings showed how the Philippines relied heavily on external financing for domestic investments.

Starting from the second half of the 1980s, the country more aggressively pursued its program to attract foreign investments. At end-1991, the share of foreign investments to total capital inflows has improved by 11 percent. Moreover, the passage of the Foreign

Investments Act in 1991 is expected to accelerate investments into the country and thereby reduce its dependence on foreign borrowings. Under this "Act", non-Philippine nationals may own up to one hundred percent (100%) of domestic market enterprises unless foreign ownership is limited and/or prohibited by existing law.

Figure 10.1 shows the magnitude of the country's external debt problem in terms of the debt stock relative to the size of the economy and the cost of servicing foreign debt. In 1970, foreign debt as a percentage of GNP was placed at 35.7 percent and between 1970 to 1982, the debt to GNP ratio averaged only 40.1 percent. Likewise, debt service ratio at 19.5 percent was also higher during this period. External debt started to rise in 1978 to 47.3 percent and moved further upward to 67.2 percent in 1982, a year before the country declared a debt moratorium. The 1983-1985 crisis saw foreign debt averaging 82.4 percent and peaking at 96.6 percent in 1986 before slowing down to 87.5 percent in 1987. By 1990, the ratio of foreign debt to GNP was registered at 64.5 percent still higher than the average obtained before the crisis.

In the meantime, debt service ratios from 1983-1991 were lower (averaging 16.7 percent) than the pre-crisis period because of the shift in reliance from commercial bank debt (which carry commercial terms) to multilateral/bilateral debt (which usually carry concessional terms) coupled with the decelerating trend in interest rates thereby contributing to lower debt service burden.

1.3 Definitions and Measurement of Savings

Gross domestic savings in this particular study is defined as that portion of income of the household (including that of unincorporated enterprises), private corporations and government that was not spent on current consumption. Gross domestic investments, on the other hand, is the sum of fixed assets, i.e., construction, durable equipment and breeding stock and orchard development, and changes in stocks in a given period. The primary source of data for this study is the National Accounts of the Philippines.

1.3.1 Investment-Savings Situation

During the 1970s, the ratios of both gross domestic savings and investments were relatively higher than during the decade of the 1980s,

Table 10.1**TOTAL FOREIGN BORROWINGS AND INVESTMENTS, 1970-1991**

(Million US Dollars)

Period	Foreign Investments	Percent Share	Foreign Borrowings	Percent Share	Total Foreign Capital Inflow	Percent Share
1970	..	..	2297.00	100.0	2297.00	100.0
1971	..	..	2393.00	100.0	2393.00	100.0
1972	..	..	2732.00	100.0	2732.00	100.0
1973	146.07	4.8	2886.00	95.2	3032.07	100.0
1974	269.22	6.7	3755.00	93.3	4024.22	100.0
1975	390.94	7.3	4939.00	92.7	5329.94	100.0
1976	512.96	7.0	6768.00	93.0	7280.96	100.0
1977	695.79	7.9	8061.00	92.1	8756.79	100.0
1978	852.12	7.4	10694.00	92.6	11546.12	100.0
1979	1051.41	7.3	13352.00	92.7	14403.41	100.0
1980	1280.88	6.9	17252.00	93.1	18532.88	100.0
1981	1587.69	7.1	20893.00	92.9	22480.69	100.0
1982	1931.59	7.3	24677.00	92.7	26608.59	100.0
1983	2207.20	8.2	24816.00	91.8	27023.20	100.0
1984	2353.75	8.5	25418.00	91.5	27771.75	100.0
1985	2600.65	9.0	26252.00	91.0	28852.65	100.0
1986	2708.90	8.7	28256.00	91.3	30964.90	100.0
1987	2805.28	8.9	28649.00	91.1	31454.28	100.0
1988	2875.91	9.3	27915.00	90.7	30790.91	100.0
1989	3078.72	10.0	27616.00	90.0	30694.72	100.0
1990	3274.59	10.3	28549.00	89.7	31823.59	100.0
1991	3689.89	11.0	29956.00	89.0	33645.89	100.0

.. Data not available

Source: Selected Philippine Economic Indicators, Central Bank of the Philippines.

Table 10.2**SELECTED ECONOMIC INDICATORS, 1970-1991**

Period	Current Account Surplus/(Deficit) (In Million U.S. \$)	Debt to GNP Ratio (In Percent)	Debt Service Ratio 1/ (In Percent)	Growth 2/ (In Percent)	Inflation Rate (In Percent)
1970	1-51	35.7	34.0	2.7	14.8
1971	-3	32.7	24.0	6.2	21.8
1972	9	34.4	19.0	5.6	8.2
1973	536	28.7	20.0	9.7	16.5
1974	-176	27.1	20.0	4.2	34.2
1975	-892	33.2	16.2	4.9	6.8
1976	-1050	29.9	12.6	8.2	9.2
1977	-752	24.6	13.7	5.8	9.9
1978	-1102	47.3	18.0	5.5	7.3
1979	-1497	48.4	18.6	6.4	17.5
1980	-1904	53.5	18.7	4.6	18.2
1981	-2061	58.8	19.1	3.2	13.1
1982	-3200	67.2	19.4	2.8	10.2
1983	-2750	75.9	16.2	1.4	10.0
1984	-1116	83.5	17.6	-8.7	50.3
1985	-103	87.8	18.8	-7.1	23.1
1986	954	96.6	22.8	4.2	0.8
1987	-444	87.5	19.5	5.1	3.8
1988	-390	74.1	18.2	7.2	8.8
1989	-1456	65.7	12.4	5.7	10.6
1990	-2695	64.5	11.8	4.2	12.7
1991	-1034	65.8	12.8 p/	0.2	17.7

1/ Per R.A. 6142, as amended, debt service ratio is computed as the ratio of debt service burden on all fixed term credits (excluding prepayments and interim financing) to foreign exchange receipts of the immediately preceding year.

2/ Percent change in real GNP.

p/ Preliminary

Source: Selected Philippine Economic Indicators, Central Bank of the Philippines.

Figure 10.1
SELECTED EXTERNAL INDICATORS DEBT
AND DEBT SERVICE RATIOS 1970-91

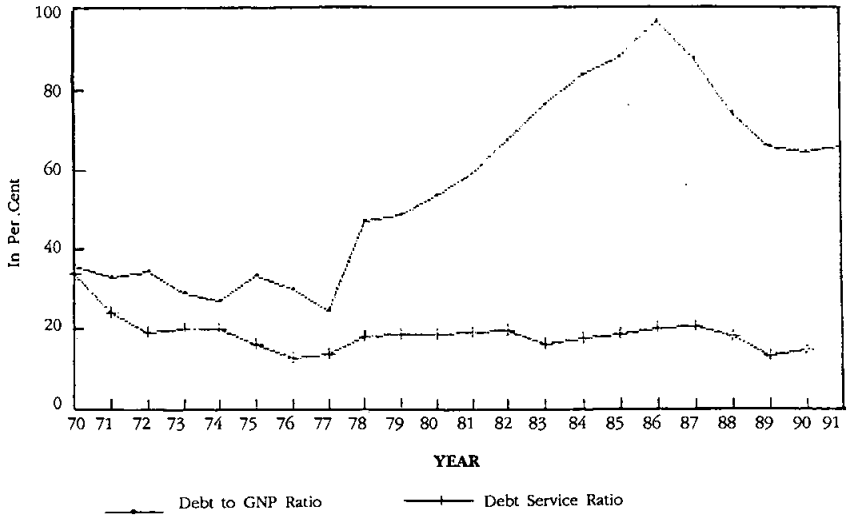
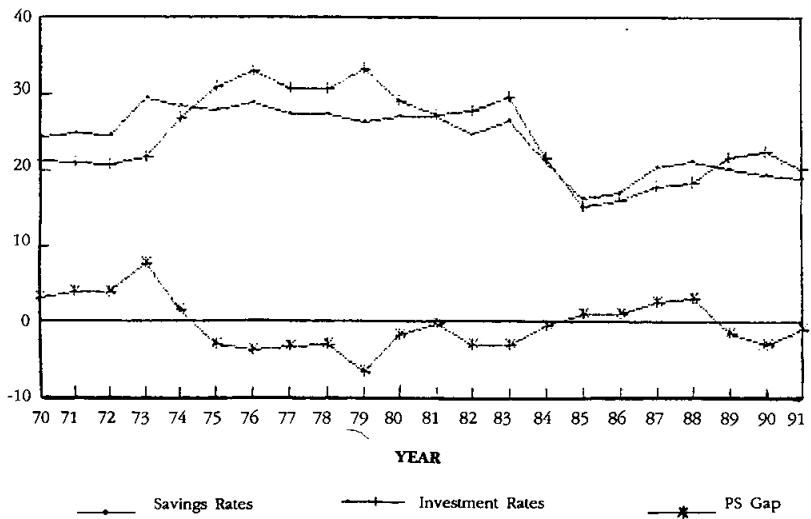


Figure 10.2
INVESTMENT-SAVINGS GAP 1970-91



and saving rates (domestic savings in proportion to GDP) were even higher than investment rates (domestic investments in proportion to GDP) between 1970 and 1974 (Figure 10.2). Starting in 1975, however, investments grew significantly by 30.9 percent of GDP from 26.9 percent in 1974 overtaking domestic savings which was only 27.9 percent of GDP. Higher investments continued until the early 1980s reflecting high investment-savings gap which reached a peak of 6.8 percent of GDP in 1979 (Table 10.3). The hefty investment-savings gap could be partly explained by the huge current account deficits during the period. In 1985, the current account balance showed considerable improvement resulting from the stabilization measures undertaken during 1983-1985. The current account deficit was reduced to only \$103 million and by the following year in 1986, a current account surplus of \$954 million was registered. Inflation rates were also maintained at single-digit levels from 1986-1988 averaging 4.5 percent. These developments were reflected in the investment-savings gap which became positive from 1985 to 1988. The task of sustaining economic recovery became a major challenge of the Philippine government.

During the period, the economy continued to grow albeit at a decelerated pace due largely to the devastating effects of the July 1990 earthquake, the Gulf war in January 1991, the volcanic eruption in June 1991, and other adverse developments which bore heavily on the economy. By 1991, real GNP dropped to 0.2 percent from 7.2 percent in 1988. At the same time, inflationary pressures began to be felt again, hitting the double-digit level for the first time after three years at 10.6 percent in 1989 or an average of 13.7 percent from 1989 to 1991. Saving rates virtually dropped while investment rates climbed considerably during the last years following the increase in commodity prices.

1.3.2 Domestic Savings by Sector

Household savings comprised almost half of the total domestic savings of the economy (Table 10.4). Average percent share of household savings to total domestic savings between 1970-1980 (pre-crisis period) was about 48 percent. During the crisis (1983-1985), household savings improved remarkably, averaging 62.2 percent to total savings. Starting in 1987, however, the share in household savings decelerated significantly as inflationary pressures began to be felt again by the economy. Yields in savings deposits in real terms went negative and by 1991, a big drop (25.2 percent) in the share of household savings was noted as inflation rose to 17.7 percent.

Table 10.3

SAVING-INVESTMENT GAP, 1970-1991

(Million Pesos)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
GROSS DOMESTIC SAVINGS (S)	9573	11850	13141	20039	26570	30089	36661	39719	45853	53391	66319	76540	78275	98153	111058	93045	105184	139674	170609	188083	209360	233771
Savings	5138	6833	7166	13620	19310	21877	27372	29212	33826	37888	49206	56843	55532	69073	62684	37271	44167	75708	103447	116082	127011	131989
Households & Unincorporated Enterprises	3806	5294	6293	9502	14376	14658	19035	20172	22239	21896	33820	46797	52362	65442	59513	62282	62504	71865	82523	82661	85986	58935
Private Corporations	795	682	681	1628	1663	2144	3331	2266	2779	3135	362	-3915	-9217	-11226	-6771	-28372	-9121	-4551	15625	7020	18564	24621
Government	537	857	492	2490	3271	5275	5006	6771	8808	12857	15015	15661	12387	14857	9932	3361	-9216	8374	5299	26401	22461	48233
Plus: Capital Consumption Allowance	4445	5017	5075	6419	7240	8212	9289	10507	12027	15503	17113	19997	22743	29080	-48374	56674	60017	65966	67162	72001	82249	101782
GROSS DOMESTIC CAPITAL FORMATION/ INVESTMENT (I)	8432	10015	11105	14860	25207	33306	41799	44548	51241	67277	70898	77354	88414	109227	114803	87697	97441	123186	147515	202113	241333	248558
Fixed Capital	7144	8654	9416	11645	18586	26598	33499	36619	42198	55896	66350	78147	87325	110167	128587	98018	102374	116373	143184	193181	234249	266440
Construction	2902	3186	3917	4833	8231	12735	19133	21916	24417	32828	37275	45978	50355	66698	82948	56892	54133	63043	73184	98937	114919	114355
Durable Equipment	3473	4474	4456	5509	8538	12125	12490	12615	15491	20239	24085	26869	31367	37661	37897	33261	39991	42112	56951	79030	101968	111317
Breeding Stock & Orchard Development	769	994	1073	1303	1817	1738	1876	2088	2390	2849	4990	5360	5603	5808	7742	9645	9150	11218	13049	15214	17362	20768
Changes in Stock	1288	1361	1659	3215	6621	6708	8300	7929	9043	11381	4548	-813	1089	-940	-14284	12121	-4933	6813	-4331	8932	7084	2118
SAVING-INVESTMENT GAP	1141	1835	2036	5179	1363	-3217	-5138	-4829	-5388	-13886	-4579	-794	-10139	-11074	-3245	6248	6743	16488	23094	-14030	-32073	-14787
As Percent of GDP	2.89	3.85	3.8	7.6	1.46	-2.98	-4.04	-3.32	-3.22	-6.84	-1.88	-0.28	-3.2	-3.0	-0.62	1.09	1.11	2.41	2.88	-1.52	-2.98	-1.19

Source: The National Accounts of the Philippines, National Statistical Coordination Board

The corporate sector, on the other hand, registered negative saving rates during the whole crisis period even extending up to 1987. The share of corporate savings to total domestic savings was placed at -30.2 percent in 1985. Corporate sector savings, however, gradually improved after 1987 and contributed 10.6 percent to total domestic savings at end-1991.

As a whole, government savings (the combined savings of the general government and government corporations) during the crisis period remained fair despite the general decline in public corporate savings between 1983-1989. The government authorities adopted strict expenditure-cutting and revenue-generating measures to abet losses sustained by government corporations. At end-1991, the share of government savings to total domestic savings was 20.6 percent.

II. The Role of the Financial System

In a developing economy such as the Philippines, the need for an efficient and functioning financial system to help supply adequate funds for economic development is very crucial. Government resources are not sufficient to fully meet the increasing capital requirements of the country. Hence, the need for financial institutions to mobilize resources necessary to finance the needs of the growing economy.

Starting with one bank in 1851, the Philippine financial system has evolved gradually over a span of more than a century to presently become a multifaceted system. The Philippine financial system is composed of a Central Bank, commercial banks including those which have expanded commercial banking functions or universal banks, thrift institutions, i.e., savings banks, private development banks and stock savings and loan associations, specialized government banks, rural banks and non-bank financial institutions consisting of investment houses, financing companies, investment companies, securities dealers and brokers, pawnshops, fund managers, lending investors, non-stock savings and loan associations, mutual building and loan associations, private insurance companies, government non-bank financial institutions and venture capital corporations.

From 1,542 head offices, branches and offices in 1970, the number of financial institutions in the Philippines grew by more than a quadruple to reach 7,861 units in 1991 (Table 10.5).

Table 10.4**PER CENT DISTRIBUTION OF GROSS DOMESTIC SAVINGS
BY SECTOR, 1970-1991**

(In Per Cent)

Period	Households	Corporations	Government	Capital Consumption Allowance	Gross Domestic Savings
1970	39.8	8.3	5.6	46.3	100.0
1971	44.7	5.8	7.2	42.3	100.0
1972	47.9	5.2	3.7	43.2	100.0
1973	47.5	8.1	12.4	32.0	100.0
1974	54.1	6.3	12.3	27.3	100.0
1975	48.1	7.1	17.5	27.3	100.0
1976	51.9	9.1	13.7	25.3	100.0
1977	50.8	5.7	17.1	26.4	100.0
1978	48.5	6.1	19.2	26.2	100.0
1979	41.0	5.9	24.1	29.0	100.0
1980	51.0	0.6	22.6	25.8	100.0
1981	61.1	-7.7	20.5	26.1	100.0
1982	66.9	-11.8	15.8	29.1	100.0
1983	66.7	-11.4	15.1	29.6	100.0
1984	53.6	-6.1	8.9	43.6	100.0
1985	66.3	-30.2	3.6	60.3	100.0
1986	60.0	-8.8	-8.8	57.6	100.0
1987	51.4	-3.2	6.0	45.8	100.0
1988	48.4	9.2	3.1	39.3	100.0
1989	43.9	3.7	14.1	38.3	100.0
1990	41.1	8.9	10.7	39.3	100.0
1991	25.2	10.6	20.6	43.6	100.0

2.1 The Banking Sector

Deposit mobilization in the Philippines is primarily carried through the banking system. Total deposits (demand, savings and time) mobilized at end-1991 amounted to P/418.8 billion or about 45.2 percent of the total financial resources (Table 10.6). Banks' deposits have continuously increased during the last two decades except in 1986 when total deposits dropped by a measly 0.9 percent (Figure 10.3). On the average, the rate of growth of bank deposits was faster during the 1971-1980 period at 26.3 percent compared to the 15.3 percent average growth during the next eleven (1981-1991) years. The significant dropped in the average growth rate in bank deposits could be attributed to the decline in time deposits by 32.6 percent which dampened the 27.0 percent growth in savings deposits during the period. The unfavorable political and financial developments during the early 1980s may partly explain the public's preference for more liquid assets at the time due to the uncertainties brought about by these events. The decline in the rate of growth was noticed starting in 1981 at 9.6 percent, from an average of 26.3 percent in 1971 to 1980. It went down further to 8.7 percent in 1984 although it bounced back to 9.9 percent in 1985. The rate of growth, however, dived to a negative 0.9 percent in 1986 following a major political event which saw a change in the country's administration. In 1987, however, deposits grew again by 8.1 percent and by 1988, the rate of increase went higher or by 26.4 percent and remained at above the 20 percent level until 1990. This development followed the improvement in both the economic and political fronts coupled with the revival of the public's confidence in the banking system which has eroded during the financial crisis because of the many cases of bank failures.

The principal outlets for savings are commercial bank deposits. Commercial banks captured a sizeable share of the deposit market because of their extensive branching network with almost all of them located in cities and first class municipalities. Financial savings with commercial banks amounting to P 365.6 billion accounted for 87.3 percent of the total financial savings or deposits of the banking system in 1991.

On the other hand, savings through thrift banks at P 34.6 billion accounted for 8.3 percent of total financial savings of the banking system in 1991. Thrift banks relied heavily on deposits to finance their lending and investment operations. Deposits mobilized by rural banks

comprised 53.6 percent (P 8.6 billion) of their total resources although it is only about 2.0 percent of the system's total deposit base.

Like the rural banks, specialized government banks are also not active in mobilizing deposits. Lately, however, they had been encouraged to be more competitive and to be less dependent on government funds for their operations.

Savings deposits accounted for the largest share (58.6 percent) in total deposits mobilized by banks as of end- 1991. Savings deposits showed a steady climb from 1971 to 1991 despite adverse developments during the early 1980s. However, it was during the second half of the 1980s when the remarkable growth in savings deposits was noted, the highest of which was registered in 1988 by 30.9 percent. Of the P 245.5 billion savings deposits of the banking system in 1990, 86.8 percent or P 213.2 billion was contributed by commercial banks. Savings deposit mobilization by commercial banks has increased substantially during the recent years with the introduction of the automated teller machines which not only facilitate cash deposits/ withdrawals and funds transfer, among others, but also make banking more convenient.

The upsurge in savings deposits lately is also traced to the promotional attractions which different commercial banks offer the whole year round. Commercial banks engage in various promotional come-ons to entice potential savers/existing account holders to open savings accounts/to increase their deposits with them. Among the promotional offerings are brand new cars, house and lot, vacation trips (local and abroad), cash, and "double your deposits" scheme.

2.2 Contractual Savings Sector

The contractual savings sector in the Philippines is composed of the social security institutions, private pension plans and the insurance institutions. The social security institutions consist of the Social Security System (SSS) and the Government Service Insurance System (GSIS). The SSS serves employees in the private sector and like the GSIS, it also provides coverage against a wide variety of risks including retirement, disability and sickness. The GSIS, on the other hand, covers all government employees including those in government-owned and controlled corporations and in addition, offers compulsory and optional

Table 10.5**NUMBER OF FINANCIAL INSTITUTIONS, 1970-1992**

Financial Institutions	1970	1975	1980	1985	1990	1991
Banking Institutions	1316	2129	3364	3630	3637	3791
Commercial Banks	643	996	1521	1776	1863	1989
Thrift Banks	138	246	673	661	653	663
Specialized Gov't. Banks	28	67	74	76	76	76
Rural Banks	507	820	1096	1117	1045	1063
Non-Bank Financial Institutions	226	1420	1693	2150	3845	4070
Total	1542	3549	5057	5780	7482	7861

Source: Department of Economic Research-Domestic, Central Bank of the Philippines.

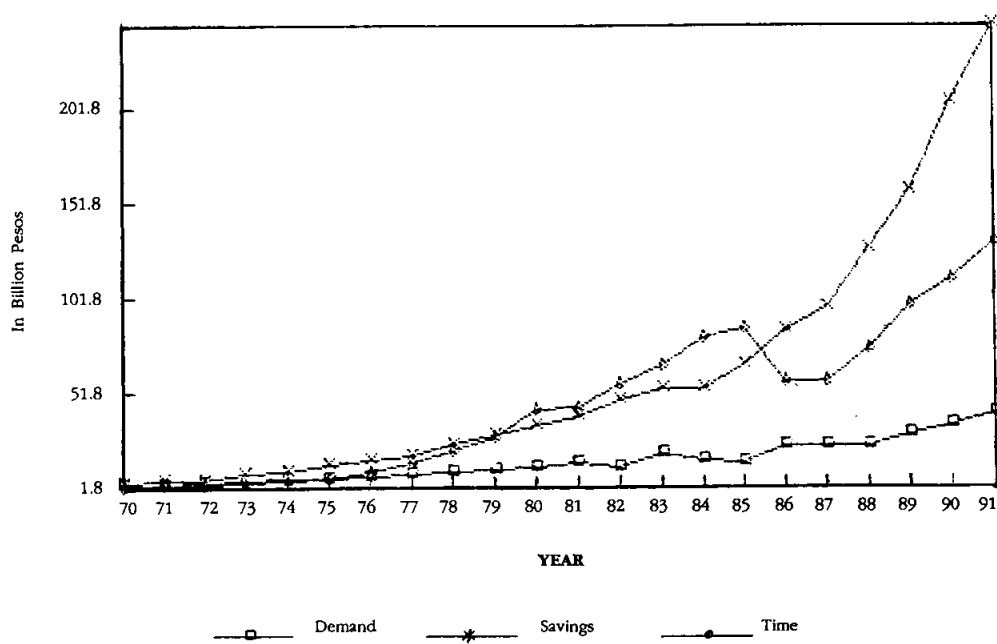
Table 10.6**FINANCIAL SAVINGS BY TYPE OF INSTRUMENT, 1970-1991**

(Million Pesos)

Period	Demand	Savings	Time	Total
1970	2466.6	4587.9	1808.1	8862.6
1971	2924.4	5455.0	2307.7	10687.1
1972	3744.7	5752.1	3150.3	12647.1
1973	5290.6	8586.7	3634.0	17511.3
1974	6079.1	10715.1	5086.2	21880.4
1975	6835.6	13981.7	7077.0	27894.3
1976	7476.1	16134.0	10288.4	33898.5
1977	9096.2	18989.0	14747.9	42833.1
1978	9679.5	24565.2	20706.9	54951.6
1979	11549.4	29951.7	28679.3	70180.4
1980	13099.2	34466.2	42799.0	90364.4
1981	14602.5	40098.7	44352.0	99053.2
1982	12319.2	47609.5	56732.8	116661.5
1983	19872.7	54096.1	66079.4	140048.2
1984	16001.7	54754.8	81480.1	152236.6
1985	15208.1	66593.3	85570.9	167372.3
1986	23675.3	84564.6	57687.3	165927.2
1987	23461.3	97528.7	58396.4	179386.4
1988	24115.5	127664.4	75028.2	226808.1
1989	30237.9	158085.5	98328.8	286652.2
1990	34237.4	204835.7	111539.3	350612.4
1991	41290.0	245467.4	131998.4	418755.8

Source: Department of Economic Research - Domestic, Central Bank of the Philippines.

Figure 10.3
FINANCIAL SAVINGS BY TYPE OF INSTRUMENTS



life insurance for government employees. As of 1990, social security contributions amounted to P 16.2 billion.

Private pension plans are voluntary and they consist of single employer occupational schemes. Meantime, insurance institutions are generally owned and operated by private companies. However, there are three government agencies which also offer various forms of insurance and these are the GSIS, the Philippine Crop Insurance Corporation and the Home Insurance and Guarantee Corporation.

2.3 Policy Measures to Improve Domestic Savings

The 1980 reforms included two significant measures to improve domestic savings. One measure was the introduction of the universal banking system to enhance competition among banks and to increase the flow of savings to more productive and longer-term investments. The other equally important measure was the adoption of the market-determined interest rate policy.

2.3.1 Interest Rate Policy

Even before its full deregulation in 1983, interest rate policy had already been used as an instrument to improve deposit mobilization. It began with the elimination of interest rate ceilings on certain types of loans, the upward adjustment of interest rate ceilings on savings and time deposits and the removal of ceilings on over two-year time deposits to promote longer-term savings. Subsequently, total bank deposits (demand, savings and time) increased significantly in 1980 to 37.1 percent of GDP from an average of 26.7 percent in 1970-1979 (Table 10.7). It was noted that bank deposit rates (ratio of bank deposits to GDP) started to accelerate in 1975 following the upward adjustments in interest rate ceilings on time and savings deposits (Table 10.8). Bank deposit rate climbed to 37.9 percent of GDP when the remaining interest rate ceilings were lifted in January 1983. Deposit rate, however, dropped significantly to 29 percent in 1984 as the economy suffered from both political and financial problems. Economic growth was registered at -8.7 percent and continued to be on the negative trend until 1985. In 1986, deposit rate dropped again by 27.3 percent and further to 26.2 percent in 1987. The improvement in bank deposit rates during the succeeding years may be attributed to the rising interest rates especially in 1989 to 1990. Deposit mobilization further

improved in 1991 following the liberalization of the branching policy. Bank deposit rate registered 33.8 percent to GDP at end-1991.

2.3.2 Branching Policy

On May 16, 1989, the moratorium on the establishment of new banks was lifted followed by the approval on April 15, 1991 of the Monetary Board of the revised regulations governing the establishment and relocation of branches of commercial and thrift banks. The new rules on bank branching feature an auction system which provided an impartial and transparent method of awarding franchises for more new bank branches in the National Capital Region, in first class cities and municipalities. To determine the number of authorized branches in a given service area, the use of the loans-to-deposit ratio is adopted as a criterion. In the first auction held in May 1991, a total of 155 branch franchises were awarded to 32 qualified commercial and thrift banks. In the second auction held in October of the same year, 143 new branch franchises were granted to 27 qualified applicant banks.

From 3,637 units (head offices, branches/agencies) in 1990, the number of bank branches increased by 154 units in 1991 and further, by 187 units in June 1992. The ratio of deposits in proportion to the number of bank branches likewise increased from P/9,640 million per bank in 1990 to P 11,046 million in 1991.

Branching policy for rural banks has also been liberalized. Rural banks are now allowed to establish new branches nationwide and they are exempted from the bidding requirement imposed on commercial and thrift banks.

On May 23, 1991, the operation of automated teller machines in off-site or off-premises areas was allowed facilitating the delivery of banking services to a greater number of clientele and help bank tap additional sources of funds.

Banks' capitalization requirements were likewise raised to ensure their stability and widen their service capability. The minimum paid-in capital of universal banks was raised to P 1.5 billion from P/1.0 billion; regular commercial banks, to P 750 million from P/500 million; thrift banks (head offices in the National Capital Region (NCR) to P 20 million from P 10 million and those which are located outside the NCR to P

Table 10.7**FINANCIAL SAVINGS BY TYPE OF INSTRUMENT, 1970-1991**

(Million Pesos)

Period	Demand	Savings	Time	Total	Savings to GDP Ratio (In Per Cent)
1970	2466.6	4587.9	1808.1	8862.6	22.4
1971	2924.4	5455.0	2307.7	10687.1	22.4
1972	3744.7	5752.1	3150.3	12647.1	23.6
1973	5290.6	8586.7	3634.0	17511.3	25.7
1974	6079.1	10715.1	5086.2	21880.4	23.4
1975	6835.1	13981.7	7077.0	27894.3	25.8
1976	7476.1	16134.0	10288.4	33898.5	26.6
1977	9096.2	18989.0	14747.9	42833.1	29.4
1978	9679.5	24565.2	20706.9	54951.6	32.9
1979	11549.4	29951.7	28679.3	70180.4	34.6
1980	13099.2	34466.2	42799.0	90364.4	37.1
1981	14602.5	40098.7	44352.0	99053.2	35.2
1982	12319.2	47609.5	56732.8	116661.5	36.0
1983	19872.7	54096.1	66079.4	140048.2	37.9
1984	16001.7	54754.8	81480.1	152236.6	29.0
1985	15208.1	66593.3	85570.9	167372.3	29.3
1986	23675.3	84564.6	57687.3	165927.3	27.3
1987	23461.3	97528.7	58396.4	179386.4	26.2
1988	24115.5	127664.4	75028.2	226808.1	28.3
1989	30237.9	158085.5	98328.8	286652.2	31.0
1990	34237.4	204835.7	111539.3	350612.4	32.6
1991	41290.0	245467.4	131998.4	418755.8	33.8

10 million from P 5 million); rural banks in the NCR, P 20 million; rural banks in Cebu and Davao cities, P 10 million; those outside the NCR, Cebu and Davao cities, P 2 million and cooperative rural banks, P 1.25 million.

Meantime, the entry of new foreign bank branches in the Philippines is currently being studied with the objectives of improving efficiency and stability in the financial system through increased competition among banks, and of complementing the liberalized investment environment in the country.

2.4 Financial Sector Reforms

2.4.1 Adoption of Universal Banking System

As early as the seventies, the Philippine financial system was already heavily burdened with insufficient savings mobilization, inefficient allocation and high intermediation costs. These problems were the result of inadequate competition, highly restricted activities and operations of financial institutions, dearth of long-term capital funds, and interest rate controls. With the aim to resolve these problems, and following the recommendation of a joint IMF/IBRD Financial Sector Study in 1979, the Philippine government initiated further reforms beginning in 1980 which seek to fundamentally expand on the 1972 financial sector reforms. The major objectives of the 1980 reforms were: a) to promote greater efficiency in financial intermediation through increased competition and economies of scale; b) to increase availability of and access to longer-term funds, and c) to rationalize financial market regulations.

One of the most significant financial reforms implemented in the early 1980s was the adoption of a modified concept of universal banking (an expanded commercial banking system) which was intended to lead the system to bigger and more diversified competitive intermediaries. Modified universal banking in the Philippines became a law on April 1, 1980 and went into effect in July of the same year. The thrust of the universal banking system was aimed at reducing the functional distinctions among different categories of financial institutions through the removal of legal barriers to allow banks to engage in a wider range of activities. Under this modified concept, a bank with a minimum capitalization of P 500 million can be granted an expanded commercial

Table 10.8

NOMINAL INTEREST RATES, 1970-1991 1/

(In Per Cent)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Savings Deposits	6.000	6.000	6.000	6.000	6.000	6.000	7.000	7.000	7.000	9.000	9.000	9.812	9.811	9.729	9.855	10.842	7.993	4.530	4.100	4.374	5.063	4.786
Time Deposits (all Maturities)											14.000	16.743	15.808	15.295	24.157	21.828	14.770	9.767	13.392	16.982	20.208	18.542
1 year and below	7.000	7.000	7.000	7.000	7.000	7.000	10.000	10.000	10.000	12.000	14.000	15.314	14.080	13.713	23.242	21.790	12.273	8.372	10.978	15.974	20.381	18.337
2 years and below	8.000	8.000	8.000	8.000	8.000	8.000	12.000	12.000	12.000	14.000	14.000	15.400	14.090	13.893	23.200	21.797	12.275	8.353	11.075	15.951	20.584	18.532
Over 2 years											14.000	16.848	16.854	16.353	26.207	21.837	15.367	9.997	13.899	17.671	19.695	18.747
Treasury Bills (91-days)	13.135	11.948	11.918	9.425	10.047	10.342	10.186	10.901	10.888	12.254	12.141	12.606	13.811	14.173	30.534	26.806	14.433	11.390	14.406	19.333	23.396	21.351

1/ Prior to October 1981, rates were based on administrative ceilings.

Source: Department of Economic Research-Domestic, Central Bank of the Philippines.

banking license and carry on the business of both a commercial bank and an investment house such as underwriting, securities dealership and equity investments in allied and non- allied undertakings. They have also been accorded special benefits and powers which are not extended to other financial institutions, i.e., to float bonds to generate long-term funds for relending to various industries and the privilege of access to the special credit facility for medium and long-term loans. At the same time, other control measures which limited the activities of specialized sectors were also rationalized to give these financial institutions more flexibility in their operations, e.g. allowing rural banks to engage in branch banking.

2.4.2 Increased Scope of Banking Operations

The overall 1980 reform package also included specific measures to enhance efficiency by increasing the scope for more competition and allowing banks to expand their scale of operations. The measures included the permission for savings and agricultural banks to open demand deposit accounts; authorizing commercial banks to engage in the securities business; rationalization of regulation governing agriculture and private sector development banks; and approval for investment houses to conduct trust and foreign exchange operations. Moreover, banks and other financial institutions were also encourage to merge/consolidate to make them stronger and more stable. Along this line, the government raised the minimum capital requirements and approved 100 percent investment by commercial banks in savings and private development banks. Some incentives were also provided, such as the conversion or upgrading of existing head offices, branches and/or extension offices of the merged or absorbed institutions into branches of the new surviving institutions; and the condonation of liquidity damage and/or penalties on loan arrears to the Central Bank by rural banks which are parties to the merger or consolidation.

2.4.3 Interest Rate Deregulation

In tandem with the 1980 financial sector reform, interest rates were also deregulated. Interest ceilings on savings, NOW (negotiable order of withdrawal) accounts, deposit substitutes, and loans (except those with maturities of less than two years) were removed in July 1981 and finally completed on January 1, 1983 with the removal of the remaining interest rate ceiling on short-term loans. This final step gave financial

institutions greater flexibility in mobilizing funds. Likewise, the Central Bank's rediscounting facility was rationalized through changes in rediscount ceilings, rates and loan values to encourage banks to mobilize other fund sources. To increase banks' loanable funds and at the same time lower intermediation costs, the reserve requirements on short-term deposits were also reduced.

2.4.4 Liberalization

The country's financial liberalization process, which was temporarily interrupted by the economic and financial crisis in 1983-1985, continued in 1987. The 1987 policy reform primarily focus on the improvement of the legal and supervisory framework for the financial system and was aimed at strengthening the banking system, reduce intermediation costs and improve the mobilization of long-term credit. Specifically, the 1987 financial reform program included the (a) strengthening of the legal framework for bank supervision; (b) strengthening protection for depositors through the state-controlled Philippine Deposit Insurance Corporation; (c) liberalization of bank branching; (d) eventual phase-out of the withholding tax on interest income for interbank transactions and the gross receipt tax on financial institutions; (e) gradual transformation of the DBP into a wholesale institution responsible for raising long-term funds and channelling them to retail financial institutions; and (f) reduction in Central Bank's involvement in credit allocation. Some of these policy measures are already in place while those which necessitated legislative actions are still pending in Congress.

A draft bill to amend the Central Bank Act is now with Congress which aims to strengthen the legal framework for bank supervision, particularly, by enabling the Central Bank to take corrective actions on problem banks in a more timely manner. Another draft bill which is being deliberated on in Congress is the proposed amendments to the Philippine Deposit Insurance depositors by enlarging the role of PDIC through increased capitalization and institutional reforms. The current reform also supports the plan for gradual removal of taxes such as the gross receipt tax on financial institutions in order to bring down the costs of intermediation. In September 1992, foreign exchange regulations were further liberalized aimed at improving the country's export trade and its ability to attract foreign investments. This deregulation process is expected to hasten mobilization of capital resources essential for economic growth.

2.5 Financial Innovations and Its Impact on Savings

The most recent innovation in the Philippine financial sector is the automation of financial services through the operation of the electronic funds transfer system. The introduction of automated teller machines (ATMs) has intensified competition in the savings deposit market with commercial banks having a decided advantage over other bank types. This is because most of them are already using ATMs in their branches and in other areas where "off-site" ATMs are permitted. In response, some thrift banks and rural banks offered higher rates on their savings deposits and at the same time lowering the required deposit balances as compared with commercial banks.

While it may be difficult to assess the impact of the ATMs on the growing preference of the public to hold interest-earning assets, the shift towards savings deposits in recent years clearly indicates the change in savings behavior with people tending to hold smaller money balances as possible and investing their excess resources in the form that would earn interest but which could be withdrawn any time when needed.

The use of ATMs became widespread in the second half of 1980s (It was introduced in 1983) which saw a significant growth in savings deposits to an average of 23.9 percent (1987-1991) from an average of 15.8 percent (1983-1986). It was also noted that the share of savings deposits to total bank deposits started to increase substantially after 1983 reaching as much as 50.9 percent in 1986 while the share of time deposits declined to 34.8 percent during the same period. By 1991, the share of savings deposits to total deposits was placed at 58.6 percent while time deposits went down by 31.5 percent.

III. The Role of the Capital Market

3.1 Development of the Philippine Capital Market

Just like other developing countries, the Philippines also recognizes the importance of capital markets for the country's economy. It is aware of the dynamic role domestic capital market could play in the efficient mobilization of private savings and as conduits of financial resources for investments in productive undertakings.

The development of the capital market in the Philippines has been greatly influenced by the macroeconomic and political events in the 1980s. During the period, the Philippine economy had undergone three major phases. The first was a period of growth extending until 1983 accompanied by an increasing imbalance in international payments. The second phase was characterized by negative economic growth, large devaluations and rising interest rates. It was during this phase that authorities employed monetary and exchange rate controls. The third phase, which is still continuing, is one of gradual economic recovery.

3.2 Components of Capital Market

3.2.1 The Non-Securities Market

The non-securities market is comprised of well established commercial banks (including the universal banks), a number of thrift institutions, rural banks, specialized government banks and non-bank financial institutions. This market provides medium and long- term credits to business enterprises in the form of loans, mortgages, leases and sale and lease back arrangements. Major participants in this market are the banks, insurance companies and leasing companies.

Banks, specifically the commercial banking sector had been dominating the non-securities market for so long, particularly in the loans market. The commercial banks had been tapped to catalyze the loans market, especially the bigger commercial banks (universal banks), because of their large asset base and extensive branching network. Commercial banks have indirectly participated in the development of longer-term market through roll-overs of short-term credit and as conduits of various refinancing schemes. As of end-1991, loans granted by commercial banks amounted to P 844.0 billion.

3.2.2 The Securities Markets

The securities markets provide medium and long- term debt through negotiable instruments. The securities markets are composed of the primary and secondary markets.

The Primary Market

The primary markets deal with new issues of securities including equity and debt securities. The institutions involved in this market are

investment banks, brokers/dealers, venture capitalists, issues of securities by private corporations and government agencies and the Securities and Exchange Commission.

In the Philippines, the debt securities or bonds markets are not well developed. This is because only very few companies issue long-term bonds. Instead, there is concentration of short-term debt instruments in the form of commercial papers.

The bonds market is mainly dominated by government securities, particularly national government issues. Comprising the bulk of government securities are the Treasury bills, followed by the Central Bank bills and government corporate issues. There is no significant secondary market for government securities to speak of, except for Treasury bills which are actively traded as money market instruments. It has been difficult to develop longer-term government security issues because they have generally served as short-term mopping-up instruments by the Central Bank.

The Secondary Market

The secondary market deals with the trading of already issued securities. Trading is normally done in the stock exchanges and the institutions involved are the stock exchanges, securities brokers/dealers, over-the-counter market, clearance and settlement agencies and mutual funds.

The equities market have not been an important source of long-term funds in the Philippines. The problems that face the development of the equities market have to do with a low supply of and demand for equity shares. Among the reasons cited are: inadequate tax incentives, highcost of equity capital in comparison with capital from lending markets, reluctance of family-owned corporations to go public, slow privatization of government-owned corporations, limited number of enterprises going public, lack of appreciation or understanding of how the market works, perception of the stock market as mainly dealing with speculative issues, as well as cases of malpractice and fraud.

3.3 Problems of the Philippine Capital Market

The 1988 Conference on Capital Market Development identified the following problems which hinder development of a healthy Philippine capital market¹:

- (a) dearth of equity issues;
- (b) preference for short-term investments, lack of confidence in and disinclination towards investment in long-term securities;
- (c) tight rein or possible over-regulation by government on the operations of financial institutions;
- (d) lack of tax incentives and support from the government to pump the capital market;
- (e) absence of an active secondary market for commercial papers, bonds, debentures or even government securities;
- (f) lack of novel and unconventional financial instruments that will suit the needs of investors;
- (g) reluctance of family-owned corporations to go public;
- (h) lack of necessary resources by securities brokers or dealers to support greater trading volume;
- (i) inadequate investor protection;
- (j) lack of a specific body charged with the responsibility of developing the capital market;
- (k) easy access by prime companies to bank loans and money market funds; and,
- (l) poor listing in stock exchanges.

1. Lirio, Ricardo P. The Philippine Capital Market and Development, Central Bank Review, March 1989.

The country's financial system has also been beset by problems which may have affected development of the Philippine capital market. These problems of the financial system were also cited during the Conference, such as:

- (a) The market mechanism does not work. The domestic financial markets are not capable of effectively mobilizing meaningful amounts of capital to meet domestic investment requirements.
- (b) Virtual non-existence of a market for long-term financial assets. The long-term financial needs of borrowers have tended to be met by bank borrowings.
- (c) With the exception of few blue chip issues, the Philippine capital market seems to be speculative, extremely thin and in general, an inappropriate outlet for long-term investment funds.
- (d) The system has substantial liquidity but inadequate absorptive capacity. It seems to have difficulty in effectively re-channeling domestic savings and foreign capital.
- (e) The banking system is unable to meet the corporate sector's long term financing needs. Banks remain cautious in their lending activities despite indications of economic recovery.

3.4 Recommendations to Develop the Capital Market

The workshops on capital market development came up with several recommendations to help develop the Philippine capital market.

The major recommendation was for the government to declare capital market development a priority policy. It recommended also the creation of a Presidential Commission for Capital Markets Development to formulate, integrate and nationalize policies.

IV. Factors Affecting the Mobilization of Domestic Savings

This section of the paper will try to identify the various factors that determine savings behavior.

Domestic savings, per Philippine data can be divided into three main groups, namely: the household sector, the corporate sector and government sector. To determine the factors that affect domestic savings movements, a behavioral equation for each group's savings was estimated using the ordinary least squares (OLS) method. The annual data used ranged from 1970 to 1991 and were sourced from the Central Bank of the Philippines, National Statistical Coordination Board and National Statistics Office.

In determining each group's behavior, several independent variables were considered, namely: inflation rates, Treasury bill rates, national income, tax revenues and government expenditures. Most of these variables were used in real terms to remove price change effects. Likewise, the dependent variables, which are the amount of savings generated by each group, were price-adjusted. Government savings, however, were specified in nominal terms since the results showed a better fit. Dummy variables were also included in two behavioral equations to capture the unusual movements and developments in the economy.

4.1 Household Savings

Household savings, or unconsumed income of private persons including unincorporated enterprises, can be represented as the difference between income and expenditures of private individuals. Past empirical studies using household survey data (Bhalla 1980 and Moore 1981) showed a positive relationship between saving and income. Likewise, empirical findings of the study made by Bautista and Lamberte (1990) on the savings behavior of Philippine households deduced that income is the most important determinant of household savings in the Philippines.

The other variables that were considered in the savings equation of private individuals are Treasury bill rates, inflation rate, government's tax revenues, and the savings behavior of the previous period. It was expected that Treasury bill rates will have a positive effect on savings behavior since rational individuals will always shift their resources to more profitable ventures. An exception to this case occurs when there is a general lack of confidence in the economy or when unstable conditions occur. Inflation rates, on the other hand, is posited to be a negative function of personal savings since people are expected to

hedge inflation by purchasing more and saving less when prices go up. In the case of tax payments, the higher the amount the lesser will be the amount of household savings. Meantime, the previous year's savings is meant to capture the fact that people get used to a certain kind of behavior. And lastly, the inclusion of the dummy variable is expected to capture the height of the financial crisis in 1986.

The equation was estimated as follows:

$$\begin{aligned} \text{SAVHR} = & 72544.53 + 0.608 \text{ DISPY} + 1852.072 \text{ TB91} - \\ & (7.27) \quad (8.12) \quad (4.32) \\ & 1358.611 \text{ INF} - 1.101 \text{ TAXRER} - 0.301 \text{ SAVHR}(-1) \\ & (-6.40) \quad (-7.99) \quad (-1.19) \\ & - 15336.577 \text{ D86} \\ & (-3.05) \end{aligned}$$

R-squared = 0.954

Adjusted R-Squared = 0.926

Durbin-Watson Statistic = 1.81

where:

- PGNP = GNP, nominal/GNP, real (1988 prices)
- SAVHR = Net savings of private persons/PGNP
- DISPY = GNP, real - Private consumption expenditures,
real - General government consumption expenditures
- TB91 = Treasury bill rate for 91-day maturities
- INF = Inflation rate
- TAXRER = Tax revenues/PGNP
- D86 = Crisis dummy for 1986

The resulting equation confirms the hypotheses that were just made. The high adjusted R-squared shows that the equation has a good fit. All the dependent variables have correct signs and are significant at 5 percent level of significance. The Durbin-Watson statistic indicates that there was no autocorrelation at 10 percent level of significance.

4.2 Corporate Savings

In determining the factors that significantly affect savings of private corporations, a number of independent variables were included in the initial runs. Among the variables that were used in the estimation of the model were inflation rate, T-bill rates, GNP growth rates, tax revenues, non-tax revenues, price of oil, lagged corporate savings and amount of exports and imports. After several estimations, however, exports, imports, tax revenues and non-tax revenues did not show significant effects on corporate savings. Treasury bill rates were also specified in the model but the results showed that it was not an important determinant of corporate savings. The price of oil was also included in the initial runs but since it had a low t-statistic, it was concluded that the price of oil did not have any major influence on corporate savings.

The variables that were found to be statistically significant were GNP growth rates and lagged inflation rates. A dummy variable for the years 1985 to 1987 was also included to capture the effects of the financial crisis. Originally, the current inflation rates were specified in the model, but since the results were insignificant, the lagged inflation rates were tried and were found to be a negative function of corporate savings. The inclusion of inflation rates lagged one year could be explained by the speculative stance taken by corporations in making savings decisions. The performance of the economy through the growth of GNP was also a good indicator of the savings behavior of the private corporate sector. As in the case of household savings, corporate savings was meant to indicate that corporations get used to a certain amount of annual savings.

The resulting equation on corporate savings is as follows:

$$\begin{aligned} \text{SAVCR} = & 8721.88 - 332.244 \text{ INF}(-1) + 1131.102 \text{ GGNPR} + \\ & (2.31) \quad (-1.78) \quad (2.77) \\ & 0.370 \text{ SAVCR}(-1) - 20361.634 \text{ D8587} \\ & (2.44) \quad (2.6) \end{aligned}$$

R-squared = 0.875

Adjusted R-squared = 0.841

Durbin-Watson Statistic = 1.6

where:

SAVCR = Savings of corporations

GGNPR = Annual GNP growth rate

D8587 = Dummy for 1985 to 1987

The resulting behavioral equation shows a good fit given the high R-squared obtained. All the independent variables were significantly related to corporate savings as indicated by the resulting t-statistic and had the correct signs in relation to corporate savings. Furthermore, the Durbin-Watson statistic indicates that there was no autocorrelation at 10 percent level of significance.

4.3 Government Savings

There were a lot of reestimations done in determining the factors that significantly affect government savings. First, the variables used were price-adjusted but the results were not significant. A respecification was performed using variables in their nominal terms. The results showed that the factors significantly affecting government savings were tax revenues, current expenditures, real GNP growth lagged on year, and real Treasury bill rates lagged one year. Tax revenues were posted to be positively related to government savings; while government expenditures, negatively related. Growth in real GNP was expected to be a positive function of government savings since a higher output means more resources for the government. Real T-bill rates, on the other hand, were expected to negatively affect the savings behaviour of the government as the latter pays the yield on these Treasury bills.

The resulting equation is as follows:

$$\text{SAVG} = -7025.247 + 1.117 \text{ TAXREV} - 0.749 \text{ CUGEXP} +$$

(3.40) (9.03) (8.04)

$$803.570 \text{ GGNPR}(-1) - 119.553 \text{ TB91R}(-1)$$

(4.88) (1.92)

R-squared = 0.934

Adjusted R-squared = 0.904

Durbin-Watson Statistic = 2.0

where:

TAXREV = Tax revenues

CUGEXP = Current government expenditures

The resulting equation came out to be just as expected. The behavioral equation for government savings showed a good fit. The signs were all correct and the t- statistics of all the variables indicated that they were significantly different from zero. The Durbin-Watson statistic also showed that there was no autocorrelation present.

Inflation rates were included in the initial runs of the equation but the results were not significant. Thus, it was concluded that the amount of savings generated by the government was not significantly depended on prices. This could be explained by the insignificant results when the variables used were in real terms.

V. Concluding Remarks

In order to sustain economic growth, macroeconomic adjustment programs should be geared towards the expansion of domestic savings to finance capital formation. Foreign savings cannot be expected to continuously provide the capital needed to increase production output. For one, the country is already heavily burdened by debt servicing and second, national savings in industrial countries are reportedly on the declining trend. As such, foreign capital would be eventually hard to obtain.

To promote domestic savings, it is imperative that income level of the household should also be raised. This is because savings decision by households in the Philippines is greatly associated by their current income, i.e. higher income means higher savings. Since household savings formed the major portion of domestic savings, an appropriate policy mix would be one that would encourage private savings and tax incentives for all forms of savings.

Bibliography

1. Adamos, Teresita D. "Domestic Resource Mobilization Through Postal Savings: Philippine Case". (First Draft)
2. Bautista, Romeo M. and Lamberte, Mario B. "Comparative Saving Behavior of Rural and Urban Households in the Philippines". 1990.
3. Financial Sector Study: Philippines. *World Bank Report*. 1988.
4. Kitchen, Richard L. "Finance for the Developing Countries". 1986.
5. Lamberte, Mario B. "The Financial System of the Philippines: Operation and Problems". July 1990.
6. Lamberte, Mario B. "Assessment of the Problems of the Financial System: The Philippine Case". *Working Paper No. 89-18*. Philippine Institute for Development Studies. December 1989.
7. Lirio, Ricardo P. "The Philippine Capital Market and Development". *Central Bank Review*. Manila. March 1989.
8. Lirio, Ricardo P. "Domestic Resource Mobilization in the SEACEN Countries: The Philippines". *Central Bank Review*. Manila. November 1988.
9. Martinez, Enrique P. "The Advent of Automated Teller Machines in the Philippines". *Central Bank Review*. Manila. August 1991.
10. Okuda, Hidenobu. "Financial Factors in Economic Development: A Study on the Financial Liberalization Policy in the Philippines". September 1990.
11. Robledo, Catalina T. "Development of the Capital Market in the Philippines". 1989.

12. Suleik, Mercedes B. "Development of the Capital Market". *Central Bank Review*. Manila. May 1991.
13. Zialcita, Edgardo P. and Amador, M. Cyd Tuaño. The Philippines Foreign Debt Problem and How it has affected the Savings-Investment Flows in the Philippines'. *Central Bank Review*. Manila. September 1991.

Chapter 11

DOMESTIC RESOURCE MOBILISATION IN SINGAPORE

by

Yeow Ju Li

I. Introduction

The Singapore economy has grown by an average 9 per cent per annum since 1965. This rapid growth was made possible, in part, by a high rate of investment. Like most developing countries, Singapore has depended on both domestic and foreign resources to finance its capital formation. This paper focuses on the former, analysing the composition of aggregate savings, and investigating the determinants of private savings.

A review of Singapore's savings and investment trends is presented below. Section 3 discusses the various components of savings, while Section 4 presents an econometric analysis of the determinants of savings. Section 5 concludes by taking a brief look at the likely future trends in savings.

II. Savings and Investment Trends

2.1 Changing Investment Needs

The ratio of gross capital formation (GCF) to gross national product (GNP) doubled from 21 per cent in 1965 to over 40 per cent in the early 1970s, as the initial years of economic take-off necessitated massive expenditures on industrial estates and shipyards. Investment spending surged further in the late 1970s and early 1980s with the acceleration of the public housing programme and large-scale public infrastructure projects. The investment rate reached nearly 50 per cent at its peak in 1982.

The second half of the 1980s saw a sharp decline in the investment rate, from an average 47 per cent in the period 1980-85 to 37 per cent in 1986-91. This reflected slowing investment needs as the capital-output

ratio approached the levels of the mature, industrial economies, and economic growth began to moderate towards a more sustainable rate from 1990 onwards.

2.2 Emergence of Savings-Investment Gap

Singapore's savings rate has been less volatile than its investment rate, showing a steady uptrend from 15 per cent in 1965 to 47 per cent in 1991. By the early 1980s, Singapore had the highest savings rate in the world.

Despite a rising savings rate¹, rapid economic growth and the consequent strong demand for investment expenditures meant that Singapore had to depend heavily on foreign resources to finance its capital formation². In fact, Singapore's reliance on foreign savings was greater than indicated by its saving-investment gap alone. This is because a sizeable portion of domestic savings was channelled abroad, while the bulk of investments in the foreign MNC-dominated manufacturing sector was financed by foreign direct investments³.

It was only towards the latter half of the 1980s that Singapore's savings rate rose to match its investment rate (see Figure 11.1 and Appendix 11.1). Singapore has been a net capital exporter since 1986, with a current account surplus averaging 8 per cent of GNP during the last three years. Even with a positive savings-investment gap, Singapore has continued to depend heavily on FDI. Gross inflows of FDI have remained strong, financing more than half of domestic non-construction capital formation in the last 5 years.

This does not mean that domestic savings has been unimportant. On the contrary, the high rate of domestic savings and consequent healthy reserve position have enhanced Singapore's credit worthiness and helped instil the investor confidence necessary for attracting FDI.

1. Defined as the ratio of gross national saving (GNS) to GNP.

2. From the early 1970s up to 1985, the domestic resource gap, or current account deficit, averaged 9 per cent of GNP.

3. Foreign capital inflows into Singapore have been almost entirely in the form of equity rather than debt. Dependence on FDI has also brought with it dynamic benefits, such as transfer of technology and access to export markets.

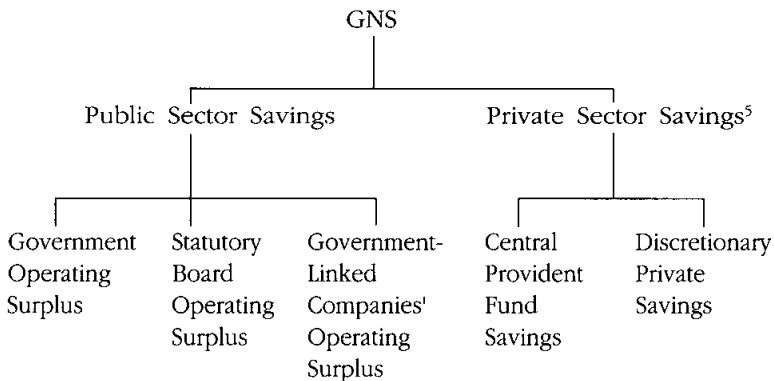
III. Components of Gross National Savings

Savings is defined as income less consumption. In the national accounts framework, gross domestic savings (GDS) is obtained as a residue, by subtracting private and government consumption from gross domestic product (GDP). GNS is essentially GDS plus net factor income and net transfers from abroad.

$$\text{GDS} = \text{GDP} - \text{Private Consumption} - \text{Government Consumption} - \text{Statistical Discrepancy}^4$$

$$\text{GNS} = \text{GDS} + \text{Net Factor Income From Abroad} + \text{Net Transfers From Abroad}$$

GNS in Singapore can be categorised as follows:



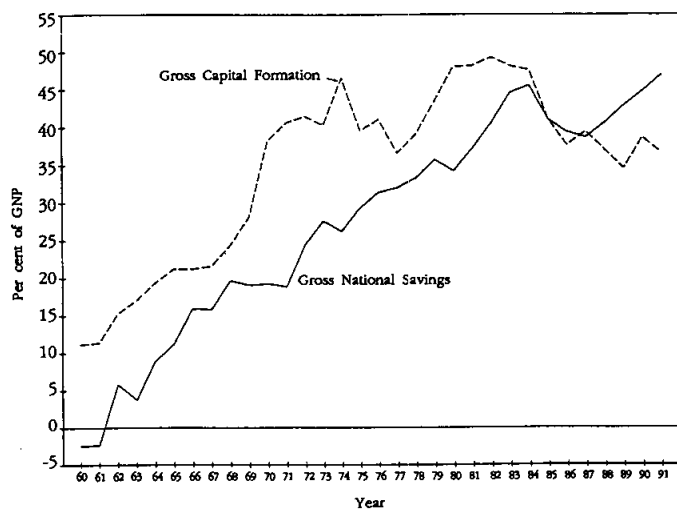
Public and private sector savings are estimated to make up roughly equal portions of total savings.

4. The statistical discrepancy is added to the estimate of GDP calculated by the expenditure method, to make it equal to that estimated by the output approach. By convention, it is treated as a consumption item and deducted from income in order to derive savings.

5. It would be ideal to further divide private savings into its household and corporate components; data for such a breakdown are, however, not available in Singapore.

Figure 11.1

SAVING-INVESTMENT GAP 1960-91



3.1 Government Operating Surplus

The government has been running surpluses on its current account since the 1970s. This has reflected a philosophy of fiscal prudence, rather than a desire to achieve a high savings rate. State welfarism was eschewed, and a tight rein placed on public expenditures.

The government's fiscal conservatism is in part a legacy of the uncertain economic and political circumstances that Singapore faced in the 1960s and early 1970s, e.g. separation from Malaysia in 1963, the Indonesian Confrontation in the early 60s, the closure of British naval facilities in 1968, and the sense of vulnerability created by the Vietnam War.

3.2 Statutory Boards' Operating Surplus⁶

Statutory boards were set up as separate entities from government ministries, so that they may perform certain public sector functions, such as the provision of telecommunication services and utilities more efficiently. Although the government provides some financing for a few of the statutory boards, the statutory boards' main sources of income are from fees and charges for services provided, and income from investments. The statutory boards have a large degree of financial autonomy and hence have much scope to be operated on fairly commercial lines.

Most statutory boards enjoy surpluses; the notable exception is the Housing Development Board (HDB), which continues to depend on government subsidies for its public housing programme.

3.3 Government-Linked Companies' Operating Surplus

The government is a major shareholder in a large number of business corporations, called government-linked companies (GLCs). These GLCs

6. In our definition of public sector savings, we have included the operating surpluses of twelve major statutory boards. They are the Public Utilities Board (PUB), Port of Singapore Authority (PSA), Telecommunications Authority of Singapore (Telecoms), Urban Redevelopment Authority (URA), Jurong Town Corporation (JTC), Housing Development Board (HDB), Post Office Savings Bank (POSBank), Central Provident Fund (CPF), Mass Rapid Transit Corporation (MRTC), Civil Aviation Authority of Singapore (CAAS), Sentosa Development Corporation (SDC), and Singapore Broadcasting Corporation (SBC).

are organised as subsidiaries and associated companies of four main holding companies owned by the government⁷.

The GLCs operate almost entirely on a commercial basis. Their savings may be estimated by taking the aggregate of the profits of the government holding companies, and netting out any taxes or transfers to the government⁸.

3.4 Central Provident Fund Savings

Funds placed with the Central Provident Fund (CPF) constitute a large portion of private sector savings. Established in 1955, the CPF is a savings scheme primarily aimed at providing for retirement needs⁹. At present, employees contribute 22 per cent of net wages, and employers 18 per cent, to the CPF. (See Appendix 12.2 for CPF contribution rates.) The long-term target is to keep to a total contribution rate of 40 per cent, with equal contribution by employers and employees. Total outstanding balances with the CPF, including interest accrued, stood at S\$50.1bn at September 1992.

The bulk of the funds mobilised through the CPF is invested in government securities, and advance deposits with the MAS. In the 1960s, the CPF represented an important pool of funds available to the government. For instance, CPF funds helped finance the building programme of the HDB in the initial years. Since the beginning of the 1970s, however, most of the CPF funds have been invested abroad.

3.5 Private Discretionary Savings

Besides the CPF, private saving is mobilised through banks, finance companies, insurance companies and the capital market.

Commercial banks lead in the amount of funds they manage to attract. Previously, commercial banks' interest rates were fixed under a

7. These are Temasek Holdings, Singapore Technologies Holdings, MND Holdings, and Health Corporation of Singapore.

8. For this paper, the operating surplus of the Health Corporation of Singapore has not been included.

9. The CPF is distinct from the social security systems of most other countries in that it is fully-funded and non-distributive.

cartel arrangement, until liberalisation in 1975 allowed them to quote their own rates. Total deposits with the commercial banks stood at \$77.6bn at August 1992.

The Post Office Savings Bank (POSBank) is also an important financial intermediary in Singapore. It was established in 1877, during colonial rule, with the objective of encouraging the savings habit and providing funds for national development. As it is required to invest not less than 50 per cent of its total deposits in government securities and/or deposits with the MAS, its funds, like those of the CPF, also helped finance public development projects in the 1960s and early 1970s.

After its incorporation as a statutory board in 1972, the POSBank gained a growing share of total non-bank resident deposits until the late 1970s. In the 1980s, this share declined somewhat. As at September 1992, deposits with the POSBank totalled \$16.9bn, most of which were in the form of savings deposits.

Finance companies have the smallest share of total deposits and have seen moderating growth in recent years. They attracted \$9bn of total deposits as at August 1992. Net funds raised in the capital market were \$9bn in 1991. For the life insurance industry, total annual premiums in force as at end June 1992 were \$1.5bn compared to \$0.9bn as at end 1989.

IV. Determinants of Private Savings

4.1 Some Conceptual Issues

Both the life cycle hypothesis (LCH) and the permanent income hypothesis (PIH) postulate that the consumption behaviour of individuals is a stable function of expected lifetime income. The individual will plan to attain an even consumption path over his lifetime using all available resources, including his stock of non-human wealth. If individuals save a roughly stable fraction of their permanent income, then income that is considered transitory will be largely saved.

Savings may also be influenced by demographic factors. A key tenet of the LCH is that households accumulate wealth prior to retirement and dissave during retirement. A rise in the ratio of young

and aged dependents in the population may be expected to have a negative effect on the savings rate.

A country's savings rate over time, or in comparison with other countries, may to some extent be explained by the level of government savings. If, however, Ricardian equivalence holds, changes in government saving would lead to offsetting changes in private saving, so that aggregate savings remains unchanged¹⁰.

Savings could also be affected by the level of "forced" savings or other contractual savings schemes. In Singapore, CPF contributions have often been cited as an example of forced savings that have led to a high overall savings rate. The empirical issue here is whether such contractual savings are substitutable with discretionary savings, i.e. whether an increase in CPF savings would be offset by a decrease in discretionary savings, thus leaving total savings unchanged¹¹.

Another form of contractual savings is insurance. Insurance represents not only funds available for use in the future. The pooling of resources reduces risks and thus the amount of precautionary saving required. If, however, discretionary savings are inversely related to the degree of insurance coverage, i.e. individuals reduce other savings when they take up an insurance policy, then total savings would be unaffected.

Real interest rates may also be hypothesized to affect saving, although the direction of effect is not certain. If interest rates have a strong substitution effect, their relationship with saving would be positive; if the income effect predominates, higher interest rates would mean a lower saving rate is needed to achieve a desired level of saving.

10. For an empirical review on the validity of Ricardian equivalence in the U.S., see Liam P. Ehill and Owen Evans, *Ricardian Equivalence and National Saving in the United States*, IMF Working Paper WP/88/96, October 1988.

11. There is a related measurement problem with CPF savings, which should be defined as gross contributions plus accrued interest less all withdrawals for consumption. It is not possible to ascertain from available data how much of CPF withdrawals go into consumption. Some categories of withdrawals, say for medical expenses, are clearly consumption, while others like withdrawals for investment in shares or gold are not. It is not apparent though how the two largest categories of withdrawals - for housing and retirement - are to be treated. Conceptually, both include substantial portions of consumption. The problem is measuring how much.

4.2 Empirical Results

To estimate a private savings function for Singapore, regressions were run for the period 1975-91 for the private voluntary savings rate. Previous work on a gross domestic savings function is also presented, as a comparison with the private savings function. Private voluntary savings are defined as GNS excluding government budget and statutory board surpluses, and less net contributions to the CPF¹². This is taken as a ratio of private disposable income. The independent variables are listed in Table 11.1.

Table 11.1

INDEPENDENT VARIABLES

Mnemonic	Variable	Derivation
dr	Dependency ratio	No. of persons aged below 20 and above 55 as a percentage of the rest of the population
gs	Government savings rate	(Government revenue-consumption) as a percentage of GNP
pch(pdi)	Income growth proxy	Annual growth in real private disposable income
pch(gdp)	Real income growth	Annual growth in real GDP
ir	Nominal interest rate	Deposit-weighted average of nominal interest rates on fixed and savings deposits in banks, finance companies, the POSB and the ACUs
dev(er)	Exchange rate deviation	Deviation of the real effective exchange rate from its trend
sd	Statistical discrepancy	Statistical discrepancy, scaled by nominal GDP

12. Depreciation was not netted out, as there is no satisfactory series on depreciation.

The econometric results are presented in equation 1 below. As expected, the savings rate was found to be significantly negatively related to the dependency ratio. A rise in the dependency ratio of 1 percentage point is expected to lower the private voluntary savings rate by 0.2 percentage points.

The savings rate was found to be positively affected by an increase in the growth rate of private disposable income.

Equation 1

PS

Ordinary Least Squares

ANNUAL data for 16 periods from 1976 to 1991

Date: 29 October 1992

pvs

$$= - 0.22270 * dr - 0.66976 * gs$$

(9.16877) (6.14204)

$$+ 0.12823 * pch(pdi) - 0.63484 * ir + 0.32409 * dev(er)$$

(1.99428) (3.76339) (6.67082)

$$+ 55.3132$$

(19.2148)

Sum Sq	13.4570	Std Err	1.1600	LHS Mean	21.4815
R Sq	0.9531	R Bar Sq	0.9297	F 5, 10	40.6501
D.W.(1)	2.1211	D.W.(2)	2.3035		

Nominal interest rates were found to have a negative effect on the savings rate, indicating that the income effect of an interest rate rise outweighed the substitution effect of enjoying higher returns on money.

The savings rate was also affected by transitory income changes resulting from exchange rate changes. An appreciation of the real effective exchange rate that is faster than its trend by 1 percentage point would raise the savings rate by 0.3 percentage points.

There was no evidence of strict Ricardian equivalence; however, our equations suggest that there is a partial offset in private savings from a rise in government savings.

Equation 2

GDS

Restricted Ordinary Least Squares

ANNUAL data for 20 periods from 1972 to 1991

gds

$$\begin{aligned}
 = & 0.36787 * \text{pch}(\text{gdp}) + 0.10912 * \text{pch}(\text{gdp})[-1] \\
 & (7.46660) \qquad (3.10026) \\
 & + 0.10007 * \text{pch}(\text{gdp})[-2] + 0.13295 * \text{pch}(\text{gdp})[-3] \\
 & (2.84152) \qquad (3.41298) \\
 & + 0.11561 * \text{dev}(\text{er}) - 0.24343 * \text{ir} - 0.56522 * \text{sd} \\
 & (4.18729) \qquad (1.96077) \qquad (3.31719) \\
 & - 0.32851 * \text{dr} + 0.52041 * \text{gs} + 61.8732 \\
 & (35.3861) \qquad (5.65478) \qquad (76.2036)
 \end{aligned}$$

Polynomial lags:

pchya(ngdp85)

from 0 to 3 degree 3 far

Sum Sq	3.1287	Std Err	0.5333	LHS Mean	37.9717
R Sq	0.9962	R Bar Sq	0.9935	F 8, 11	362.955
D.W.(1)	2.3718	D.W.(2)	2.1506		

We also estimated savings equations using overall savings as the dependent term. (See equation 2 above.) As in the private savings equation, demographic factors were found to be important in affecting the savings rate. In fact, the bulk of the increase in Singapore's savings rate since 1972 appears attributable to demographic factors. The secular fall in Singapore's dependency ratio contributed to about 90 per cent of the rise in the domestic savings rate during 1973-84. This has mirrored the entry of the post-war baby boom generation into the workforce. The decline in the dependency ratio appears to have bottomed out towards the end of the decade as it began to reflect the trend slowdown in birthrates since the early 1970s.

Income growth was also significant in determining the domestic savings rate, a similar result to the case of private savings. The slowdown in the growth of real income has exerted the strongest depressive effect on the savings rate in the past. Real GDP growth has slowed from an average of 13 per cent in the early 1970s to about 5-6 per cent in the second half of the 1980s. While Singapore's high GDP growth rate by international standards contributes towards explaining its higher savings rate vis-a-vis other countries, it does not account for the secular rise in Singapore's savings rate over time as real income growth has moderated on a trend basis.

Government savings was found to be a significant factor affecting the overall savings rate. This is consistent with the private savings equation estimated earlier, although the pass-through of government savings to overall savings appeared to be slightly larger, implying a weaker Ricardian equivalence effect.

The savings rate has also responded inversely to changes in nominal interest rates in the past, implying the dominance of the income effect over the substitution effect on savings behaviour.

Deviations from the long-term trend in the real effective exchange rate (REER) were also found to be significant in affecting the savings rate. As expected, a faster appreciation in the REER than its trend tended to increase the savings rate.

A term in the statistical discrepancy was found to be negatively significant. Although by convention, statistical discrepancy is treated as a consumption item, there is little reason for it to be so. The results suggest that about half of the statistical discrepancy is actually savings.

V. Conclusion

The greying of Singapore's population will have a downward effect on the private savings rate towards the end of the century. A continued savings-investment gap of 7-8 per cent of GNP is expected over the medium-term. Also, even if the level of domestic resources remains high enough to finance our investment needs, our reliance on foreign direct investment still exists. The sum of domestic funds may not be able to replace the direct investment of foreign multinationals and cannot replicate the other benefits that direct investment brings.

SAVING-INVESTMENT GAP

(Per Cent of GNP)

Year	Gross National Savings	Gross Capital Formation	Saving- Investment Gap
1960	-2.4	11.2	-13.6
1961	-2.3	11.4	-13.7
1962	5.8	15.3	-9.5
1963	3.7	17.0	-13.3
1964	8.9	19.4	-10.5
1965	11.2	21.2	-10.0
1966	15.9	21.2	-5.3
1967	15.8	21.6	-5.8
1968	19.7	24.4	-4.8
1969	19.1	28.2	-9.1
1970	19.3	38.3	-19.0
1971	18.8	40.7	-21.8
1972	24.5	41.5	-17.0
1973	27.6	40.3	-12.7
1974	26.3	46.6	-20.3
1975	29.4	39.6	-10.2
1976	31.4	41.1	-9.7
1977	32.0	36.6	-4.6
1978	33.3	39.1	-5.8
1979	35.7	43.5	-7.8
1980	34.2	48.1	-13.9
1981	37.2	48.2	-11.0
1982	40.6	49.3	-8.7
1983	44.6	48.1	-3.5
1984	45.6	47.6	-2.0
1985	41.0	41.0	0.0
1986	39.4	37.6	1.8
1987	38.6	39.4	-0.8
1988	40.6	37.0	3.6
1989	42.8	34.5	8.3
1990	44.8	38.7	6.1
1991	46.9	36.6	10.3
Average			
1960-69	9.5	19.1	-9.6
1970-79	27.8	40.7	-12.9
1980-84	40.4	48.3	-7.8
1985-91	42.0	37.8	4.2

CPF CONTRIBUTION RATES

(Per Cent)

Period	Employee CPF Contri- bution Rate as % of Net Wage	Employer CPF Contri- bution Rate as % of Net Wage	Total CPF Contri- bution Rate as % of Net Wage
	1	2	3=1+2
1960-67	5.00	5.00	10.00
1968	5.375	5.375	10.75
1969	6.50	6.50	13.00
1970	8.00	8.00	16.00
1971	10.00	10.00	20.00
1972	10.00	12.00	22.00
1973	10.50	14.50	25.00
1974	13.00	15.00	28.00
1975	15.00	15.00	30.00
1976	15.00	15.00	30.00
1977	15.25	15.25	30.50
1978	16.00	16.00	32.00
1979	16.50	18.50	35.00
1980	17.25	20.50	37.75
1981	20.00	20.50	40.50
1982	22.50	21.25	43.75
1983	23.00	22.50	45.50
1984	24.00	24.00	48.00
1985	25.00	25.00	50.00
1986	25.00	13.75	38.75
1987	25.00	10.00	35.00
1988	24.50	11.00	35.50
1989	23.50	13.50	37.00
1990	23.00	15.75	38.75
1991	22.75	17.00	39.75
1992	22.25	17.75	40.00

Chapter 12

DOMESTIC RESOURCE MOBILIZATION - THE CASE OF SRI LANKA

by

B.D.W.A. Silva

I. An Overview of the Developments in Domestic Savings Mobilization

1.1 The Role and Significance of Domestic Savings

Sri Lanka is ranked in the group of 20 countries receiving lowest per capita income in the world. In the decade of the 1980s, Sri Lanka's average per capita income at current prices was US Dollars 310. This situation is attributed to the country's low growth rates. Although Sri Lanka achieved favourable growth immediately after the economic liberalization in 1977, the country's growth has been generally low. The average real growth (GNP) rate was 4.0 per cent for the decade of 1970 and 3.9 per cent for the decade of 1980. Therefore, all the policy measures being initiated emphasizes the need to increase the country's growth rate.

A high level of investment is a pre-requisite for sustaining a high growth rate. The level of investment depends on the level of savings mobilized from domestic and foreign sources. It has been recognized that the investment in Sri Lanka during the past, especially during the period up to 1977, had been constrained by the lack of domestic savings. Investment as a percentage of GDP was around 17 per cent in 1970s and 25 per cent in 1980s whereas domestic savings was 13.86 and 12.05 respectively during the two periods. At present, the investment rate is 21 per cent and this clearly should be increased to maintain a higher growth in the economy. In the medium-term perspectives of budgetary measures, policy makers expect to sustain an annual rate of economic growth around 6-7 per cent in order to enhance production and employment opportunities in the country (Budget Speech - 1992). It is planned that this target of growth requires a rate of investment of not less than 25 per cent of the gross domestic product (GDP) of the country.

In order to finance this level of investments without creating inflationary pressures; it is also planned that the level of domestic savings is required to be increased to over 17 per cent of GDP from the current 13 per cent level. In this situation, domestic resource mobilization receives much emphasis in economic growth of the country.

Since financing of public investment through deficit financing is likely to create inflationary pressure, government investment is expected to be maintained at around 9 per cent of GDP in the coming years. Government will mainly concentrate on rehabilitating economic and social infrastructure. In this situation, private investments would be encouraged in supportive and complimentary manner. However, current domestic savings is about 12.8 per cent of GDP. Therefore, to increase the level of investment requires increased mobilization of savings.

Savings to be mobilized from foreign countries for investment financing is a delicate issue. In Sri Lanka, the dependency on foreign savings has been relatively higher in the recent past. For instance, financing the leading public investment projects during the early 1980s was made possible through the availability of finances. In 1980, about 60 per cent of investment was financed by savings from foreign sources. In 1991, this rate was 44 per cent which is still very high. However, public sector investment has been reduced significantly during the recent past as planned in the medium term perspectives. While policy reforms are being initiated to promote the domestic private sector and foreign direct investments to meet the country's investment needs, it is expected that a large portion of domestic private sector investment will be financed from domestic savings mobilized through the financial as well as the capital market.

This chapter, therefore, attempts to study the issues in domestic savings mobilization and appropriate measures to enhance the level of domestic savings. The role of financial system in domestic savings mobilization is analyzed in Section II, while the role of the capital market in domestic savings mobilization is discussed in Section III. An attempt is then made in Section IV to identify the factors affecting the mobilization of domestic savings. Finally, the major findings and conclusions are presented in Section V.

1.2 Definitions Associated with the Measurement of Domestic/National Savings

Savings, broadly, is the money saved from current disposable income. This savings in aggregate is utilized for investment and future consumption. Households, businesses and government are the sources of savings. Savings mobilization would imply an organizational set-up stimulating and collecting scattered savings to make these available for productive investment purposes. If savers who intend to finance future consumption hold savings as cash at hand, they would suffer a decline in the real value of savings due to inflation. Investors, on the other hand, undertaking productive services need money from surplus units of the economy. Therefore, savings mobilization measures should not only increase the level of domestic savings but also attract savings to the institutional sector and channel such savings to finance productive investments.

A measurement of savings in a country can be derived through the National Income Identity as follows:

$$Y = C+I+X-M \dots\dots\dots (1)$$

$$Y - C = S \dots\dots\dots (2)$$

Therefore,

$$S = I+X-M$$

Y : Gross Domestic Product

C : Consumption, Private and Public

I : Investment

X : Exports of goods and non-factor services

M : Imports of goods and non-factor services

S : Gross Domestic Savings

Domestic savings is the savings mobilized within the country for financing investment. On the other hand, National Savings measures the savings mobilized by the citizens of the country, and is derived by adding the net factor income and net private transfers from abroad to domestic savings. Therefore, National Savings indicates the country's ability to finance investments. Accordingly, the shortfall of savings for investments is estimated as foreign savings. This foreign savings is termed the savings investment gap.

1.3 Experience and Trends in Savings Mobilization

Table 12.1 shows the levels of domestic savings, national savings, investment and savings investment gap (i.e., foreign savings) relative to GDP in the country.

The post-1977 economic policies had a favourable impact on investment in the country, requiring increased savings mobilization. Investment, as a percentage of GDP, increased from 14 per cent in 1977 to 31 per cent in 1982. This sharp increase in investment was mainly due to the large investment programmes launched by the government to develop the country's economic infrastructure. The lead projects, consisting of the Accelerated Mahaweli Development Programme, the Investment Promotion Zone at Katunayake and Urban Development and Housing Programmes absorbed a substantial proportion of the overall investment expenditure. The emphasis of the investment strategy was on the initial development of essential infrastructure through public investment, so that the private sector would eventually take over the leading role in economic activities. Consequently, the government decided in 1984 that budgetary resources not be allocated to activities handled by the private sector but that the government should concentrate only on ongoing projects. Private sector investment has displayed an appreciable expansion in recent years. As a result of the phasing out of leading public investment projects and curtailing new projects, the overall investment rate has shown a decline from 28.5 of GDP in 1983 to 23 per cent in 1991. Public investment is currently confined mainly to irrigation, road rehabilitation, telecommunication, power and energy and human resource development. This pattern is expected to continue in this decade.

Similar to many other developing countries, savings mobilization in Sri Lanka has been traditionally low due to slow growth in per capita income. In Sri Lanka, national savings have been higher than domestic savings mainly due to remittances from Sri Lankan workers employed abroad. However, the levels of savings as indicated by the savings ratios have been evidently variable, which is not a healthy sign for a developing economy. Domestic savings averaged about 12 per cent of GDP during most of the 1980s. Although, domestic savings increased to 14.3 per cent of GDP in 1990, it fell to 12.8 per cent in 1991. Following this trend, national savings have also fluctuated, reaching a level of 15.2 per cent of GDP in 1991. In recent years, national savings was around 14 to 15 per cent of GDP.

Table 12.1**RELATIVE SHARES OF DOMESTIC SAVINGS,
NATIONAL SAVINGS, INVESTMENT AND FOREIGN SAVINGS**

(Per cent of GDP)

Year	Investment	National Savings	Foreign Savings	Domestic Savings
1977	14.45	18.02	-3.57	18.10
1978	20.05	15.52	4.53	15.27
1979	25.82	14.76	11.06	13.78
1989	33.77	13.94	19.83	11.19
1981	27.77	14.29	13.48	11.70
1982	30.76	15.42	15.34	11.86
1983	28.89	16.44	12.45	13.79
1984	25.83	22.25	3.58	19.89
1985	23.82	14.22	9.61	11.87
1986	23.66	14.49	9.17	12.05
1987	23.33	15.28	8.05	12.83
1988	22.78	14.23	8.54	12.02
1989	21.72	14.65	7.07	12.23
1990	22.21	16.77	5.44	14.33
1991	23.01	15.21	7.81	12.80

Source: Annual Reports, Central Bank of Sri Lanka.

A major problem that Sri Lanka continues to face in planning investment projects is the lack of national savings to meet the investment needs. Therefore, the country has been dependent on foreign savings to finance the shortfall between investment and national savings. Following the economic liberalization in 1977, the use of foreign savings steadily increased to about 50 per cent of investment till 1982. In subsequent years, this dependency rate has fluctuated significantly and reached 34 per cent of investment in 1991. Foreign savings as a per cent of GDP have also fluctuated in the range of 19.8 per cent to 3.6 per cent during the decade of the 1980s. This rate has been about 7 to 8 per cent in recent years. However, in general, a moderate, gradual decline in the use of foreign savings is observed after 1980. Borrowing has been the major component of foreign savings to the country. The terms offered to Sri Lanka government in borrowing from the foreign sector are believed to be favourable because of low interest rates, longer repayment periods and grace periods and other concessionary loan repayment conditions. As a source of foreign savings, direct investment and portfolio investment have yet to influence the economy significantly. Thus, even though the attraction of a greater amount of foreign savings under favourable terms to the country is treated as an achievement, attention should be paid to attracting non-debt creating sources of foreign savings such as direct investment and portfolio investment.

II. Role of the Financial System in Domestic Savings Mobilization

The financial system, more specifically, the banking and non-banking financial system, plays, a lead role in domestic savings mobilization in Sri Lanka. However, the financial system prior to 1977 was represented by a limited number of institutions and markets reflecting a low level of economic activity, especially in the private sector. With the change in overall economic policy in 1977, financial reforms were also implemented, which included the promotion of financial intermediation through the establishment and promotion of financial institutions, especially non-bank financial institutions and liberalization of interest rates. The level of nominal interest rates was raised and maintained at high levels as it was considered to be a precondition for raising financial savings which eventually could be channelled for investments.

2.1 Developments in the Financial Structure

The financial sector in Sri Lanka consists of the Central Bank, commercial banks, Non-Bank Financial Institutions (NBFIs) including finance companies, development banks and savings institutions. The financial structure in Sri Lanka has been significantly broadened since 1977 in terms of institutions, markets and instruments. Confirming this, the share of banking, insurance and real estate in GNP, which rose only by 0.4 percentage points during the 1970-77 increased to 1.6 per cent in 1979 and grew sharply to reach 4.9 per cent in 1991. In this analysis, the structure has been broadly categorized into three; namely institutions that accept deposits (discretionary savings), those which receive contractual savings and those which provide only financial services, but do not accept deposits.

2.1.1 Discretionary Savings Institutions

The institutions that accept deposits include Commercial Banks, the National Savings Bank (NSB), Finance Companies, Co-operative Rural Banks (CRBs) and Regional Rural Development Banks (RRDBs). Following the liberal economic policies adopted in 1977, the emphasis was placed upon attracting foreign investment and as such, restrictions on the establishment of branches of foreign commercial banks were removed. Accordingly, several foreign commercial banks opened their branches in Sri Lanka, substantially increasing the number of commercial banks operating in the Country.

The NSB, which was formed as a government-owned savings institutions in 1972 by amalgamating the activities of the Ceylon Savings Bank, the Post Office Savings Bank and the National Savings Movement, is the only savings bank in the country. The objective of the NSB was to mobilize savings, especially from small savers and to provide savings opportunities in areas where banking facilities are not readily available. In addition to its main branches, the NSB provides savings facilities to its customers through the island-wide net work of post offices and sub-post offices. The NSB is legally required to invest 60 per cent of its deposits in government securities, thus becoming a captive source for government borrowings. By the end of 1991, savings and fixed deposits in the NSB accounted for 25 per cent of all deposits and this represents about 34 of such deposits of all commercial banks.

Finance companies are the third largest group of deposit taking institutions in Sri Lanka. These institutions showed a rapid growth during the 1977 - 1987 period in response to liberalization measures introduced in 1977. Although the main line of business was restricted to hire purchase activity, their activities gradually began to shift from hire purchase to granting loans and advances for commercial activities and the import-export trade. Deposits are the major source of their funding.

The growth of finance companies has however decelerated to a certain extent in the recent past mainly due to liquidity problems encountered by some finance companies necessitating official intervention and self operations. Consequently, the number of finance companies registered with the Central Bank, which stood at 72 at end of 1988 declined to 24 by the end of 1991. However, the total deposits in finance companies that reported information shows an increase over the level in 1988.

Rural Banks (RBs) are engaged in mobilizing rural savings and channelling credit to the rural sector. RBs are assisted by the People's Bank (PB) with technical advice and supervision. During the last three decades, the RBs have grown in number, providing basic banking services to a large portion of the rural population. A rural bank was established for each of the new co-operative as part of the government policy in the rural sector.

2.1.2 Contractual Savings Institutions

Action was also taken to establish new contractual savings institutions. Accordingly, a second provident fund, The Employees Trust Fund (ETF) was established in 1981. Breaking the monopoly in insurance business, The National Insurance Corporation (NIC) was established in 1980. Subsequently, the insurance business was opened to the local private sector in 1985 by abolishing public sector monopoly. Accordingly, three private insurance companies have been set-up.

In the context of liberalized economic policies, there was also a need for specialized financial services. Accordingly, several Non-Bank Financial Institutions (NBFIs) were established specifically to meet the growing demand of the private sector. In order to provide medium and long term capital and other corporate financial services, three merchant

banks were established. Increasing the number of development banks to three, the National Development Bank (NDB) was established. Another noteworthy development was the introduction of foreign currency banking operations (FCBUs) to promote off-shore banking services. The total number of FCBUs operating in Sri Lanka has progressively increased since their inception in 1979 and stands at 24 at present.

2.1.3 Expansion of Financial Institutions

A significant feature of the development of the financial system was the branch expansion of both existing and new financial institutions. Table 12.2 shows the overall expansion of financial institutions in terms of their branches. It is evident that the commercial bank branch net-work has expanded significantly during the period 1977-1991. The total number of branches, including those of non-banks, nearly doubled during this period despite a significant decline in Agriculture Service Centre (ASC) branches of the Bank of Ceylon since 1979. Consequently, the banking density-the total number of bank branches for each 10,000 population - also shows similar improvement depicting the increased opportunities to mobilise savings through the financial system. The banking density, which stood at 0.157 by the end 1970 reached 0.256 in 1976 and further increased to 0.489 in 1991.

2.1.4 Expansion in Financial Facilities

The availability of a wide range of financial instruments will enhance the capacity to mobilize savings. During the recent past, financial institutions have introduced changes to enhance the quality of existing financial instruments and also introduced innovative instruments in order to attract deposits.

Fixed deposits, being the most popular deposit instruments, are accepted by commercial banks, the NSB, rural banks and finance companies. With respect to fixed deposits, more frequent payment of interest, up-front payment of interest, extending the minimum and maximum deposit amounts, extending the maturity of deposits are some of the changes made. The most significant improvement in this class of deposits is the introduction of Certificates of Deposits (CDs). Due to its negotiability and anonymity, CDs have become a popular deposit instruments. In addition, commercial banks and the NSB also introduced special schemes for minors, extending the scope of depositors.

Table 12.2**DEVELOPMENTS IN THE INSTITUTION NET-WORK**

(at end of the period)

Institution	1980	1985	1987	1988	1989	1990	1991
1. Commercial Banks	489	653	699	700	712	742	763
2. Non-Monetary Sector							
a. Deposit Taking Institutions							
a. 1 NSB	42	57	62	64	69	76	81
a. 2 Rural Banks	641	914	955	970	986	1029	1060
a. 3 Finance Cos.*	27	54	53	54	52	36	33
a. 4 RRDBs	-	21	61	80	89	100	124
a. 5 Agri.Service Centre	387	53	49	47	45	38	36
b. Contractual Savings Insts.*	4	4	7	7	7	7	7
3. Total Branches	1590	1756	1886	1992	1960	2028	2140
4. Banking Index (1+a.1)	0.378	0.45	0.442	0.460	0.465	0.481	0.489

* Includes Employees Provident Fund, Employees Trust Fund and Insurance Corporations/Companies.

Savings deposits are also an important financial instrument as far as domestic resource mobilization is concerned, though not as significant as fixed deposits. Commercial Banks, the NSB and rural banks accept savings deposits. Commercial Banks and the NSB have introduced special savings deposit schemes even to save small amounts. The Save-As-You Earn scheme (SAYE), Gift Voucher Scheme and Investment Savings Schemes are some of them.

Another important development is the introduction of foreign currency deposits in 1979 with attractive concessions. Sri Lankan residents working abroad and non-residents could open and maintain Non-Resident Foreign Currency (NRFC) and Resident Non-National Foreign Currency (RNNF) accounts in several designated foreign currencies. These accounts are free of exchange control and are non-taxable. In addition, residents were also allowed to open and operate foreign currency accounts entitled 'Resident Foreign Currency Accounts' and similar concessions as under NRFC accounts, were made available under this scheme.

2.2 Trends and Magnitudes of Savings Through the Financial System

Under the positive impact of the expansion of the financial system, financial savings which includes discretionary savings, contractual and compulsory savings, have shown a substantial growth during the period 1977-1991. As evident in Table 12.3, total financial savings as a per cent of GDP has also increased during this period, showing the developments of financial savings. Total financial savings as a per cent of GDP which remained relatively stagnant during 1970-90, has risen to 53.3 as at end of 1990.

Commercial banks are the single most important mobilizers of savings in Sri Lanka. Of the total savings at the end of 1991, time and savings deposits mobilized by the banking system accounted for 75 per cent. Competitive deposit rates, the branch expansion program, innovative instruments and effective publicity campaigns have contributed to the expansion of deposits.

Contractual savings institutions such as Provident Funds and insurance companies have also made an immense contribution towards raising financial savings in the country. Establishing another public

Table 12.3**ACCUMULATED FINANCIAL SAVING-FINANCIAL ASSETS**

(Million Rupees)

Item	1977	1988	1989	1990	1991
A. Currency Held by Public	2792	18487	19650	22120	24152
B. Discretionary Savings	8792	79098	89440	108285	134910
1.Demand Deposits-Comm. Banks	2574	13892	15688	17758	22202
2.Time & Saving Dep.-Comm Banks	3441	41818	48548	61700	78959
3.Time & Savings Dep-N.S.B.	2596	18065	19956	23103	27652
4.Time & Savings dep-RRDBs	-	104	176	314	437
5.Time & Savings Dep-F.C.	181	5219	5072	5383	5660
C. Contractual Savings	2576	27618	33967	41133	49637
1. Employees' Provident Fund	2576	24759	30358	36298	43769
2. Employees' Trust Fund	-	2859	3609	4835	5868
D. Total Financial Savings	14160	125203	143057	171511	208699
E. Total Financial Savings GDP(%)	38.9	56.4	56.8	53.3	55.6

Source: Annual Reports, Central Bank of Sri Lanka.

insurance corporation and setting-up three private insurance companies after opening the insurance business to the private sector have contributed to the growth in this sector. A notable feature in life insurance in the recent past has been the introduction of new life policies with added benefits by all institutions.

2.3 Financial Reforms

Several measures were taken to reform the financial sector. The broad objective of the financial reforms, as an integral part of the 1977 policy package, is to create an environment conducive to rapid and sustainable economic growth through enhanced savings and investment. These reforms included the promotion of financial intermediaries through the establishment and promotion of financial institutions, especially non-bank financial institutions, and the liberalization of interest rates. A move towards a market-based interest rates structure and a strengthening of the regulatory frame-work to ensure smooth functioning of financial intermediaries were other measures taken.

With regard to interest rates, a substantial increase of interest rates was effected as high interest rates were thought to be a pre-condition to raising financial savings which eventually could be channelled for productive investments. The government-owned NSB was used as the apex institution to raise the deposit rates structure aimed at stimulating savings. The NSB raised its savings deposit rates and one year fixed deposit rates from 7.2 per cent and 7.5 respectively respectively in 1976 to 8.4 per cent and 15 per cent respectively in September, 1977. Also, the NSB introduced 12 months fixed deposits with an interest rate of 18 per cent. Faced with stiff competition, the commercial banks were also compelled to fall in line with the rates offered by the National Savings Bank. Accordingly, the fundamental change in the deposit rates was an almost doubling of fixed deposit rates offered by these institutions.

Similar increases were also effected on the short-term and medium-term instruments. The Central Bank raised the "Bank Rate"¹. The Bank rate, which was 6.5 per cent in 1976, was raised to 10 in 1977 and further to 14 per cent. In line with these increases, adjustments were

1. Rate at which the Central Bank grants advances to commercial banks for their temporary liquidity purposes.

also made in respect of short-term, medium and long-term debt instruments such as Treasury bills, Government Securities, Small and Medium Industry (SMI) debentures.

Action was also taken to move towards a market-based interest rate structure. The Treasury bill rates were allowed to be determined by market conditions with less intervention by the authorities. In response, non-bank participation in Treasury bills has grown rapidly in the recent past. The Central Bank administered refinance rates too have been adjusted on several occasions to reduce the distortions in the interest rate structure.

Another aspect of the financial reforms was the establishment of new financial institutions together with branch expansion of both existing and new financial institutions. For instance, the number of commercial bank branches have nearly doubled during the last decade. In order to mobilize rural savings and channel credit to this sector, Regional Rural Development Banks (RRDBs) were set-up in 1985. In addition, there has been a significant improvement in the Co-operative Rural Banks network. The qualitative improvements in the banking sector is another development that took place through increased competition following reforms. Accordingly, several banks and branches have computerized their transactions.

The strengthening of the regulatory environment to ensure smooth functioning of financial institutions was another area of attention. In this context, several legal enactments were introduced. Chief among these was the Banking Act which includes new prudential regulations and capital requirements. The Debt Recovery Act and Finance Company Act are other legislative enactments introduced to improve the conditions of financial institutions. A Credit Information Bureau was also set-up to facilitate the monitoring of defaulted loans.

III. The Role of the Capital Market in Domestic Resource Mobilization

3.1 Introduction

A well developed capital market can play a significant role in mobilizing domestic resources. More specifically, in an economy when

the private sector is expected to play the leading role in economic activities, the existence of an active capital market is considered to be extremely important in mobilizing both domestic and foreign capital for investment. As in the case of many other developing countries, the capital market in Sri Lanka is yet an underdeveloped one.

Except for the stock market which trades and exchanges equity shares of listed companies, all the other sub markets of the capital market are relatively inactive. The stock market has also been stagnant for a period of about three and a half decades since the introduction of exchange control regulations restricting the movement of capital across borders. It was only since 1990 that a significant turn around has been witnessed in the stock market with increasing participation by both local and foreign investors. The markets for intermediate and long term bonds appear to have a limited scope in resource mobilization due mainly to the inherent bottlenecks in the system itself. The major obstacles are the relatively unattractive returns on investments in such markets and the lack of confidence. In the bond market trading is confined to government securities having low returns and the players are almost exclusively captive sources which are legally bound to invest in such instruments. The low returns and non availability of an array of different maturities has kept the investors away from the securities market.

3.2 Development of the Capital Market

In the bond market, the main instruments traded are the government rupee securities and debentures issued by government owned institutions. "Defence Bonds" and "Treasury Certificates of Deposits" are two other instruments traded occasionally in the bond market. In the stock market the instrument traded is the equity shares of listed companies. The traditional rupee securities being long-term debt instruments with a relatively low return, are not attractive instruments for investors to trade. In response to market reactions, the maturity periods of rupee securities have been reduced with an array of maturity periods. Accordingly, the maturity periods which were as long as 25 years were reduced to 12 years in 1979 and further to 6 years in 1987. In 1991, rupee securities with a maturity period of one year were also introduced, marking a complete departure from the traditional practice of issuing only medium and long term debt instruments.

3.2.1 Recent Developments in the Equity Market

In developing the equity market a number of supporting measures have been taken in the recent past. The development of an institutional and legal framework and fiscal incentives coupled with the relaxation of exchange control appear to be the dominant measures in this regard. In strengthening the legal and institutional framework, the Securities Council was established under the Securities Council Act No. 36 of 1987 to regulate the securities market, to grant licences to stock exchanges, stock brokers and stock dealers. The Securities Council (subsequently renamed the Securities and Exchange Commission) was also entrusted with the task of protecting the financial interests of investors and ensuring that professional standards are maintained in the market. Under the Securities Council (Amendment) Act No.26 of 1991, the Securities and Exchange Commission (SEC) is also empowered to grant licenses to establish Unit Trusts (UTs).

A package of fiscal incentives has been extended to listed companies with a view to expanding market activities by attracting more investors, domestic as well as foreign. The fiscal policy package included the abolition of the 100 per cent property tax on share purchases by non-nationals, revision of the capital gains tax to affect only sales within one-year from the date of purchase, abolition of the ad-valorem stamp duty, withdrawal of the withholding tax of 15 per cent on dividends paid by listed companies and withdrawal of the wealth tax on listed company shares.

The privatisation of public enterprises provided further impetus to boost trading activities in the equity market. This measure increased the supply of shares, the number of market participants in the market and also the public confidence in market oriented trading activities. Out of the six new issues made during 1991, two issues were made by privatised public enterprises.

Increased non-national participation both in the primary and the secondary market was a significant factor contributing to the buoyancy in the market. This was mainly due to the relaxation of exchange controls, tax incentives and approvals granted for the operations of country and regional funds. In addition, the investment guarantees through the signing of MIGA and bilateral investment treaties providing protection to investments also contributed positively to promote non-national

participation. Another noteworthy feature observed in the stock market was the launching of four Unit Trusts.

In view of the above developments, the market size as measured by market capitalization and trading activities in the stock exchange recorded a substantial growth during the last two years. The annual turnover, which was Rs.226 million in 1989 increased to Rs.1,563 million at the end of 1990 and further to Rs.4,303 million at the end of 1991 recording an eighteen fold increase within a very short period of two years. The daily turnover which was Rs. 1 million increased to Rs.6.5 million and further to Rs.18 million during the same period. Reflecting a similar trend, the average price of shares also increased during this period. Meanwhile, the market capitalization which was Rs.17 billion at the end of 1989 increased to Rs.81 billion at the end of 1991. Market capitalization as a percentage of GDP also increased from 7.5 per cent to 23.9 per cent during the period 1989-1991. Depicting buoyant trading activities, the All Share Price Index and the Sensitive Price Index rose by 366 per cent and 250 per cent, respectively, during the same period. However, the number of companies listed on the stock exchange increased only marginally.

3.2.2 Bond Market

The bond market in Sri Lanka is relatively narrow and is confined to the primary market activities. The bond market comprises mainly the rupee securities issued by the government and the debentures issued by government owned financial institutions namely State Mortgage and Investment Bank (SMIB), Urban Development Authority (UDA) and National Housing Development Authority (NHDA) which provide finance for housing purposes. These debentures are also guaranteed by the government. So far, two debenture issues have been made by companies which are listed on the stock exchange, but little trading has taken place with these debentures. The other forms of long-term debt instruments are not in existence in the domestic market.

(a) Rupee Securities

Under the Registered Stock and Securities Ordinance No. 7 of 1937, the government issues long-term debt instruments called rupee securities to finance the budget deficit. In terms of this Ordinance, the terms in respect of each loan including the amount of money to be

Table 12.4**SUMMARIZED TRADING STATISTICS**

	1986	1987	1988	1989	1990	1991
Annual Turnover (Rs.Mn.)	140	290	319	226	1563	4304
Market Days (No.)	233	230	236	238	238	239
Daily Turnover Average(Rs.Mn.)	0.6	1.3	1.4	1.1	6.6	18.0
Share Traded (No.Mn.)	6.1	12.8	12.3	12.2	41.7	79.2
Transactions (No.)	8525	14964	13027	16792	48332	91571
Companies Traded (No.)	132	151	154	160	164	166
New Listings (No.)	06	04	08	02	01	05
De-Listings (No.)	05	09	00	02	01	02
Companies Listed (No.)	173	168	176	176	175	178
Market Capitalization (Rs.Mn.)	11812	18460	15693	17087	36880	81084
All Share Price Index (Base 1985)	141.38	217.97	172.44	179.49	384.39	837.89
Sensitive Price Index (Base 1985)	218.19	384.12	309.56	341.74	680.30	1198.65

raised, the mode of raising the loan, and the rate of interest etc. have to be specified and gazetted before the issues are made. With respect to transfer of securities, every transfer should be registered and a payment has to be made.

In response to market reactions, gradual reductions in the maturity period of rupee securities have been effected minimizing the need to enter into contracts of very long periods for fixed interest rates. The maturity periods as long as 25 years were reduced to 12 years in 1979 and further to 6 years in 1987. In 1991, rupee securities with a maturity period of one year were also introduced making a complete departure from the traditional practice of issuing only medium and long-term securities. In addition, securities with different maturity periods were also made available providing an array of debt instruments for the investors since 1983. In 1991, rupee securities with 1, 2, and 4 year maturities were issued. Notwithstanding these changes effected to the period of maturity the government has continued to place heavy reliance on the traditional captive sources in mobilizing resources for the rupee loan programme.

Another development witnessed in the recent past has been the reduction of the interest differential that existed between the medium-term rupee securities and the short-term rates on other financial instruments. In 1989, the yield on 3 year securities was 13 per cent, in comparison with 12 month Treasury bill rate of 19.1 per cent. In 1990, the 3 year rate was raised to 18 per cent in order to bring it to a comparable level with the Treasury bill (12 months) rate of 18.4 per cent. Making further progress, the interest rate of 1 year securities (short-term) was at par with the 12 month Treasury bill rate. However, the two year security rate of 17 per cent is still lower than the short-term Treasury bill rate.

In terms of magnitudes, rupee securities account for the largest share in the bond market. The amount raised through rupee securities, which was Rs.2,513 million in 1981 increased to Rs.26,004 million in 1991. Meanwhile, the total amount of securities issued under the rupee securities programme during this period amounted to Rs.99,360 million. However, the share of securities in the total debt has declined, reflecting the reduced ability to raise money only through captive sources. The proportion of rupee securities in the total debt which was 56 per cent in 1981, declined to 50 per cent in 1988, and further reduced to 44 per cent in 1991. As can be seen in Table 12.5, the major subscribers

Table 12.5**BORROWINGS THROUGH RUPEE SECURITIES AND
DEBENTURES ISSUED BY SMIB, UDA AND NHDA**

(Million Rupees)

	1985	1986	1987	1988	1989	1990	1991
Rupee Loans	10,550	7,776	7,000	8,761	8,671	8,313	26,004
NSB	5,630	2,383	2,096	3,339	-	1,975	9,794
	(53)	(31)	(30)	(34)	-	(24)	(38)
EPF	4,418	5,118	4,228	6,163	8,449	5,896	13,363
	(42)	(66)	(61)	(62)	(97)	(71)	(51)
Others	502	258	676	498	223	114	934
Debentures Issued	647	40	50	365	480	83	1,000

to rupee securities continued to be the principal captive sources, namely the Employees Provident Fund (EPF) and NSB, which account for more than 90 per cent of the securities purchased.

(b) Debentures Issued by SMIB, UDA and NHDA

In comparison with the issue of securities by the government, a much smaller volume of debentures has been issued by the SMIB, UDA and the NHDA. These institutions issue debentures for the purpose of raising money for their housing financing programmes. These issues are effected through the Central Bank and the debenture issues by these institutions also carry the guarantee of the government as in the case of rupee securities. The maturity pattern and interest on these debentures have also been fixed in line with the terms applicable to rupee securities. As in the case of rupee securities, most of these debentures have also been limited to captive sources, the ETF being the major subscriber, because of the below market rates offered. In addition to debentures, housing bonds had also been issued by the UDA under the Ceiling on Housing Property Law (No.1 of 1973) to the owners of houses which have been vested with the UDA under law. The yield on these bonds too had been fixed and remained at an artificially low level at 5 per cent.

(c) Bonds Issued by Other Institutions

The issue of bonds by other institutions is negligible. The Development Finance Corporation of Sri Lanka (DFCC) has issued bonds in 1985 and 1987 to the value of Rs.398.7 million at 7 per cent which is well below the market rates. Commercial banks were the subscribers to these bonds and the Central Bank of Sri Lanka had authorized commercial banks to maintain these bonds as part of their required reserves. Apart from these only two companies, namely Lanka Orient Leasing Company (LOLC) and Chemenex Ltd. have so far issued bonds through the stock exchange and these issues have proved to be unsuccessful.

3.3 Problems and Issues

3.3.1 Equity Market

Despite the large expansion in the equity market witnessed during the recent past, certain issues inhibited further development of the market.

While some of the issues emanated from the recent policies introduced to promote trading in the equity market, others are inherent problems within the financial system itself due to its under-developed nature.

First, the equity market in Sri Lanka experienced an overheated situation in the recent past reflecting limited supply of shares in the market. This was clearly seen in the primary market where all new issues, even with a premium, were heavily oversubscribed. It would, therefore, be necessary to take measures that would stimulate supply in the share market creating an environment that is conducive for listing on the stock exchange. In this regard, the current "peoplisation" drive can be used to increase the supply of shares if measures are taken to require them to be effected through the stock exchange. Other possible measures that would increase the supply of shares in the market are the promotion of venture capital companies in the country so that the companies which are financed by them will be potential business entities to be listed on the exchange and also encourage joint ventures with foreign firms to obtain listing on the stock exchange. In the latter case, the participation of foreign investors in joint ventures would be a stimulus to the development of the market as the message would be passed on to other prospective investors.

Second, on the fiscal front, some barriers restricted the flow of foreign investments while some other conditions discouraged domestic investors. For example, the capital gain tax still restrict smooth flow of foreign capital into the country. Therefore, it may be appropriate to re-examine the existing fiscal policy package on the investments in the equity market. Third, the institutional development would be a further supporting measure to develop the equity market. At the moment, a company, inter-alia, has to maintain a Rs.5 million issued and 'fully paid-up' capital a, to qualify for listing on the CSE. This undoubtedly restrict companies with a lower level of capital listing on the CSE. As there are a large number of companies in the country which fall into this category, it may be useful if a two tier exchange is established where companies with less than Rs.5 million capital could also be listed. Once the companies qualified with the necessary capital, they could be listed on the CSE.

3.3.2 Bond Market

(a) Market Oriented Bonds

A number of adverse developments have been observed in the bond market which are not conducive to government securities being market oriented. Among these are the low yield relative to other financial papers, unfavourable term structure, limitations in the legal framework, limitation of major investors to captive sources which are not sensitive to market signals and the lack of professional dealers who can act as efficient "market makers".

Unattractive interest rates, especially for medium and long-term securities and an unfavourable term structure have posed problems in marketing government securities. Despite the fact that rates on short-term securities have been adjusted to reflect market rates, the rates on medium and long-term securities are still significantly lower than the rates on short-term securities themselves as well as other short-term financial papers. Accordingly, as against an upward sloping yield expected by private investors, the actual yield curve is downward sloping for medium and long-term securities. Obviously this is mainly due to the higher rates on short-term securities.

Another major obstacle to the development in the securities market is the limitation in the legal framework. As discussed earlier, the Rupee Securities Ordinance requires to determine and gazette the rates applicable before the issues are made limiting the flexibility of allowing varying interest rates during the currency of the bond. In addition, with regard to the transfer of these bonds, all transfers are required to be registered which also involves a transfer fee. These impediments clearly do not warrant easy transfer of securities and have driven away the private investors from the securities market. The measures that could be introduced to develop the securities market may include the following :

- (i) The complete removal of legal requirements specified in the Registered Stock and Securities Ordinance with respect to the fixing of interest rates and transferring of bonds. This will facilitate the issue of securities either at variable interest rates or at market rates with a broader spectrum of maturities that closely matches the liquidity preferences of investors. In addition, the removal of constraints on

the transfer of bonds will clearly increase the liquidity of securities as a market instrument.

- (ii) Introduction of an auction system for rupee securities parallel to the one for Treasury bills. This will allow more room for market forces to play a greater role in determining rates rather than the authorities. A disadvantage under this system is that the government may not be able to accurately forecast its debt burden in the budgetary estimates, since the rates are not fixed. However, when the market is functioning smoothly, it can be expected that rates will stabilize and these problems would be minimal.
- (iii) The introduction of a secondary market for government and government guaranteed securities. As done for Treasury bills, the Central Bank could establish a secondary market for government securities as well. The secondary market for government securities would also facilitate the conduct of open market operations (OMO) efficiently as this will increase the instruments available for the Central Bank to operate with. Another option is to allow the primary dealers who are to be appointed for Treasury Bills to deal in government securities. This will not only promote the secondary market but also help decentralize the activities in the securities market. Another course of action in this regard would be to list the securities in the stock exchange and permit the Central Bank to participate in the market until it takes off the ground.

(b) Management of Government Debt

The underdeveloped nature of the securities market also poses some problems in managing the government debt efficiently. First, the cost of servicing debt would be higher if the government placed more reliance on the short-term market instruments rather than on long-term borrowing. In the recent past, the government has continued to rely mostly on short-term borrowings through Treasury bills. Consequently, the share of Treasury bills in the domestic debt has increased and accounted for almost fifty percent as at end 1991. The short-term debt has to be rolled-over more frequently than long-term debt, resulting in a higher cost of servicing debt. Second, the government being a major borrower, its effect will influence the general interest rate structure in the country. Accordingly, if the government tends to borrow more from the short-term market, it will push-up short-term rates making it difficult to

establish a yield curve. Third, high debt service cost due to poor management of domestic debt will add pressure on budgetary operations by further expanding the budget deficit.

(c) Corporate Bonds

The corporate bond market in Sri Lanka is still in its infancy due to numerous reasons. The non-existence of well established large companies in which the public can place its confidence and, the relatively low level of overall economic growth are among the major reasons that hinder the development of the bond market in the country. The government policy of making available financial accommodation to large companies and their subsidiaries under various credit schemes such as Medium and Long Term Credit Fund (MLCF), Small and Medium Securities (SMI) etc. at even below market rates made the companies "easy going" without resorting to issuing bonds to meet their financial needs. Consequently, only two bond issues have been routed through the stock exchange so far and these proved to be unproductive.

Notwithstanding the yet underdeveloped nature of the corporate bond market, government policy itself can effectively be used to create an environment that is conducive to an active bond market. For example, most of the public enterprises that have been privatised or are to be privatised are very large scale with a high degree of probability of being large companies after privatisation. Thus, they could participate in the bond market actively by issuing bonds for much needed funds.

The other corporate entities which have the potential to issue corporate bonds are the emerging "holding companies". These holding companies could raise funds for their subsidiaries through the issue of bonds. Since the bond market is relatively new to local investors, more attractive instrument would be convertible debentures since these have the additional advantage of being able to be converted into equity shares at the option of the holder. Apart from the attraction of conversion rights to investors, there are additional advantages to a company. It will be cheaper in comparison with ordinary shares because, its great security and prospective convertibility into ordinary shares reduce the risk premium required by the investor. As compared with normal debenture stock, its convertibility provides a source of self-liquidation at the time of conversion.

IV. Factors Affecting the Mobilisation of Domestic Savings

Two previous sections presented details of major developments in the financial system and also the development in the capital market. It was discussed that there has been a substantial increase in private sector financial savings especially since 1977. It was also discussed at the beginning that national savings have not improved as expected and that there had been an investment savings gap. The primary objective of this section is to identify the determination of such savings. In this analysis, the determinants of Private Financial Savings and National Savings are considered.

4.1 Determinants of Private Financial Savings

Among the independent variables identified in savings functions in the literature are income, rate of economic growth and per capita, real output rate, foreign savings, financial intermediation (mainly proxied through the number of branches of savings institutions) and the lagged values of the dependent variables. Interest rate effects on savings have been examined in many research studies and it has been found in some studies that the effect of the interest rate on savings is inconclusive.

In this analysis, both real GDP growth rate and nominal per capita income are considered as explanatory variables with an expected positive sign. The real GDP growth rate would capture the influence of fluctuations in income on financial savings and per capita income would capture the accumulated effect on income. The real deposit rate (one year commercial bank fixed deposits) has been considered as another variable with positive effects since thrust is placed on reforms to achieve high positive real interest rates.

In addition, export income plus private transfers (net) have also been assumed to have a positive impact while the number of bank branches as a proxy for financial intermediation expected capture its positive influence on savings. Financial savings in the current year may have been effected by the amount of national savings. Therefore, it is also intended to analyse financial savings with national savings as another independent variable in the equation. Finally, the dependent variable consists of financial savings of commercial banks, NSB and finance companies as a ratio of GDP.

4.2 Analysis of Estimated Financial Savings Functions

Financial savings functions have been estimated by the Ordinary Least Square (OLS) method with various combinations of explanatory variables discussed in the sub- section 4.1.

The first two equations considered the influence of real GDP growth rate, per capita income nominal interest rate and the number of branches. The effect of GDP growth rate was negative in all equations. However, per capita income and bank branches yielded expected signs in first and second equations. In addition, the nominal interest also yielded expected sign in all. However, the bank-branches variable has very low significance on financial savings. Per capita income was significant in all three equations, indicating the influence of income variables on financial savings.

Determinants of National Savings

It is now proposed to estimate the statistical importance of several independent variables which determine National Savings. Gross National Savings have been obtained by adjusting the Domestic Savings for the Net Private transfers. In this estimation, the GNS/GDP ratio has been considered as the dependent variable.

The variables chosen in the previous analysis have been considered to influence the level of financial savings. In addition, foreign savings (FOR) have been identified as another factor since FOR can weaken the efforts to mobilise domestic savings.

Analysis of National Savings Functions

The OLS regression procedure was employed in the estimation. It is noted that the growth rate of GDP yielded opposite signs in several equations. However, three month moving average of GNP yielded the expected sign. The dependency ratios and nominal interest rates were statistically significant in all equations.

Table 12.6

DETERMINANTS OF FINANCIAL SAVINGS (FS)

Explanatory Variable	OLS		
	1	2	3
C	39.468 (4.258)	39.45 (3.336)	63.249 (2.604)
GDPG	-1.753 (-4.508)	-1.644 (-3.336)	-0.761 -0.761
Percapita	0.008 (8.341)	0.007 (6.287)	0.0004 (2.073)
Expr	0.633 (1.992)	0.438 (1.116)	-0.090 (-0.848)
Bankbr	0.008 (1.346)	0.002 (0.287)	
RN	-0.265	-0.009	-0.036
GNS	-0.571 (-2.45)		
FS(+)			0.140 (0.543)
R ²	0.96	0.93	0.95
R ²	0.93	0.89	0.90
DW	2.34	2.53	2.63

Notes: 1 t-statistics are given in parenthesis.

2 GDP growth rate.

Table 12.7

**DETERMINANTS OF AGGREGATE SAVINGS
GROSS NATIONAL SAVINGS**

Explanatory Variable	OLS		
	1	2	3
C	105.212 (5.227)	104.983 (4.838)	
GDPG	- 0.607 (-2.08)	-0.603 (-1.924)	-0.489 (-1.022)
PGDP	0.161 (2.79)	0.168 (2.413)	0.154 (1.768)
EXPT	0.337 (2.261)	0.302 (1.352)	
EXPRR			0.546 (2.065)
DEP	-1.753 (-4.31)	-1.709 (-3.57)	-0.167 (-1.03)
RN			-0.431 (-2.629)
RI			
FOR	-0.153 (1.86)	-0.163 (-1.62)	
LMGNP			4.409 (4.524)
FS	-0.47 (-4.128)	-0.483 (-3.72)	-0.697 (-3.417)
R ²	0.89	0.89	0.73
R ²	0.79	0.76	0.50
DW	1.87	1.83	1.54

Notes:- 1 t-statistics are given in parenthesis.

- GDP : GDP growth rate
- pGDP : GDP Deflator
- DEP : Dependency Ratio
- LMGNP : Three month moving average of GNP (in logarithm)
- RN : Nominal Interest Rate
- RI : Real Interest Rate
- EXP : Level of Exports
- EXPRR : Level of Exports plus private transfers

V. Summary and Concluding Remarks

Sri Lanka, being one of 20 countries receiving the lowest per capita income in the world, attracts a high emphasis for the need to increase its economic growth. In the medium-term perspectives of budgetary measures, it is expected to sustain an annual rate of economic growth around 6-7 per cent as against an average growth around 4 per cent experienced during the last two decades, in order to enhance the production and employment opportunities. In order to achieve such growth prospects, it is necessary to increase the rate of investment to a level above 25 per cent of GDP.

Financing for investments through foreign sources which is still high(i.e. 44 percent of investment) in Sri Lanka, is not encouraged in the long run due to possible consequences of dependence on the foreign sectors. In this context, mobilisation of domestic resources to generate savings for financing investments needs becomes an important factor in achieving growth prospects. Therefore, to increase domestic savings to a level above 17 per cent of GDP from the current level of 13 per cent requires policy measures and institutional efforts to improve the domestic savings mobilisation. In this context, the role of financial intermediaries and capital market needs further improvements in mobilising savings. Also, some policy revisions are necessary in support of financial savings mobilisation efforts.

Financial reforms introduced so far were aimed at liberalising interest rates and making the interest rate structure more market oriented, promoting financial intermediation and improving the regulatory framework of financial institutions. In this situation, there are several positive results the country is now experiencing. Firstly, realistic market interest rates encourage both savers and borrowers in their dealings with financial institutions leading to increased savings mobilisations and utilisation. Secondly, competition among the financial institutions would expand financial services increasing the volume of savings and loans. Establishment of branches of foreign banks and branch expansion of domestic banks are further results of such competition. Thirdly, the improvements of regulatory framework creates financial stability and discipline among the institutions attracting increased customer confidence. This financial environment would improve the real volume of financial activity in the country and savings mobilisation. As a positive sign, financial savings in the recent past have increased.

Therefore, savings mobilisation efforts in a competitive environment, financial institutions should initiate further improvements to their innovations in financial instruments and other customer services and expand network of bank branches.

The development of a market oriented interest rate structure is another area of concern. The existence of high lending rates discouraged the private sector from exploiting investment opportunities. This will also raise the demand for non-market credit allocation methods such as Central Bank refinance. High deposit rates on the other hand would hinder the development of the capital market.

Another important aspect that should be looked into is the capital market development. There are a number of constraints to the development of the capital market such as impediments in the legislation, weaknesses in the market structure, fiscal structure and incentives, and general economic and political conditions. The main problems that inhibited the development of the equity market are the limited number of listed companies and shares, shortcomings in the fiscal package, institutional barriers and lack of institutional investors. Thus, action to improve the availability of shares, careful study of the fiscal policy package and removal of institutional barriers and encouraging institutional investors are some of the broader issues to be addressed to develop the equity market. The problems in the bond market, on the other hand, are more fundamental. With regard to government securities, changes in inappropriate legal provisions and interest rate structure and establishment of a secondary market are some of the basic issues to be considered. Further, the promotion of the number of participants in the market, particularly pension and provident funds, corporations and insurance companies and the setting up of a dealer network, listing in the stock exchange are other areas that require due consideration. In all, a balanced macro-economic policy and political stability are considered to be prime conditions for the development of the securities market.

Chapter 13

DOMESTIC RESOURCES MOBILIZATION IN THE REPUBLIC OF CHINA, TAIPEI

by

Jyb-Miin Lu

I. An Overview of the Development in Domestic Savings Mobilization in the Republic of China

The domestic savings mobilization in the Republic of China during 1971 to 1991 was characterized as high growth and high savings rate. The average annual growth rate of gross domestic savings reached 17.34 per cent and the ratio of domestic savings to GNP stood at 32.40 per cent. The sustained expansion in domestic savings not only sufficiently accommodated the ever increasing need of domestic investment, but also resulted in sizable net foreign lending, i.e. savings used by foreigners. With the support of high domestic savings, gross domestic investment registered an average annual growth rate of 16.72 per cent, which in turn had a significant contribution to the rapid real economic growth rate of 8.84 per cent during 1971 to 1991. As to the role of foreign capital, the available data showed that the disbursed external public debt was below US\$6.5 billion during 1978 to 1990 while the public debt service ratio was less than 5 per cent. The extremely light debt burden was an important factor contributing to the mobilization of domestic savings. Although the domestic savings rate was high, it has shown signs of decline in the past three years. The ratio of gross national savings to GNP ranged between 33 per cent and 39 per cent during 1984 to 1988. However, it dropped to around 30 per cent during 1989 to 1991. The decline in domestic savings rate will no doubt have an adverse effect on the capital formation of the six-year, US\$303.6-billion National Development Plan which was scheduled for the period from 1991 through 1996 with a view to improving the infrastructure construction and raising the quality of life. Hence, how to raise the domestic savings rate is an issue that merits careful attention.

The concept of gross national savings referred to in this paper is the portion of GNP exclusive of consumption expenditure. Using national income data, its measurement is defined as follows:

Figure 13.1

**GROSS NATIONAL SAVINGS AND
GROSS DOMESTIC INVESTMENT**

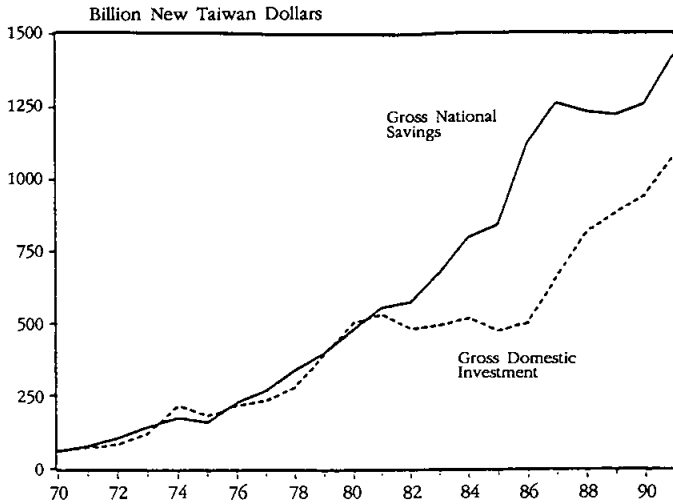
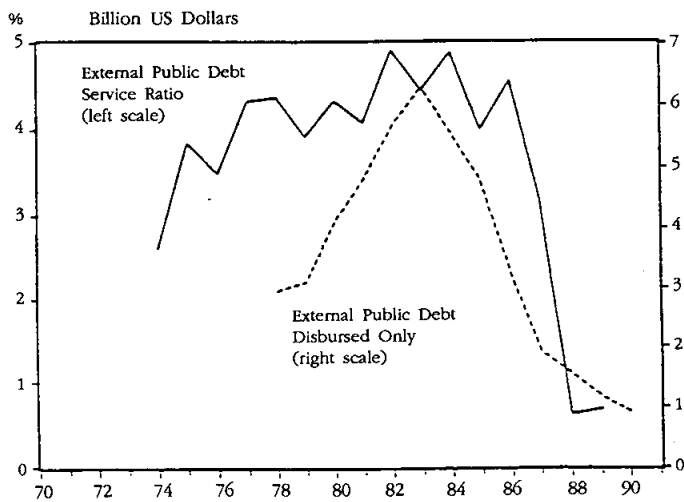


Figure 13.2

EXTERNAL PUBLIC DEBT



Gross National Savings = GNP - Private Consumption Expenditures
- Government Consumption Expenditures - Other Current Transfers
to the Rest of the World + Other Current Transfers from the Rest
of the World.

The total of gross national savings can be further divided into the following sectors: the private enterprises, the public enterprises, the general government, and the households and private non-profit institutions. The actual measurement to separate total gross national savings into the above-mentioned sectors is by means of using the income and outlay accounts. As an illustration, total gross national savings of the Republic of China in 1991 amounted to NT\$1,431 billion, where NT\$321 billion went to the private enterprises, NT\$187 billion to the public enterprises, NT\$67 billion to the general government, and NT\$856 billion to the households and private non-profit institutions.

Examining the experience of the domestic savings mobilization of the Republic of China, the average annual data for 1971 to 1991 revealed that the level of gross national savings amounted to NT\$635.7 billion. Of which the households and private non-profit institutions accounted for NT\$300.4 billion or 47.25 per cent, the private enterprises accounted for NT\$134.4 billion or 21.15 per cent, the general government accounted for NT\$114.4 billion or 17.99 per cent, and the public enterprises accounted for NT\$86.5 billion or 13.61 per cent. As reflected in their contribution to the 17.34 per cent average annual growth rate of gross national savings, the households and private non-profit institutions sector contributed 8.37 per cent, the private enterprises sector contributed 3.96 per cent, the general government sector contributed 2.96 per cent, and the public enterprises sector contributed 2.05 per cent. These figures reflect that the households and private non-profit institutions sector as well as the private enterprises sector is the most dominant sector in the savings mobilization of the Republic of China, followed by the general government sector and then the public enterprises sector. However, the sequence underwent some changes in 1991; the general government sector fell behind the public enterprises sector and became the least important sector in terms of savings mobilization, mainly because of decreases in tax revenue and substantial increases in transfer payments.

To further identify the surplus units and the deficit units, the saving-investment gap of each sector was calculated. The result showed

that during 1971 to 1991 the households and private non-profit institutions sector and the general government sector, on an average, were the surplus units with saving-investment gap amounting to NT\$236.9 billion and NT\$32.4 billion, respectively. On the other hand, the private enterprises sector and the public enterprises sector were the deficit units with saving-investment gap reaching NT\$59.9 billion and -NT\$34.5 billion, respectively. Dividing each sectoral surplus by its corresponding savings, we found 78.87 per cent of the savings of the households and private non-profit institutions sector and 28.32 per cent of the savings of the general government sector were used by other sectors. So we conclude that the households and private non-profit institutions sector played an extremely important role in mobilizing savings which, to a substantial extent, was channeled to the investments of other sectors. The general government sector, although a surplus unit, played a much less important role in supplying savings for the investment needs of other sectors. In addition, due to the implementation of the 6-year National Development Plan starting from 1991, the government has been in need of a huge amount of money to fund the plan. Consequently, it is very possible that the savings of the general government sector will shrink considerably in the coming years.

II. The Role of the Financial System in Domestic Savings Mobilization

Financial institutions in the Republic of China have played an important role in mobilizing domestic savings and channeling it to domestic investments. By pooling the savings of many savers, financial institutions have the benefits of economies of scale in extending loans to enterprises to make investments. Through this process, both savings and investments will be promoted, causing GNP to increase. The increase in GNP will in turn lead to even higher savings and investments.

The financial institutions in the Republic of China include:

- (1) the central bank of China;
- (2) domestic banks;
- (3) the local branches of foreign banks;
- (4) medium business banks;
- (5) credit cooperative associations;
- (6) credit departments of farmers' associations

- (7) credit departments of fishermen's associations
- (8) investment and trust companies;
- (9) the postal savings system;
- (10) life insurance companies;
- (11) property and casualty insurance companies;
- (12) bills finance companies;
- (13) Fuh-Hwa securities finance company; and,
- (14) offshore banking units.

Among them, (2) through (7) are classified as deposit money banks in that they can absorb checking account deposits and thus have the ability to create deposit money. Deposit money banks, while engaging in various kinds of activities in commercial banking and investment banking, are the predominant group of financial institutions viewed either from the scale or the scope of financial activities that they engage in. In terms of savings mobilization, deposit money banks are thus the most important group which is worthy of further analysis. Besides them, the postal savings system, with its numerous post offices and postal agencies located at almost every populated region, also has its importance in savings mobilization.

Before further analyzing savings mobilized through financial institutions, it is useful to review some key macroeconomic factors that were relevant to the changes in savings between 1971 and 1991. During this period, prices were very stable except the two episodes of oil shock in 1973-74 and 1979-81. The stable prices had the effects of low price expectations and positive real interest rates. By using the actual annual growth rate of the consumer price index to proxy price expectations, we found that out of the 21 years during 1971-91 the real interest rates of one-year time savings deposits were positive in 18 years except for 3 years that fell into the two oil-shocked periods. Further calculation indicated that the average of the 18 positive real interest rates reached 5.39 per cent, signifying that it might be an important factor encouraging people to save. On the part of monetary policies adopted during 1971-91, it was interesting to note that a series of financial deregulation policies were undertaken by the Central Bank of China during 1980s and this could have significant impacts on savings mobilization. In the 1980s the Central Bank of China actively engaged in liberalizing interest rates, deregulating foreign exchange control and promoting the sound developments of the money market and the foreign exchange market. As a consequence, financial instruments were

diversified and their prices were determined by market forces. This development together with the fast economic growth accompanying with the expansion of external trade surplus, might result in higher savings rate, because people were getting wealthier and having a larger set of financial instruments to place their money in. This line of reasoning, however, may induce some challenges, because higher income may result in higher consumption and thus cause savings rate to decrease. Yet considering the frugality character of the people of the Republic of China and the substantial increase of the ratio of gross national savings to GNP during 1984-88, it seemed that there were evidences supporting my argument.

To have a meaningful analysis about savings mobilized through the financial system of the Republic of China is not an easy task, as one can not directly conduct such an analysis from existing data. In an effort to overcome the data problem, we tried to use the data of the major sources of funds of financial institutions, because, by and large, it reflected a great deal of savings flowing into financial institutions and, hence, could provide insights on the issue under discussion. From the major sources of funds of financial institutions, we found that during 1971-90 the annual average of the total of these sources of funds registered NT\$375.7 billion, where 55.92 per cent came from time, savings and foreign currency deposits, 20.70 per cent from demand deposits, 7.96 per cent from government deposits, 5.42 per cent from reserves of life insurance, 4.98 per cent from trust funds, 4.54 per cent from currency and 0.48 per cent from presettlement requirements for imports. These figures showed that time, savings and foreign currency deposits were the most important in terms of savings mobilized through financial institutions, followed by demand deposits and government deposits. Comparing the total of the major sources of funds in 1990 with that of 1970, we found that it increased from NT\$21.5 billion to NT\$796.1 billion and had a compound annual growth rate of 19.79 per cent. The source of funds from time, savings and foreign currency deposits increased from NT\$11.8 billion to NT\$759.1 billion showing a compound annual growth rate of 23.14 per cent.

As to the question of whether the number of financial institutions is critical in influencing the mobilization of savings for the past 20 years, we would briefly discuss the data on deposit money banks and the postal savings system, which were both considered important in terms of savings mobilization in the financial system. Between 1970-89 the

Figure 13.3

**ANNUAL GROWTH RATE OF CONSUMER
PRICE INDEX**

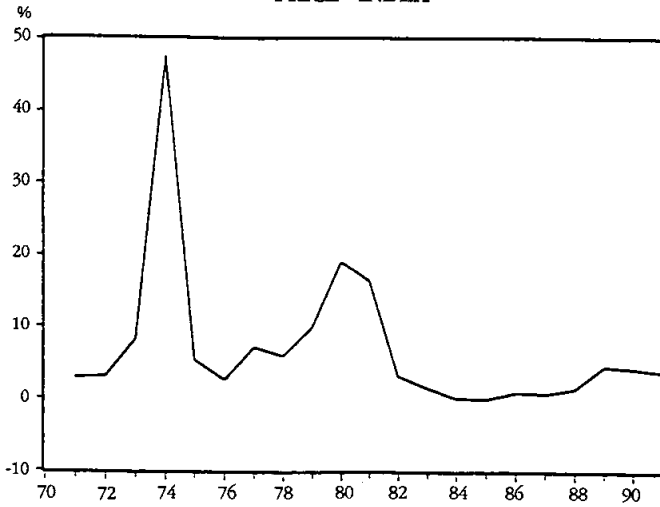
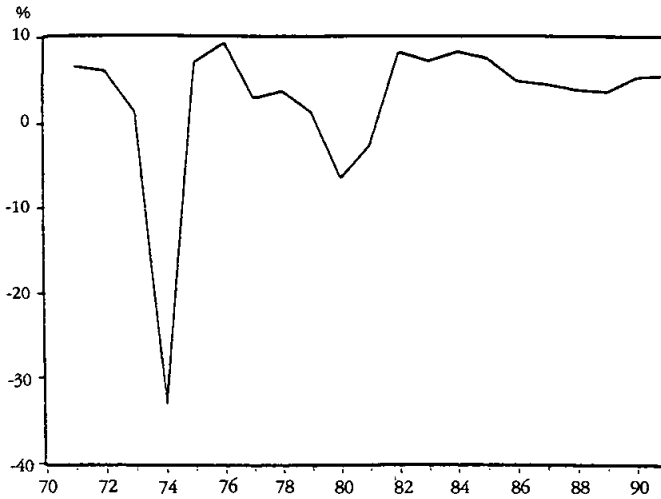


Figure 13.4

**REAL INTEREST RATE OF ONE-YEAR
TIME SAVINGS DEPOSITS**



Note: Real rate = nominal rate - annual growth of CPI

number of financial institutions of deposit money banks increased from 882 to 1396, with a compound annual growth rate of 2.44 per cent. During the same period, the postal savings system had significant changes in the number of operational units. It had 619 post offices and 1522 postal agencies in 1970, and 1181 post offices and 393 postal agencies in 1989. These statistics showed that the postal savings system outnumbered deposit money banks. With the superiority in number of institutions, the postal savings system had an advantage in absorbing savings. As reflected below, the ratio of deposits held by enterprises and individuals in the postal savings system to that in deposit money banks increased to 19.56 per cent in 1989 from 16.40 per cent in 1970, indicating that the postal savings system was indeed in a better position in absorbing savings.

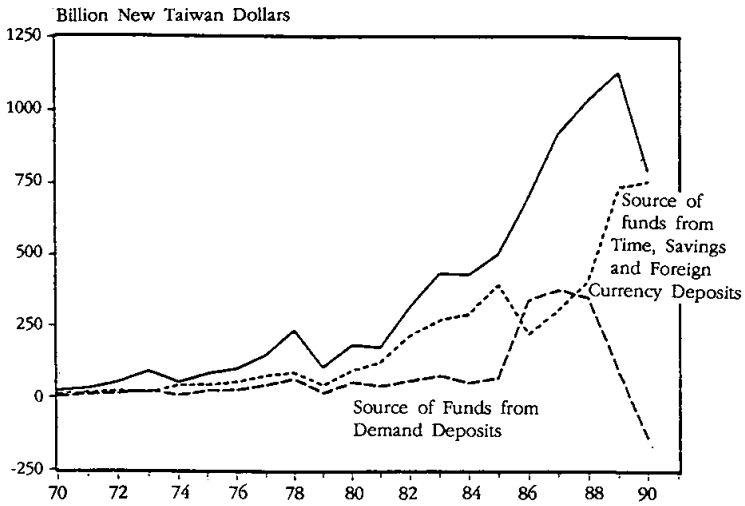
From the above analysis we conclude that savings mobilized through financial institutions has expanded substantially during the past twenty years, with major sources coming from time, savings and foreign currency deposits, and then from demand deposits and government deposits. Number of financial institutions was also an important factor in mobilizing savings.

III. The Role of the Capital Market

The Capital Market in the Republic of China includes the stock market and the bond market. Over more than thirty years' development, the stock market has become a mature and well established market. Its trading system, regulations and supervising authorities are well developed even compared with those in the developed countries. This market has been growing very fast. The Companies listed in the market increased in number to 199 in 1990 from 49 in 1972 with total capital amounting to NT\$533.3 billion from NT\$9.9 billion; while the unlisted companies increased in number to 571 from 20 with total capital expanding to NT\$646.8 billion from NT\$18.1 billion. The number of persons with an account in a security firm increased to 5,033,088 from 41,514. The market experienced a boom period during 1986-89. In that period, the external trade accelerated remarkably, causing money supply to increase considerably. As a consequence, the weighted price index of the stock market ballooned to 8616.14 in 1989 from 944.74 in 1985, and the total trading value increased to NT\$25,407.9 billion from NT\$675.6 billion.

Figure 13.5

SOURCE OF FUNDS



Compared with the stock market, the bond market has been much smaller in scale and not as active in trading, because the frequency and amount of government bonds issued in the past were not significant due to good financial conditions of the government. However, along with the implementation of the six-year National Development Plan (1991-96), the government since 1991 has faced tremendous pressure in financing the plan and has begun to issue a large amount of government bonds, resulting in a significant increase in bonds issued.

Moreover, in the past two years the government has been actively engaged in promoting the development of the bond market, and investors have gradually become interested in investing in bonds partly because of the slump in the stock market. As a consequence, the bond market has played an increasingly important role in the capital market. There are two kinds of bonds' trading. Bonds can be traded over either the stock market or the OTC (over-the-counter) market. Most trading of bonds occur in the OTC market. Its share in the bond market has been more than 99 per cent since 1986. The OTC market has been growing remarkably ever since it was established in 1982. Total trading value of bonds traded through the OTC market increased to NT\$1,592.3 billion in 1990 from NT\$0.6 billion in 1982, with trading instruments including corporate bonds, government bonds and financial debentures, but primarily concentrating on government bonds - since 1987 its share has accounted for more than 95 per cent of the bonds traded through the OTC market.

With the fast development in the capital market, it is of great help to channel savings into the public enterprises' sector, the private enterprises' sector and the government sector. By selling stocks and issuing government securities, these sectors can mobilize other sectors' savings. As shown in the above table, changes in private enterprises' stocks & equity held by non-corporate business increased rapidly from 1986 onwards. It amounted to an annual average of NT\$297.5 billion during 1986-90, far more than the NT\$91.1 billion recorded in 1985, showing that savings mobilized through private enterprises' sale of their stocks went up considerably during 1986-90. Changes in public enterprises' stocks & equity held by non-corporate business had experienced significant growth during most years of 1970s, but it then fluctuated between NT\$26 billion and NT\$44 billion during 1980-90 except in 1987, indicating that savings mobilized by the public

Table 13.1**SAVINGS MOBILIZED THROUGH THE CAPITAL MARKET**

(Million New Taiwan Dollars)

Year	Change in Private Enterprises' Stocks & Equity in Non- Corporate Business	Changes in Public Enterprises' Stocks & Equity in Non- Corporate Business	Changes in Government, Securities' Outstanding
1970	9,707	4,764	1,379
1975	27,760	9,385	480
1980	69,931	29,780	-2,119
1985	91,138	34,809	25,519
1986	234,926	43,911	22,950
1987	120,851	59,494	30,281
1988	408,558	32,437	54,847
1989	280,906	30,674	44,596
1990	442,320	31,628	-32,514

Source: "Flow of Funds in Taiwan District, the Republic of China (1965-90)," The Central Bank of China, 1991.

enterprises' sector by selling their stocks was much smaller than that of the private enterprises' sector.

Changes in government securities' outstanding were of limited amount before 1985, however, from then on it fluctuated between NT\$22 billion and NT\$55 billion except in 1990 when it had a negative value of NT\$32 billion, showing that savings mobilized by the government via issuing government securities increased in general, from 1985 onwards, to a higher level than before.

IV. Factors Affecting the Mobilization of Domestic Savings

In analyzing factors affecting the mobilization of domestic savings, we will try to identify factors that affect the savings of the following:

- (1) the households and private non-profit institutions sector;
- (2) the general government sector;
- (3) the private enterprises sector; and,
- (4) the public enterprises sector.

A behavioral equation for each of these sectors will be specified and estimated using least squares method and sample data of 1972-91. The dependent variables used are the ratio of each sector's savings to GNP, where we avoid using the level of each sector's savings because it becomes larger as time goes by and may cause serious heteroscedasticity problems. In the behavioral equation of each sector's savings, nominal interest rate and inflation rate will be used as independent variables to reflect the fact that when people make decisions about savings they take both factors into consideration. The influence of nominal interest rate on savings is positive, i.e. the higher the interest rate is, the more the savings is. The sign of the influence of inflation rate on savings can not be specified a priori. When current prices go up, people may expect prices to decrease in the future, so they tend to save more for their future's consumption. On the other hand, when prices rise people may try to hedge inflation by purchasing more commodities and saving less now. The combined effect can be either positive or negative depending on which effect is stronger. We do not

use real interest rate (nominal interest rate - inflation rate) as an independent variable because when doing so we implicitly restrict the coefficients of nominal interest rate and inflation rate to be the same, and this is not true in the case of the experience of the Republic of China.

4.1 The Households and Private Non-profit Institutions Sector

The savings to GNP ratio of this sector is specified as a function of per capita disposable income, dependency ratio of ages under 15, nominal interest rate of one-year time savings deposits, annual growth rate of consumer price index, the ratio of private consumption expenditure to disposable income, and per capita tax payments. In estimation, we have also taken into consideration the influence of the dependency ratio of ages 65 and over, and that of per capita current transfers to residents. However, the empirical results showed that the effects of the two factors were not different from zero at 5 per cent significance level, so we excluded the two factors from the behavioral equation. The savings equation was then estimated as follows.

Equation 1

$$\begin{aligned} \text{CGNSH} = & 12.16 + .00017 \text{ NIDISPER} + .58 \text{ DEP1} - .055 \text{ FISDY} \\ & (1.71) \quad (6.01) \quad (4.08) \quad (-.35) \\ & + .014 \text{ CYCPI} - .36 \text{ RCPDISP} - .00061 \text{ TAXPER} \\ & (.61) \quad (-3.12) \quad (-5.06) \end{aligned}$$

$$\text{Adjusted R-squared} = .90 \quad \text{DW} = 2.47$$

* Note: figures in the parentheses are t-value

where

- CGNSH = gross national savings of this sector/GNP * 100
- NIDISP = per capita disposable income
- DEP1 = dependency ratio of ages under 15
- FISDY = nominal interest rate of one-year time savings deposits
- CYCPI = annual growth rate of consumer price index
- RCPDISP = the ratio of private consumption expenditure to disposable income
- TAXPER = per capita tax payments

From this equation we found that per capita disposable income and dependency ratio of ages under 15 have a positive effect on savings, while the ratio of private consumption expenditure to disposable income and per capita tax payments have a negative influence on savings. Both nominal interest rate and inflation rate have little effects on savings. If nominal interest rate and inflation rate are dropped from the equation, the estimated result is very similar to that listed in equation 1, so we do not list it here.

4.2 The General Government Sector

There are four variables that are used to explain the behavior of government savings. The ratio of government savings to GNP is specified as a function of nominal interest rate, inflation rate, the ratio of government consumption expenditure to GNP, and the ratio of tax revenue to GNP. The consumption expenditure of the government, exogenously determined in general, is an important factor causing government savings to decrease, while tax revenue of the government is the major source of government savings. The regression result is as follows.

Equation 2

$$\begin{aligned} \text{CGNSG} = & 17.28 + .21 \text{ FISDY} - .048 \text{ CYCPI} - 1.79 \text{ RCGGNP} \\ & (3.82) \quad (1.41) \quad \quad (-1.47) \quad \quad (-6.06) \\ & + .85 \text{ RTAXGNP} \\ & (4.68) \end{aligned}$$

$$\text{Adjusted R-squared} = .75 \qquad \text{DW} = 1.77$$

where

- CGNSG = gross national savings of this sector/GNP * 100
- RCGGNP = the ratio of government consumption expenditure to GNP
- RTAXGNP = the ratio of tax revenue to GNP

The regression result is close to our intuition that government consumption expenditure has a strong negative influence on government savings, and that tax revenue is an important source of

government savings. Both nominal interest rate and inflation rate are not different from zero at 5 per cent significance level.

4.3 The Private Enterprises Sector

Formulating the equation of the savings of private enterprises sector has to consider the influences of the fast economic expansion of the Republic of China and the significant role the export sector has played to the economy since 1970. With this consideration in mind, we specify the savings to GNP ratio of this sector as a function of the growth of GNP, the ratio of export to GNP, nominal interest rate, inflation rate, and the ratio of tax to GNP. Both the growth of GNP and export expansion are expected to have a positive effect on savings, while increases in tax are expected to have a negative influence. The regression equation estimated is shown below.

Equation 3

$$\begin{aligned} \text{CGNSPRI} = & 6.72 + .19 \text{ CYGNP} + .056 \text{ REXGNP} - .046 \text{ FISDY} \\ & (2.86) \quad (8.76) \quad (1.94) \quad (-.56) \\ & -.088 \text{ CYCPI} - .24 \text{ RTAXGNP} \\ & (-4.64) \quad (-2.36) \end{aligned}$$

$$\text{Adjusted R-squared} = .84 \quad \text{DW} = 1.88$$

where

CGNSPRI = gross national savings of this sector/GNP * 100
CYGNP = annual growth rate of GNP
REXGNP = exports of goods and services/GNP * 100

The result shown above indicated that both the growth of GNP and export expansion have a positive influence on private enterprises sector's savings, while inflation rate and tax burden have a negative influence. The coefficient of REXGNP is not different from zero at 5 per cent significance level (critical value = 2.145), but it is significantly different from zero at 10 per cent significance level. It is interesting to note that inflation rate has a negative influence on savings, i.e., the private enterprises sector tend to hedge inflation by consuming more

and saving less during inflation period. The nominal interest rate is not significantly different from zero. This may be due to the fact that interest payments accounted for less than 10 per cent of total costs in the cost structure of this sector.

4.4 The Public Enterprises Sector

Originally we considered specifying the savings function of this sector as that of the private enterprises sector. But the regression result was contrary to our understanding in that the coefficient of the growth of GNP was negative. So, this variable is dropped and the savings sector is specified as a function of the ratio of export to GNP, nominal interest rate, inflation rate, and the ratio of tax revenue to GNP. The regression result is listed below.

Equation 4

$$\begin{aligned} \text{CGNSPUB} = & 1.20 + .11 \text{ REXGNP} + .28 \text{ FISDY} - .045 \text{ CYCPI} \\ & (.56) \quad (4.46) \quad \quad (3.85) \quad \quad (-3.30) \\ & - .28 \text{ RTAXGNP} \\ & (-3.00) \end{aligned}$$

Adjusted R-squared = .62

DW = 2.22

where

CGNSPUB = gross national savings of this sector/GNP * 100

The regression coefficients of equation 4 are all significantly different from zero at 5 per cent significance level although the adjusted R-squared statistics is only .62, showing that the regression line does not fit the data well. As shown in this equation, both export expansion and nominal interest rate have a positive influence on savings, while inflation rate and tax burden have a negative influence. The positive and significantly-different-from-zero coefficient of nominal interest rate is particularly noteworthy of mention. It means that using monetary policy to raise interest rate can have a positive effect on savings. This phenomenon was not seen in the analyses of other sectors. One reason to have an explanation on this is that public enterprises include many

government owned financial institutions which constitute the bulk of all financial institutions, and raising interest rate via monetary policy will cause these institutions to have higher income and higher savings due to wider profit margin, resulting in a positive relationship between the savings of this sector and nominal interest rate.

4.5 Major Findings and Concluding Remarks

The discussions on the domestic savings mobilization in the Republic of China can be summarized as follows:

- (1) Financial institutions in the Republic of China made a great contribution to mobilize savings and channel it to investments during the past twenty years. Major sources of savings mobilized through financial institutions came from time, savings and foreign currency deposits, and then from demand deposits and government deposits. In absorbing deposits both deposit money banks and the postal savings system played an important role. The postal savings system, with its extensive network of post offices and postal agencies, had an advantage in absorbing savings, showing that the number of financial institutions was an important factor in the mobilization of savings.
- (2) The stock market of the Republic of China is a well established and mature market and has had an important function of pooling the savings of many savers to meet the investment needs of enterprises, especially the private enterprises. The bond market is smaller in scale and not as active as the stock market. Following the implementation of the six-year National Development Plan (1991-96), the government has begun to substantially increase its issue of bonds. Also, the government has been actively involved in promoting the development of the bond market in recent years. As a consequence, this market has been growing very fast in recent years and its contributions in mobilizing savings for public investments have become much more important than before.
- (3) As to factors affecting the domestic resource mobilization, a regression analysis was conducted in this paper to identify them by sector. The savings of the households and private non-profit institutions sector were shown to be influenced mainly by disposable income, dependency ratio of ages under 15, private consumption

expenditure, and tax payments. Government savings was found to be affected primarily by government consumption expenditure and tax revenue. For the private enterprises sector, it was found that the growth of GNP and export expansion have a positive influence on savings, while inflation rate and tax burden have a negative influence. The savings function of the public enterprises sector was estimated slightly differently from that of the private enterprises sector. It was found that export expansion and nominal interest rate have a positive influence on savings, while inflation rate and tax burden have a negative influence. Especially worthy of mention is the policy implication of the positive influence of nominal interest rate on public enterprises' savings, i.e., raising interest rate via monetary policy can result in higher savings of the public enterprises sector.

Chapter 14

DOMESTIC RESOURCE MOBILIZATION IN THAILAND

by

Chittima Duriyaprapan
Chirathep Senivongs

I. Introduction

Notwithstanding adverse economic impacts linked to the two oil shocks, the Thai economy had enjoyed a relatively fast pace of economic expansion during the past two decades with GDP growth averaging about 7 per cent per annum. In the early 1970's, GDP growth averaged 6.8 per cent per annum and rose to 7.5 per cent per annum in the second half of the decade. As a result of the second oil shock combined with the recessionary impact of structural adjustments in the first half of 1980's, growth slowed to 5.5 per cent -- which was still relatively high compared with the world average of 2.5 per cent during the same period. Combined with the devaluation of the baht in 1984 and the strong world economic rebound, the Thai economy had enjoyed robust growth averaging over 11 per cent during 1987-1990 led by exports and investment. During this same period, a marked change in the country's output structure occurred with earnings from the exports of manufactured goods and from the service sector contributing increasingly to total GDP while the share of agricultural output is declining.

1.1 The Saving-Investment Situation

The role of investment in bringing about Thailand's buoyant growth and progress in industrialization is well recognized. As indicated by Table 14.1, Thailand's demand for investment has always been large averaging 25 per cent of GDP in the early 1970's and rising to 30 per cent of GDP in the late 1980's. In particular, the average private investment rose from about 19 per cent of GDP to almost 25 per cent of GDP during these same periods. In spite of the strong investment expansion, partly linked to the government policy to substantially boost infrastructural investment in the early development plans, the country's

external stability as measured by the deficit on the external current account had not been too worrying by world standard --- generally below 5 per cent of GDP.

The major factor allowing for this sustainable structural and economic development in Thailand has been the government policy on the investment-saving balance. While the overall country's investment requirement is implicitly set by the National Economic and Social Devel-

Table 14.1

**CURRENT ACCOUNT DEFICIT IN TERM
OF INVESTMENT-SAVING GAP**

(In Per Cent of GDP, Average of period)

	Private		State Enterprise		Government		Total		
	Investment	Saving	Investment	Saving	Investment	Saving	Investment	Saving	GAP 1/
1970-74	19.2	19.2	1.6	1.5	4.3	2.8	25.0	23.5	-1.5
1975-80	19.3	17.9	2.7	1.0	4.6	2.6	26.6	21.5	-5.1
1981-86	16.0	17.2	3.9	1.7	4.5	1.2	24.3	20.1	-4.3
1987-90	24.7	18.2	2.9	2.7	3.0	6.4	30.6	26.7	-4.0

1/ Equals to the current account deficit

Source: Bank of Thailand

ment Plans, the policy on saving has generally focused only on public finance with private investment being residually financed by private saving and foreign borrowing. Similarly, private saving has been left to household and corporate decisions and promoted through the authorities's development of the financial system and the capital market.

The Government's focus on public saving led to an implementation of a comprehensive stabilization programme in the early 1980's - with tight monetary policy, exchange rate adjustment, and strict fiscal discipline. To strengthen the public sector's financial performance, tax

collection was improved while expenditure was tightened through a comprehensive review of public expenditure programmes and the limit on external borrowing by public agencies which effectively screened investment programmes of the Government and state enterprises. In addition, the efficiency of state enterprise operation was improved by setting up the National State Enterprise Committee to review their operations, by redirecting policies towards a reduction of the government's role, and by encouraging the private sector to take on a lead role in economic activities. These measures were responsible for the reduction of the budget deficit from 5.2 per cent of GDP in 1982 to 1.4 per cent of GDP in 1987. Moreover, benefitting from the strong growth in tax revenue since 1988, the deficit was turned around to a fiscal surplus which rose, as per cent of GDP, from 2 per cent in 1988 to 5 per cent in 1990.

As regards private savings, the private saving rate had remained stagnant at around 18 per cent over the past twenty years. Thus given the rapid expansion of private investment which grew from 17.7 per cent of GDP in 1987 to 31.3 per cent of GDP in 1990, the average deficit on the current account -- though remained in a manageable average span of below 5 per cent during the period -- rose from 0.7 per cent in 1987 to 8.9 per cent in 1990. On sectoral basis, while, as per cent of GDP, corporate savings rose steadily during the past two decades, household savings experienced a decline. Household savings averaged 10 per cent of GDP during 1971-1975, 10.7 per cent during 1976-1981, 9.5 per cent during 1983-1986 and about 9 per cent of GDP during 1987-1990. In this light, Thailand's increasing dependence on foreign savings reflected the problem of low household savings.

1.2 The Financing of the Current Account Deficit

Though it can be argued that Thailand's current account problem has not been as excessive as in other countries to the extent that it is financeable thereby avoiding a serious debt crisis, the importance of foreign savings in allowing the economy to invest and expand beyond the limited saving base is well acknowledged. As indicated by the data in Table 14.2, the total foreign capital inflow rose from 2.3 per cent of GDP during 1971-1974 to around 5 per cent of GDP in the early 1980's and almost 8 per cent of GDP during the late 1980's. With the exception of the period 1975-1980, the inflow more than compensated for the current account deficit and led to a rapid accumulation of international reserves.

On the types of foreign capital inflow into Thailand over the past two decades, debt capital had been a major source of investment finance accounting on average for about 70 per cent and was as high as 90 per cent during the late 1970's. As for the terms of the inflow, the medium- and long-term borrowing capital accounted for approximately 60 per cent of total debt capital and around 70 per cent of total net inflow.

Private inflow was the largest source of foreign capital in the early 1970's, averaging over 80 per cent, but was superseded by official capital during 1975-1980 as a result of the decline in private direct investment and the government policy to encourage state enterprises to finance their investment by borrowing from abroad. The dominance of private capital inflow, however, reemerged from 1985 as the policy tilted more towards letting the private sector take a lead role in economic activities as well as the continued strict observance of the ceiling on external borrowing by state enterprises as part of the fiscal adjustment effort since 1984.

During 1987-1990, private capital inflow rose by an average annual rate of 170 per cent from US\$ 0.6 billion in 1987 to US\$ 9.4 billion in 1990, and were largely in forms of foreign direct investment. The net inflows of foreign direct investment grew at annual rates of 209.2, 63.4 and 36.8 per cent in 1988, 1989, and 1990, respectively, reflecting the investment promotion policies especially in export-oriented industries. On portfolio investment, as per cent of total market transactions, the value of securities transacted by foreign investor rose to 11 per cent in 1987 and to 14.4 per cent representing a substantial expansion from the ratio of merely 2 per cent in 1982.

While the medium- and long-term capital was the major source of foreign financing as noted earlier, the importance of short term inflow, nonetheless, grew markedly during the late 1980's -- rising to about 40 per cent of net capital inflow compared to below 30 per cent during 1970-1986. This development reflected an easier access to foreign loans linked to financial market integration, domestic interest rate policy which led to large differentials between domestic and foreign interest rates, and the liberalization of restrictions on foreign capital movements since May 1990.

As can be seen, foreign capital has played an increasingly important role in financing Thailand's investment and growth which

Table 14.2**FINANCING OF THE CURRENT
ACCOUNT DEFICIT, 1970 - 1990**

(Million US Dollars)

	Average of Period			
	1970 - 74	1975-80	1981-86	1987-90
Current account deficit	-122	-1,249	-1,627	-2,819
(In percent of GDP)	(1.5)	(5.1)	(4.3)	(4.0)
Nonmonetary capital (net)	195	1,068	1,738	4,449
Medium + L - T capital (net)	164	847	1,362	2,411
Private sector	135	288	518	2,809
Direct investment (equity)	65	75	225	1,015
Portfolio investment	10	27	46	708
Others	60	187	248	1,086
Public sector	29	559	844	-398
Short - term capital (net)	31	222	376	2,039
Others	26	-38	156	582
Change in international reserves	99	-218	268	2,213
Total foreign capital inflow 1/	221	1,031	1,895	5,032
(In percent of GDP)	(2.3)	(4.5)	(5.0)	(7.8)
Total external borrowings	120	967	1,467	2,727
(As percent of total investment)	(5.0)	(16.0)	(15.7)	(13.8)

1/ Calculated as the sum of the current account deficit and the build up of reserves.

Source: Bank of Thailand

would otherwise be constrained by inadequate domestic savings. Notwithstanding the benefits foreign capital inflow has brought in terms of modern technology, management expertise, and enlarged market network, foreign capital should not be viewed as independent from or a substitute of domestic saving. Domestic saving is considered superior because of risks associated with external financing. This is because in the long-term, the availability and conditions of foreign financing depends on the confidence of foreign creditors and investors on the growth and stability performance especially with respect to the ability to service external debt. The ratio of external debt to GDP, though showed a declining trend since 1988, still remains relatively high and can contribute to the weakening of the economy's ability to weather external shocks.

In view that adequate domestic saving in relation to investment demand is an important factor contributing to economic stability, its role in achieving sustainable growth cannot be overemphasized. The current account deficit has been expanding sharply since 1989 and looks to remain high in view of the continuation of many large investment projects, particularly in infrastructure. While public and corporate savings will continue to be an important source of investment finance, a fundamental shift for household savings needs to be established in order to raise total savings to the level that would allow for the closing of the investment - saving gap especially in the private sector.

II. The Role of Financial System in Domestic Savings Mobilization

The share of savings in the financial system had increased steadily in the past decade. As per cent of total household savings, household savings mobilized through the financial system rose from 3.7 per cent in 1980 to 7.3 and 11.1 per cent in 1985 and 1990, respectively.

Total financial savings of households can be classified into non-equity and equity types. Household equity-typed savings, mobilized through the stock market, is much lower than savings at financial institutions. This is largely because savings at financial institutions is liquid, and the Thai stock market is relatively small. According to the Flows of Fund Accounts of Thailand, the average proportion of equity holding to total household savings was 20 per cent during 1985-1988.

Table 14.3**HOUSEHOLD SAVINGS: EQUITY AND NON-EQUITY**

(Million Bahts, Per Cent of Total)

Year	Equity		Non Equity	
	Volume	% of	Volume	% of
1980	8,131.5	11.4	63,263.3	88.6
1981	5,274.5	9.0	53,272.4	91.0
1982	13,221.5	12.3	94,306.3	87.7
1983	21,724.0	18.1	98,300.0	81.9
1984	24,192.3	19.9	97,312.4	80.1
1985	25,300.4	20.8	96,179.6	79.2
1986	23,898.8	17.9	109,691.3	82.1
1987	41,000.0	23.1	136,535.5	76.9
1988	38,863.3	18.0	176,996.3	82.0

Source: NESDB

2.1 Savings Mobilization Through Financial Institutions

Savings mobilized through financial institutions are mostly in the form of deposits, of which 80 per cent were mobilized through commercial banks and finance companies. Deposits are generally divided into three main categories : demand, savings, and time or fixed deposits.

After the adjustment of interest rate structure toward a more flexible system in 1980, deposits at commercial banks rose on average by 23 per cent per annum, during the years 1981-1985. Moreover, commercial banks' deposits grew markedly by 25.9 and 29.4 per cent

in 1989 and 1990, respectively, linked to rapid economic expansion and the implementation of financial deregulation and liberalization measures. These measures included the liberalization of regulations on interest rate, the opening of new bank branches, and the introduction of new technology including the automated teller machine and electronic fund transfer system (EFT). Table 14.4 and 14.5 give an idea of total household savings mobilized by the financial system of Thailand.

Finance companies, the second largest financial institutions in Thailand, mobilize deposits by issuing promissory notes to the public. During 1983-1987, the value of promissory notes (equivalent to commercial banks' at call and term deposits) issued by finance companies increased marginally by 4.2 per cent annually, compared to the average rate of 26.8 per cent in early 1980's. This was due to the weakening of public confidence after evidence of mismanagement of funds by some finance companies. However, to restore public confidence, the "Life Boat Scheme" was set up in 1984 to assist finance companies experiencing financial difficulties. As a result, the growth of deposits at finance companies recovered and the average annual growth rate was 38.4 per cent per annum during 1988-1990.

On the structure of deposits at commercial banks and financial companies, the shares of time or fixed deposits and demand deposits to total deposits, fell significantly, from 74.6 and 13.8 per cent in 1980 to 65.1 and 5.5 per cent in 1990, respectively. In contrast, the shares of savings deposits increased markedly, from 11.6 to 29.4 per cent, in the corresponding periods.

Factors contributing to this change were an imposition of a 15 per cent withholding tax on interests earned from time deposits since 1986, while returns from savings accounts were tax-free. Moreover, since late 1970's, the authorities permitted commercial banks to operate a system similar to the Automatic Transfer System between demand and savings deposits thereby reducing the need to hold large demand deposit balances. However, the lifting of the ceiling on fixed deposits rates in March 1990 led to a sharp increase in fixed deposit rate for all maturities, hence fixed deposit rose again to 70 per cent of total deposits in 1990. In addition, the imposition of a 15 per cent withholding tax on interest income of more than B 10,000 earned from the saving accounts from 7 November 1991 led to a shift away from saving deposits.

Table 14.4**HOUSEHOLD SAVINGS CLASSIFIED BY INSTITUTION**

(Million Bahts)

Institution	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Commercial Banks	163,761.1	198,298.4	253,339.4	328,064.2	394,484.8	452,929.6	505,218.9	588,728.6	704,588.0	887,648.5	1,148,777.6
Financial Companies	29,309.0	38,824.8	49,814.2	54,050.7	48,551.9	58,097.4	59,117.4	60,272.4	79,693.0	117,669.0	149,379.8
Specialized Finance Institutions	26,960.0	29,650.8	35,032.3	42,562.4	53,019.1	65,825.6	93,060.7	109,256.4	122,999.2	136,154.2	151,291.4
Insurance Companies	5,403.9	6,924.8	8,793.3	11,109.1	13,352.4	15,933.5	17,473.3	20,468.7	24,233.7	29,972.6	34,345.1
Other Finance Institutions	6,618.8	8,588.7	10,974.9	12,424.3	13,794.6	16,412.6	20,431.6	25,575.8	32,170.0	38,723.7	47,128.5
Stock Exchange of Thailand	25,521.8	23,471.2	29,439.0	34,793.6	47,431.9	49,456.8	75,200.0	138,155.4	223,645.2	659,493.1	613,515.3
Total	257,574.6	305,758.7	387,393.1	483,004.3	570,634.7	658,655.5	770,501.9	942,457.3	1,187,329.1	1,869,661.1	2,144,437.7

Source: Bank of Thailand

Table 14.5**PROPORTION OF HOUSEHOLD SAVINGS
CLASSIFIED BY INSTITUTION**

(Per Cent)

Institution	Average 1985-1990	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Commercial Banks	59.5	63.5	64.9	65.4	67.9	69.1	68.8	65.5	62.5	59.3	47.5	53.6
Financial Companies	7.2	11.4	12.7	12.9	11.2	8.5	8.8	7.7	6.4	6.7	6.3	7.0
Specialized Finance Institutions	9.7	10.5	9.7	9.0	8.9	9.3	10.0	12.1	11.6	10.3	7.2	7.0
Insurance Companies	2.0	2.1	2.3	2.3	2.3	2.4	2.4	2.3	2.2	2.0	1.6	1.6
Other Finance Institutions	2.5	2.6	2.8	2.8	2.5	2.4	2.5	2.7	2.7	2.8	2.1	2.2
Stock Exchange of Thailand	19.1	9.9	7.7	7.6	7.2	8.3	7.5	9.7	14.6	18.9	35.3	28.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Bank of Thailand

With the growth of the securities markets during the past 5 years, which will be discussed in the next section, the average share of savings channeled through commercial banks declined from 67.2 per cent during 1981-1985, to 57.7 per cent during 1986-1990. Moreover, the shares of savings mobilized by non-bank financial institutions, including finance companies as a major group of institutions, fell from 15.7 per cent during 81-85 to 11.2 per cent during 86-90.

2.2 Unorganized Financial Market

In common to other developing countries, there exists an informal or unorganized financial market in both rural and urban Thailand. Operations in the informal market include direct lending among individuals and firms, rotating credit association ("chit fund" or "share game" in Thai), discounting post dated cheques and trade credits. According to the household savings surveys carried out by the Bank of Thailand, in 1980, 16.2 per cent of total deposits and 40.4 per cent of total loans were in the informal sector.

A certain degree of linkages is believed to exist between the informal and formal markets. Policies or measures affecting activities in the formal financial market could generate a spillover effect to the informal market. For example, in 1984, when the tight credit policy was adopted, demand for credit in the informal market and interest rates rose significantly. Lending in the informal market is therefore closely linked to the formal credit system, particularly commercial banks which are a major source of funds for the informal market activities. Moreover, differentials of interest rates in the formal financial system and alternative returns on money are also major factors affecting interest rates in the informal market, particularly in rotating credit and cheque discounting businesses.

2.3 Measures to Promote Domestic Resource Mobilization

2.3.1 Interest Rate Policy

A move towards a flexible interest rate regime was first initiated in 1980 with the enactment of the Act of Interest Rate on Lending of Financial Institutions. The law permitted the authorities to raise the ceiling on lending rate above the fixed 15.0 per cent limit imposed by the Civil and Commercial Code. Since then, ceiling rates on both deposits and

loan were adjusted several times. In June 1989, the ceiling rate for deposit of more than one year maturity was lifted to encourage longer-term deposit mobilization and to enable commercial banks to adjust themselves gradually to a more flexible interest rate system. Later, the ceilings on fixed deposit rates of all types of maturity, on saving deposit rates, and on loan rates were lifted, effective March 1990, and January and June 1992 respectively, allowing interest rates to be determined by market forces. The subsequent rise in deposit rates together with lower inflation, has made the net return on deposits at financial institutions more attractive for the public to save as evidenced by a strong growth of deposits at commercial banks.

2.3.2 Commercial Bank Branching Policy

To increase and develop financial services in the rural areas, commercial banks who are willing to open branches in remote communities are also allowed to open more branches in prime areas. As a result, 264 new branches were approved in 1989 compared with only 56, 42 and 83 branches during the three preceding years, respectively. Furthermore, in 1989, a new concept of "sub-branch" was created to allow banks to open compact-sized offices, each manned by five staff or less. The concept of "sub-branch" or "mini-branch" is particularly suitable in areas where the volume of transactions is not high enough to be cost-effective to open a full-sized branch. A total of 78 sub-branches was approved in 1989.

At end-1990, there were 2,311 commercial bank branches, of which 662 branches were situated in Bangkok Metropolitan areas.

2.3.3 Promotion of Contractual Savings Schemes

Among other measures to promote long-term savings, tax privileges were granted to encourage the formation of contractual savings schemes, especially voluntary provident funds and life insurance. In 1982, payments to both schemes were tax deductible up to B 7,000 per year which was raised to B 10,000 per year in 1991. Moreover, for the provident fund scheme, the employees' contributions to the fund are allowed to be excluded from taxable income. As for employers, their contributions are also tax deductible up to 15 per cent of the company's total wage payment in the same accounting period.

2.3.4 Development of Financial Instruments and Services

The developments of financial instruments and services for businesses and financial institutions to mobilize funds are key policy objectives. Measures to promote the development of financial instruments include removing legal and tax barriers to issue financial papers (1991), setting up the SEC-typed of organization to oversee the development of capital market (1992), both primary and secondary markets, promoting the establishment of credit rating agency and trust institutions, improving information and disclosure system for investors' protection, and promoting the development of both primary and secondary markets for financial instruments.

Removing Tax Obstacles

In Thailand, taxes affecting financial investment are personal income tax, corporate income tax, business tax, and stamp duty. Taxable incomes are interest income, dividends and capital gain received from investment in financial instruments. In the past, the distorted tax structure and complicated tax collection system created unfair tax treatment and tax cascades thereby discouraging the development of financial instruments. In particular, income from different types of instruments are subjected to different tax rates while capital gains and unpaid interest income from a transfer of debentures, bonds, transferable certificate of deposits were taxed at every transactions.

To encourage the issuance of financial instruments, the Revenue Code was amended, effective 7 November 1991, to eliminate repetitive transaction costs and to create a common tax system for financial instruments of all types.

III. Role of the Securities Markets in Domestic Savings Mobilization

The Thai securities market, though relatively small by international standard, is nonetheless a rapidly expanding one. In Thailand, the securities market comprises primary and secondary segments, and types of securities include debt instruments (government bonds and debentures) and equity instruments (corporate shares and stocks).

The **primary market** involves trading, both through financial intermediaries and directly between issuers and investors. In Thailand, the new issues were mostly government and state enterprise bonds while a small proportion was new shares issued by private companies. The total value of government bonds and shares issued in the primary market increased from B 14.0 billion in 1980 to peak at B 40.8 billion in 1986. However, following a build up of government budget surplus since 1988 and policy to reduce government debt, the amount of government bonds declined significantly. Table 14.6 provides data on equity and debt instruments in primary market.

In the **secondary market**, issued securities are traded among investors. Buying and selling in this market are carried out mostly in the stock exchange and the remaining in the over-the-counter market. The development of the Stock Exchange of Thailand can be divided into two major phases. In the first phase, the Bangkok Stock Exchange of Thailand was established by private members in the early 1970's but later ceased to operate due to a lack of support from both the Government and private businesses. Marking the second phase was the enactment of the Securities Exchange of Thailand (SET) Act in 1974. This act allowed for an establishment of the Securities Exchange of Thailand in 1975, renamed the Stock Exchange of Thailand in January 1990, with the mandate to develop the Thai capital market and supervise its orderly growth. The SET Act was, however, amended in 1984 in an attempt to reform the capital market and protect investors against manipulation.

Prior to 1985, the growth of the stock market was sluggish with trading volume averaging a low B 58.13 million per day. However, aided by the authorities' firm support, the rapid economic growth, lower oil prices and interest rate, the daily trading value jumped from B 101.2 million in 1986 to B 1,526.4 million in 1989 -- ranking Thailand's stock market as one of the fastest-growing markets in Asia. The SET index also jumped from 207.2 to 879.2 during the same period while the market capitalization rose from B 75.2 billion to B 659.5 billion. The values of financial instruments in secondary market are given in Table 14.7.

In 1990, prior to the Persian Gulf Crisis, the daily transaction was around B 4,384 million and the SET index reached a record high of 1,143.8 in July 1990. After the Gulf War, however, stock market

Table 14.6

EQUITY AND DEBT INSTRUMENTS IN PRIMARY MARKET

Compared with Credit from Financial Institutions

(Million Bahts)

Instruments	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Equity											
Common shares											
Quoted Companies	548.4	798.7	1,723.4	1,051.8	3,281.5	2,880.9	1,544.7	7,304.6	4,907.2	10,637.9	17,464.9
Warrants	-	-	-	-	-	-	-	-	-	345.0	-
Unit Trusts	-	-	50.0	-	-	-	825.0	2,500.0	500.0	1,000.0	-
Debt Instruments											
Government bonds	14,000.0	23,200.0	24,500.0	18,700.0	35,020.0	26,265.3	40,756.6	29,220.7	20,500.0	16,150.0	6,750.0
State Enterprises bonds	1,500.0	2,577.5	500.0	-	100.0	3,413.0	3,947.0	1,658.4	2,181.1	1,500.0	6,689.0
Promissory notes of											
State Enterprises	-	-	-	-	-	-	-	-	-	4,750.0	-
BOT bonds	-	-	-	-	-	-	-	2,000.0	2,000.0	-	13,485.0
Commercial papers B/E	n.a	n.a.	n.a.	1,284.0	n.a.	2,382.0	8,423.1	11,195.5	16,685.8	18,748.6	21,537.8
Citi notes	-	-	-	-	-	-	325.0	650.0	650.0	650.0	650.0
Chase notes	-	-	-	-	-	-	-	200.0	200.0	200.0	600.0
IFCT notes	-	-	-	-	-	-	-	-	400.0	400.0	400.0
Floating Rate Notes (FRNS)	-	-	-	-	-	600.0	1,400.0	1,907.0	7,082.0	7,082.0	6,875.0
Transferable Certificates											
of Depistis (TCD)	-	-	-	-	19,484.1	18,858.0	1,916.7	949.9	301.0	188.0	84.4
Debentures	-	100.0	-	-	200.0	290.0	200.0	2,250.0	3,201.0	4,292.4	3,906.0
Convertible Debentures	-	-	-	-	-	-	-	-	-	857.9	1,550.0

Table 14.6 (Cont'd)

Instruments	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Credit in Financial System											
Credit Extended by Financial Institutions	314,907.8	368,708.6	433,387.5	552,905.5	636,981.6	695,351.5	728,987.2	882,320.0	1,121,165.9	1,493,350.5	1,988,237.1
Credit extended by Commercial banks	218,931.2	254,449.6	299,760.1	401,648.2	474,993.2	521,036.0	543,728.7	672,906.8	853,545.4	1,110,596.2	1,481,953.7
Credit extended by Specialized Financial institution (GSB, GHB, BAAC, IPCT & SIFO)	25,122.1	30,022.6	32,017.9	34,787.2	37,328.8	42,449.7	45,078.4	51,531.9	59,523.4	74,214.9	100,956.7
Credit extended by other Financial Institutions	70,854.5	84,236.4	101,609.5	116,470.1	124,659.6	131,865.8	140,180.1	157,881.3	208,097.1	308,539.4	405,326.7
SET	25,521.8	23,471.2	29,439.0	34,793.6	47,431.8	49,456.8	75,200.0	138,155.4	223,645.2	659,493.1	613,515.3
Total Deposit at CB	217,115.4	260,184.9	324,303.3	407,597.1	496,122.5	555,546.3	627,152.6	752,568.1	893,413.5	1,135,073.0	1,440,809.0
Demand deposit	28,323.5	29,652.1	28,237.8	25,736.5	27,938.8	25,776.7	33,596.0	48,146.1	51,818.3	57,270.2	58,079.0
Savings deposit	28,671.8	38,633.8	61,695.4	95,473.5	106,035.5	117,083.1	164,090.1	234,143.4	283,385.0	365,418.1	398,292.6
Time deposit	157,671.0	188,671.9	231,406.3	282,878.7	358,433.14	09,402.2	425,925.9	464,278.7	552,043.3	702,802.2	975,257.6
Other deposit	2,993.0	3,227.1	2,963.8	3,508.4	3,915.1	3,284.3	3,540.5	5,999.9	6,166.9	9,582.5	9,179.8
Finance Companies											
Notes payable	n.a.	53,023.8	65,983.8	69,955.3	66,231.5	76,640.9	79,634.7	84,209.6	116,101.0	170,392.8	229,098.8P
At call	n.a.	9,582.8	10,591.6	11,851.6	9,507.1	10,981.6	6,454.6	8,383.5	17,588.1	22,834.6	51,554.1
Times	n.a.	43,441.0	55,392.2	58,103.7	56,774.4	65,660.3	73,180.1	75,821.1	98,512.9	147,558.2	177,544.7
Treasury bills	8,400.0	8,400.0	9,900.0	11,000.0	12,000.0	12,000.0	12,000.0	11,500.0	2,000.0	-	-

Source: Bank of Thailand

activities were more volatile due mainly to increases in domestic interest rates, slower trading in foreign stock markets, and greater domestic political uncertainties. Consequently, the daily trading value and the SET index fell to B 3,237.0 million and 711.36 in 1991, respectively.

As for the degree of stock market development, the ratio of market capitalization to GDP rose from 4.9 per cent in 1985 to 37.7 per cent in 1991. Meanwhile, the ratio of total turnover value to GDP grew from 1.5 to 31.6 per cent during the corresponding periods. The number of listed and authorized companies in the SET also increased from 93 in 1986 to 214 in 1990. In addition, as per cent of total household savings, the stock market capitalization averaged 7.7 per cent during 1981-1985 and rose to 21.4 per cent during 1986-1990. Some highlight statistics on quoted securities are given in Table 14.8.

Important measures carried out during 1980s to promote and develop the securities market can be summarized as follows:

3.1 Measures to Improve Regulation and Supervision

The amendments of the Securities Exchange Act (1984) increased investor protection by imposing penalties on manipulation and insider trading. In addition, rules and procedures on securities trading were improved including supervision and examination of securities price movement, data disclosure, member companies' operation and financial condition as well as margin loan rate adjustment. To strengthen the supervision and develop securities businesses, the Securities and Exchange Act was passed and the Securities Exchange Commission (SEC) was subsequently established in 1992. This will further increase investor protection as more stringent regulations on information disclosure and prevention of insider trading have been introduced. In addition, the supervision of securities companies and other related institutions is restructured to increase its transparency and efficiency.

3.2 Measures to Increase the Supply of Securities

The 1984 amendment also permits listed companies to issue debentures to the public, the right of which was previously exclusive to public companies under the Public Company Act 1978. With the enactment of the SEC Act in 1992, the right to issue debt instruments

to mobilize funds from the public has been extended to all companies subject to the approval of the Securities Exchange Commission. Other measures to increase the supply of securities included a modification of certain criteria and requirements for the listing and trading of securities, encouraging capital increases by listed companies, increasing the number of listed companies, and encouraging state enterprises with good performance to list in the SET. In addition, new types of securities: convertible debentures, warrants, and the American Depository Receipt (ADR) were introduced together with necessary amendments of regulations in order to promote these instruments.

3.3 Measures to Increase the Demand for Securities

In order to increase the demand for securities, institutional investors such as life insurance companies and provident funds were given increased flexibility in their investment practices by allowing them to invest in listed securities. Moreover, the establishment of provincial offices of securities companies were also encouraged to attract investment by individual investors.

3.3.1 Tax Incentives

Since 1986, apart from the exemption on capital gains, dividend income earned from listed securities is taxed at a progressive rate of up to the maximum of 15 per cent compared with the previous maximum of 55 per cent. Tax privileges on equity owned by foreign investors were allowed to promote investment in on-shore foreign funds. Tax privileges were given to foreign juristic investors who invest through onshore foreign country funds with capital gains tax of 12.5 per cent, and dividend tax of 10 per cent - half the rate for foreign investors in general.

3.4 Measures to Improve SET Operations

A number of SET regulations were amended to increase operational efficiency and to promote a more active securities trading. A uniform board lot was introduced for all types of stocks where 1 board lot comprise 100 stocks. In line with increased trading volume, trading hours of the SET was extended from 2 to 3 hours, and from 1 July 1992 the system of two session trading was introduced, from 10.00 a.m. to 12.30 p.m. and from 2.00 p.m. to 4.00 p.m. Services of

Table 14.7

FINANCIAL INSTRUMENTS IN SECONDARY MARKETS
(Outstanding Amount)

Instruments	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Equity (market value)											
Common shares	24,825.3	23,003.3	28,917.8	34,221.9	46,710.1	48,776.4	74,248.9	134,994.8	218,073.7	647,273.2	602,909.3
Preferred shares	58.8	54.5	51.9	159.6	181.0	172.7	210.6	371.7	547.4	2,244.0	1,557.6
Warrants	-	-	-	-	-	-	-	-	-	-	472.0
Unit Trusts	437.5	331.3	445.0	400.0	540.8	507.8	700.0	2,040.0	3,336.5	7,325.0	4,725.0
Debt Instruments											
Government bonds	77,161.1	88,779.0	109,492.3	134,530.4	151,355.7	179,035.0	200,915.8	204,588.1	201,379.7	196,273.8	182,637.9
State Enterprises bonds	887.2	887.2	887.2	1,387.2	1,429.2	1,429.2	2,274.2	2,429.2	2,429.2	2,429.2	2,429.2
Debentures	200.3	82.3	24.3	12.1	-	-	40.6	748.9	1,687.7	2,130.0	2,346.3
Convertible Debentures	-	-	-	-	-	-	-	-	-	524.3	1,405.1
Treasury Bills	61,735.1	71,015.7	137,229.4	154,831.2	147,872.5	44,145.1	51,619.2	2,002.7	4,676.4	660.9	-
Repurchase	22,407.8	25,758.6	52,966.9	52,956.2	58,403.7	5,997.9	9,348.5	5.0	3,672.7	7.0	-
Sales	39,327.3	45,257.1	84,262.5	91,875.0	89,468.8	38,148.7	42,270.7	1,997.7	1,003.7	653.9	-

Table 14.8

VITAL STATISTICS ON QUOTED SECURITIES

	1980 2523	1981 2524	1982 2525	1983 2526	1984 2527	1985 2528	1986 2529	1987 2530	1988 2531	1989 2532	1990 2533
CORPORATE SECURITIES											
Annual Turnover - Volume											
- Value	(mil. shares)	58.24	30.00	60.76	71.20	83.27	99.34	153.67	923.59	3,253.64	8,243.89
Average Turnover - Monthly	(bil. baht)	6.55	2.52	5.88	9.12	10.60	15.33	24.99	122.14	377.03	627.23
- Daily	(mil. shares)	55.77	210.10	489.83	760.05	882.93	1,277.83	2,082.79	10,178.21	31,419.02	52,269.40
Turnover by Types of Securities	(mil. shares)	26.41	10.21	23.89	36.93	42.72	62.59	101.19	494.49	1,526.43	2,539.40
- Common and Preferred Shares	(bil. baht)	6.30	2.36	5.48	8.76	10.26	14.99	24.49	112.72	338.70	575.21
- Unit Trusts	(mil. shares)	246.78	162.31	396.43	364.20	336.53	346.39	497.97	6,428.97	6,937.81	6,691.27
- Debentures	(mil. shares)	0.02	0.72	+	+	+	+	2.67	25.72	30.88	551.16
- Convertible Debentures	(mil. shares)	+	+	+	+	+	+	+	+	+	75.59
- Warrants	(mil. shares)	+	+	+	+	+	+	+	+	+	2,247.68
SET Index*		124.67	106.62	123.50	134.47	142.29	134.95	207.20	284.94	386.73	612.86
Market Dividend Yield*	(%)	9.42	9.57	8.53	6.97	9.07	8.15	4.30	3.86	3.84	5.63
Market P/E Ratio*		6.40	9.52	11.83	6.54	7.19	9.59	12.34	9.31	12.03	13.81
Capital Mobilized by Quoted Companies	(mil. shares)	696.45	1,084.36	2,163.88	1,459.15	6,099.92	4,143.32	2,167.98	14,515.17	25,311.82	46,648.68
Number of Quoted Companies		77.00	80.00	81.00	88.00	96.00	97.00	93.00	109.00	141.00	214.00
- Listed		72.00	76.00	78.00	85.00	93.00	95.00	92.00	102.00	122.00	159.00
- Authorized		5.00	4.00	3.00	3.00	3.00	2.00	1.00	7.00	19.00	55.00
Number of Issues		85.00	86.00	85.00	92.00	99.00	100.00	98.00	125.00	165.00	261.00
- Listed		79.00	81.00	81.00	88.00	95.00	97.00	96.00	117.00	145.00	203.00
- Authorized		6.00	5.00	4.00	4.00	4.00	3.00	2.00	8.00	20.00	58.00
Total Capitalization		13.86	14.83	16.55	18.08	22.59	24.58	24.35	38.48	53.50	103.13
- Nominal Value	(bil. baht)	25.52	23.47	29.44	34.79	47.43	49.46	75.20	138.16	223.65	613.52
- Market Value											
GOVERNMENT SECURITIES											
Annual Turnover - Volume											
- Value	(mil. shares)	0.01	0.92	0.10	1.73	1.85	7.04	6.32	1.27	0.21	0.08
Number of Listed Issues	(mil. shares)	10.00	376.48	87.75	203.35	276.01	1,148.87	4,854.76	1,282.42	192.13	38.83
Total Capitalization - Nominal Value	(bil. baht)	71.00	85.00	103.00	124.00	134.00	134.00	142.00	129.00	144.00	129.00
		78.05	89.67	110.38	135.92	152.74	180.46	202.34	206.86	203.81	185.30

* End of year
+ No listed issue

Source: Development and Planning Department
The Stock Exchange of Thailand

the SET's Share Depository Centre and securities information services network were developed to facilitate trading activities in securities market. A computerized trading system was also fully operational since 1991.

3.5 Other Measures

Apart from measures mentioned above, to curb volatility in stock trading which occurred during the crisis such as the Black October and the Persian Gulf Crisis, a close-ended fund named "Ruam Pattana Fund and Ruam Patana Fund II", under the management of the Mutual Fund Company, were established. These funds are invested in securities in the SET to help stabilize stock prices as well as to boost liquidity in the market. Improvements were also made in public relations and in the dissemination of data and information regarding the securities business.

IV. Determinants of Domestic Saving

In general, how much an economy will consume/save is dependent on three categories of variables : (A) Variables determining the ability to consume/save. Variables of this type will include income and demographic factors, (B) Variables that determine the relative price between present and future consumption, i.e. determine incentive to consume/save such as interest rate, inflation, and (C) Variables that determine the opportunity for saving, such as the degree of financial development, the increase in availability of saving instruments with risk/return profiles.

4.1 Variables Determining Ability to Consume/save

4.1.1 Income

Here, the possible income/saving relationship as explained by Keynesian and Permanent Income theories are:

- (i) Current income - (+) from the Keynesian consumption function
- (ii) Permanent income - (+) with a fixed marginal propensity to save.
- (iii) Transitory component of current income - (+) and marginal propensity to save is 1.

- (iv) **The educational age** has negative immediate effect since an increase in time spent on education, thereby lessening the working time. However, this is to be taken *ceteris paribus* of the disproportionate rise in productivity, real income, available for saving as a result of education.

4.2 Relative Price of Present and Future Consumption

Time preference entails the influences of interest rate and inflation. Both factors are however dominated by theoretical ambiguities with regards to the direction of their net effects on savings.

1) The **interest rate** has an ambiguous effect on household saving linked to the opposing effect between a positive substitution effect and a negative income effect. When interest rate rises, the opportunity cost of future consumption in terms of present consumption is lowered, i.e. the relative price of present consumption rises. A substitution effect will lead to a substitution away from the present consumption and therefore raise saving in the current period. With regard to the income effect, however, an increase in interest rate leads to increased income and hence the ability to increase present consumption, leaving the original desired stock of wealth intact.

2) **Inflation** may also have effects which are independent from the effects of the real interest rate. Higher inflation would reduce savings to the extent that it is linked to lower returns thereby substituting consumption for savings, though higher inflation also suggests uncertainties thus inducing higher savings for precautionary measures.

4.3 Liquidity Constraints

With liquidity constraints, the inability to borrow to finance consumption during an earlier working period would induce the consumption profile to closely follow the income profile thereby reducing dissaving of young households. With a downward shift in consumption pattern in the earlier period, savings for middle aged households would be less important and dissaving for retired household will therefore be smaller, making the net effects of liquidity constraint variables (such as credit ceilings, interest rate ceiling, the requirement for collateral to back a loan request) on aggregate savings ambiguous and dependent on the age profile of households.

For developing countries, at the aggregate level, liquidity constraints are also linked to capital inflow. This can have a negative effect on saving in that it is viewed as a substitute for household saving and thus its availability reduces saving effort. On the other hand, it could have a long-run positive effect if the country, previously facing foreign exchange constraints, can now utilize foreign capital to increase investment and general income growth that can be saved in the future. Empirical evidence has often shown a negative impact of foreign saving though in some cases it has been shown that a secondary effect of this is to raise saving following capacity growth and income.

In summary, variables which are expected to determine saving for households which engage in a consumption smoothing process under PIH and LCH assumptions can be captured by the following:

$$S = S \left\{ \begin{array}{l} \text{Savers} \\ \text{Income, } (-----) \text{ Relative price of present and future -} \\ \text{Dissavers} \qquad \qquad \qquad \text{consumption} \\ (+) \qquad (+) \qquad \text{(ambiguous)} \end{array} \right.$$

Liquidity constraints (capital inflow) }
(+) / ambiguous

Empirical Results

Based on the above theoretical discussion, an equation is fitted to explain potential relationships between aggregate domestic savings and the variables already described using Thai data.

Equation 1

$$\text{GDSI} = 0.0358 \text{ GRNAG} + 0.0114 \text{ GRAGR} + 0.0160 \text{ CPI} - 0.2712 \text{ DR} - 0.0146 \text{ INF}$$

(5.103) (1.963) (3.940) (-3.156) (-1.796)

$$R^2 = 0.763 \qquad \text{D.W.} = 2.71$$

$$F(5,14) = 11.264 \quad t - \text{statistics in the parenthesis}$$

Period 1972-1990

Equation 1 shows that the growth of gross domestic savings (GDSI) is linked positively to the growth of non-agricultural (GRNAG) and agricultural (GRAGR) income as well as the rate of inflation (CPI). The

higher coefficient for the growth of non-agricultural income than that of the growth of agricultural income is consistent with progressive industrialization of the Thai economy since 1970. The positive coefficient of inflation can be taken to explain both wealth and interest rate influences on the growth of domestic savings. Higher inflation reduces the desired real stock of wealth and thus induces the economy to increase its savings. In addition, in the case of Thailand, the rate of inflation is linked negatively to real interest rates, as nominal rates were subjected to ceilings until 1991, whose net effect on domestic savings is theoretically ambiguous. Meanwhile, the growth of gross domestic savings is linked negatively to the dependency ratio (DR) and the ratio of total net capital inflows to GDP (INF). On the influence of net capital inflows, the substitution with domestic savings is only partial, partly because, for a saving deficit country, capital inflows allow an economy to invest and expand beyond the limited domestic saving base and thus raise the ability of the economy to increase savings.

As for the statistical significance of Equation 1, the coefficients of all explanatory variables and the whole equation are significant at the 5 per cent level. Although the Durbin-Watson number indicates a possible serial correlation, it falls in the inconclusive range. The problem of this equation is that it is very sensitive to changes in the number of observations and therefore does not represent a stable long-run relationship. This reflects inaccuracies of aggregate data as well as policy influences especially public sector's saving behaviour. Nevertheless, for the period under consideration, the direction of effect of each explanatory variable of domestic savings is consistent with theoretical explanations and can therefore be taken as a useful policy indicator.

As already noted, the problem of low domestic savings in Thailand is rooted in the saving behaviour of households. Thus to identify key variables affecting household savings, Equation 2 was fitted explaining the ratio of household saving to GDP.

Equation 2

$$\begin{array}{l} \text{SH} \quad -37.4933 + 0.1441 \text{ GRAG} + 0.0479 \text{ GRNAG} + 0.4184 \text{ DR} - 0.0053 \text{ ITRE} \\ \text{---} = \\ \text{GDP} \quad (-2.194) \quad (2.655) \quad (0.710) \quad (2.763) \quad (-0.159) \\ \quad + 0.0087 \text{ BRANCH} \\ \quad (2.648) \end{array}$$

$R^2 = 0.564$ $F(5,13) = 3.369$
 $D.W. = 1.493$ Period 1971 - 1989
 T - statistics in the parenthesis

Equation 2 is significant at the 5 per cent level with all major explanatory variables - the growth of the agricultural sector, the number of bank branches and the dependency ratio significant at 5 per cent. The real interest rate variable has a negative sign but is not significant.

From our results, an increase in growth of the agricultural sector by 1 percentage point will raise the household saving rate by 0.14 percentage point. The relative importance of the agricultural sector compared with the non-agricultural sector is consistent with the fact that the majority of households in Thailand continue to be employed in the agricultural sector. The result seems to imply at first sight that the benefits of growth of the non-agricultural sector have not sifted down to the households. Given that households own equity and therefore the right to corporate income, the result may well imply either that households consume most of this unearned income or that the corporate income is not passed on to households, but instead goes into retained earning.

The coefficient of the dependency ratio is significant and positive, contrary to the expected negative sign. An increase in the ratio of the non-working population (retired and age below 15) to working population by 1 percentage point would increase households saving rate by a substantial 0.42 percentage point. This positive sign of the dependency ratio was also found by Lahiri (1989) in his study of private saving in Thailand between 1962-85.

This positive correlation could perhaps be explained by the fact that increase in the number of dissavers or children (*ceteris paribus* increase in number of the retired) and household expenditure was more than offset by the increased saving efforts of the existing saver seeking to achieve the desired stock of wealth.

The effect of interest rate on household saving is inconclusive. Nevertheless, the negative coefficient of the interest rate variable, while not significant, could be explained along three lines. Firstly, the income effect of increased wealth, as interest rate rises, which lowers saving,

outweighs the positive substitution effect which raises saving. Secondly, a fall in real interest rate may have been largely the result of the increase in inflation which induces saving to rise in order that a household achieves the desired real stock of wealth. In addition, a rise in inflation may also increase saving in fixed assets faster than it depresses the saving in financial assets, thus leading to an increase in overall saving. The third line of reasoning is linked to the liability side of households. In this context, households borrow from financial institutions and thus the rise in interest rates (generally with the deposit rate and lending rate rising together) increases costs for households, particularly when the acquisition of fixed assets is normally financed by credit, and therefore reduces disposable income and the ability to save. As the lending rate is not included in the equation, the deposit rate may have acted as a proxy for it and the negative coefficient could have been the result of the depressing effect of the increased cost of borrowed funds on asset acquisition.

As indicated by the equation, the variable most relevant for policy issue is the financial development variable, as proxied by the number of commercial bank branches. Empirical results suggest that an increase in the number of bank branches by 100 branches will raise the ratio of household savings to GDP by 0.87 percentage point. The quantitative implication, even taking it at face value, implies that financial development does offer a scope for stimulating domestic saving. The result for the number of bank branches, however, should be viewed as an indicator of the effect of overall financial market development. The household saving in Thailand appears to be responsive to factors which expand saving opportunities, and therefore, is strongly linked to Thailand's on-going process of financial development.

V. Major Findings and Conclusion

Domestic savings, as a major source of investment finance, is one of the most important factor for sustainable economic growth. Due to the rapid investment expansion in the late 1980's, Thailand's investment-saving gap widened substantially and should continue to increase unless measures are actively taken to increase the level of domestic saving in consistent with the country's investment requirements.

In light of this study, the major outstanding issues of domestic savings mobilization are the following:

1. In Thailand, the effort to improve national saving should focus mainly on the mobilization of household savings. However, the public sector should continue to observe financial discipline to avoid a reemergence of the deficit which will put further pressure on the overall investment-saving gap.
2. The empirical result indicated that household saving is positively and significantly linked to the growth in income of agricultural households, dependency rate, and the degree of financial development. However, the influence of real interest rate and capital inflow on saving is inconclusive.
3. To increase the level of household savings, therefore, the authorities should continue to promote the development of the financial system including the capital market. Here, there are two major types of measures which should be implemented. Firstly, the government should continue to actively promote existing and develop new contractual saving instruments including provident funds, life insurance, saving for retirement, and housing finance. Secondly, the continued liberalization of restrictions on financial activities by private and public institutions regarding branch opening as well as policies to improve the efficiency of these institutions will also help attract financial saving.
4. On interest rate policy, while empirical studies have demonstrated inconclusive results, the maintenance of positive real interest rate by keeping inflation low should help attract financial saving. In particular, in the case of Thailand, the interest rate deregulation, which led to a rise in interest rates, resulted in an increase in deposit balances, and has helped support the development of new financial instruments to stimulate financial saving.
5. A national body should be set up to be responsible for constructing policies to mobilize domestic saving and implementing national campaigns countrywide.

Bibliography

1. Asian Development Bank "Capital Market Development in Selected Member Countries of the Asian Development Bank", January 1986.
2. Bandid Nijathaworn & Chirathep Senivongs "Managing Foreign Capital in a High Growth Economy : Thailand's Recent Experience and Policy Issues", paper presented at the Seminar on Financial Reform Prospects, organized by the People's Bank of China, Beijing, August 1992.
3. Chaipayat Wibulswasdi "Strategies and Measures to Maintain Thailand's Economic Stability in the 1980s", *Bank of Thailand Quarterly Bulletin* Vol.23, No.1, March 1983.
4. Chittima Duriyaprapan "Development of the Capital Market in Thailand" in "The Development of Capital Markets in the SEACEN Countries" edited by Ng Beoy Kui. The South East Asian Central Banks (SEACEN) Research and Training Centre, Kuala Lumpur, Malaysia, 1989.
5. Chittima Duriyaprapan & Suchart Sukkankosone "Domestic Resource Mobilization : The Case of Thailand", Bank of Thailand, *Quarterly Bulletin*, Vol. 29, No. 2, June 1989.
6. Duangmani Vongpradhip "Urban Unorganized Money Markets in Thailand, Bank of Thailand, *Quarterly Bulletin*, Vol.26 No.2, June 1986.
7. Dongal, H.E. & Gaumnitz, J.E., Capital Markets and Institutions, 3rd ed. Prentice-Hall, New Jersey 1975.
8. Goldsmith, R.W. Financial Structure and Development, Yale University Press, New Haven and London, 1969.
9. Nawaporn Maharagkaga & Chirathep Senivongs "Role of Domestic Savings In Economic Development : Experience From The Rapidly Growing Asian Economies and A Case Study of Thailand, paper presented at the Seminar on Lesson From Rapidly Growing Asian Economies for Africa, Bangkok, 4-5 June 1991.

10. Olarn Chaiprawat & Siri Ganjarerndee "Competing Uses of Resources Between the Public and the Private Sectors in Thailand" Unpublished Manuscript.
11. Pairoj Vongripanond, Commercial bank Branches and Financing of Non-Farm Enterprise : A Study of their Capacity and Constraint, *Research Report* prepared for USAID, January 1985.
12. Siri Ganjarerndee "Pattern of Household Financial Savings in Thailand Since 1960", Bank of Thailand, *Quarterly Bulletin*, June, 1981.
13. Siri Ganjarerndee "Financial Reform in Thailand, in ed. Hang-Sheng Cheng Financial Policy and Reform in Pacific Basin Countries, Sponsored by the Federal Reserve Bank of San Francisco, Zexington Books, 1986.
14. Skuly, M.T. (ed.) Financial Institutions and Markets in Southeast Asia, *St. Martin's Press New York 1984*.
15. Snoh Unakul & Supachai Panitchapakdi, *Role of Central Banks in Economic Development*, Paper prepared for the Twelfth SEANZA Central Banking Course hosted by the Bank of Korea in Seoul during September 4 -November 16, 1978.
16. Suchada Kirakul & others "Household Savings", Bank of Thailand, *Quarterly Bulletin*, Vol. 24, No. December 1984.
17. Suchada Kirakul & others "Business Savings", Bank of Thailand, *Quarterly Bulletin*, Vol. 25, No. 4, December 1985.
18. Supachai Panitchapakdi "Financial Structure : Segmentation and Development", Bank of Thailand, *Quarterly Bulletin*, Vol. 21, no. 1, March 1981.
19. Suree Siricharoenseng "Thai Household Savings Behavior Under an Alternative Saving Concept : An Analysis of Cross-Section Data 1981", *Thesis Master of Economics*, Thammasart University, May 1987.
20. Thailand Development "Financial Resources Management", prepared by Research Institute the Macroeconomic Policy Program, TDRI, Foundation (TDRI) December 1986.

21. Tongroj Onchan "Informal Credit and the Development of Non-farm Enterprises in Thailand", research paper prepared for USAID/THAILAND, January 1985.
22. World Bank, Thailand : Financial Sector Study, Report No. 8403-... May 25, 1990.