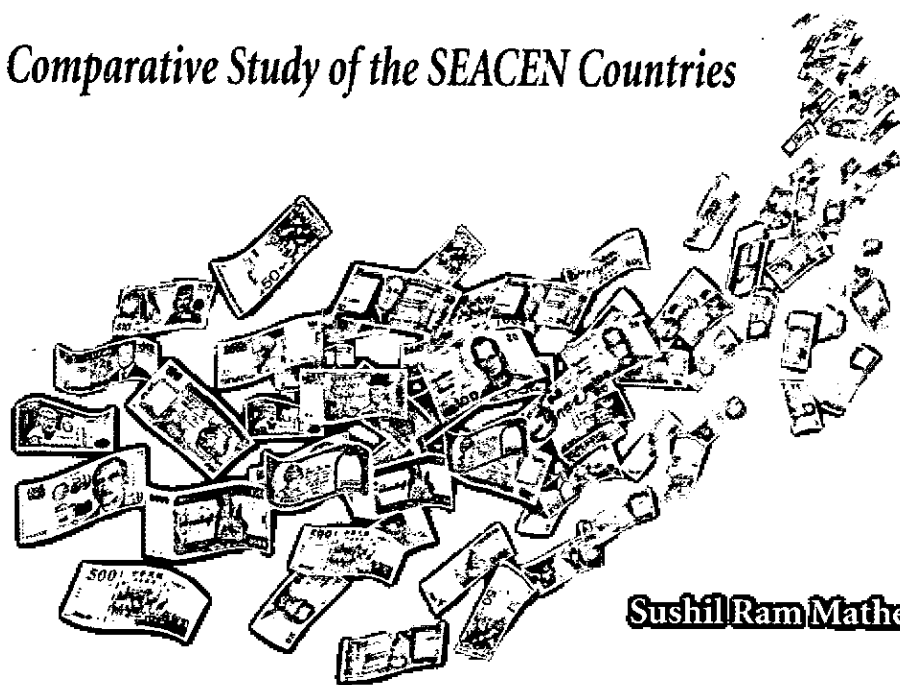


**The South East Asian Central Banks (SEACEN)
Research and Training Centre**

MANAGING AND MONITORING DIRECT AND PORTFOLIO INVESTMENT FLOWS:

A Comparative Study of the SEACEN Countries



Sushil Ram Mathema



The SEACEN Centre
Kuala Lumpur, Malaysia

**MANAGING AND MONITORING
DIRECT AND PORTFOLIO INVESTMENT FLOWS:
A COMPARATIVE STUDY OF THE SEACEN COUNTRIES**

by

Sushil R. Mathema



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

© 2004 The SEACEN Centre

Published by The South East Asian Central Banks (SEACEN)
Research and Training Centre
Lorong Universiti A
59100 Kuala Lumpur
Malaysia

Tel. No.: (603) 7958-5600
Fax No.: (603) 7957-4616
Telex: MA 30201
Cable: SEACEN KUALA LUMPUR

**MANAGING AND MONITORING DIRECT AND
PORTFOLIO INVESTMENT FLOWS: A COMPARATIVE
STUDY OF THE SEACEN COUNTRIES**
Sushil R. Mathema

ISBN: 983-9478-36-2

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form by any system, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the copyright holder.

Printed in Malaysia by Graphic Stationers Sdn. Bhd.

FOREWORD

The challenges faced by the world as well as regional economies due to the large private capital flows in recent times have been a matter of great concern, particularly to the central banks and the monetary authorities. The economic overheating and the associated problems of the appreciation of the real exchange rate as well as sudden reversals of the flow of these capital has emphasised the critical importance of having a good database on capital flows to estimate total foreign obligations.

The research study on *Managing and Monitoring Direct and Portfolio Investment Flows: A Comparative Study of the SEACEN Countries* is a collaborative effort between the SEACEN Centre and the 10 member central banks of Indonesia, Korea, Malaysia, Mongolia, Nepal, Philippines, Singapore, Sri Lanka, Taiwan and Thailand. It aims to review existing compilation, reporting and monitoring procedural systems as well as central banks' policies on management of foreign direct investment (FDI) and foreign portfolio investment (FPI) flows in the SEACEN countries with a view to improving data coverage as well as data collection systems for better management of these flows in the member countries. The project also aims at examining the economic impacts of these private capital inflows on key macroeconomic variables and the subsequent implications on the monetary policy. It also represents a part of the Centre's on-going effort in assisting the work of the *SEACEN Expert Group (SEG) on Capital Flows* in promoting the collection of data relating to capital flows.

The study made extensive use of the concept of the international guidance and respective surveys as provided in *BPM5, BOP Compilation Guide, OECD Benchmark Definition of FDI, Foreign Direct Investment Statistics: How Countries Measure FDI, 2003 and Coordinated Portfolio Investment Survey Guide 2002*. For the study, two research workshops were conducted with the first workshop focusing on issues to be covered and overall coverage and methodology of the project and the second workshop on discussions of the final drafts and regional analysis pertaining to the project theme. The paper is divided into 2 parts: the first part consists of the integrative report and regional analysis authored by Mr. Sushil Ram Mathema, Project Leader and Senior Economist at the SEACEN Centre who was seconded from Nepal Rastra Bank, while the second part consists of country chapters authored by country researchers from the 10 participating member central banks.

The author wishes to gratefully acknowledge the contribution of Ms. Marie Montanjees, Senior Economist, at the IMF for her assistance and useful suggestions

at the various stages of the project and valuable comments on the final draft paper. He would also like to express his deep gratitude to all the country researchers for preparing their respective country studies and to the Directors of Research of the respective member banks/monetary authorities for their useful comments and suggestions on the final draft paper. Finally, he wishes to record his deepest appreciation to Miss Seow Yun Yee, Economist, for her untiring and highly efficient research assistance.

The views, conclusions and recommendations stated in the paper are those of the authors which do not necessarily reflect those of the SEACEN Centre or its member central banks.

May 2004

Dr. Subarjo Joyosumarto
Executive Director

	<i>Page</i>
Foreword	iii
Tables of Contents	v
List of Tables	xvii
List of Charts	xxii
List of Appendices	xxvi
Executive Summary	xxix

PART I INTEGRATIVE REPORT

Chapter 1: Managing and Monitoring Direct and Portfolio Investment Flows: A Comparative Study of the SEACEN Countries

1. Introduction	1
2. Overview of FDI and FPI Flows in SEACEN Countries	2
3. General Issues	3
4. Principles of Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI)	4
4.1 Foreign Direct Investment	4
4.2 Foreign Portfolio Investment	6
5. International Efforts to Improve Data on International Investment Flows	8
6. Definitions and Concepts of FDI and FPI Flows - Compilation and Measurement System	11

	<i>Page</i>
6.1 Foreign Direct Investment (FDI)	11
6.1.1 Definition	11
6.1.2 Direct Investment Income	12
6.1.3 Direct Investment Capital	13
6.1.4 Recording of FDI Flows	14
6.1.5 Time of Recording	14
6.1.6 Valuation	14
6.1.7 Geographic and Industrial Allocation	15
6.1.8 Accounting Practice	16
6.1.9 Unit of Account and Exchange Rate Conversions	16
6.1.10 Special Cases of Direct Investment Enterprises	16
6.1.11 Data Sources for FDI	18
6.2 Foreign Portfolio Investment	20
6.2.1 Definition	20
6.2.2 Classification of FPI by Institutional Resident Sector	21
6.2.3 Classification of FPI by Instruments	21
6.2.4 Valuation	22
6.2.5 Data Sources of FPI	23
7. Distinguishing Between Foreign Direct Investment and Foreign Portfolio Investment	25
8. Dissemination of FDI and FPI Statistics	26
8.1 Efforts of SEG Members in Capturing Information on Domestic Debt Securities and International Securities	26
9. Direct Investment and Portfolio Investment Data Availability, Data Sources and Compilation Practices in the SEACEN Countries	27
9.1 Foreign Direct Investment (FDI)	28
9.1.1 Data Availability	28
9.1.2 Periodicity and Timeliness	29
9.1.3 Data Sources	29
9.1.4 Geographic and Industrial Classifications	30
9.1.5 Treatment of Definitions for Direct Investment Enterprises Resident in the Reporting Economy (Inward FDI): Transactions Data	32

	<i>Page</i>
9.1.6 Valuation of Assets and Liabilities	33
9.1.7 Recording of FDI Statistics (Transactions) in Special Cases	34
9.2 Foreign Portfolio Investment	35
9.2.1 Data Availability	35
9.2.2 Periodicity and Timeliness	35
9.2.3 Data Sources	35
9.2.4 Country Attribution and Residency and Collection Basis	37
9.2.5 Sectoral Breakdown of FPI Data	38
9.2.6 Geographical Allocation of FPI Statistics (Liabilities)	38
9.2.7 Currency Breakdown	38
9.2.8 Classification of Securities by Instruments and Maturity/Duration	39
9.2.9 Valuation	39
10. Effectiveness of Current Data Compilation System and Efforts to Improve Foreign Investment Flows Data	40
10.1 Issues	40
10.2 Efforts in Improving FDI/FPI Data	41
10.2.1 Indonesia	42
10.2.2 Korea	42
10.2.3 Malaysia	43
10.2.4 Nepal	43
10.2.5 Philippines	43
10.2.6 Singapore	44
10.2.7 Sri Lanka	44
10.2.8 Thailand	44
11. Recent Trends in International Investment Flows (FDI & FPI) in the SEACEN Countries	45
11.1 Trends in Foreign Direct Investment	45
11.2 Trends in Foreign Portfolio Investment (FPI)	51
12. Volatility of Private & Capital flows: FDI versus FPI Flows	57
13. Economic Impacts of International Investment Flows (FDI&FPI) on Key Macroeconomic Variables	59
13.1 Previous Empirical Evidences	59

	<i>Page</i>
14. Causality Test	61
14.1 Impact of Foreign Direct Investment (Inward) on Key Macroeconomic Variables	63
14.1.1 Impact of FDII on GDP (National Output)	63
14.1.2 Impact of FDII on Gross Domestic Investment (GDI)	63
14.1.3 Impact of FDII on Gross Domestic Savings (GDS)	64
14.1.4 Impact of FDII on Exports (EXGS)	64
14.1.5 Impact of FDII on Current Account Balance (CBAL)	64
14.1.6 Impact of FDII on Employment (UEMP)	66
14.1.7 Overall Results	66
14.2 Impact of Foreign Portfolio Investment (Inward) on Key Real and Monetary Sectors	66
14.2.1 Impact of FPII on GDP	66
14.2.2 Impact of FPII on Key Interest Rate	67
14.2.3 Impact of FPII on Exchange Rate	67
14.2.4 Impact of FPII on Money Supply	68
14.2.5 Impact of FPII on Stock Prices (STOCK)	68
14.2.6 Overall Results	70
15. Managing Private Capital Flows in the SEACEN Countries	70
16. Summary and Conclusion	75
Bibliography	80

PART II COUNTRY CHAPTERS

Chapter 2: **Managing and Monitoring Direct Investment and Portfolio Investment Flows: The Case of Indonesia**

1. Introduction	103
2. Salient Features of Foreign Direct Investment (FDI)	104
2.1 Category of FDI by Country of Origin	106
2.2 Category of FDI by Economic Sector	106

	<i>Page</i>
3. Salient Features of Foreign Portfolio Investment (FPI)	107
4. National Policy/Regulation on FDI and FPI	108
5. Compilation Practice of FDI and FPI	111
6. Issues Relating to Compilation Practices and Efforts to Improve FDI and FPI Data	112
6.1. Implementing the Monitoring System for Foreign Exchange Activity	112
6.2. Conducting Survey (FDI Survey and CPIS)	112
6.3. Implementing the New Data Collecting System on Private Enterprises	113
6.4. Conducting Workshop on Mergers and Acquisitions (M&As)	113
7. Empirical Evidence : The Relationship Between FDI and Output Growth	113
7.1. The Impact of FDI on Industrial Output (Growth Determinant Equation)	114
7.1.1 Hypotheses (H)	114
7.2 Exchange Rate Volatility	116
7.3 The Granger Causality Test	120
8. Concluding Remarks	120
References	123

Chapter 3: Managing and Monitoring Foreign Direct and Portfolio Investment Flows in Republic of Korea

1. Introduction	125
2. Monitoring and Compilation Systems of FDI/FPI	126
2.1 Data Compilation Practices of FDI and FPI	126
2.2 Foreign Exchange Information System	127
3. Phased Monitoring during FDI and FPI Procedure	128
3.1 Foreign Direct Investment Procedures	128
3.2 Foreign Portfolio Investment Procedures	129
4. Salient Features of FDI/FPI and Some Issues in Korea	130
4.1 Trends of Foreign Capital Flows	130
4.1.1 Overview	130
4.2 Trends of Inward FDI	131

	<i>Page</i>
4.3 Trends of Outward FDI	134
4.4 Trends of Inward FPI	134
4.5 Trends of Outward FPI	137
5. Granger Causality Test of FDI/FPI and Macroeconomic Variables	137
5.1 Selection of Variables and Unit-root Test	137
5.2 Results of Granger Causality Test	138
6. National Policy Development and Korea's Experiences on FDI and FPI	141
6.1 Overview	141
6.2 Korea's Experiences with Liberalisation of Capital Flows	142
7. Policy Implications	145
8. Conclusion	145
References	148

Chapter 4: Foreign Direct Investment and Foreign Portfolio Investment in Malaysia

1. Definition	149
2. Compilation Practices of FDI and FPI Flows	149
3. Salient Features of Pre- and Post-Crisis FDI	150
4. Salient Features of Pre- and Post-Crisis FPI	155

Chapter 5: Foreign Direct Investment in Mongolia

1. What is FDI?	159
2. Brief Review of Mongolia and the Economy	160
3. Foreign Direct Investment in Mongolia	161
4. Legal Framework	164
4.1 Foreign Investment Law	164

Chapter 6: Managing and Monitoring Direct and Portfolio Investment in Nepal

1.	Review of the Nepalese Economy	169
2.	Main Characteristics of FDI in Nepal	170
3.	Prospects of FDI in Nepal	173
3.1	NRNs, PNOs and FDI Prospects in Nepal	177
4.	Tenth Plan and FDI	177
5.	Review on Foreign Investment Policies and Regulations	178
6.	Review on Foreign Investment Related Rules and Regulations of NRB	183
7.	Compilation Practices of FDI in Nepal	186
8.	Issues Relating Compilation of FDI and Authorities' Efforts in Improving FDI Flow Data	187
9.	Policy Recommendations	188
	References	190

Chapter 7: Managing and Monitoring Direct and Portfolio Investment Flows: Philippines

1.	Salient Features of Foreign Direct Investments (FDI) and Foreign Portfolio Investments (FPI) in the Philippines	207
1.1	Direct Investments	207
1.2	Portfolio Investments	212
1.2.1	Equity Securities	212
1.2.2	Debt Securities	216
2.	National Policy on Investments	216
2.1	Relevant Legislations	217
2.2	Foreign Investments Act of 1991 (FIA)	219
2.3	Limitations on Foreign Firms' Access to Financing	220
2.4	Financial Regulations	220
2.5	Taxation	221
2.6	Investment Incentives	221
2.7	Investment Applications	222
2.8	Investment Assistance	222
2.9	Investment Fields/Sectors	222

	<i>Page</i>
2.10 Employment of Foreign Nationals	222
3. Reporting and Monitoring Systems (Covering Definition, Data Source, Coverage, Classification, Compilation Practices and Data Dissemination System)	223
3.1 Components of FDI	223
3.2 Coverage of Portfolio Investment	224
3.3 Data Sources	224
3.4 Data Availability	225
3.5 Measures to Improve FDI and FPI Data	226
4. Issues on Data Collection, Valuation and Flows-Stock Reconciliation and Evaluation of Effectiveness of Current Data Compilation System	226
5. Applicability of the IMF and OECD Guide on Definition and Compilation Practices	227
6. Central Bank and Other Authorities' Directives/Regulations	227
6.1 Inward Foreign Investments	227
6.2 Outward Foreign Investments	228
7. Granger Causality Test with Unit Roots Testing	228
8. Philippine Experience on Adoption of Different Policies in Managing Capital Flows (Basically Capital Control or Open Market Operations)	230
References	234

Chapter 8: Managing and Monitoring Direct and Portfolio Investment Flows: Country Paper on Singapore

1. Salient Features of FDI and FPI during the Pre- and Post-financial Crisis Period	241
1.1 Managing Capital Outflows during the Asian Crisis	245
2. National policy on FDI and FPI (both Inward and Outward) and Other Complementary Policies	246
3. Reporting and Monitoring Systems of FDI and FPI (Covering Basically Definition, Data Source, Coverage, Classification, Compilation Practices and Data Dissemination System)	246
3.1 Data Sources	246
3.2 Coverage	247

	<i>Page</i>
3.3 Definitions	247
3.3.1 Foreign Equity Investment in Singapore	247
3.3.2 Singapore's Investment Abroad	247
3.4 Classifications	248
3.4.1 Geographic Classification	248
3.4.2 Industrial Classification	248
3.5 Data Dissemination System	248
4. Issues on Data Collection, Valuation and Flows-Stocks Reconciliation and Valuation of Effectiveness of Current Data Compilation System	249
5. Central Bank and Other Authorities' Directives/ Regulations on FDI and FPI	249
5.1 Liberalisation of the Financial Sector	249
5.1.1 During the 1970s	249
5.1.2 Post- Asian Currency Crisis, Particularly from 1998 Onwards	250
6. Direction of Economic Effects of FDI/FPI Flows on Key Macroeconomic Variables and Impact on Monetary Policy	251
6.1 Selected Macroeconomic Variables and Unit-root Test	251
6.2 Results of Granger Causality Test	251
6.2.1 Pre-crisis and Crisis Years	251
6.2.2 Post-crisis Years	252
6.3 Remarks	253
7. Country's Experiences on Adoption of Different Policies in Managing Capital Flows	254
7.1 Liberalisation of the Exchange and Capital Regime	254
References	256

Chapter 9: Managing and Monitoring Direct and Portfolio Investment Flows: The Case of Sri Lanka

1. Introduction	261
1.1. Direct Investment and Portfolio Investment in the Global Context	261
1.2. History of Liberalisation in Sri Lanka	262
2. National Policy/ Regulations of FDI and FPI and Other Complementary Policies	263

	<i>Page</i>
2.1. Investment Inflows	263
2.2. Investment Outflows	265
2.3. Other Complementary Policies	265
3. Compilation Practices of FDI and FPI Flows	266
4. Salient Features of FDI and FPI Flows	267
5. Impact of Capital Flows on Key Macroeconomic Variables: Direction of Causality	272
6. Observations and Conclusions	274
6.1. Improving Data Availability and Accuracy	274
6.2. Concerns Relating to Further Liberalisation/Managing and Monitoring Issues	275
6.3 Concluding Remarks	276
References	278

Chapter 10: Managing and Monitoring Direct and Portfolio Investment Flows: The Taiwan Experience

1. Introduction	287
2. Salient Features of FDI and FPI	288
2.1 FDI	288
2.2 FPI	289
3. National Policies/Regulations on FDI and FPI	290
3.1 FDI	292
3.2 FPI	291
4. Issues Regarding National Policies for Foreign Investment Flows	292
4.1 Hedge Fund	292
4.2 FDI Strategy	292
4.3 The Structure of Capital Flows	293
5. Reporting and Monitoring Systems of FDI and FPI Flows	294
5.1 Definition	294
5.2 Sources for FDI Data	294
5.3 Sources for FPI Data	295
5.4 Reporting Requirements and Monitoring	295
6. Various Issues on Current Data Compilation System	296
6.1 The 10% Share Rule to Distinguish between FDI and FPI	296

	<i>Page</i>
6.2 Valuation	296
6.3 Stock Data Compilation	297
6.4 Flows-Stocks Reconciliation	298
6.5 Disseminating FDI and FPI Data	298
6.6 Evaluation of the Current Data Compilation System	299
7. Data Compatibility with International Standards	299
7.1 IMF Guide on Definition and Compilation Practices	299
7.2 Compatibility with the SMSDI Areas	300
7.2.1 Areas with Marked Improvements	300
7.2.2 Areas with More than 75% Compliance Rate	301
7.2.3 Areas Where, Despite Improvements, the Majority of the Countries Surveyed Do Not Yet Follow the Applicable International Standards	301
7.3 Compatibility with the CPIS	302
8. The Relation between FDI/FPI Flows and Key Macroeconomic Variables	302
8.1 The Theory	302
8.2 The Empirical Evidence	303
9. Taiwan Experiences in Adopting Different Policies to Manage Capital Flows	306
9.1 Capital Control	306
9.2 Monetary Policies to Sterilise the Capital Flow Impacts	307
10. Conclusion	308
References	310

Chapter 11: Managing and Monitoring Direct and Portfolio Investment Flows in Thailand: A Comprehensive Study of the SEACEN Countries

1. Introduction	313
2. Salient Features and Developments of Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI) in Thailand	313
2.1 Definition	313

2.2	Developments of inward FDI and FPI in Thailand before and after the 1997 Crisis	314
2.2.1	Inward FDI	314
2.2.2	Inward FPI	319
2.2.3	Outward FDI	322
2.2.4	Outward FPI	324
3.	Compilation Practices of FDI and FPI Flows	324
4.	Issues on Data Collection and Effectiveness of Current Data Compilation System	326
5.	Related Policy/Regulations on FDI and FPI	327
5.1	Current Capital Controls on FDI and FPI	327
5.2	Foreign Ownership Limit	328
5.3	The Board of Investment (BOI)'s Privilege Programme	328
6.	Thailand's Experiences on Capital Controls, Foreign Exchange Management and Open Market Operations	329
6.1	The Pre-Crisis Period (1990-1996)	329
6.2	The Crisis Period (1997-2001)	330
6.3	The Post-Crisis Period (Since 2002)	330
7.	The Relationship between Inward FDI/ FPI and Key Macroeconomic Variables	331
8.	Conclusion and Policy Recommendation	337
	References	339

LIST OF TABLES

Chapter 1: Managing and Monitoring Direct and Portfolio Investment Flows: A Comparative Study of the SEACEN Countries

Table 1.1:	SEACEN Countries Participating in the 2001 SIMSDI Update	10
Table 1.2:	Data Sources for FDI Transactions	31
Table 1.3:	Data Sources for FPI Transactions	36
Table 1.4:	Total FDI Inflows: US \$ Million	45
Table 1.5:	Total FDI Outflows: US \$ Million	47
Table 1.6:	Total FDI Flows in the SEACEN Countries (in US \$ Million)	48
Table 1.7:	FDI Inflows as Percentage of Gross Fixed Capital Formation	49
Table 1.8:	FDI Inflows as Percentage of GDP	50
Table 1.9:	Total FPI inflows: US\$ Million	52
Table 1.10:	Total FPI Outflows: US\$ Million	53
Table 1.11:	Total FPI Inflows in the SEACEN Countries	55
Table 1.12:	Total FPI Outflows in the SEACEN Countries	55
Table 1.13:	FPI Inflows as Percentage of GDP	56
Table 1.14:	Volatility of Private Capital Flows: Coefficient of Variation between FDII and FPII	58
Table 1.15:	Granger Causality Test – Direct Investment	65
Table 1.16:	Granger Causality Test – Portfolio Investment	69

Chapter 2:	Managing and Monitoring Direct Investment and Portfolio Investment Flows: The Case Of Indonesia	
Table 2.1:	GARCH Equation	117
Table 2.2:	Unit Root Test – Augmented Dickey Fuller Test	117
Table 2.3:	Industrial Output Determinant Equation Cointegration Relation (Based on Johansen Test)	119
Table 2.4:	Error Correction Model Short Run Equation	119
Table 2.5:	VAR Pairwise Granger Causality/Block Exogeneity Wald Tests	121
Table 2.6:	VAR Pairwise Granger Causality/Block Exogeneity Wald Tests Sample: 1993:1 2002:4	122
Chapter 3:	Managing and Monitoring Foreign Direct and Portfolio Investment Flows in Republic of Korea	
Table 3.1:	Trends of Inward FDI	132
Table 3.2:	Trends of Inward FDI by Type	132
Table 3.3:	Trends of Inward FDI by Region	133
Table 3.4:	Trends of Inward FDI by Industry	133
Table 3.5:	Trends of Outward FDI	134
Table 3.6:	Trends of Inward FPI	135
Table 3.7:	Trends of Inward FPI by Region	135
Table 3.8:	Trends of Inward FPI by Type of Investor	136
Table 3.9:	Trends of Inward FPI by Security Type	136
Table 3.10:	Trends of Outward FPI	137
Table 3.11:	Description of the Variables	138

Table 3.12:	Granger Causality Test of Inward FDI and Macroeconomic Variables	139
Table 3.13:	Granger Causality Test of Inward FPI and Macroeconomic Variables	140
Table 3.14:	Granger Causality Test of Inward FPI Using Daily Data (2001~2003)	141
Table 3.15:	Business Analysis of FDI Enterprises in Korea in 2002	143
Table 3.16:	Trading Value Ratio and Net Purchases of Foreign Investors	144
Table 3.17:	Dividend Payments of Corporations Listed on Exchanges	144
Table 3.18:	Turnover Ratio of Listed Stocks	145
Chapter 4:	Foreign Direct Investment and Foreign Portfolio Investment in Malaysia	
Table 4.1:	Net Foreign Direct Investment 1999 - 3Q 2003	151
Table 4.2:	Portfolio Investment	156
Chapter 6:	Managing and Monitoring Direct and Portfolio Investment in Nepal	
Table 6.1:	Foreign Investment Projects in Nepal (1989-2003)	197
Table 6.2:	Foreign Investment projects in Nepal - Sector Wise (1989-2003)	198
Table 6.3:	Foreign Investment Projects in Nepal - Status Wise (1989-2003)	198
Table 6.4:	Joint Venture Industries In Nepal - Country Wise (1989-2003)	199

Table 6.5:	Approved Projects for Foreign Investment and Technology Transfer	200
Table 6.6:	Foreign Investment and Nepal's Real GDP, Total Investment, Total Export Trade, Foreign Exchange Reserves and Budget Deficit (1988–2003)	200
Chapter 7:	Managing and Monitoring Direct and Portfolio Investment Flows: Philippines	
Table 7.1:	Direct Investment	209
Table 7.2:	Non-residents' Direct Investment Flows	210
Table 7.3:	Portfolio Investment	214
Table 7.4:	Non-residents Portfolio Investment Flows	215
Chapter 8:	Managing and Monitoring Direct and Portfolio Investment Flows: Country Paper on Singapore	
Table 8.1:	Singapore's FDI and FPI Flows, 1988-2002 (S\$bn)	244
Table 8.2:	External Balance Adjustment	245
Chapter 10:	Managing and Monitoring Direct and Portfolio Investment Flows: The Taiwan Experience	
Table 10.1:	Net Capital Flows Position of Selected SEACEN Countries: 1990-2001	293
Table 10.2:	An Example of the Reconciliation Statement	298
Table 10.3:	The Unit Root Tests	304
Table 10.4:	The Johansen Cointegration Test	304
Table 10.5:	Pairwise Granger Causality on the VEC Model	306

Table 10.6:	Factors Affecting Changes in Base or Reserve Money B	308
Chapter 11:	Managing and Monitoring Direct and Portfolio Investment Flows in Thailand: A Comprehensive Study of the SEACEN Countries	
Table 11.1:	MNC's Direct Loans and Net Borrowings from BIBF During 1993-1995	315
Table 11.2	Additional Foreign Direct Investment Outflow	316
Table 11.3:	Outward Foreign Portfolio Investment	323

LIST OF CHARTS

Chapter 1:	Managing and Monitoring Direct and Portfolio Investment Flows: A Comparative Study of the Seacen Countries	
Chart 1.1:	Capital Flows in SEACEN Countries: 1990-2002	3
Chart 1.2:	Total FDI Inflows: US\$ Million	46
Chart 1.3:	Total FDI Outflows: US\$ Million	47
Chart 1.4:	FDI Inflows as a Percentage of Gross Fixed Capital Formation	50
Chart 1.5:	FDI Inflows as a Percentage of GDP	51
Chart 1.6:	Total FPI Inflows: US\$ Million	52
Chart 1.7:	Total FPI Outflows: US\$ Million	53
Chart 1.8:	FPI Inflows as a Percentage of GDP	56
Chapter 2:	Managing and Monitoring Direct Investment and Portfolio Investment Flows: The Case Of Indonesia	
Chart 2.1:	Economic Growth	103
Chart 2.2:	Gross Domestic Product	104
Chart 2.3:	Foreign Direct Investment	105
Chart 2.4:	FDI by Country of Origin	106
Chart 2.5:	FDI by Economic Sector	107
Chart 2.6:	Foreign Portfolio Investment (FPI)	108
Chart 2.7:	Equity and Debt Securities	108

Chapter 3: Managing and Monitoring Foreign Direct and Portfolio Investment Flows in Republic of Korea

Figure 3.1:	The Structure of Foreign Exchange Information System	128
Figure 3.2:	Procedure of FDI and Monitoring at Each Stage	129
Figure 3.3:	Procedure of FPI and Monitoring at Each Stage	130
Chart 3.1:	Trends of Foreign Capital Flows in Korea	131

Chapter 4: Foreign Direct Investment and Foreign Portfolio Investment in Malaysia

Chart 4.1:	Gross Inflows of FDI: Actual FDI, Approved FDI	150
Chart 4.2:	Percentage Share of FDI by Type	152
Chart 4.3:	Gross FDI by Sector	153
Chart 4.4:	Gross FDI Components	153
Chart 4.5:	Portfolio Flows by Type – Cash BOP Reporting System	155
Chart 4.6:	KLSE CI vs. CBOP Portfolio Flows	157

Chapter 7: Managing and Monitoring Direct and Portfolio Investment Flows: Philippines

Chart 7.1:	Net Direct Investments in the Philippines, 90-02	208
Chart 7.2:	Non-residents Direct Investment Flows by Component, 90-02	208
Chart 7.3:	Net Portfolio Investments, 90-02	213
Chart 7.4:	Non-residents Portfolio Investment Flows by Components, 90-02	213

Chapter 8: Managing and Monitoring Direct and Portfolio Investment Flows: Country Paper on Singapore

Chart 8.1:	Singapore's FDI and FPI (BOP basis)	242
Chart 8.2:	Singapore's Direct Investment Inflow and Outflow (BOP basis)	242
Chart 8.3:	Singapore's Net Portfolio Investment (S\$bn)	243
Chart 8.4:	Singapore's Portfolio Investment Inflow and Outflow (S\$bn)	243

Chapter 9: Managing and Monitoring Direct and Portfolio Investment Flows: The Case of Sri Lanka

Chart 9.1:	Net FDI and FPI Flows to Sri Lanka	263
Chart 9.2:	FDI – Inflows and Outflows	268
Chart 9.3:	Comparison of Sectoral Composition of Cumulative FDI Inflows	268
Chart 9.4:	Composition of Inward FDI by Type of Ownership (1979-2002)	269
Chart 9.5:	Composition of Inward FDI by Ownership and Total Investment	270
Chart 9.6:	Source Country Composition by Number of Projects Commenced Operation During 1979-2001	271
Chart 9.7:	Source Country Composition by Estimated Total Investment in Projects Commenced Operations During 1979-2001	271
Chart 9.8:	Portfolio Investment: Stock Market Activity	271
Chart 9.9:	FDI and FPI as a Percentage of GDP	272

Chapter 11: Managing and Monitoring Direct and Portfolio Investment Flows in Thailand: A Comprehensive Study of the SEACEN Countries

Figure 11.1:	Components of Net Capital Flows	314
Figure 11.2:	Inward Foreign Direct Investment	315
Figure 11.3:	Private Investment/GDP; Inward FDI/GDP; Inward FPI/GDP; Exports/GDP and External Loans/GDP	315
Figure 11.4:	Major Sources of Inward Foreign Direct Investment in Thailand	317
Figure 11.5:	Inward of Non-bank Foreign Direct Investment to 6 most Important Sectors before Financial Crisis	318
Figure 11.6:	Inward of Non-bank Foreign Direct Investment to 7 most Important Sectors after Financial Crisis	318
Figure 11.7:	Foreign Investment in Thai Stock Market, SET Index and Exchange Rate	320
Figure 11.8:	Components of Inward Foreign Portfolio Investment	320
Figure 11.9:	Major Sources of Inward Foreign Equity Portfolio Investment into Thailand	320
Figure 11.10:	Outward FDI (Thai Direct Investment Abroad)	322
Figure 11.11:	Outward FDI Classified by Country	322
Figure 11.12:	Commercial Banks' Outward FDI and Spread of Ten-year US Treasury Bonds over Ten-year Thai Government Bonds	324
Figure 11.13:	Gross Domestic Product of Private Investment Inward FDI	333

LIST OF APPENDICES

Chapter 1:	Managing and Monitoring Direct and Portfolio Investment Flows: A Comparative Study of the SEACEN Countries	
Appendix 1.1:	Reporting FDI Statistics to International Organisations	84
Appendix 1.2:	Periodicity and Timeliness and Revision Policy of Disseminated Equity Capital Data (Transactions)	85
Appendix 1.3:	Major Sources of FDI Data	86
Appendix 1.4:	Availability of Geographic Breakdown and Industrial Breakdown of FDI Statistics (Flows)	87
Appendix 1.5:	Geographical Allocation of FDI Statistics	88
Appendix 1.6:	Treatment of Definitions for Identifying Direct Investment Enterprise Resident in the Reporting Economy	89
Appendix 1.7:	Valuation of Assets	90
Appendix 1.8:	Recording of FDI Statistics (Transactions) in Special Cases	91
Appendix 1.9:	Availability of Inward and Outward Breakdown FPI Data by Type of Securities	92
Appendix 1.10:	Reporting FPI Liabilities Statistics to International Organisations	93
Appendix 1.11:	Periodicity and Timeliness and Revision Policy	94
Appendix 1.12:	Major Sources of FPI Data	95
Appendix 1.13:	Availability of FPI Data by Country Breakdown and Residence and Security by Security Approach	96

Appendix 1.14:	Portfolio Investment (FPI) by Institutional Resident Sector	97
Appendix 1.15:	Geographical Allocation of FPI Statistics (Liabilities)	98
Appendix 1.16:	Currency Breakdown of Securities (FPI)	99
Appendix 1.17:	Classification of Securities by Instruments	100
Appendix 1.18:	Classification of Securities by Maturity	101
Appendix 1.19:	Valuation of Securities	102
Chapter 6:	Managing and Monitoring Direct and Portfolio Investment in SEACEN Countries with Reference to Nepal	
Annex 6.1:	Organisational Chart of Department of Industry (DOI)	201
Annex 6.2:	Stages of Implementation of FDI Projects in Nepal	202
Annex 6.3:	Application Procedures for Foreign Investors	203
Annex 6.4:	Bank Certificate for Foreign Investor	204
Chapter 7:	Managing and Monitoring Direct and Portfolio Investment Flows: Philippines	
Annex 7.1:	Promoted Sectors for Investment Under the 2003 Investment Priorities Plan (IPP)	235
Annex 7.2:	Results of the Granger Causality Tests	238
Chapter 8:	Managing and Monitoring Direct and Portfolio Investment Flows: Country Paper on Singapore	
Appendix 8.1:	Granger Causality Test Results	257

Chapter 9:	Managing and Monitoring Direct and Portfolio Investment Flows: The Case of Sri Lanka	
Annex 9.1:	Results of the Granger Causality Tests	280
Chapter 10:	Managing and Monitoring Direct and Portfolio Investment Flows: The Taiwan Experience	
Appendix 10.1:	Outward and Inward FDI, Outward and Inward FPI, Outward and Inward OI	311
Chapter 11:	Managing and Monitoring Direct and Portfolio Investment Flows in Thailand: A Comprehensive Study of the SEACEN Countries	
Appendix 11.1:	Results of the Unit Root Tests	341

Executive Summary

This collaborative project was undertaken with an aim to review the compilation, reporting and monitoring practices of foreign direct investment (FDI) and foreign portfolio investment (FPI) flows in the SEACEN countries with a view to improving the data coverage as well as data collection systems for better management of these flows in these countries. The project also aims at examining the economic impacts of these private capital flows on key macroeconomic variables and the implications on monetary policy.

One fact that was highlighted by the study is that not all SEACEN countries are able to fully comply with the standard component of BPM5 of the IMF in defining, compiling and disseminating FDI and FPI statistics. Most of the SEACEN countries are still at initial stage of producing and disseminating statistics for both inward and outward FDI and FPI flows. In addition, the current treatment to the definition of direct investment shows that most of the countries apply the basic criteria of 10% equity ownership threshold.

A wide variance has been noted in the periodicity and timeliness of data dissemination with the time period varying from monthly to quarterly to annual across the participating SEACEN countries. Although most of the SEACEN countries are reported to have their primary data sources as enterprise surveys and ITRS (International Transaction Reporting System), they are found to be handicapped in acquiring information on fully accrual basis as required by the BPM 5 on account of the fact that most of the information solicited from ITRS comes under cash transaction basis and moreover, ITRS in essence does not capture reinvested earnings as it is only an imputed transaction, not a real one, whether cash or non-cash. The study also reveals that with respect to geographic and industrial classification of the private flows, different countries use different principles as either transactor or debtor/creditor principle for the basis of geographic classification.

The study also reveals that not all the countries compile FPI transactions by type of instruments such as equity securities and debt securities (further broken down into long-term and short-term debt securities) for both inward and outward data. For some countries even if they do, the data are not consolidated and/or disseminated due to confidentiality clauses in data generation. The study notes that as all the SEACEN countries collect data on aggregate basis and not on a “security by security” basis, they face difficulty in obtaining information on currency breakdown, as a result of which only a few countries have been reported to have this data.

The study notes that, as a consequence of the short fall in meeting international standards in existing FDI and FPI compilation and monitoring practices of the SEACEN countries, they are currently faced with numerous challenges on data quality and reliability. For example, the application of the 10% ownership criteria to FDI enterprises is not always possible in the ITRS system. Likewise, they face difficulties in capturing reinvested earnings in most cases in ITRS as the transaction on reinvested earnings do not involve cash flows. It is also revealed that most of the SEACEN countries use estimates for obtaining shorter term data like monthly information in terms of periodicity and timeliness which may lead to poor data quality requiring periodic revision. In the situation where flows data have to be derived from stocks data particularly in case of FPI statistics, the use of different exchange rates for conversion (average or end period for different periods) may compromise data quality. Also, the application of residency concept in FPI data has been limited due to difficulty in identifying the end-investor (resident/non-resident) which is a cumbersome task. Finally, most of the SEACEN countries are believed to garner information on private capital flows on an accrual basis with the existing compilation practices.

The project also looks at the relative volatility of private capital flows and assesses the economic impact of these flows on major macroeconomic variables which can assist economic analysts and policy decision makers to properly manage the private capital flows for crisis prevention. The study infers that FPI tends to be more volatile than FDI as the coefficient of variation for FPI is relatively higher than that of FDI in both pre-crisis period (1990-96) and post-crisis period (1997-2002) for the countries like Indonesia, Korea, Malaysia, Philippines, Singapore, Sri Lanka, Taiwan and Thailand. It suggests that policies to attract FPI flows should be cautious while making sure that information on FPI flows is accurate and reliable.

An assessment of the Granger Causality tests carried out to examine the direction of economic impacts of private capital flows on various macroeconomic variables and monetary aggregates reveals that in Indonesia, Nepal, Philippines, Taiwan and Thailand, FDI inflows contribute to national income, while for Korea, Malaysia, Philippines, Sri Lanka, and Taiwan, FDI promotes exports significantly. It can also be inferred that FDI inflows has capacity for current account imbalances for Philippines, Singapore, Sri Lanka and Taiwan. The traditional accepted convention that FDI promotes domestic investment was realised in Indonesia, Malaysia, Sri Lanka and Taiwan.

Likewise, the results of the causality tests relating to the impact of FPI inflows suggest that FPI stimulates output growth in Indonesia, Singapore and Taiwan. It is also revealed that the monetary variables such as interest rate and exchange rate tend to be affected by the FPI inflows particularly in the short-run. A strong causal

relationship is observed between portfolio inflows and money supply in most of the SEACEN countries implying that monetary policy is or need be an important tool in regulating international investment flows. Conversely, SEACEN stock markets need to be developed further to attain a rational and significant relationship with portfolio flows movements as it appears that a strong international bond market and poorly developed stock markets in the SEACEN countries has been the main reason why there is no significant relationship between FPI and stock price indices.

In summary, the SEACEN countries need to continue their efforts in fully complying with the BPM 5 of the IMF so as to improve the comparability of international investment data across the member countries. For this, they have to first deal with developing a proper monitoring system of these flows which are in compliance with international standards where the definitions of FDI and FPI are homogeneous and the period of reporting, timely. Efforts should be made to improve the data coverage and for the adoption of an efficient dissemination and measurement system. A proper valuation system to assess the external assets and liabilities at market value needs to be developed and the disaggregation of data by currency breakdown is to be encouraged. Moreover, secondary sources to supplement primary sources in garnering data on an accrual basis needs to be continuously identified either through occasional surveys or other sources where ever feasible. As far as the utility of existing data on FDI and FPI flows is concerned, this would be more useful for historical analysis rather than for making forecasts for policy decision purposes. Once the quality of data is upgraded in the due course of time, policy decisions on international investment portfolio may be based on these statistics. In conclusion, in order for the data quality to be improved and maintained, the foreign exchange information system needs to be upgraded in the respective countries with a reduced time lag on compilation and dissemination practices. Occasional surveys should be carried out domestically or in jointly sponsored exercises with international organisations such as the IMF, to improve the accuracy and reliability of FDI and FPI statistics.

PART I :
INTEGRATIVE REPORT

CHAPTER 1

MANAGING AND MONITORING DIRECT AND PORTFOLIO INVESTMENT FLOWS: A COMPARATIVE STUDY OF THE SEACEN COUNTRIES

by
Sushil R. Mathema

1. Introduction

During the 1990's, East and South-East Asian countries received universal acclaim as the fastest growing economies in the world. The active participation of these countries in the globalisation process led to the remarkable achievement of sustaining a high rate of economic growth over an extended period of time. However, during the second half of 1997, several East and South-East Asian economies fell victim to some of the pitfalls associated with closer integration into the global economy. This led to the financial crisis in many of the emerging economies including South-East Asian economies. One of the major causes that triggered the crisis was the deterioration in the current account of the balance of payments in all the affected countries (Indonesia, Malaysia, Philippines, Republic of Korea and Thailand). The rising current account deficit was to be financed by capital flows and interestingly, private flows were found to be the dominant components in most of East and South-East Asia. Foreign Direct Investment (FDI), in particular featured as an important component of total capital flows in these countries. However, foreign portfolio investment (FPI) and credit, including banking flows clearly showed rising trends at the later stage. The substantial inflows took place not merely to finance deficits in the current account of the balance of payments, but often also as a result of investors seeking profit opportunities in capital markets, which were seen to be expanding very fast and entry into which had recently been made easier. At the same time, a very significant structural change was taking place in the international financial markets. The rapid institutionalisation of savings in the developed countries led to huge accumulation of resources in pension and mutual funds. The growing institutionalisation of savings and the participation of institutional investors in the international markets as a means to diversify their portfolios boosted the purchase of emerging market securities.

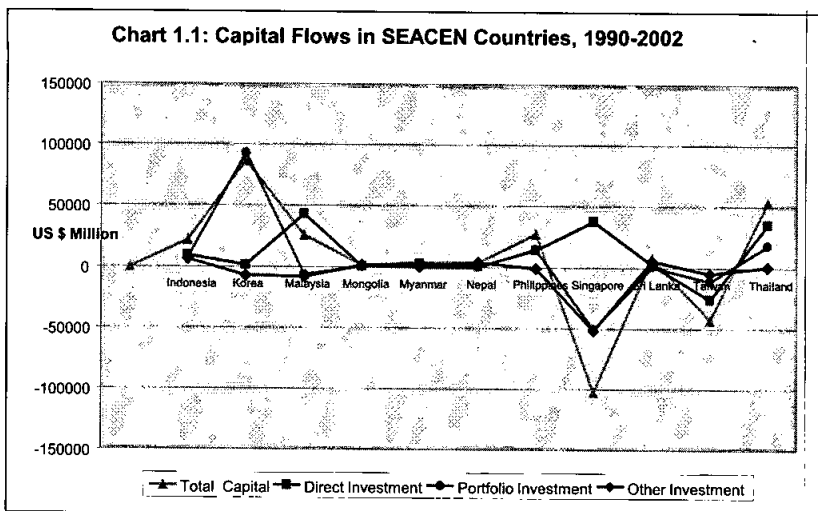
Private capital flows, although beneficial in net terms, poses two types of challenges. First large surges led to economic overheating and associated problems of appreciation of the real exchange rate. Many countries in the region pursued a policy of relatively high interest rates in order to maintain a stable exchange rate. The rather large and continuing differential between the domestic interest rates and international interest rates, in combination with the liberalisation of policies was a further lure for capital inflows, while stable exchange rates minimised currency

risks. This gave rise to a rapid build-up of the stock of foreign debt, a large part of which was not hedged against currency risk. The second challenge, on the other hand, was the sharp reversals in capital inflows which proved disruptive to emerging economies. Sudden movements of large capital flows could be detrimental to even a fundamentally strong economy. It is therefore of paramount importance that the small and open economies with open capital account have a good data base on private capital flows to estimate the total foreign obligations so as to prevent a possible financial crisis. It is also equally important to know the composition and nature of the private capital flows to be able to estimate the size and timing of possible outflows in future.

2. Overview of FDI and FPI Flows in SEACEN Countries

Development of capital flows in the emerging market economies including some of the SEACEN member countries reveals that in 1990's there has been significant development in net flows of private direct investment to these countries.¹ It is observed that net private direct investment increased to US\$ 170.5 billion in 2001, an increase of 79.0% from the US\$ 95.0 billion registered in 1995. Net private portfolio investment, however, registered negative US\$ 38.5 billion in 2001 compared to a positive balance of US\$ 48.8 billion in 1995 indicating a shift from a liability position to an asset position in the foreign asset and debt securities market. For developing Asia which includes countries such as Korea, Singapore and Taiwan, not much development has been observed for net FDI as there has been a decline of 11.6 percent to US\$ 46.5 billion in 2001 as against US\$ 52.6 billion registered in 1995. Moreover, similar to emerging market economies, net private portfolio investment registered negative US\$ 13.5 billion in 2001 compared to a positive figure of US\$ 22.7 billion in 1995.

1. IMF, "World Economic Outlook: Growth and Institutions." April 2003.
Emerging markets include developing countries, countries in transition, Korea, Singapore, Taiwan and Israel.



Source: IMF, Balance of Payments Statistics Yearbook, Part 2 World and Regional Tables, 1998, 1999, 2002, 2003
 ADB, Key Indicators 2002 and 2003

Private capital flows to the SEACEN countries in the form of FDI and FPI, have also accelerated in pace after the liberalisation of their economies. In the period between 1990 and 2002, private capital flows in the form of FDI to Indonesia, Malaysia, Philippines, Singapore and Thailand has edged up while capital flows in the form of FPI were predominant mainly in Korea, Philippines and Thailand. Further, Singapore and Taiwan have been marked as the countries having net outflows during the period in question (Chart 1.1). It was also observed that during the period under review, Malaysia earned the claim of having the highest net foreign direct investment amounting to a cumulative amount of around US\$ 42000 million while Korea recorded the highest net portfolio investment of US\$ 93, 000 million in cumulative terms.

3. General Issues

The rapid expansion and reversal of the private capital flows, namely, FDI and FPI in recent years has inevitably raised the importance of easily available reliable and timely statistics for monitoring purposes of a country's private capital flows. Moreover, it is also realised that detailed and timely information on these flows could reveal details such as the growth in magnitude, its direction and its relationship to other macroeconomic aggregates and ultimately its trend of volatility. Monitoring and managing of these flows is therefore essential to help reduce the probability of future crises. It is, however, often argued that there are statistical

problems related to the question of definition, accounting practices, sources of data, compilation practices and analysis of the relative importance of the two major investment flows for developing countries. A clear classification of different types of investment would result in better reporting systems. For better and systematic classification, multilateral agencies such as OECD and IMF have made efforts to develop guidelines and methodologies² but the application of guidelines and methodologies for such classifications is also not without problems. For example, not all countries use a predetermined threshold of 10 percent or more of the ordinary share in the definition of Direct Investment and in the past many non-OECD countries appears to rely on exchange control authorities/investment approval authorities for the collection of their FDI statistics. Problems have been noted in cross-border investments data as there exists different sources of data which differ widely among themselves, according to the methodologies used. In this connection, a discrepancy has also been observed in the data provided by the IMF and the World Bank and/or Bank for International Settlements (BIS) as the data in each case may differ according to the data sources, and methodology utilised in estimating investment flows, and at the regional and global level, the country coverage of the particular source. These issues clearly demonstrates that there are gaps in the treatment of FDI and FPI flows and any improvement in the data monitoring system in terms of providing accurate, detailed and timely statistics of these flows would mean their better management.

4. Principles of Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI)

4.1 Foreign Direct Investment

Classical trade theory stipulates that the cost of production is paramount to international competitiveness. Although the motivations for international investments are diverse, seeking for low cost factors or natural resources is one of the more important. As such, multinationals move production to countries with lower labour cost or lower resources cost necessary for the product. They are simply choosing to move closer to the cost advantage. In the same sense, international investment is simply a modern extension of classical trade.

2. OECD, "Benchmark Definition of Foreign Direct Investment", Third Edition, 1999. IMF, "Coordinated Portfolio Investment Survey Guide," Second Edition, 2002; BPM5 Manual and the Financial Derivatives Supplement to BPM5.

Standard neoclassical investment theory states that investment is a function of value added and real interest rate based on profit maximisation. However, this theory has one drawback as it does not explain why investment can take place concurrently in several locations. This has been fairly explained by the OLI paradigm developed by John Dunning. The paradigm is a blend of three different theories of foreign direct investment= O+L+I, each piece focusing on a different question.³ In the OLI framework, O (ownership advantages) hypothesises that the multinational enterprises has one or more firm specific advantage (ownership advantage, core competency) which allows it to overcome the costs of operating in a foreign country. This firm specific advantage (FSA) is normally intangible and can be transferred within the multinational company at low cost (e.g., brand name, benefits of economies of scale, technology). The advantage either generates higher revenues and/or lower costs that can offset the costs of operating at a distance in a location.

It is, however, locational advantages L (country specific advantages) that explain why certain locations are chosen to host the subsidiary operations of multinational companies (MNCs). The choice of investment location depends upon a complex calculation which includes economic, social and political factors. Therefore, the country specific advantages (CSA) that influence where an MNC will invest can be broken down into three categories: economic, social and political. Economic advantages include the quantities and qualities of the factors of production (e.g., land and building costs, raw material components, parts as well as low-cost unskilled and skilled labour), size and scope of the market, transport and telecommunications and so on. Social/cultural advantages include psychic distance between the home and host country, general attitude towards foreigners, language on cultural differences, and the overall stance towards free enterprises. Political advantages include the general and specific government policies that affect inward FDI flows, international production and intra-firm trade. An attractive CSA package for a multinational company would, therefore, include a large and growing high income market, low production costs, a large endowment of factors scare in the home country, and an economy that is politically stable, and is culturally and geographically close to the home country.

Finally, there is the I factor or international advantage. There are also asset-seeking FDIs which can be either tangible or intangible. Tangible assets take the form of physical infrastructure such as roads, ports, power and telecommunication while intangible assets are technological, innovatory, managerial, relational and other created assets embodied in individuals, firms or cluster of firms. The existence of an asset such as special know- how or core skill can generate economic rent for

3. Griffin & Pustay: Ch.3: International Trade and Investment Theory-MGMT/BUS450: The International Environment of Business (6/11/03).

the firm. These rents can be earned by licensing FSA to another firm, exporting products using this FSA as an input or setting up subsidiaries abroad.

The OLI model predicts that the hierarchy (the vertically or horizontally integrated firm based on internal market) is a superior method of organising transactions other than the market (trade between unrelated firms) whenever external markets are non-existent or imperfect. The theory predicts that international advantages will lead to MNCs preferring wholly owned subsidiaries over minority ownership or arm's length transactions. It is, therefore, the international advantages part of the OLI paradigm that explains why MNCs are integrated businesses, producing in several countries, and using intra-firm trade to ship goods, services and intangibles among their affiliates.

According to Dunning (1999) the motives for and the determinants of FDI have changed with the advent of globalisation, as FDI in developing countries have shifted from market seeking and resource seeking to efficiency seeking. On the other hand, recent empirical evidences reveal that it does not necessarily capture the shift to efficiency-related variables (Nunnenkamp and Spatz, 2002). Moreover, it was also argued that there is a positive relationship between trade liberalisation and openness to trade and FDI as well as liberalisation of tariff barriers in some cases (Farrell, Gaston and Sturm, 2001).

While Dunning's model emphasised particularly the locational advantages in the determinants of inflows of FDI, this does not imply that the policy framework for FDI in host countries is unimportant. On the contrary, the vast literature on FDI shows clearly the policy framework, especially in terms of economic, social and political stability does matter (UNCTAD, 2002). Thus, both the OLI paradigm as well as existing evidences suggests that FDI is a function of the size of the economy, trade openness, FDI openness, macro-economic and political stability and locational cost competitiveness.

4.2 Foreign Portfolio Investment

By conventional theory, individuals have to allocate their income among current consumption, productive investment, and financial investment. Assuming that consumption and production investment decisions are already made, it leaves the portfolio decision to be made which is narrowly defined as the allocation of the remaining wealth to financial and/or real assets so as to maximise the most desirable return, i.e. consumption in the future. Despite the simple definition, complexity arise in practice as wealth can be held in various forms ranging from non-liquid holdings of real estate, gold coins and commodity futures to stocks, bonds, savings

accounts, money market instruments and cash equivalents. Investment theory, then, comprise the principles that help investors to rationally allocate their wealth between the different investment alternatives.

In the context of International Portfolio Investment (IPI), which involves investment not only in domestic but also in foreign securities, the established investment concepts of portfolio theory and capital market theory needs to be modified and extended to take into account the international dimension.⁴ Whereas the basic principles also mostly apply on an international scale, additional considerations become necessary. An important issue that arises if portfolios are composed of securities from different countries is the choice of a numeraire for measuring risk and expected return. As a matter of tradition and/or due to regulation, local currency is used in most cases to calculate these security characteristics, which means that return and variance values for foreign securities need to be adjusted for currency gains or losses.⁵ It has to be noted, however, that foreign goods and services represent a significant proportion of the consumption basket in many countries. Therefore, if purchasing power were to be maintained, the maximisation of local currency returns may not be optimal in this regard.⁶

The Capital Asset Pricing Model (CAPM) has been developed with respect to major capital markets in the world. It is well accepted and widely used by professional portfolio managers to analyse the pricing of the securities in national financial markets. However, since the scope of securities under consideration is enlarged to incorporate equities of all markets around the globe, and since the cost of obtaining information and restrictions are generally eliminated, it may be argued that capital markets have become increasingly “integrated”, and securities’ prices might actually be determined by internationally integrated as opposed to segmented, financial markets. With integrated capital markets, optimal diversification is realised by forming a global market portfolio, and the riskiness of all securities in the world is measured according to their contribution to the risk of this portfolio.

4. Sohnke M. Bartram and Gunter Dufey, “International Portfolio Investment: Theory, Evidence and Institutional Framework”, May 15, 2001:<http://econpapers.hhs.se/paper/wpawuwpi/0107001.htm>

5. Shapiro (1996).

6. Odier/Solnik (1993).

The transfer of CAPM logic to a global perspective leads to the International Capital Asset Pricing Model (ICAPM),⁷ which can be formally stated as

$$E[R_i] = R_F + \sum_i \beta_i R_{P^w} + \sum_{k=1}^K \gamma_{ik} R_{P^k}$$

where R_{P^w} and R_{P^k} are the risk premia on the world market portfolio and the relevant currencies, respectively, and R_F is the risk-free interest rate. It rests on the assumption that investors make investment decisions based on risk and return in their home currency. Clearly, in an international context, the market portfolio is not the only source of risk any more as exchange rate risk has to be accounted for. As a result, investors take a position composed of the domestic risk-free asset and the common world market portfolio while hedging some of the currency risk.

5. International Efforts to Improve Data on International Investment Flows

The fifth edition of the Balance of Payments Manual (BPM5) provides a statistical framework for the recording of capital flows and the international investment position (IIP) and a detailed set of its standard components. The IIP is the balance sheet of the stock of external financial assets and liabilities and the standard components of the IIP are direct investment (FDI), portfolio investment (FPI), other investment, financial derivatives and reserve assets. The IIP has been included in the series of statistical indicators covered by the special data dissemination standard (SDDS) implemented by the IMF in 1996 and as of today 57 countries have subscribed so far.

In an effort to consolidate and improve data on FDI and FPI of the IIP, in May 1997, the International Monetary Fund (IMF) and the Organization for Economic Cooperation and Development (OECD) launched the Survey of Implementation of Methodological Standards for Direct Investment (SIMSDI). The survey encompassed a comprehensive study of data sources, collection methods, and dissemination and methodological practices for foreign direct investment (FDI) statistics. The principle objectives of the 1997 Survey⁸ were as follows:

7. Solnik (2000), Levi (1996), Giddy (1993), Adler/Dumas (1983), Sercu (1980), Solnik (1974c).
8. *The IMF/OECD Report on the Survey of Implementation of Methodological Standards for Direct Investment, March 2000.*

In 1983, the OECD conducted a similar survey of its member countries, and in 1992, the IMF Working Party on the Measurement of International Capital Flows surveyed 38 of the largest reporters of FDI statistics.

Managing and Monitoring Direct and Portfolio Investment Flows:.....

- 1) to discover the extent to which member countries have adopted the recommendations on FDI statistics made in BPM5 (1993) and the third edition of the OECD's Benchmark Definition of Foreign Direct Investment (1996);
- 2) to obtain standardised information on data sources, collection methods and reporting practices (e.g., availability, periodicity, timeliness, revision policy, desegregation etc) from member countries; and;
- 3) to facilitate the exchange of information between reporting countries.

The 1997 Survey was updated in 2001 for 61 countries (30 OECD member countries and 31 selected non-OECD countries) and was envisaged to incorporate in its report the inclusion of comparative tables showing the practices of the 56 countries that have agreed to release their information to the general public (including all 30 OECD member countries as well as summary information for the remaining 5 countries that chose not to make their detailed information available to the general public). The survey report which was published in 2003 includes cross-country comparative tables. The survey found out that ninety percent of the 61 countries use the 10 percent ownership rule as their basic criterion for identifying direct investment enterprises in at least part of their inward FDI transactions data and 82 percent use the rule as basic criterion for identifying direct investors in their outward FDI transactions data.⁹ The status of the SEACEN member countries which participated in 2001 SIMSDI update survey is given in the table below.

9. IMF, 2003, "Foreign Direct Investment Statistics: How Countries Measure FDI 2001".

Table 1.1
SEACEN Countries Participating in the 2001
SIMSDI Update

Definitions Used to Identify Direct Investment Enterprises Resident in
the Reporting
Economy (Inward FDI): Transactions Data

Country	Apply 10% ownership as basic criterion	Apply percentage ownership different from 10 % as basic criterion
Indonesia	√1	√1
Korea	√	X
Malaysia	√	X
Philippines	√2	√2
Singapore	√	X
Thailand	√	X

1/ 10% criterion applied for data on equity only. FDI data on income on debt and other capital are based on the criterion of foreign enterprises used by the Investment Board.

2/ 10% criterion applied in principle. All foreign investment, except equity securities transacted through the stock exchange is treated as FDI regardless of the percentage of ownership by non-residents.

Source: Table 15- "Foreign Direct Investment Statistics: How Countries measure FDI, 2001", IMF 2003.

A glossary of Direct Investment Terms and Definitions has been published in the IMF/OECD publication, *Foreign Direct Investment Statistics: How Countries Measure FDI 2001* which is based on the methodology for compiling foreign direct investment set out in the international standards, namely, the BPM5 Manual (1993) and the third edition of the OECD's Benchmark Definition of Foreign Direct Investment (1996).

For obtaining comprehensive and quality data on FPI (portfolio investment) statistics, the second edition of the "Coordinated Portfolio Investment Survey Guide"

(CPIS Guide) was published in 2002.¹⁰ This survey was conducted in response to global asymmetries in reported BOP data that were originally identified and analysed in the IMF's **Report on the Measurement of International Capital Flows (Gordeaux Report 1992)**. The report highlighted the increasing importance of portfolio investment across international borders, reflecting the liberalisation of financial markets, financial innovation and the changing behaviour of investors. The increased liberalisation of international flows, however, has brought measurement difficulties. These difficulties have been reflected in the imbalances at the worldwide level between recorded financial assets and liabilities with higher flows usually being recorded for liabilities than for assets.

The purpose of the CPIS update is thus to improve statistics of holdings of portfolio investment assets in the form of equity, long-term debt, and short-term debt with the two objectives set as the following:

- to collect comprehensive information with geographical detail on the country of residence of the issuer, on the stock of cross-border equities, long-term bonds and notes, and short-term debt instruments for use in the compilation or improvements of the IIP; and,
- to exchange the bilateral data among the participating countries.

The survey is now annually conducted.

6. Definitions and Concepts of FDI and FPI Flows - Compilation and Measurement System

6.1 Foreign Direct Investment (FDI)

6.1.1 Definition

In the BPM5, foreign direct investment is defined as existing when the direct investor has ownership of a minimum of 10% of the ordinary shares or voting power or the equivalent in the direct investment enterprise and in which a resident entity in one country obtains a lasting interest in an enterprise resident in another

10. The first CPIS survey was undertaken in 1997 with a goal to ensure that all the main investing countries undertook a benchmark portfolio asset survey at the same time; and participating countries followed definitions and classifications as set out in BPM5 and all participating countries provided a breakdown of their stock of portfolio investment assets by country of residence of the non-resident issuer.

country.¹¹ A lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence by the investor on the management of the enterprise.

Similarly, according to the OECD Benchmark and the BPM5, a direct investment enterprise is an incorporated or unincorporated enterprise in which a direct investor that is a resident of another economy has 10 % or more of the ordinary shares or voting power (for an incorporated enterprise) or the equivalent (for an unincorporated enterprise). The BPM5 uses the “*Benchmark Definition*” for identifying enterprises within a direct investment relationship.¹² The direct investor may be an individual, an incorporated or unincorporated private or public enterprise, a government or associated groups of individuals or enterprises that have direct investment enterprises in economies other than those in which the direct investors reside.

6.1.2 Direct Investment Income

The components of FDI flows under direct investment income in the current account of BOP comprise:

- (i) Income on Equity which includes (a) dividends and undistributed branch profits and (b) reinvested earnings and undistributed branch profits. Dividends comprise dividends that are, in an accounting period, declared payable to a direct investor, less dividends declared payable in the same accounting period by that direct investor to that direct investment enterprise.
- (ii) Income on debt (interest accrued) which consists of the interest accrued on inter-company debt during an accounting period and owed by an enterprise to a direct investor, less the interest accrued during the same accounting period and owed by that direct investor to that enterprise.

11. A survey jointly conducted by the IMF and OECD (SIMSDI) in 1997 indicated that 85% of the 96 OECD and non-OECD respondent countries analyzed in the survey applied the 10 % rule. The results also indicated that 90% of the 61 countries surveyed use the 10% threshold as their basic criterion for their inward data, and that 5 of the 61 countries had changed their practices in this respect since 1997 (see Table 4.1 in *Foreign Direct Investment Statistics: How Countries Measure FDI*).

12. Direct Investment enterprises include those entities that are subsidiaries (a non-resident investor owning more than 50 % share), associates (a non-resident investor owning between 10 and 50 % share) and branches (unincorporated enterprises wholly or jointly owned by a non-resident investor) of a direct investor - Report on the Survey of implementation of Methodological Standards for Direct Investment: IMF & OECD, March 2000.

- (iii) Reinvested earnings of direct investment enterprises in the reporting economy are recorded as an income debit item in the current account with an offsetting entry in the financial account. Conversely, reinvested earnings of direct investment enterprises abroad are recorded as income credit items in the current account with an offsetting entry in the financial account.

6.1.3 Direct Investment Capital

It is the capital provided by a direct investor (either directly or through other enterprises related to that investor) to a direct investment enterprise or, the capital received by a direct investor from a direct investment enterprise and other capital contributions (such as the provision of machinery) that constitute part of the capital of the direct investment enterprise. The components of direct investment capital which is generally recorded in the financial account of BOP include equity capital, reinvested earnings and other capital (or inter-company debt transactions).

Equity Capital comprises equity in branches, all shares in subsidiaries and associates (excluding non-participating preferred shares that are treated as debt securities under BPM5) and other capital contributions. Reinvested Earnings consist of the direct investor's share of earnings (in proportion to equity held) not distributed as dividends by foreign subsidiaries or associates and the earnings of branches not remitted to the direct investor (undistributed branch profits).

Other Capital, which is also known as inter-company debt transactions, covers the borrowing and lending of funds including debt securities and trade (supplier's) credits between direct investors and subsidiaries, branches and associates, and between two direct investment enterprises resident in different countries that share the same direct investor. The non-participating preferred shares which are treated as debt securities are put under other capital. However, the following items should not be compiled in the "other capital":

- loan guarantees provided by the direct investor;
- loans that are merely arranged by the direct investor on behalf of the direct investment enterprise;
- funds borrowed by the direct investment enterprise from a bank or enterprise that is not affiliated with the direct investor;
- insurance company technical reserves; and,
- deposits, loans and other claims and liabilities related to usual banking and financial intermediation activities between affiliated banks and between affiliated financial intermediaries.

6.1.4 Recording of FDI Flows

FDI is not recorded in the BOP on a strict asset/liability basis. Instead, FDI is recorded on a directional basis as the following:

- Direct investment in the reporting economy (Inward FDI)
- Direct investment abroad (Outward FDI)

6.1.5 Time of Recording

FDI data are required to be recorded on an accrual basis, i.e., at the time when there is a change in ownership. Accordingly, dividends need to be recorded when payable, interest be recorded as it is accrued and reinvested earnings be recorded in the period it is earned.¹³ At times, though, obtaining data on accrual basis can be difficult because of the following reasons:

- Enterprises may record the transactions in their accounts at a time that differs from the change in ownership. For example, dividend payments may be recorded on the date they were actually paid instead on the date that they are payable.
- ITRS (International Transactions Reporting System) based system record FDI transactions on a cash basis.

6.1.6 Valuation

In principle, the OECD Benchmark definition and BPM5 recommends market value as the conceptual basis for valuation. If the current market value is not available, a market value proxy is recommended. For example, net worth (assets minus liabilities) or net asset value at current market cost would be a good proxy for the market value of an enterprise that does not have traded shares provided that the assets and liabilities of the enterprise are valued at current market values. However, enterprises often record the value of equity or other capital assets using book value based on historical cost, replacement cost, etc. Similarly, the trade price on stock exchange can be used to determine the value of the direct investor's equity in a publicly traded enterprise. In the case of mergers and acquisitions settled in shares, the price agreed between the two parties should be used as the market value even if this represents a premium or discount over the price traded on the stock market.

13. There was a debate concerning time of recording for dividends where according to BPM5 dividends are to be recorded "as of the date they are payable". The term used as "declared payable" in IMF *BOP Textbook* and the one "due for payment" used in *Benchmark* differ to each other but then it was agreed to align the concepts with the recommendation of BPM5- "Foreign Direct Investment Statistics: How to measure FDI 2001- IMF, 2003".

Market valuation places all assets at current prices rather than when purchased or last revalued and allows comparability of assets of different vintages.¹⁴ It also allows for consistency between flows and stocks of assets of different enterprises, industries and countries, as well as overtime. In practice, book values from the balance sheet of direct investment enterprises (or investors) are generally utilised to determine the value of the stock of direct investment. Where market values are derived indirectly, BPM5 recommends that, where feasible, countries should also publish data on a book value basis if the two types of data differ.

6.1.7 Geographic and Industrial Allocation

FDI transactions may be allocated to the country to which funds were paid or from which funds were received even if that country is not the country of the direct investment enterprise or direct investor. This method of allocation is referred to as the *transactor principle*. On the other hand, the geographic allocation may be based on the country of the direct investment enterprise or direct investor even if the amounts paid or received are to or from another country. This allocation method is known as the *debtor/creditor principle*. There is no hard and fast rule regarding the recommendation on the regional allocation of FDI transactions, but the BPM5 recommends that position data be allocated according to the *debtor/creditor principle*. Use of the *transactor principle* for flows requires a reconciliation to be effected between stocks and flows data. BPM5 and OECD also recommend that total direct investment flows be compiled only with respect to the immediate host or investing countries. The OECD also recommends a sectoral (industrial) analysis of a minimum of nine major distributions as set out in the “United Nations International Standard Industrial Classification of All Economic Activity” as follows:

- 1) Agriculture, hunting, forestry and fishing
- 2) Mining and Quarrying
- 3) Manufacturing
- 4) Electricity, gas and water
- 5) Construction
- 6) Wholesale and retail trade and restaurants and hotels
- 7) Transport, storage and communications
- 8) Financing, insurance, real estate and business services
- 9) Community, social and personal services

14. For more details, please see “OECD Benchmark Definition of Foreign Direct Investment: Third Edition, OECD, 1996.”

6.1.8 Accounting Practice

The *Benchmark* and the *BPM5* recommend the use of the Current Operating Performance Concept (COPC) to measure direct investment earnings. Under this concept, the earnings of an enterprise include its income from normal operations before accounting for nonrecurring items and capital gains and losses. Operational earnings should be reported only after making provision for depreciation of capital and income and deduction of corporation tax charged on these earnings. Direct investment earnings should not include any realized or unrealized capital gains or losses or exchange rate gains and losses made by either the direct investment enterprise or the direct investor. It should also not include write-offs of inventory, of intangibles, of bad debts or on expropriations without compensation.¹⁵

6.1.9 Unit of Account and Exchange Rate Conversions

The compilation of FDI statistics could be complicated by the fact that the position data may be expressed initially in a variety of currencies. The conversion of these data into a reference unit of account is deemed necessary for consistent and international comparability. As the national currency is subject to significant fluctuations relative to other currencies, it will affect the analytical value as valuation changes could dominate inter-period comparisons. In order to well redress it, price changes for market value asset and exchange rate changes for foreign currency denominated assets needs to be adjusted to come up with the position data at the end of each specific period which may be the end of a year. In other words, all position data should be converted into the unit of account using the exchange rate prevailing on the date to which the position data relate.

It is, therefore, suggested that FDI transactions in general, be converted to the unit of account at the exchange rate prevailing in the day of transaction. However, transactions involving dividends and distributed branch profits may be converted at the average exchange rate in the period in which the transactions are recorded.

6.1.10 Special Cases of Direct Investment Enterprises

The *BPM5* recognises a number of special cases of direct investment enterprises which warrant special mention. These are transactions with quasi-corporations, offshore enterprises, special purpose entities (SPEs), cross-border real estate transactions and the natural resource exploration activities.

15. For details see, "Foreign Direct Investment Statistics: How countries Measure FDI 2001", IMF, 2003.

a) Quasi-Corporations

Quasi-corporations are enterprises that produce goods and services in an economy other than their own, but do not establish a separate legal corporation in the host economy. According to the OECD Benchmark and the BPM5, quasi-corporations that are in a direct investment relationship with the parent enterprise are deemed to have:

- Production maintained for one year or more.
- A separate set of accounts maintained for the local activities.
- Income tax paid in the host country.

Construction operations or the operation of mobile equipment in another country come into this category.

b) Off-Shore Enterprises

According to international standards in the FDI data, the residency of offshore enterprise is attributed to the economies in which the enterprises operate regardless of any special treatment they may receive from local authorities such as exemption from taxes, tariffs or duties. Offshore enterprises can be engaged in the following operations:

- assembly of components manufactured elsewhere;
- processing of re-exported goods;
- trade and financial operations; and,
- located in special zones such as special trade zones, free trade zones or tax-havens.

c) Special Purpose Entities

Special purpose entities (SPEs) are defined either by their structure (e.g., financing subsidiary, holding company, base company, regional headquarters etc.) or their purpose (e.g., sale and regional administration, management of foreign exchange risk, facilitation of financing of investment etc.). SPEs are (i) generally organised or established in economies other than those in which the parent companies are resident and (ii) engaged primarily in international transactions with few or no local transactions.

SPEs should be treated as direct investment enterprises if they meet the 10% criteria. In the case of SPEs that have the primary purpose of financial intermediation,

the direct investment data should include (i) all transactions with non-financial affiliated enterprises and (ii) only those transactions with affiliated banks and affiliated financial intermediaries¹⁶ that involve equity capital and permanent debt. Transactions involving deposits, loans and other claims and liabilities related to usual banking and financial intermediation activities between affiliated banks, and between affiliated financial intermediaries, including SPEs with the primary purpose of financial intermediation, are excluded from the direct investment data.

d) Cross-border Real Estate Transactions

By convention in the BOP statistics, all land and buildings located within an economy except that owned by foreign governments (such as embassies) are regarded as being owned by residents. If the actual owner is a non-resident, the owner is treated as if the ownership has been transferred to a resident notional institutional unit which is deemed to own the land and the buildings. The non-resident therefore has a financial investment in this notional institutional unit which is deemed to be direct investment enterprise. Such cross-border transactions (recording of foreign ownership of land) in real estate with non-resident enterprises/ individuals should therefore be reported in FDI statistics as equity capital.

e) Natural Resource Exploration

When a direct investment enterprise is set up for the exploration of natural resources, inward direct investment flows that are provided to the direct investment enterprise by a direct investor located abroad that are used for exploration should be recorded as direct investment (equity capital).

6.1.11 Data Sources for FDI

In most countries, compilers use several data sources (please see country chapters). According to the 2001 SIMSDI results, the two major sources include (i) Enterprise Surveys, (ii) and International Transactions Reporting Systems (ITRS).

a) Enterprise Surveys

The approaches of enterprise surveys may range from data collection by telephone from a few large companies to highly organised large scale mail-based

16. Financial intermediaries are defined as being (i) other depository institutions (banks other than the central bank) (ii) other financial intermediaries except insurance companies and pension funds and (iii) financial auxiliaries- "*Recommended Treatment of Selected FDI Transactions*" (<http://www.imf.org/external/np/sta/di/fditran.htm>)

collections. An enterprise survey may be designed to capture a specific type of data or to obtain data that supplements other sources such as ITRS. The advantage of this source is that it permits the complete recording of FDI transactions and position data for each enterprise surveyed including reinvested earnings. It also provides the opportunity for the explanation of FDI concepts and treatment to data providers and allows other economic data on FDI activities (such as number of employees, exports, etc) to be collected at the same time. However, there are also some disadvantages since it may be difficult to maintain a comprehensive list of enterprises with direct investment transactions. Since the survey data are collected on a balance sheet or stock basis while BOP requires data on a transaction basis, the cost of obtaining supplementary data on gross transactions' underlying changes in stock data is high.¹⁷ In addition, countries that do not normally use enterprise surveys for BOP measurement will incur high costs in developing and implementing specialised direct investment surveys. Countries that use enterprise surveys also face difficulty in obtaining data on transactions on land especially those involving individuals as it often incurs numerous small transactions and is costly to measure. In addition, balance sheet information may be provided on the basis of historical cost rather than market value.

b) International Transactions Reporting System (ITRS)

An ITRS system measures individual balance of payments cash transactions passing through the domestic banks and may also measure (1) individual cash transactions passing through foreign bank accounts of enterprises, (2) non-cash transactions, and (3) stock positions.¹⁸ The principal advantage of this system is that a large part of the necessary information is often readily available from banking records. It also avoids the expenses incurred in developing alternative collection systems for the countries which already use an ITRS for collecting BOP data. The main disadvantages of this system are that in general only cash transactions are measured. Non-cash transactions in direct investment such as reinvested earnings, equity provided in the form of machinery and inter-company loans are not measured in this system, requiring supplementary collections. FDI concepts and therefore appropriate treatment of particular transactions is difficult to explain on the generalised banking report form leading to often classification problems. In addition, transactions in domestic currency or through accounts with non-residential banks from a standard

17. It has however, been noticed that 2001 SIMSDI update found little evidence of enterprise surveys of stocks being used to compile the transactions data, and the standard enterprise survey form recommended in the *BOP Compilation Guide* shows that the enterprise survey is expected to cover both stocks and transactions.

18. Report on the SIMSDI 2001 Survey.

cash-based ITRS are difficult to measure. Finally, it may be hard to get information on position data.

c) Information from Approvals

This source of FDI statistics provides information often available as a by-product of the investment approval process but it has many disadvantages. Approval processes are rarely designed to meet BOP requirements. There are often significant time lags between approval and actual investment while the actual investment may not take place at all. Information on reinvested earnings and on withdrawals of investment (disinvestment) is often not available while information on non-equity transactions that is inter-company debt is limited. Information on approvals generally relate to direct investment in the reporting economy and not to direct investment abroad. Some country use data on approvals of purchases by non-citizens rather than on residency basis which is a BOP requirement.

d) Others

Other sources of information for FDI transaction data could be data from exchange control or investment control authorities, company reports/accounts which may be used for calculation of reinvested earnings and position data, review of press and financial media for identification of enterprises with potential FDI transactions (this is particularly important for mergers and acquisitions) and partner country data for bilateral comparisons.

6.2 Foreign Portfolio Investment

6.2.1 Definition

Portfolio investment includes investments by a resident entity in one country in equity and debt securities of an enterprise resident in another country which seek primarily capital gains and do not necessarily reflect a significant and lasting interest in the enterprise. The category includes investments in bonds and notes, money market instruments and financial derivatives other than those included under direct investment, i.e., investments which are both below the 10 % rule and do not involve affiliated enterprises. The purchase of sovereign bonds by the foreigners issued by the governments is also enlisted under portfolio investment. Foreign portfolio investment can be categorically broken down into Equity Securities and Debt Securities.

Equity Securities are defined in the Survey Guide as all instruments and records acknowledging, after the claims of all creditors have been met, claims to the residual values of enterprises. Equity Securities include ordinary shares, stocks, participating preference shares, depository receipts, shares/ units in mutual funds and investment trusts, equity securities that have been sold under repurchase agreements and equity securities that have been lent under a securities lending arrangement.

Debt Securities are sub-divided into long-term debt securities and short-term debt securities. Long-term debt securities cover bonds, debentures and notes that usually give the holder the unconditional right to a fixed cash flow or contractually determined variable money income (payment of interest is not dependent upon the earnings of the debtor) and have an original term to maturity of more than one year.

Short-term debt securities cover only money market instruments such as bills, commercial paper and banker's acceptances that usually give the holder the unconditional right to receive a stated, fixed sum of money on a specified date and have an original term to maturity of one year or less.

6.2.2 Classification of FPI by Institutional Resident Sector

Portfolio investment (FPI) can be further classified by institutional resident sector. Identification of the residence of the issuer of the security and holder of the security is required for provisioning of a country's attribution of resident's investment in securities issued by non-residents. As such, portfolio investment by institutional resident sectors of the issuer or holder can be classified into:

- 1) Monetary authorities
- 2) General Government
- 3) Banks, and,
- 4) Others (non-financial corporations, insurance companies, pension funds, other non-depository financial intermediaries, private non-profit institutions and households, stock exchanges etc).

6.2.3 Classification of FPI by Instruments

Equity Securities can be classified by instruments as follows:

- 1) Ordinary share
- 2) Preference share
- 3) Participating preference share

Managing and Monitoring Direct and Portfolio Investment Flows:.....

- 4) Depository receipts
- 5) Shares in mutual funds and investment trusts
- 6) Others

Likewise, Debt Securities can be classified as follows:

- 1) market (Euro bond, foreign bond)
- 2) interest (fixed rate bond, zero-coupon bond)
- 3) maturity (Bond with call option, perpetual bond)
- 4) currency (Dual –currency bond, SDR bond)
- 5) borrower (Brady bond, Guaranteed bond)
- 6) Collateral (mortgage backed securities, asset backed securities)
- 7) Convertibility/exchangeability (convertible issue, exchangeable issue)

Money market instruments can be classified as:

- 1) Euro note
- 2) Certificate of deposits (CD)
- 3) Revolving underwriting facility (RUF)
- 4) Treasury bill (T-bill)
- 5) Banker's acceptance (B/A)
- 6) Others

Thus, portfolio investment instruments in the BPM5 are classified by (a) assets and liabilities (b) type of instrument (equity and debt securities with debt securities further broken down into bonds and notes, and money market instruments) with each of these three types of instrument further broken down by (c) resident institutional sector (monetary authorities, general government, banks and other sectors).

6.2.4 Valuation

In principle, market value should be used to report all holdings of securities.

- For equity securities that are listed on a stock exchange, the value of outstanding stocks should be calculated using the market price on their main stock exchange prevailing.
- For unlisted enterprises if a market value is not available, it should be estimated by using one of the following: (i) a recent transaction price (ii) director's valuation, or (iii) net asset value.

Managing and Monitoring Direct and Portfolio Investment Flows:.....

- For debt securities following valuation methods in descending order of preference should be used.
 - (i) A quoted traded market price.
 - (ii) The present value of the expected stream of future payments or receipts associated with the securities.
 - (iii) For unlisted securities, the price used to value securities for accounting or regulatory purposes.
 - (iv) For deep-discount or zero-coupon securities, the issue price plus amortization of the discount; or
 - (v) For debt instruments issued at a premium, the issue price less the amortization of the premium.

It is also suggested that securities be classified by original maturity broken down into short-term (one year or less) and long-term (more than one year) and by currency. The BPM5 further recommends that interest accrued but not yet payable be included in the price of the debt securities.

6.2.5 Data Sources of FPI

As for data sources of FPI, data on FPI stock positions, financial flows and non-flow changes can be solicited from an ITRS¹⁹, Enterprise Surveys or from official sources.

The second edition of the CPIS Survey Guide (2002)²⁰ provides advice on the choice of a collection system and discusses the advantages and disadvantages of an end-investor survey, a custodian survey, a combined custodian/end-investor survey and surveying investment fund managers. The 2001 CPIS collects information on the stock of cross-border holdings of equities and long and short-term debt securities valued at market prices prevailing at the time of the survey and broken down by economy of residence of the issuer. A number of the SEACEN member countries participated in the CPIS 2001 survey which includes Indonesia, Korea, Malaysia, Philippines, Singapore and Thailand. Data on geographic breakdown of the portfolio assets of CPIS participating countries can be useful for deriving position data on the liabilities of other countries that may not have participated.

19. ITRS does not cover non-transaction changes.

20. The 2001 CPIS survey has focused primarily to cover portfolio investment assets of domestic residents; that is, securities issued by non-residents and owned by residents. The survey is done annually and the latest update available in IMF website till today is February, 2004.

According to CPIS Survey Guide, an end investor survey (e.g., banks, security dealers, pension funds, insurance companies, mutual funds, non-financial corporations, households) directly approaches the owner of securities issued by non-residents. This approach provides good coverage and quality data when investment in securities issued by non-residents is concentrated in institutional investors. However, additional preparation will be required if it is a new approach to the national compiler as there is always the possibility of under-coverage occurring. Secondly, although the end-investor approach is supposed to provide good coverage of large institutional investors, it may not capture the securities owned by households as it is too difficult and expensive to conduct a survey of households. Similarly, valuation by end-investors may vary among holders and even within a respondent's own accounts as some may be on a daily basis while others are on a weekly, monthly or quarterly basis.

A custodian survey focuses primarily on those financial institutions that hold securities issued by non-residents on behalf of end-investors. This type of survey would provide good coverage when residents mainly hold their securities issued by non-residents with domestic custodians. However, due to vague and complex potential relationships between end-investors and custodians as well as among custodians, the security holding may be double counted affecting the quality of the data. Custodians generally encounter difficulties in (a) distinguishing between holdings of residents and non-residents, (b) providing details of the geographic breakdown of resident holdings of securities issued by non-residents and (c) valuing some securities at market value.

Combined custodian/end-investor survey while providing the most comprehensive coverage, is likely to suffer from double counting or undercounting. This is because the data is collected from two different sources which require close coordination as is the case with the fund investment managers. A more complete coverage might be obtained with the inclusion of fund investor manager survey but the disadvantage is the complexity of the survey and the possibility of double counting or undercounting.²¹

The related issues with the above data sources is the degree of details required which can be met by collecting data either on a security –by security basis or on an aggregate basis. Collecting data on a security-by security basis rather than on aggregate basis provides more information and allows greater possibility for data verification. This approach provides the information required to construct geographical allocated position data, verification on price and country of issuer,

21. For details on all types of above mentioned surveys please refer to Chapter 4, Collection Methods in CPIS, 2002; IMF.

currency attribution, industry/sector of the issuer, yields on securities and so on. However, such a survey is generally expensive for the compiler although it is deceptively cheaper and easier for respondents. In contrast, an aggregated survey relies on the survey respondent to perform the aggregation, allocation and valuation of securities which entails relatively less involvement of national compilers. Survey respondents should be made fully aware that quality data reporting is imperative for end-investor surveys on aggregate security basis and to provide actual information relating to the market valuation, country attribution of issuer and also for custodian surveys to avoid double counting and ensuring correct valuation of securities and maintaining quality.

Another plausible source for FPI data is the Bank for International Settlements (BIS) database. The BIS maintains a security-by-security database covering international debt securities. Information can be availed on international banking business banking centres comprising banks' balance sheet assets and liabilities vis-a'-vis non-residents in any currency plus information on similar assets and liabilities vis-a'-vis residents in foreign currency. Two sets of data are produced - one termed as locational statistics which is based on the country of location or residence, of creditor banks. The second is termed as consolidated statistics which is based on the country of origin, or nationality of creditor banks. The BIS statistics, however, partially covers the BOP and IIP components as it only includes the international banking statistics of 36 countries as at March 2003. Also relevant to is the *BIS Quarterly Review Security Statistics (Table 14A and 14B)* which provides some information on a country' liabilities relating to portfolio investment which includes data on the issuance of international money market instruments and international bonds and notes. It should however, be mentioned that as this source reports only "international securities" (securities issued abroad by countries) it does not cover securities issued in domestic market that are purchased by non-residents. In addition, it makes no allowance for international securities purchased by residents of the debtor country. Pertaining to above limited information on BIS statistics, its data should be used only if there are no national statistics available.

7. Distinguishing Between Foreign Direct Investment and Foreign Portfolio Investment

Foreign direct investment exists in principle, when foreign firm has 10% ownership of the ordinary shares or voting power and it does not require international transfer of fund but of ownership which may finance the transaction in diverse ways. Foreign portfolio investment exists when a firm buys stocks, bonds and / or other money market instruments that do not involve management of assets but require international transfer of funds.

Furthermore, in the definition of FDI, apart from investor ownership of 10 % or more of the ordinary shares or voting power, the objective of lasting interest implies the de facto existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence by the investor on the management of the enterprise. Therefore, both the equity held that establishes the direct investment relationship and any other holdings of equity or debt²² that are issued by the direct investment enterprise or the direct investor or its affiliates owned by them come under foreign direct investment. Other securities transactions of related financial intermediaries including all debt securities are classified as portfolio investments (see *BPM5*, paragraphs 365 and 372).

8. Dissemination of FDI and FPI Statistics

Within IIP (International Investment Position) framework, the SDDS of the IMF prescribes disseminating annual data within two quarters of the reference year. The SDDS, however, encourages the dissemination of quarterly data within one quarter lag. It stipulates that assets and liabilities should be classified according to the component detail specified in the *BPM5*. Direct investment and portfolio investment are the sub-components of the classification made in the *BPM5*. For economies in which an analysis of debt position is highly desirable, the SDDS encourages a breakdown of securities under portfolio investment by currency of issue and by original maturity.

8.1 Efforts of SEG Members in Capturing Information on Domestic Debt Securities and International Securities

To facilitate the sharing of information on capital flows for monitoring and risk management, the members of the SEACEN Experts Group (SEG) on capital flows had agreed at its second meeting held on 6 September 2000, to have a common set of data templates to be shared through an electronic data exchange facility at the SEACEN Centre. For this purpose, 18 templates were developed which were aimed at capturing current information on inflows/outflows of foreign currency, on transactions in the financial markets as well as on external and domestic debts and forward looking data on predetermined flows. This was later modified into 16 templates only with 14 core templates and 2 optional templates. Related to this research project, SEG templates (B)a and (B)b provide information on the following:

- total domestic debt securities issued and type of holders (resident/non-resident) on a monthly basis;

22. Already held when the threshold of 10 percent is reached or other securities acquired subsequent to the reaching of that threshold.

Managing and Monitoring Direct and Portfolio Investment Flows:.....

- total domestic debt securities outstanding at the end of each month and holding of these securities by non-residents by original maturity of less than one year as well as more than one year; and,
- total issuance by institutional sector in a reporting economy.

The rationale of these templates are:

- to have information on non-residents' holdings of domestic securities since this constitutes a significant part of capital flows in some economies;
- to capture information on domestic debt securities held by non-residents maturing in less than one year, as this would indicate imminent capital flows; and,
- to indicate the significance of each type of sector in issuing domestic debt securities.

These templates are disseminated monthly with a one month lag. The purpose of SEG optional template L, on the other hand, is to collect more frequent and timely data on residents' holdings of international securities by country of issuer with additional breakdown into sectors and holdings of those securities. The rationale of this template is to:

- monitor resident's holdings of international securities (outward investment);
- have geographical details on the country of residence of issuer;
- identify the stock of cross-border equity and debt securities for use in the compilation or improvement of the IIP statistics on portfolio investment; and
- identify the main holders (by sector) of international debt securities.

The information on this template is also to be disseminated on quarterly basis with a one month lag.

9. Direct Investment and Portfolio Investment Data Availability, Data Sources and Compilation Practices in the SEACEN Countries:

This section delves into the current practices regarding the data sources, availability and the measurement practices of foreign direct investment (FDI) and foreign portfolio investment (FPI) of the 10 participating SEACEN countries. The following examines the progress made in conforming to the agreed international standards for FDI and FPI compilation that have been established by the IMF and OECD as well as comparative analysis of the measurement practices adopted among the SEACEN member countries. For this purpose, 19 templates have been developed

(Appendices 1.1 to 1.8) for FDI and (Appendices 1.9 to 1.19) for FPI based on the 2001SIMSDI Survey Report and CPIS Survey Guide 2001 of the IMF. The information on these templates was acquired through member banks' responses, the results of which are discussed below.

9.1 Foreign Direct Investment (FDI)

9.1.1 Data Availability

As discussed earlier, the BPM5 and the OECD Benchmark recommend that FDI statistics be compiled as part of balance of payment statistics (transaction data) and international investment position statements (position data) and countries are expected to compile and disseminate FDI statistics according to standard components of BPM5 which are direct investment income, direct investment financial flows, and direct investment positions. It is found that for inward transactions data and positions data, all the 10 SEACEN member countries²³ except Nepal and Singapore report FDI statistics under the component *direct investment income* while all the member countries except Nepal have been found to compile and disseminate FDI statistics under the heading *direct investment financial flows* (Appendix 1.1). It is also revealed that except for Philippines and Taiwan, none of the above countries compile and report FDI statistics under component *reinvested earnings*. Likewise, *direct investment position data* is been compiled by most of the SEACEN member countries with the exception of Nepal and Sri Lanka. Compared with the 2001 SIMSDI update in which six member countries (Indonesia, Korea, Malaysia, Philippines, Singapore and Thailand) have participated, Thailand has moved up from *non-reporting status to reporting status under inward income on equity*. Indonesia, Korea, Malaysia, Philippines and Thailand have now started to report FDI statistics under component *inward direct investment position data*²⁴.

23. Includes Indonesia, Korea, Malaysia, Mongolia, Nepal, Philippines, Singapore, Sri Lanka, Taiwan and Thailand.

24. During 2001 SIMSDI Update, except for Singapore, all the participating countries do not report both inward and outward position data. Thailand, however, used to cover data on *other capital* only for inward and *equity capital* only for outward position data. For outward transactions data, under *direct investment income*, only Korea, Malaysia and Philippines used to report income on equity (dividends) while Korea is the sole country reported under outward reinvested earnings. Outward transaction data on income on debt (interest) was available for all participating countries except Indonesia and Thailand. Likewise, for outward *direct investment financial flows*, Korea and Singapore used to report both on equity capital and other capital while Philippines and Thailand on equity capital only.

9.1.2 Periodicity and Timeliness

The periodicity and timeliness of data dissemination plays an important role in making available the statistics to the public. Here, the periodicity for transactions (flow) data refers to the frequency in which data is compiled and is specified in terms of the interval represented by a single data point. Likewise, timeliness refers to the period elapsing between the end of reference period and the dissemination of the data and is measured in the number of weeks, months or years.

The current status shows that more SEACEN member countries are compiling monthly and quarterly inward transactions data (equity capital) except for Singapore (Appendix 1.2). Korea, Malaysia, Philippines, Taiwan and Thailand have monthly periodicity while Indonesia, Mongolia and Thailand have quarterly periodicity. The periodicity of inward equity capital transactions data disseminated for Singapore is quarterly/annual. Compared to 2001 SIMSDI survey, it can be seen that Malaysia has improved its periodicity of transaction data compilation from quarterly to monthly.

As regards to timeliness, three countries, namely Korea, Taiwan and Thailand, have relatively shorter time lags in disseminating their inward transaction data with monthly intervals. The rest of the members except Singapore²⁵ (annual) has a timeliness of one quarter (Appendix 1.2). There has been improvement in timeliness of inward transaction data dissemination for the countries like Indonesia, Korea and Thailand since 2001.²⁶ As regards to the revision policy, it varies from country to country with Thailand revising 4 times a year, annually for Korea and Sri Lanka while no revision policy is strictly applied in case of Singapore and Taiwan. Nonetheless, revisions are still made both in Singapore and Taiwan when there are methodological changes or new data sources or errors are found.

9.1.3 Data Sources

Data sources make a significant impact on the ability of compilers to abide by the international recommendations set for the compilation of FDI statistics. Major data sources currently used are enterprise surveys, international transactions reporting system and data from exchange control or investment control authorities. Appendix 1.3 shows the primary data sources for FDI for most timely transactions data.²⁷

25. Singapore's quarterly data has been mentioned as provisional.

26. 2001 SIMSDI Update shows timeliness of FDI transaction data disseminated for Indonesia, Korea and Thailand as 6 months, 1 to 2 months and 2 months respectively.

27. Most timely data are the direct investment data that are first disseminated.

It appears that enterprise surveys and ITRS are the most common data sources for the FDI transactions data (both inward and outward) for most of the SEACEN member countries.²⁸ Table 1.2 shows that while Korea, Nepal, Sri Lanka and Taiwan do not conduct enterprise surveys, the rest of the SEACEN member countries have enterprise surveys for both inward and outward transactions data. With the exception of Nepal and Singapore, the member countries data sources include the ITRS system to a greater extent. Exchange control or investment control approval authorities are used as primary sources by Korea (inward only) Malaysia (outward only), Sri Lanka, Taiwan and Thailand²⁹.

Table 1.2 also indicates that there has been a move towards the use of published sources such as company accounts for Philippines and Singapore which are often used to supplement the data obtained from a cash-based ITRS data source which cannot supply information on transaction of reinvested earnings. Bangko Sentral ng Philippines also maintains a system of registration of foreign investment and loans - both inward and outward which covers cash investment and non-cash investment. Improvement can be seen in primary data sources for transactions data when comparing current data sources with 2001 SIMSDI update for six countries. Korea has moved to the ITRS system from the previous exchange control/investment approval authority. Malaysia has expanded its data sources from enterprise surveys to all those mentioned in Table 1.2. Thailand moved up from the ITRS system to incorporate other sources as well such as enterprise surveys and exchange control/investment approval authority.

9.1.4 Geographic and Industrial Classifications

All the nine SEACEN participating member countries with the exception of Mongolia compile geographic breakdowns for inward FDI transactions. However, for outward FDI data, only three countries including Sri Lanka, Taiwan and Thailand follow the geographic breakdowns (Appendix 1.4). SEACEN countries, except Korea and Mongolia, also compile industrial breakdowns of FDI statistics for inward data while only three countries namely Sri Lanka, Taiwan and Thailand compile industrial sector breakdowns for outward FDI statistics. In case of Korea, geographic desegregation is possible only on the basis of foreign exchange receipts and payments or by the notification of investment plan but not by BPM5. Industrial desegregation is possible only by the criteria of Reports of Intents submitted to the Ministry of

28. 2001 SIMSDI Update has reported that there has been a move toward the use of enterprise survey as a primary source for compiling these data.

29. Ibid.

Table 1.2
Data Sources for FDI Transactions

Country	Primary Source	Supplementary Source
Indonesia	a) Foreign Debt Administration and Analysis Division, Bank Indonesia b) FDI Survey	—
Korea	a) ITRS b) Information from Ministry of Commerce, Industry and Energy	Survey on real estate investment by non-resident
Malaysia	a) DOS Survey b) BNM Cash BOP System	a) MIDA application approvals b) MIDC approvals and others
Mongolia	a) BOP b) Foreign Trade (FIFTA) Statistics	—
Nepal	a) BOP b) Department of Industry	—
Philippines	ITRS, Enterprise Surveys, Banking Statistics, External Debt Statistics	Registration system for investment, financial statements, balance sheets, news reports and bilateral sources
Singapore	Annual Surveys	Published information (company accounts, Commercial Establishment Information System (CEIS), administrative records
Sri Lanka	a) Board of Investment of Sri Lanka b) Dept. of Exchange Control	a) Press reports b) ITRS
Taiwan	ITRS by the Central Bank	Investment Approval Authority by Investment Commission in the Ministry of Economic Affairs
Thailand	ITRS	Enterprise Surveys

Source: Member banks' responses.

Commerce, Industry and Energy, the implementation of which is not binding. The current practices of compiling FDI statistics are moving towards broadening the geographic breakdowns by the SEACEN members as during the 2001 SIMSDI survey, out of the six participating countries, three (Philippines, Singapore and Thailand) compile inward and outward financial flows data with geographic breakdowns while Indonesia, Korea and Malaysia did not because that they did not compile geographic breakdowns of their FDI data at that time.

The principle used for the geographic allocation of FDI transactions makes an important impact on the comparison of partner country data. Of the ten SEACEN member countries, five countries namely, Korea, Nepal, Philippines, Sri Lanka, Taiwan and Thailand use the *transactor principle* while countries like Indonesia, Malaysia and Singapore use *debtor/creditor principle* (Appendix 1.5). Thailand uses both the principles implying that under the ITRS system the recording of data is based on the *transactor principle* whereas under the enterprise surveys, it is based on the *debtor/creditor principle*. Mongolia does not compile data on geographic breakdowns and hence, there is no basis for allocating country data. In comparing current practices of basis for allocating country data, Indonesia, Korea and Malaysia do not have information on the basis they adhere to on the 2001 SIMSDI survey. For FDI transaction data, Philippines used the *transactor principle* while Thailand used *debtor/creditor principle* for both inward and outward data.

9.1.5 Treatment of Definitions for Direct Investment Enterprises Resident in the Reporting Economy (Inward FDI): Transactions Data

As explained earlier, the 10% ownership criterion is specified in the OECD Benchmark and BPM5 for the definition of direct investment enterprises. Some countries have, however, included two more qualifications in addition to that criterion. First, if a direct investor owns less than 10% of an enterprise but has an effective voice in management, the transactions between the investor and enterprise are included in the FDI statistics. Second, if the investor owns 10% or more of the equity of the enterprise but do not have effective voice in management, the enterprise is excluded from the FDI statistics. Current treatment to the definition of direct investment shows that almost all the SEACEN member countries except for Nepal and Taiwan³⁰ apply the basic criteria of 10% equity ownership threshold

30. In Taiwan, identification is based on application behavior itself, for as long as the foreign enterprise applies with Investment Commission and gets approval, the investment is counted as Direct Investment. Nonetheless, it identifies the supplementary data source from the Investment Commission, the primary source of the CBC's (Central Bank of China) BOP statistics requires remittances as in ITRS system.

(Appendix 1.6). However, Philippines use this criterion only for stocks and a different one for flows.³¹ Taiwan also applies a criterion which is different from the basic principle of 10% equity ownership threshold. Indonesia is now solely applying the 10% ownership criteria as against the one used during SIMSDI 2001 survey where 10% criterion was applied for data on equity only. FDI data on income on debt and other capital are based on the criterion of foreign enterprises used by the Investment Board. The SIMSDI 2001 results indicated that Korea also used two additional criteria for defining their FDI.

9.1.6 Valuation of Assets and Liabilities

In principle, it is recognised that all external financial assets and liabilities are required to be valued at prevailing market prices on the date they are recorded in the FDI statistics. For direct investment, it is often not possible to value at market prices for different components in different countries. It is a general practice that some countries use the values recorded in the balance sheets of direct investment enterprises (book values) to determine the value of stock of direct investment which might be based on historical cost and not on the market valuation principle. At present, SEACEN member countries record their inward equity capital positions both in market value and book value. Nonetheless, most of the SEACEN members namely, Indonesia, Korea, Mongolia, Nepal, Philippines, Sri Lanka, Taiwan and Thailand record their inward FDI equity capital at book value while Malaysia, Singapore and Thailand³² compile inward FDI position data for both their inward equity capital and inward other capital positions at market values (Appendix 1.7).³³

-
31. 10% criterion applied in principle but for flows data, all equity investment by non-residents in the Philippines, except those purchased through the stock exchange, are defined as being direct investment in the Philippines. All listed securities trade through the stock exchange are defined as being portfolio investment, on the assumptions that (i) no non-resident investors on the stock exchange will hold more than 10 % of the total shares of a resident enterprise, and (ii) investments by non-residents through the stock exchange are speculative in nature and therefore the investors do not have a lasting interest in the resident enterprise in which they invest.
32. In Thailand, the stock of equity capital which is obtained from the surveys is recorded on the basis of market value. The flows of FDI equity is recorded on the basis of transactor principle but it is difficult to determine whether it is recorded on the basis of book value as there is no information on the exchange rate used by the respective companies.
33. During 2001 SIMSDI survey, no information was available on valuation of inward and outward position data for Indonesia, Korea and Philippines because they did not compile position data on FDI at that time. Thailand, however, value both assets and liabilities in FDI position data on market value for equity capital. Malaysia, though compiles position data on equity capital, but not disseminated. In Singapore, however, listed companies are recorded at market values while unlisted companies are recorded at book values. It is covered for both equity capital and other capital inward position data while only equity capital outward position data.

9.1.7 Recording of FDI Statistics (Transactions) in Special Cases

The information on treatment of a number of special cases by the SEACEN member countries which are included in their FDI transactions data is explored in Appendix 1.8. Korea, Malaysia, Philippines, Singapore and Thailand in accordance with the international standards, include in their FDI transactions data, *the purchases and sales of land and buildings* by non-resident enterprises and individuals and vice versa while it is not applicable for the rest of the SEACEN members.

As regards to the recording of transactions of *Offshore Enterprises*, some of the member countries like Indonesia, Malaysia,³⁴ Korea, Singapore and Taiwan include the activities of offshore enterprises in their countries by non-residents in accordance with the international standards in the direct investment transaction data. Contrary to the international standards, the rest of the countries including Philippines and Thailand do not include the transactions of offshore enterprises established in the host countries in the direct investment data. It may be noted that Korea and Singapore are the two countries which record both inward and outward transactions with offshore enterprises in their direct investment data.

Treatment of *Special Purpose Entities* in accordance with the international standards, are applied by four countries only, namely, Korea, Malaysia, Singapore and Thailand where the activities of offshore enterprises established in host countries by non-residents as well as of offshore enterprise established abroad by host country residents are generally included in the direct investment data (Appendix 1.8).³⁵ For the rest of the countries, this treatment is not applicable as the activities of *SPEs* established in those countries by non-residents are not identifiable.

As for the recording of transactions of *natural resource exploration*, the direct investment data includes the expenditure related to natural resource exploration both inward and outward in Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand. The other countries do not generally include the expenditure relating to natural resource exploration by non-residents.

34. It is an upgraded record as Malaysia did not include such transactions in the past as reported during 2001 SIMSDI survey.

35. During 2001 SIMSDI survey, only Singapore and Thailand included activities of *SPEs* in their FDI position data while Malaysia, though compiled but not disseminated.

9.2 Foreign Portfolio Investment

9.2.1 Data Availability

In accordance with the BPM 5 which defines portfolio investment as external claims on equity and debt securities, the CPIS Guide 2002 emphasises that the country portfolio investment transactions should report equity securities and debt securities separately and that debt securities be split into long- and short-term (having original maturity of one year or less). Of the eight participating member countries (Mongolia and Nepal does not have FPI) all the countries compile FPI data under inward equity securities (liabilities) and reports/disseminates the same except for Korea. Likewise, all eight SEACEN member countries compile equity securities on the assets side (outward investment). Although debt securities are available as breakdown of long-term and short-term for seven countries (Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand), only Malaysia, Philippines, Singapore, Taiwan and Thailand disseminate information on long-term and short-term debt securities issued by non-residents and owned by residents (Appendix 1.9 and 1.10). Korea collects inward transaction and position data classified by type of securities but does not disseminate the data. The liabilities of external debt statistics are, however, reported to the international organisations though not included in CPIS.

9.2.2 Periodicity and Timeliness

Korea, Philippines, Taiwan and Thailand compile FPI statistics on a monthly basis while Indonesia, Malaysia and Sri Lanka have quarterly periodicity. Korea, Taiwan and Thailand have a relatively shorter time lag of one month while Indonesia, Malaysia, Philippines, Sri Lanka disseminate their FPI transaction data quarterly with Singapore on a yearly basis (Appendix 1.11). As regards to the time frame of revision policy,³⁶ it ranges between quarterly to annually for most of the SEACEN countries while none has been made in case of Sri Lanka. In the case of Singapore, no revisions are envisaged 2 years after the end of reference year.

9.2.3 Data Sources

Data sources on FPI can come from an ITRS, enterprise surveys or from official surveys. For countries with well-developed capital markets, special surveys

36. Revision policy refers to the period of revisions after which the information is taken as the final figure

Table 1.3
Data Sources for FPI Transactions

Country	Primary Source	Supplementary Source
Indonesia	a) Jakarta Stock Exchange Monthly Statistics b) Bank Custodian Report c) Money Market Settlement Division, BI d) CPIS Survey	—
Korea	a) ITRS b) Survey on Securities Companies	a) Information from FSS (Financial Supervisory Services) b) KSE (Korean Stock Exchange)
Malaysia	a) DOS Survey b) BNM Cash BOP System	a) Others
Mongolia	—	—
Nepal	—	—
Philippines	ITRS, Enterprise Surveys, Banking Statistics, External Debt Statistics	Registration system for investment, financial statements, balance sheets, news reports and bilateral sources
Singapore	Annual Surveys	Published information (company accounts, Commercial Establishment Information System (CEIS), administrative records
Sri Lanka	a) Colombo Stock b) Dept. of Exchange Control	a) Press reports b) ITRS
Taiwan	ITRS	Investment Approval Authority - the Securities and Futures Commission of MOF (inward investment)
Thailand	a) ITRS b) Bilateral Sources (information from State Enterprises/Other Government Agencies	Enterprise Surveys

Source: Member banks' responses.

of international activities associated with securities may be required. This is especially relevant when securities are issued by non-residents in domestic capital markets or when portfolio managers (banks or other fund managers) place funds abroad. In the countries which do not have well developed secondary security markets, relevant data can be collected from the enterprise issuing or acquiring the security. For the SEACEN countries, Table 1.3 and Appendix 1.12 show that major sources for FPI data are regular surveys and ITRS both for inward and outward investment. This is followed by "other" sources in which countries like Indonesia, Malaysia, Philippines and Thailand rely on. Exchange control/investment approval authority comes as the least preferred source which is used by Malaysia and Sri Lanka (outward investment) and Taiwan (inward investment). Philippines, on the other hand, also use the Registration System (Custodian Bank's report) for both inward and outward investment data. In case of Korea, regular surveys for outward investment are applied for position data only. For BOP flow statistics, transaction data is compiled both by ITRS as well as survey.

9.2.4 Country Attribution and Residency and Collection Basis

In order to facilitate exchange bilateral information, CPIS requires the identification of the residence of the issuer of the security and of the holder of the security. The issuer of the security could be a government agency or a public/private corporation (including financial institutions), or a branch or subsidiary of a public/private corporation (including a financial institution). Likewise, the holder of the security may be a government entity, a public/private corporation (including a financial institution), a quasi-corporation, an enterprise, a non-profit institution serving households or an individual. Depending upon the data sources, compilers face difficulty in determining the country of residence of non-resident issuers of securities held by their residents or where the information is provided by investment (fund) managers or custodians. This problem is reflected in most member countries and only Korea, Malaysia and Thailand have the provision of a country attribution of residence by the issuer of a security while again only Malaysia and Korea have the provision to identify all resident holders of securities issued by non-residents (1.13). None of the SEACEN countries collect data on FPI on a security by security basis. Reporting countries which collate FPI data on an aggregate basis include Korea, Malaysia, Singapore and Thailand. This implies that most of the SEACEN countries have to seek supplementary sources such as third party holdings survey or the BIS Quarterly Review publication for obtaining information on FPI (securities) statistics.

9.2.5 Sectoral Breakdown of FPI Data

In order to identify the economic sectors of domestic investors, the sectoral classification of the securities issued would provide useful analytical information. However, the information may be impractical to collect where custodians are the primary source of information as they may not be aware of the true holder of the securities. Appendix 1.14 shows that in terms of sectoral breakdown by institutional resident sector, Korea, Malaysia, Philippines and Thailand compile securities data with breakdowns into general government, banks, monetary authorities and others. Singapore classifies sectors only by “general government” and “others” while Indonesia and Sri Lanka generally do not classify the security holding by the resident sector.

9.2.6 Geographical Allocation of FPI Statistics (Liabilities)

While the CPIS survey has primarily emphasised covering outward investment, countries do have information on inward investment as well, i.e., the securities issued by the residents and owned by non-residents (portfolio investment liabilities of residents). This will, undoubtedly facilitate the compilers in comparing data from inward surveys with those received from the data exchange. However, it is recognised that collecting geographic data on liabilities accurately, i.e., via the *debtor/creditor principle* may not be possible as it is observed that Malaysia is the only country which collates geographic data on liabilities on the *debtor/creditor principle* (1.15). Korea, Philippines and Thailand, on the other hand, collect data on the *transactor basis*. It should be noted that the data collected on the *debtor/creditor principle* can attribute the liability to the correct country of holder whereas those collected on the *transactor principle* are likely only to record the country of residence of the first party acquiring the security. Any subsequent trading between the non-residents may not be captured. Indonesia, Singapore, Sri Lanka, and Taiwan, do not collect, in general, the geographic data on inward investment.

9.2.7 Currency Breakdown

A currency breakdown of securities by type of instrument issued by non-residents and owned by domestic residents provides compilers with more scope to verify income data using position data as the yields calculated will be more accurate if they are computed by currency. However, countries collecting data on an aggregate basis and not on a “security by security” basis may face difficulties in obtaining such additional information. Among the SEACEN countries, only three countries, namely, Korea, Malaysia and Philippines have been reported to have the data on securities with currency breakdown (Appendix 1.16).

9.2.8 Classification of Securities by Instruments and Maturity/Duration

It is useful to compile securities data by type of instruments for detailed analytical purposes. Appendix 1.17 shows that almost all the SEACEN countries³⁷ except Thailand classify the securities by type of instruments. Classification of securities by instruments is first done by breakdown into equity securities and debt securities. Equity securities are further broken down into instruments such as ordinary share, participating preference share, depository receipts, etc. Debt securities are further divided into long-term debt securities which cover bonds such zero-coupon, convertible bonds, Eurobonds, etc, and money market instruments which cover bills, commercial papers, banker's acceptance, etc. In case of Philippines and Singapore, although data are available by instruments, they are not consolidated and/or disseminated due to confidentiality clauses in data generation. Thailand does not classify the securities by instruments but records only in gross terms as equity securities and long-term debts.

By maturity, all the SEACEN countries except Singapore classify the securities by original maturity. By duration, only Malaysia, Philippines and Singapore have the data on securities broken down into long-term and short-term while Indonesia, Korea Taiwan and Thailand do not, implying that although these countries have data classified by duration but is not made available to the public because of confidential clauses (Appendix 1.18). For Sri Lanka, classification by original maturity as well as by duration is not applicable.

9.2.9 Valuation

As mentioned earlier, the BPM 5 recommends that stocks of assets (and liabilities) be valued at current market price at the appropriate reference date. It also recommends that interest accrued but not yet payable be included in the price of debt securities. The same principle has been followed by the CPIS to use the market price for valuation. It may not be problematic to have market value for regularly traded equities and debt securities except that end-investors may ignore valuation of all their holdings of securities at market prices and resident custodians may not keep records of the market prices of the securities they are holding. For example, end investors may follow alternative valuation principles such as par value or acquisition cost such that banks may maintain separate trading books (at current

37. Mongolia and Nepal are not included here as they do not have foreign portfolio investment data. Taiwan, although do not classify in the exact title of short-term and long-term category as in BPM5, debt is nonetheless categorized under "bonds and notes" having maturity of more than one year and "money market instruments" having maturity within one year.

market price) and investment books (at acquisition cost). For non-traded securities, one has to adhere to the different methods explained earlier which is not that easy and is the reason not all the SEACEN countries are valuing their securities at market value. Indonesia, Philippines and Sri Lanka compile securities at book value while Korea, Singapore, Taiwan and Thailand use market value (Appendix 1.19). For Taiwan, the stock of securities which is obtained from the surveys is recorded on the basis of market value. Malaysia is the only country among SEACEN members which record securities data both at book value and market value.

10. Effectiveness of Current Data Compilation System and Efforts to Improve Foreign Investment Flows Data

The effectiveness of the data compilation system in the SEACEN countries depends on how far the countries have adopted the international standards as recommended by IMF/OECD in the definition of FDI and FPI (both inward and outward), the periodicity and timeliness of data dissemination, its coverage and the valuation system. The data compilation systems in the SEACEN countries presently differ in their modalities with respect to the criteria set under the international standards of the IMF/OECD in one way or other. However, it has been observed that these countries are moving ahead in terms of improving their data on FDI/FPI flows by way of participating actively on ad-hoc and regular surveys of their own and/or sponsored by the IMF/OECD as well as developing a better foreign exchange monitoring system. The current data compilation system is confronted with the following issues:

10.1 Issues

- 1) It is observed that most of the SEACEN countries prefer ITRS as the major data source for FDI in the BOP. The data base from ITRS will never be able to capture reinvested earnings as it is only an imputed transaction, not a real one, whether cash or non-cash.
- 2) Another issue is related to the periodicity of compilation. Good sources of reinvested earnings are the financial statements of companies but these are only available on an annual basis and therefore cannot be used in the monthly/quarterly reports of the BOP.
- 3) Even if monthly data are solicited from stock exchanges, they are basically estimates based on the information obtained from the annual financial reports of major direct investment enterprises for the previous year.
- 4) The strict application of 10% ownership criteria to identify FDI enterprises is not always possible in ITRS system (e.g., Philippines and Taiwan). Some countries include the enterprises in FDI even if 10% criterion is not maintained

but has an effective role in management (Korea) while some are not included even when 10% ownership criterion is maintained regardless of whether it has effective role in management or otherwise (Malaysia, Singapore, Thailand), leading to inconsistencies when making cross country comparisons.

- 5) Although market price is recommended as the basis of valuation of flows and stocks, most of the countries use book values particularly for stocks. Moreover, while deriving flows data from stocks particularly for FPI data, the use of different exchange rate for conversion may compromise the quality of data. For example, the exchange rate prevailing at the time of transaction is used for FDI flows, while the average monthly exchange rate is used for monthly compilation and end-month exchange rate conversion is made for stocks.
- 6) Problems have also been faced by the SEACEN countries applying the residency concept for FPI flows data as identifying the end investor (resident/non-resident) is not an easy task. Currently, most of the SEACEN countries record transactions data on securities that are conducted through fund managers/brokers which may lead to the biasness of the data coverage.
- 7) Some countries lack data on outward flows for both FDI/FPI (e.g., Indonesia) thus limiting the data availability on only securities of the residents owned by non-residents. Likewise, countries like Mongolia and Nepal lack information on FPI flows either due to capital control policies of the respective governments or the absence of a data compilation and monitoring system.
- 8) Unlike equity securities, most countries derive debt securities flow data from the changes between the beginning period and end of period stock. Absence of proper adjustments in the flows data may compromise the quality of the data.
- 9) For some SEACEN member countries, data on actual inflows are available only at the end of each year in between which an estimate is used to compile BOP. Likewise, for those countries which rely on approved investments in FDI, a significant difference may exist between the approved and actual investments, making these data highly unreliable.

10.2 Efforts in Improving FDI/FPI Data

Owing to the requirement of quality data on international investment flows, SEACEN countries have been making efforts to improve its collection and monitoring system through the adoption of new measures in line with the international standards

prescribed by the IMF/OECD as well as venturing into occasional surveys as and when required. Government efforts in improving FDI/FPI data by some of the SEACEN countries are discussed below:

10.2.1 Indonesia

- 1) Bank Indonesia has implemented a monitoring system for foreign exchange activities in 2001 with the aim to capture all (own and customer) transactions of bank and non-bank financial institutions in the foreign exchange market so as to enhance data availability to support BOP and IIP statistics (including FDI and FPI data).
- 2) As a supplement to this system, a foreign exchange monitoring system through the money market information system (PIPU) established since 1993 is continuously upgraded to scrutinise cross border capital flows. This system monitors the spot and derivative foreign exchange transactions through the inter-bank market.
- 3) In addition, Bank Indonesia has been making the effort to strengthen close cooperation and coordination with the related data providing agencies for more accurate statistics.
- 4) Beginning March 2002, Bank Indonesia introduced a new data collecting system on private capital, namely the External Debt Information System, under which the grouping of direct investment enterprises is determined by the 10% or more equity interest of foreign enterprises in domestic enterprises.
- 5) Many FDI and FPI surveys on the initiative of Bank Indonesia as well as IMF/OECD sponsored surveys have been conducted. In view of the growing importance of the contribution of cross border mergers and acquisitions to inward FDI in Indonesia, Bank Indonesia will continue conducting workshops on mergers and acquisitions.

10.2.2 Korea

- 1) Korea initiated a Foreign Exchange Information System in April 1999 which captures the data on foreign exchange flows transacted through foreign exchange banks and other financial institutions including information on private capital flows. This system is very efficient as it consist of 114 different types of reports with about 400,000 items of data gathered each day, in addition to other reports which are gathered monthly or quarterly.

- 2) The Bank of Korea (BOK) plays the role as information centralisation agency under the Foreign Exchange Transactions Act, which gathers raw data from the financial institutions, and provides them to policy-making, implementing, and /or supervisory institutions.
- 3) The Bank of Korea (BOK) has been actively taking part in surveys sponsored by the IMF/OECD and continues to conduct the SIMSDI, CPIS, IIP Surveys etc.

10.2.3 Malaysia

- 1) The Department of Statistics (DOS), the official compiler of the BOP data has upgraded several times, the system of compilation practices and reporting of investment flows data. The most significant of them is the QSIIS- the Quarterly Survey on International Investment and Services, which covers all the data relating to major components of FDI and FPI flows.
- 2) To complement the existing data compilation by the DOS, Bank Negara Malaysia (BNM) has implemented the Cash Balance of Payments System (CBOP) which provides the data on cross-border transactions between residents and non-residents which are effected through the banking system inter-company accounts of residents and their counterpart non-residents as well as approved overseas accounts maintained by residents with financial institutions abroad.
- 3) In 2002, the DOS published its first IIP for Malaysia and has recently enabled a monitoring system to collect data flows breakdown by country and sector.
- 4) BNM continues to conduct and participate in the Coordinated Portfolio Investment Survey (CPIS) for 2002 to further reinforce the quality of data for BOP compilation.

10.2.4 Nepal

Nepal Rastra Bank (NRB) is conducting an intensive survey to gather information of some 430 FDI ventures in order to improve FDI statistics. The Survey also has the objective of capturing data on reinvested earnings made by foreign ventures.

10.2.5 Philippines

- 1) The BSP launched a “Monthly Survey on Foreign Direct Investment and Related Data” in 2003 with respondents covering the top 1000 corporations in the

Philippines with foreign equity participation so as to improve the quality of BOP statistics and narrow down the reporting gaps.

- 2) It shifted from monthly to quarterly reporting system of the private capital flows beginning with the third quarter 2003 BOP report.

10.2.6 Singapore

- 1) The Department of Statistics (DOS) which is responsible for compiling foreign investment statements has been doing annual surveys in accordance with the guidelines of the BOP Manual.
- 2) Over the years, the DOS has continued efforts in improving survey coverage and incorporated data on FDI inter-company loans.
- 3) The DOS also refers to the administrative data received from the Singapore Stock Exchange wherever possible.

10.2.7 Sri Lanka

- 1) Sri Lanka generally follows the standard BOP classification with regard to FDI and FPI flows but in view of recent events of reversals of stock market acquisitions of commercial entities by non-residents which has complicated the classification of FDI and FPI, there is a need to strengthen the supplementary data sources such as ITRS and financial press. The Central Bank of Sri Lanka is therefore, currently in the process of obtaining necessary expertise to improve the BOP statistics and compile International Investment Position (IIP) statistics.
- 2) Sri Lanka is in the process of drafting a new Foreign Exchange Management Act (FEMA) with a view to monitoring private capital flows more effectively and preventing unauthorised capital transactions, and also drafting legislation to prevent money laundering activities.

10.2.8 Thailand

- 1) Under the ITRS system, reinvested earnings are not captured in the FDI data. The Bank of Thailand (BOT) Survey 2001 on IIP has tried to produce some data on reinvested earnings but a long time lag and the unreliability of these data suggests further improvements need to be made.

- 2) BOT has revised and made a major improvement in foreign exchange report forms in November 2000 to obtain more detailed data on capital flows classified by type.
- 3) In the recent past, BOT has done a major overhauling of the data compilation system by introducing the new Data Management System (DMS) which has helped to improve the efficiency and reliability of data compilation and processing and also a result of its electronic system of data reporting and automated data processing.

11. Recent Trends in International Investment Flows (FDI & FPI) in the SEACEN Countries

11.1 Trends in Foreign Direct Investment

Global FDI inflows fell significantly by 47.1% in 2001 and 18.5% in 2002 although the inflows are 2.2 times higher than the average flows recorded during 1993-96. The same trend applies for Asia with a decline of 29.5% in 2001 and 15.8% in 2002. For the SEACEN countries, it showed a decline of 32.3% in 2001 and 31.9% in 2002. The share of FDI inflows of the SEACEN countries has also been declining over time as it constitutes only 16.9% in 2002 as compared to annual average figure of 35.1% during 1993-96 period (Table 1.4).

Table 1.4: Total FDI Inflows: US \$ Million

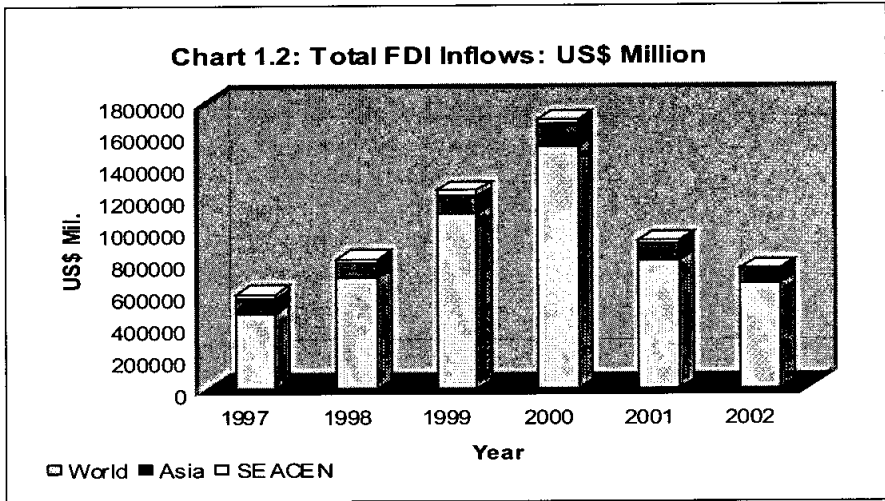
Total Inflows	1993-96 (Annual Average)	1997	1998	1999	2000	2001	2002
World	290872	466300	694100	1093400	1509200	797800	650000
Asia*	62215	87948	89422	106126	141228	99609	83845
SEACEN	21865	34033	24842	37437	30850	20879	14216
Countries**	(35.1%)	(38.7%)	(27.8%)	(35.3%)	(21.8%)	(21.0%)	(16.9%)

* Taiwan figure is adjusted

** Includes Indonesia, Korea, Malaysia, Mongolia, Nepal, Philippines, Singapore, Sri Lanka, Taiwan and Thailand only.

** Figures in parenthesis () indicates percentage of FDI inflows in SEACEN countries to Asia

Source: IMF, "BOP Statistics Year Book, Part 2- 2000, 2002 & 2003" and member banks' responses.



Source: IMF, “BOP Statistics Year Book, Part 2- 2000, 2002 & 2003” and member banks’ responses.

While FDI outflows showed, not surprisingly, the same general trend as FDI inflows for the world and Asia during the review period, the differences in the SEACEN countries, nevertheless, bears mentioning. Global foreign direct investment outflows in 2002, although were significantly higher by as much as 2.1 times compared to annual average outflows during 1993-96, declined substantially by 48.0% in 2001 and 9.7% in 2002. For Asia, it went down by more than 51.3% in 2001 and 7.1% in 2002. Surprisingly, for the SEACEN countries, although FDI outflows followed the same downward trend as the world and Asia region, registering a decline of 8.9% and 26.4% respectively in 2001 and 2002, the share of FDI outflows from the SEACEN in relation to Asia was at 33.4%, more than two times higher than the 16.9% recorded for the share of FDI inflows of SEACEN countries in relation to Asia in 2002.

Table 1.5: Total FDI Outflows: US \$ Million

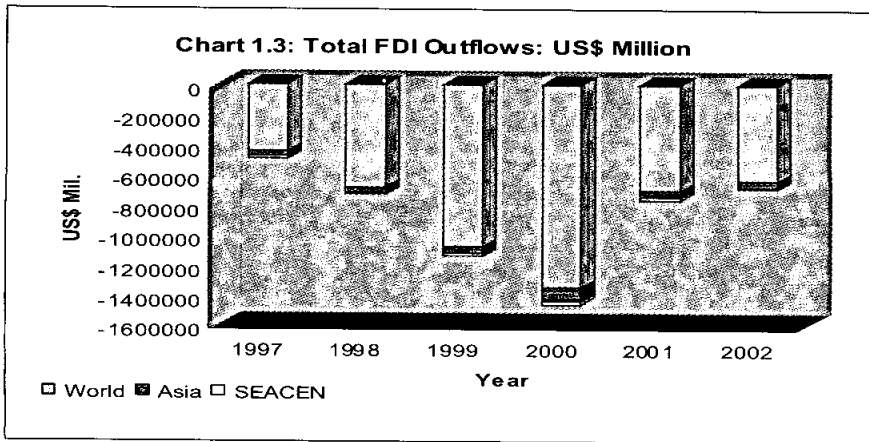
Total Outflows	1993-96 (Annual Average)	1997	1998	1999	2000	2001	2002
World	297506	442800	682100	1077800	1351000	702600	634100
Asia*	16659	27443	32836	41520	87101	42380	39386
SEACEN	11622	19541	9246	15754	19656	17899	13172
Countries**	(69.8%)	(71.2%)	(28.2%)	(37.9%)	(22.6%)	(42.2%)	(33.4%)

* Taiwan figure is adjusted.

** Includes Indonesia, Korea, Malaysia, Mongolia, Nepal, Philippines, Singapore, Sri Lanka, Taiwan and Thailand only.

** Figures in parenthesis () indicates percentage of FDI outflows in SEACEN countries to Asia

Source: IMF, "BOP Statistics Year Book, Part 2- 2000, 2002 &2003" and member banks' responses.



Source: IMF, "BOP Statistics Year Book, Part 2- 2000, 2002 &2003" and member banks' responses

It is noteworthy to bear in mind that the year 2000 was a period when the total amount of global FDI inflows stood at an all-time historical high. The drop in international investment in 2001 and 2002 appeared to be a correction towards more sustainable levels following what could arguably have been an "investment bubble" in 1999 and 2000. The same argument goes as well for the SEACEN members when assessing the causes of the drop in FDI inflows and outflows after

2000. The China factor, however, could be another reason for decline of FDI inflows to SEACEN countries in 2002 as China was second among the world's top FDI recipients with an inflow of US\$ 53 billion.³⁸

The country classification reveals that although there has been a decline in total FDI inflows as well as outflows in 2002 as compared to that of 1997, Korea, Malaysia, Singapore and Taiwan still hold prime positions in terms of FDI receipts as well as FDI outflows with Singapore being at the top.

Table 1.6: Total FDI Flows in the SEACEN Countries
(in US \$ Million)

Country	1997		1998		1999		2000		2001		2002	
	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows
Indonesia	4677	178	-356	-	-2745	-	-4550	-	-3278	-	-1513	-
Korea	2844	4449	5412	4740	9333	4198	9283	4999	3528	2420	1972	2674
Malaysia	5137	-	2163	-	3895	1422	3788	2026	554	267	3203	1905
Mongolia	25	-	19	-	30	-	54	-	43	-	78	-
Nepal	23	-	12	-	4	-	-	-	-	-	-	-
Philippines	1222	136	2268	160	1725	-29	1345	-108	982	-160	1792	59
Singapore	13532	8955	7594	380	13245	5397	12463	6061	10949	9548	6097	4082
Sri Lanka	430	-	193	-	176	-	173	-	172	-	242	-
Taiwan*	2248	5243	222	3836	2926	4420	4928	6701	4109	5480	1445	4886
Thailand	3895	580	7315	130	6103	346	3366	-23	3820	344	900	106

Source: IMF, "BOP Statistics Year Book, Part 2- 2000, 2002 & 2003" and* member banks' responses

After 1997, Indonesia experienced disinvesting while Thailand was mainly a FDI recipient country though FDI inflows in 2002 declined substantially (Table 1.6). The decline in FDI resulting from the global slowdown was exacerbated further by the events of 11 September 2001. Other factors for the swings in FDI inflows and outflows could be attributable to business cycles, stock market sentiments and mergers and acquisitions.

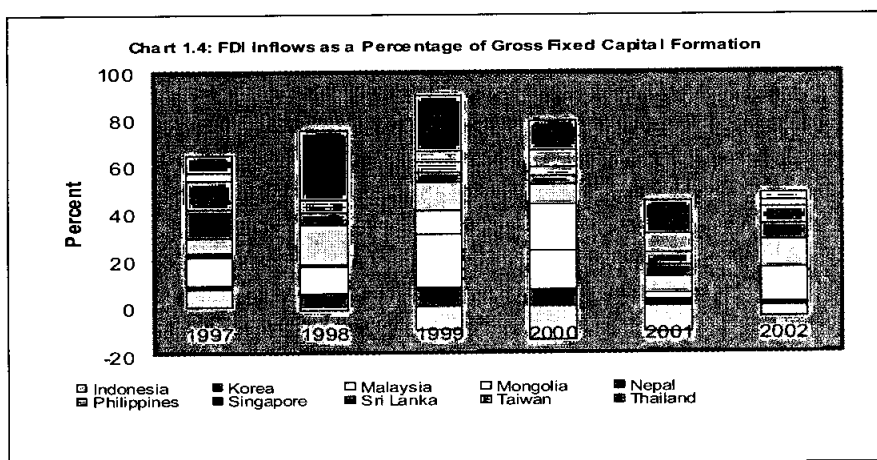
38. UNCTAD, *FDI/TNC database*
<http://www.unctad.org/fdistatistics>.

One indicator to gauge the contribution of FDI inflows and compare the trans-nationality of the countries is to look at FDI inflows as a percentage of gross fixed capital formation and FDI inward flows as a percentage of GDP. During the pre-crisis period of 1993-96, FDI inflows made a significant contribution to the gross fixed capital formation (GFCF) in the majority of the SEACEN countries, starting with Singapore (29.2%), Malaysia (13.5%), Philippines (9.1%), Indonesia (6.8%) and so forth (please refer to Table 1.7). After the crisis, only Singapore, Malaysia and Philippines maintained a stable ratio of FDI inflows to GFCF at 27.2%, 14.5% and 11.9% respectively as of 2002 while the ratios in the other countries declined substantially. However, Sri Lanka seems to be gradually advancing to becoming a trans-national host economy with the FDI inflows ratio to GFCF increasing to 7.0% in 2002. Thailand and Taiwan also experienced higher contribution of FDI inflows to GFCF until 2001 but declined sharply to 2.9% and 3.1% respectively in 2002. Indonesia and Nepal have shown declining trends in FDI inflows owing mainly to their on-going political disturbances in the countries.

Table 1.7: FDI Inflows as Percentage of Gross Fixed Capital Formation

Country	1993-96	1997	1998	1999	2000	2001	2002
Indonesia	6.8	7.5	-1.4	-9.7	-13.8	-10.6	-4.3
Korea	0.8	1.7	5.7	8.3	7.1	3.1	1.5
Malaysia	13.5	11.9	11.2	22.5	16.4	2.5	14.5
Mongolia	-	-	-	9.7	19.7	-	-
Nepal	0.5	2.0	1.2	0.4	-	-	-
Philippines	9.1	6.1	16.7	11.9	8.4	6.9	11.9
Singapore	29.2	36.6	24.7	47.6	45.4	43.7	27.2
Sri Lanka	4.4	12.1	5.1	4.2	3.9	5.1	7.0
Taiwan	2.3	3.4	0.4	4.4	6.8	7.8	2.9
Thailand	3.0	7.6	29.3	23.9	12.5	14.4	3.1

Source: BOP Year Book 2000, 2002 and 2003, IMF & Key Indicators 2003: Education for Global Participation, ADB and member banks' responses.



Source: BOP Year Book 2000, 2002 and 2003, IMF & Key Indicators 2003: Education for Global Participation, ADB and member banks' responses.

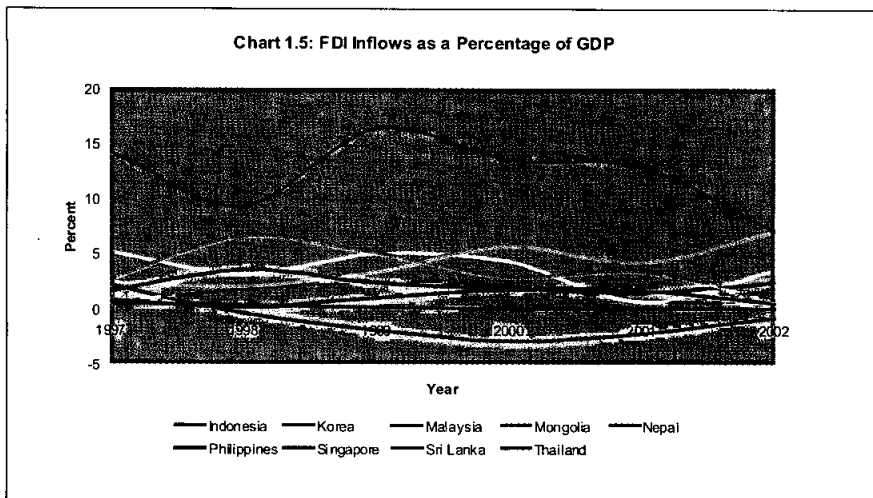
In terms of contribution of FDI inflows to the national economy, the indicator of FDI inflows as a percentage of GDP, is not that encouraging except for Singapore (7.0%), Mongolia (7.0%), and Malaysia (3.4%) in 2002, reflecting the fact that perhaps FDI constitutes a very small portion of total national economy for most of the SEACEN countries. Moreover, the contribution of FDI inflows to GDP has declined in many of SEACEN countries, especially for the post crisis period (Table 1.8).

Table 1.8: FDI Inflows as Percentage of GDP

(in percent)

Country	1993-96	1997	1998	1999	2000	2001	2002
Indonesia	1.9	2.1	-0.4	-2.0	-3.0	-2.3	-0.9
Korea	0.3	0.6	1.7	2.3	2.0	0.8	0.4
Malaysia	5.6	5.1	3.0	4.9	4.2	0.6	3.4
Mongolia	1.2	2.4	2.0	3.3	5.7	4.2	7.0
Nepal	0.1	0.5	0.3	0.1	-	-	-
Philippines	2.1	1.5	3.5	2.3	1.8	1.4	2.3
Singapore	10.3	14.2	9.3	16.3	13.6	12.9	7.0
Sri Lanka	1.2	3.2	1.4	1.2	1.2	1.2	1.7
Taiwan	0.6	0.8	0.1	1.0	1.6	1.5	0.5
Thailand	1.2	2.6	6.5	5.0	2.8	3.3	0.7

Source: Based on the data solicited from 'BOP Statistics Year Book, 2000, 2002 & 2003' IMF 'Key Indicators 2002 & 2003, ADB and member banks' responses.



Source: Based on the data solicited from 'BOP Statistics Year Book, 2000, 2002 & 2003' IMF 'Key Indicators 2002 & 2003, ADB and member banks' responses.

11.2 Trends in Foreign Portfolio Investment (FPI)

FPI inflows are more evident when there is increased globalisation and liberalisation of financial markets backed by global macroeconomic conditions of low interest rates and ample liquidity on international financial markets. The surge in FPI flows in 1993 was induced by some of those factors. After the 1997 crisis however, there was a sudden drop in FPI flows to the SEACEN countries. Consequently, although global FPI inflows were higher than those of 1993-96 average, it went down in the Asian region by 4.2 percent in 1998 after the financial crisis and except for the increased growth in 1999, has shown a downward trend since then (Table 1.9). However, global FPI inflows in 2002 were recorded higher by 56.4 % compared with the average of 1993-96. FPI inflows in Asia dropped by 44.6% in 2002 compared to the average of 1993-96. It may be recalled that the boom periods of 1993-1994 and 1996 - early 1997 were accompanied by a reduction in the cost of capital which induced increased access to foreign portfolio investment. FPI inflows in the SEACEN countries showed more complicated development during the review period. During the crisis period, it declined by a significant margin compared to the 1993-96 average but due to recourse actions and policies, increased to reach US\$ 29784 million in 1999 (due to significant rise in FPI liabilities in Taiwan and Korea). Although FPI inflows decreased by almost 52.1% in 2002 compared to that of the previous year, the trend shows that FPI inflows in the SEACEN countries still hold a major share of around 57.5% (2002) in total FPI inflows in Asia.

Table 1.9: Total FPI inflows: US\$ Million

Total inflows	1993-96 (Annual Average)	1997	1998	1999	2000	2001	2002
World	663775	964800	924000	1606300	1494400	1300500	1038200
Asia*	36431	19356	2116	105395	79035	33191	20168
SEACEN	27657	14457	1771**	29784***	16576	23480	11600
Countries	(75.9%)	(74.7%)	(83.7%)	(28.3%)	(21.0%)	(70.7%)	(57.5%)

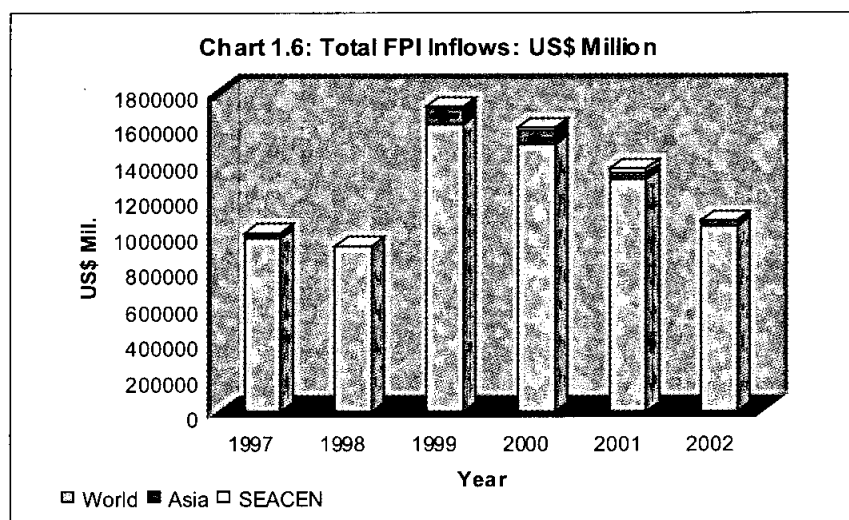
Source: BOP Statistics Year Book 2000, 2002 & 2003; World, Regional and Country Tables, IMF.

*For Taiwan and in the case where data are not available in BOP Year Book, supplement data were derived from member banks' responses.

Figures in parenthesis indicate percentage of FPI inflows compared to that of FPI inflows in Asia.

** sudden decline is on account of low FPI liabilities in Korea.

*** significant rise in FPI liabilities in Taiwan and Korea.



Source: BOP Statistics Year Book 2000, 2002 & 2003; World, Regional and Country Tables, IMF.

Global FPI outflows have been increasing since 1997 and it recorded an increase of 30.2% in 1999. Although it has exhibited a declining trend since then, global FPI outflows in 2001 were, nevertheless, 2.5 times higher than the average global FPI outflows in 1993-96. Except for 1998, when Hong Kong withdrew its portfolio

investment from abroad heavily, FPI outflows from Asia has been increasing after the crisis and in 2001, the level was more than five folds higher than the average outflows during 1993-96. For the SEACEN countries, although FDI outflows have been increasing over time perhaps due to higher interest differential with the world interest rate, its share to the total outflows from Asia has gone down from an average of 82.6% in 1993-96 to 34.8% in 2002 (Table 1.10).

Table 1.10: Total FPI Outflows: US\$ Million

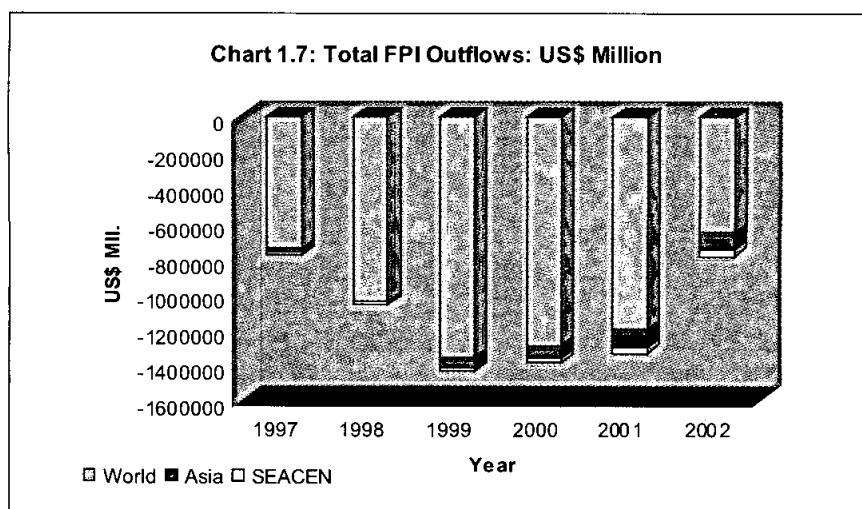
Total Outflows	1993-96 (Annual Average)	1997	1998	1999	2000	2001	2002
World	-481025	-740100	-1046200	-1362700	-1292700	-1200900	-655200
Asia*	-18473	-26872	732**	-56938	-66868	-101958	-97865
SEACEN	-15268	-19485	-16866	-16459	-23429	-29664	-34046
Countries	(82.6%)	(72.5%)	(-)	(28.9%)	(35.0%)	(29.1%)	(34.8%)

Source: BOP Statistics Year Book 2000, 2002 & 2003; World, Regional and Country Tables, IMF.

* Taiwan figure is adjusted.

**Hong Kong withdrew its portfolio investment from abroad heavily.

Figures in parenthesis indicate percentage of FPI inflows compared to that of FPI inflows in Asia.



Source: BOP Statistics Year Book 2000, 2002 & 2003; World, Regional and Country Tables, IMF.

The country assessment of total FPI inflows in the SEACEN countries in the period between 1997 and 2002 shows that FPI inflows in Indonesia, Malaysia and Sri Lanka have been, in general, marked by resident withdrawal of investment abroad. Singapore and Thailand followed suit after 1999. In 2002, however, the principal SEACEN countries receiving FPI inflows were Indonesia, Korea, Philippines, Taiwan and Thailand (Table 1.11).

Total FPI outflows in the SEACEN countries during the review period (1997-2002) reveals a volatile trend for most of the countries though it has shown a positive trend for Korea, Singapore and Taiwan in 2001 and 2002. Singapore comes in first for portfolio investment abroad but has shown a declining trend in its investment except 2002. Taiwan is second on the list and increased its portfolio investment abroad after 1998. FPI outflows from the Philippines were on an increasing trend till 2000 after which it took the reverse route with the residents withdrawing their investments abroad. Thailand registered a steady increase in FPI outflows after the 1997 crisis while Korea's pace of FPI outflows only started increasing after 1999 (Table 1.12).

In analysing the contribution of FPI inflows to the GDP between the periods 1993-96 and 2002, Philippines and Taiwan recorded FPI inflows as percentage of GDP of 2.9% and 2.2% for 2002 respectively as against 3.5% and 1.1% respectively for 1993-96. The contribution of FPI inflows to GDP in Malaysia and Singapore registered -0.9% and -1.5% in 2002 compared to -0.9% and 1.5% respectively for the period 1993-96. Finally, Thailand recorded a decline in the contribution of FPI flows to national GDP registering only 0.6% as compared to 2.5% in 1993-96 (Table 1.13). However in 2001, Korea, Philippines, and Taiwan are major beneficiaries with respective contributions of 2.9%, 2.0% and 3.9% of GDP.

Table 1.11: Total FPI Inflows in the SEACEN Countries
(in US\$ Million)

Country	1997			1998			1999			2000			2001			2002		
	Total	Equity	Debt	Total	Equity	Debt	Total	Equity	Debt	Total	Equity	Debt	Total	Equity	Debt	Total	Equity	Debt
Indonesia	-2632	-4987	2355	-1878	-4371	2493	-1792	-782	-1010	-1909	-1020	-889	-243	443	-686	1222	877	345
Korea	13308	2525	10783	725	3856	-3081	7908	12072	-4164	12697	13094	-397	12227	10266	1961	4940	193	4747
Malaysia	-248	-	-248	283	-	283	-892	-	-	-2145	-	-	-666	-	-	-836	-	-
Mongolia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nepal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Philippines	1251	-406	1657	-144	264	-408	7681	1410	6271	1019	-183	1202	1449	383	1066	1571	404	1167
Singapore	-489	-496	7	702	697	5	3159	3173	-14	-2036	-2039	3	187	161	25	-1272	-1301	29
Sri Lanka	-127	-	-127	-113	-	-113	-85	-	-85	-63	-	-63	-11	-11	-	25	25	-
Taiwan*	-1204	-2232	1028	1808	1553	255	13914	14765	-851	9559	8489	1070	11136	11298	-162	6644	3636	3008
Thailand	4598	3868	730	338	289	49	-109	945	-1054	-546	900	-1446	-559	352	-951	-694	539	-1233
Total	14457	-	-	1771	-	-	29784	-	-	16576	-	-	23480	-	-	11600	-	-

Source: BOP Statistics Year Book, Country Tables 2003.

*Member banks' responses.

Table 1.12: Total FPI Outflows in the SEACEN Countries
(in US\$ Million)

Country	1997			1998			1999			2000			2001			2002		
	Total	Equity	Debt	Total	Equity	Debt	Total	Equity	Debt	Total	Equity	Debt	Total	Equity	Debt	Total	Equity	Debt
Indonesia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Korea	1076	-320	1395	-1999	42	-2041	1282	-271	1553	-320	-480	-40	-5521	-492	-5029	-5036	-1460	-3576
Malaysia	-	-	-	-	-	-	-113	-	-	-387	-	-	254	-	-	-563	-43	-520
Mongolia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nepal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Philippines	-10	55	-65	-605	-184	-419	-807	-55	-752	-812	-42	-770	-399	-4	-395	-449	-26	-423
Singapore	-13872	-11610	-2262	-10149	-5752	-4397	-12036	-12863	827	-11482	-8909	-2573	-11284	-6619	-4665	-11374	-7879	-3495
Sri Lanka	140	-	140	89	-	89	72	-	72	19	-	19	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Taiwan*	-6749	-4628	-2121	-4220	-3893	-327	-4835	-5058	223	-10087	-9265	-822	-12427	-9358	-3069	-15711	-10949	-4762
Thailand	-70	-	-70	18	-	18	-2	-	-2	-160	-	-160	-287	-	-287	-913	-9	-904
Total	-19485	-	-	-16866	-	-	-16459	-	-	-23429	-	-	-29654	-	-	-34046	-	-

Source: BOP Statistics Year Book, Country Tables 2003.

*Member banks' responses.

Note: By convention negative sign is for assets (outflows) and positive sign for liabilities (inflows) is given in BOP Statistics Year Book.

But when there is positive sign under assets, it should be remembered that residents have withdrawn their investment abroad.

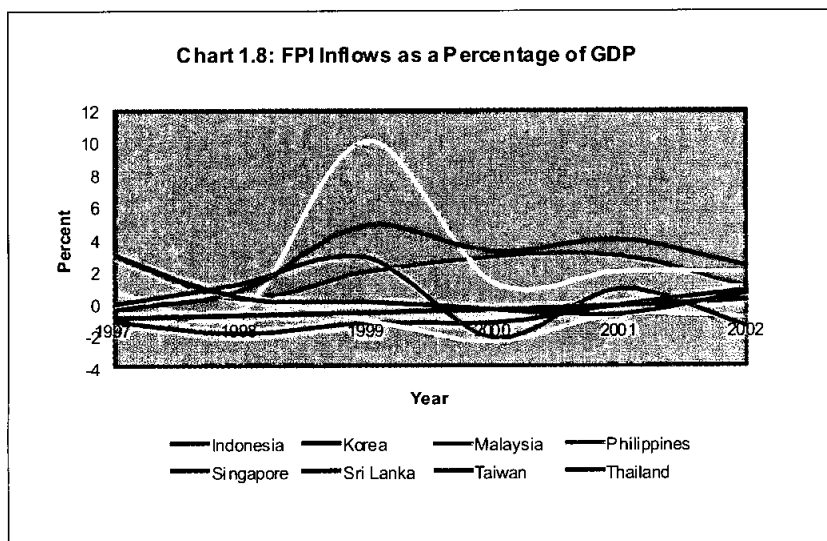
Concurrently, when there is negative sign under liabilities, it also give the same meaning of resident withdrawal of investment abroad.

Table 1.13: FPI Inflows as Percentage of GDP

(in percent)

Country	1993-96	1997	1998	1999	2000	2001	2002
Indonesia	1.9	-1.2	-1.9	-1.3	-1.3	-0.2	0.7
Korea ^{3.2}	2.8	0.2	1.9	2.8	2.9	1.0	
Malaysia	-0.9	-0.2	0.4	-1.1	-2.4	-0.8	-0.9
Mongolia	-	-	-	-	-	-	-
Nepal-	-	-	-	-	-	-	-
Philippines	3.5	0.7	-0.5	10.1	1.3	2.0	2.0
Singapore	1.5	-0.1	1.1	2.8	-2.2	0.8	-1.5
Sri Lanka	-1.2	-0.9	-0.8	-0.6	-0.4	-0.2	0.2
Taiwan	1.1	-0.4	0.7	4.8	3.1	3.9	2.2
Thailand	2.5	3.0	0.3	0.1	-0.4	-0.8	0.6

Based on the data solicited from 'BOP Statistics Year Book, 1999 & 2000, 2002 & 2003 Country Tables, IMF,' 'Key Indicators 2002 & 2003, ADB and Member banks' responses.



Based on the data solicited from 'BOP Statistics Year Book, 1999 & 2000, 2002 & 2003 Country Tables, IMF,' 'Key Indicators 2002 & 2003, ADB and Member banks' responses.

12. Volatility of Private Capital Flows: FDI versus FPI Flows

The volatility of capital flows is generally marked by either the high frequency of the reversibility of flows or the higher fluctuations (variability) in the volume of capital flows. Factors like changes in fundamentals, volatility of local stock markets, financial factors, investment cycles, contagion, asymmetric information and strategies and behaviour of portfolio investors would influence the risks and returns of investment that would result in the reversibility and variability of capital flows. Volatility of private capital flows may create an unstable investment environment that is detrimental to growth and development. There are many channels through which volatility exert a negative impact on the economy. The unexpected changes in the availability of finance, the consequential changes in its cost and asset prices will first induce high variability in expected profits making investment planning difficult. Secondly, the country has to go through compensatory adjustments in monetary, fiscal and exchange rate policies in the face of rapid changes in the availability of external finance which will have negative impact in the economy and finally capital volatility exert impact on consumption and consequently on growth.

It is true that under conditions of ample liquidity in international capital markets, capital tends to overflow into countries which appear to have strong fundamentals. However, excess capital flows induce real currency appreciation and excess liquidity in the domestic financial system which encourages asset bubbles and rise in speculative investments. The excessive capital inflows induce persistently high current account deficits and investors change their perceptions of the creditworthiness of the countries, especially in the presence of weak domestic financial systems. The sudden and sharp withdrawal of capital is often triggered by a speculative attack on the currency which is perceived as being overvalued. Sharp fluctuations in capital flows cause major disruptions to domestic financial systems not only through drastic changes in liquidity, but also through changes in asset prices. Large inflows and outflows of capital can have an impact on domestic asset prices especially in insufficiently developed markets and changes in asset prices can rapidly transmit the shock waves to other markets such as from foreign markets to stock markets.

These considerations tend to make FPI more volatile than FDI. As FDI is made in the recipient countries through the establishment of production lines, it would be difficult to dissolve in a short time. The disinvestment or reversibility of direct investment enterprises is therefore more difficult to undertake although their sale can be mediated through financial markets particularly for listed companies than in case of portfolio investment, which can easily be sold off in financial markets.

Table 1.14: Volatility of Private Capital Flows
Coefficient of Variation between FDII and FPII

Country	Sample Size 1990-1996		Sample Size 1997-2002	
	FDII	FPII	FDII	FPII
Indonesia	0.68	1.06	-2.79	-1.18
Korea	0.55	0.70	0.60	0.67
Malaysia	0.23	-1.00	0.51	-1.01
Philippines	0.42	0.80	0.23	1.19
Singapore	0.48	1.42	0.29	43.44
Sri Lanka	0.56	-1.19	0.44	-0.68
Taiwan	0.26	0.67	0.65	0.83
Thailand	0.18	0.77	0.53	0.84

Note: FDII= Foreign Direct Investment Inflows

FPII= Foreign Portfolio Investment Inflows

Comparison of volatility between FDI and FPI flows can be done by looking at their coefficient of variation which is a measure of variability. Table 1.14 shows the coefficients of variation of FDI inflows and FPI inflows over the periods 1990-1996 and 1997-2002. For the eight SEACEN countries, the values of the coefficients of variation are the highest for FDII in Indonesia followed by Sri Lanka, Korea and Singapore for the period 1990-96 while for the period 1997-2002, the coefficients are the highest in Indonesia followed by Taiwan, Korea and Thailand. Similarly, the values of the coefficients of variation are the highest for FPII in Singapore followed by Sri Lanka, Indonesia and Malaysia for the period 1990-96. During the period 1997-2002, they are the highest in Singapore followed by Philippines, Indonesia and Malaysia. When comparing the coefficients of variation for FDI and FPI inflows, it turns out that the coefficients are higher for FPII than for FDII in all selected countries in both the sample periods.³⁹ Moreover, more volatility seems to be registered during the period 1997-2002 for FDII in Indonesia, Korea, Malaysia,

39. A study done by UNCTAD for the period 1993-98 also shows that FPI inflows (liabilities) tends to be more volatile than FDI inflows for the four countries which have gone through severe financial crisis (Indonesia, Mexico, Korea and Thailand), "Comprehensive Study of the Inter-relationship between Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI); Staff Paper No. UNCTAD/GDS/DFSB/5, 23 June 1999.

Taiwan and Thailand while for FPII, Indonesia, Philippines, Singapore, Taiwan and Thailand showed more volatility during the period 1997-2002. Looking at the relatively higher coefficients of FPII compared to that of FDII, it is not surprising as FDI in contrast to FPI, is typically made with a lasting interest in the host country. It will also be difficult for trans-national corporations to disinvest and sell their foreign affiliates especially if these are intertwined in international production network. On the other hand, portfolio investment is mediated through financial markets and is highly sensitive to changes in the investment environment which may come from internal and/or external factors to the recipient countries.

13. Economic Impacts of International Investment Flows (FDI and FPI) on Key Macroeconomic Variables:

13.1 Previous Empirical Evidences

Before analysing the specific impacts of FDI and FPI inflows in the resident economy, it is important to understand the nature of the contracts linking different types of investors and the countries they invest in. FDI is an internalised investment flow which includes capital assets as well as intangible assets while FPI is a purchase of securities (equities or bonds) issued by a company or government entity of a foreign country and is mediated by financial markets and thus requires the existence of fairly liquid capital markets, domestic or international. However, from a purely financial point of view, FDI and FPI as components of capital flows may contribute in filling the financing gap needed to complement domestic savings. Further, it has been reported that there is a reasonably significant correlation between capital flows and growth. In case of FDI, it can directly increase the level of investment in host countries and augment their productive capacity and employment. This contribution can be direct through the financing of investment which is invariably a source of growth, or indirect through an increase in consumption or absorption, which in turn induce an increase in investment. Further, it can broaden the access to export markets as direct investment enterprises often serve as channels for distribution of goods from one country to other markets. On the negative side, it may entail a loss of control on domestic production and crowd out domestic enterprises. It also can create negative impact on balance of payments if its affiliates require increased volumes of imports. Moreover, massive capital inflows through FDI can have an impact on the real exchange rate.

FPI, on the other hand, is a fungible form of finance, i.e., not firm specific. Some forms of FPI such as venture capital, primary equity issues and corporate bond can make a valuable direct contribution to the financing of investment while other forms such as purchases by foreigners of securities on domestic secondary

markets impact on domestic wealth and absorption. FPI also facilitates the development of other financial intermediaries in addition to injecting liquidity in the domestic capital markets. However, its biggest negative impact is the high volatility risk. It can also exacerbate financial and exchange rate crisis as an expectation of devaluation can precipitate an outflow of FPI. This may require the central bank or monetary authority to adopt appropriate monetary stance in an efficient manner. One easy way to analyse the impact of FPI flows on the domestic economy could be by referring to monetary transmission channels which basically includes: (a) exchange rate (b) interest rate (c) the credit channel through bank reactions to liquidity injections or interest rate variations and (d) wealth effects relating to asset price variations.⁴⁰

With the increasing trend of factoring private capital inflows in the development process of countries in the last decade, there have been increased interests in empirical studies to analyse the relationship between these private capital flows and macroeconomic variables. For example, Todaro (1982), and Kruger (1987) in their empirical analyses, established the positive effect of FDI inflows on output growth. Like wise, some recent studies have reported the positive effects of FDI and FPI inflows on major macroeconomic variables (Borzenstein et al., 1998; Bekart and Harvey, 1998-200). Azizah Talib (1994) reported the significant role played by FDI in the industrialisation process and also observed that FDI generated positive impacts on economic growth, employment and exports in some SEACEN countries by applying the Granger Causality Test for the sample period of 1981-1990.

Like wise, Bosworth and Collins (1999) found a positive association between capital inflows and domestic investment in a sample of developing countries for the period 1978-1995. Hecht, Razin and Shinar (2002) found that the effect of FDI inflows on domestic investment is significantly larger than either portfolio equity or loan inflows. They also observed that the effect of FDI on GDP growth is higher than the effect of other inflows, after controlling for the effect of capital accumulation on GDP growth. Assaf Razin (2002) in his empirical study in the estimation of the interactions between domestic investment, FDI flows, international loans and international portfolio investment, using a panel data of 64 countries for

40. Banque de France in its Paper "The International Investment Position: Measurement Aspects and Usefulness for Monetary Policy and Financial Stability Issues", Presented at the Fifteenth Meeting of the IMF Committee on Balance of Payments Statistics, Canberra, Australia, October 21-25, 2002 advocates that financial openness observed via the IIP largely affects of the conduct of monetary policy in its domestic framework.

the period 1976-1997, came to the conclusion that FDI flows have an independently larger effect on domestic investment and output growth than loan flows and portfolio flows. He also found that among the main determinants of capital inflows, domestic investment or output growth, have more pronounced effects on FDI inflows than on loans and portfolio flows. However, another study found that FPI has no significant effect, while FDI has influence on macroeconomic volatility (Durham, 2003).

Given the significant role played by the FDI in the industrialisation process and development of capital markets by the FPI, the Granger Causality Test was carried out to examine the direction of economic impacts. This test was selected instead of the traditional regression analysis as the latter deals with the dependence of one variable on other variables and does not necessarily imply causation.

14. Causality Test

In order to see the causal relationship between private capital flows (FDI and FPI) and macroeconomic and monetary policy variables, the Granger Causality Test was carried out in six combinations of (i) FDII and GDP (ii) FDII and GDI (iii) FDII and GDS (iv) FDII and EXGS (v) FDII and CBAL and (vi) FDII and UEMP, for investigating the impact of foreign direct investment (FDII) on key macroeconomic variables. Five combinations of (i) FPII and GDP (ii) FPII and INT (iii) FPII and NEX (iv) FPII and M2 and (v) FPII and STOCK, were carried out for investigating the impact of foreign portfolio investment on output growth and key monetary variables.⁴¹

Granger causality postulates that X causes Y if the coefficients on the lagged X help to predict Y more accurately and vice-versa. Based on a simple bivariate model developed by Granger in 1969, the following equation is estimated to obtain a causal relationship between the selected variables:

$$(i) Y_t = a_0 + \sum_{i=1}^m a_i X_{t-i} + \sum_{j=1}^n b_j Y_{t-j} + u_t$$

41. FDII= Foreign Direct Investment Inflows; GDP= Gross Domestic Product; GDI= Gross Domestic Investment; GDS= Gross Domestic Savings; EXGS= exports of goods & services; CBAL= Current Account Balance; UEMP= Unemployment Rate; FPII= Foreign Portfolio Investment Inflows; INT= Key Interest Rate ; NEX= Nominal Exchange Rate Average; M2= Broad Money Average; STOCK= Stock Price Index.

$$(ii) X_t = c_0 + \sum_{i=1}^o c_i Y_{t-i} + \sum_{j=1}^p d_j X_{t-j} + \varepsilon_t$$

Where, Y_t = different key macroeconomic variables and monetary variables (GDP, GDI, GDS, EXGS, CBAL, UEMP, INT, NEX, M2 and STOCK)

$X_t = \text{FDII/FPII}$

u_t & ε_t = uncorrelated random error terms

a , b , c and d are parameters to be estimated; m and n are the number of lagged values of the independent and dependent variables respectively in equation (i) and o and p in equation (ii).

The null hypotheses are $\sum a_i = 0$ and $\sum c_i = 0$

The causality test provides the direction of causal relation or the independent movement of selected variables in the following conditions:

- (a) Unidirectional causality from X to Y , if $\sum a_i \neq 0$ and $\sum c_i = 0$;
- (b) Unidirectional causality from Y to X , if $\sum a_i = 0$ and $\sum c_i \neq 0$;
- (c) Bi-directional relationship between X and Y , if $\sum a_i \neq 0$ and $\sum c_i \neq 0$; and,
- (d) Independence is suggested, if a_i and c_i are not statistically significant, i.e. if $\sum a_i = 0$ and $\sum c_i = 0$.

The null hypothesis of no unidirectional causality is rejected if the computed F -statistics exceed the tabular value of F -statistics.

12 annual time series data on output growth (GDP), gross domestic investment (GDI), gross domestic savings (GDS), exports of goods and services (EXGS), current account balance (CBAL), unemployment rate (UEMP), key interest rate (INT), nominal exchange rate (NEX), broad money average (M2), stock exchange prices (STOCK), foreign direct investment inward (FDII) and foreign portfolio investment inward (FPII) for the period 1980-2002 were used for the test. However, the different sample size of the period between (1984 and 2002) and (1992 and 2002) have been used for exceptional cases owing to the unavailability of data. The data source is mainly member banks' responses supplemented by the BOP Statistics Year Book; Country Tables, Various Editions of the IMF and Key Economic Indicators 2002, ADB. Because of data constraint, Mongolia has been omitted for this test. All the data were converted into their first differences to attain stationarity in the time series before embarking on the causality test. The selection of the lag length is very important in causality tests as too many lags may reduce the number of effective observations while too few lags may affect the size of the test and

therefore, substantially influence the test results. In view of the fact that premature truncation of lag lengths could result in overlooking a significant impact that exists and vice-versa, the autoregressive least square estimation was carried out arbitrarily from lag length one to lag lengths three for the study. Since the data are annual, one to three lags should be sufficient to take into account the relationship between the variables. The Granger Causality Test results based on the chosen lag lengths are presented in Tables 1.15 and 1.16.

14.1 Impact of Foreign Direct Investment (Inward) on Key Macroeconomic Variables

14.1.1 Impact of FDII on GDP (National Output)

The results of the Granger Causality Test revealed that there is a bidirectional causality relationship between FDII and output in Indonesia, Nepal and Thailand while unidirectional causality is seen from FDII to GDP in Philippines and Taiwan.⁴² In Korea and Singapore, there is a reverse direction with GDP causing FDI growth. On the other hand, no predictable relationship is detected between FDII and GDP for Malaysia and Sri Lanka.⁴³

14.1.2 Impact of FDII on Gross Domestic Investment (GDI)

Bidirectional causality is again observed in case of Indonesia from FDII to GDI (gross domestic investment). Malaysia, Sri Lanka and Taiwan are other SEACEN countries where FDII flow was significantly influencing the promotion of domestic investment as unidirectional causality was detected from FDII to GDI in these countries. Conversely, the level of domestic investment is important to encourage foreign direct investment in Korea and Thailand.⁴⁴ Unidirectional causality was seen from GDI to FDII in these countries.⁴⁵ No predictable relationship was observed between FDII and GDI in case of Nepal, Philippines and Singapore.

42. Unidirectional causality from FDII to GDP is detected in Indonesia and Korea (using quarterly data) while unidirectional causality from GDP to FDII is seen in case of Thailand (quarterly and monthly data) country studies. (For details please see the country chapters in Part II). The above results also confirms the findings by Assaf Razin that FDII flows do have an effect on host country's output growth (NBER Working Paper 9204/Sep./2002).

43. Azizah Talib (1994) however, found unidirectional causality from GDP to FDII while using the series between 1981 and 1990.

44. Similar results were observed in the country paper studies of Korea and Thailand using quarterly data.

45. Assaf Razin (2002) also found in his study that domestic investment has more pronounced effects on FDI inflows-op. cit. page 47.

14.1.3 Impact of FDII on Gross Domestic Savings (GDS)

In the case of Thailand, the impact of FDII on GDS indicates that there exists a bidirectional causation relationship while a feedback relationship exists between FDII and GDS for Philippines and Taiwan as a unidirectional causality is seen from GDS to FDII.⁴⁶ No causation effect is detected for the rest of the SEACEN countries.

14.1.4 Impact of FDII on Exports (EXGS)

It is very evident from Table 1.15 that there seems to be strong impact of FDII on exports of Korea. A bi-directional causality is detected between FDII and exports indicating not only the significant influence of FDII flows on exports but existence of feedback relationship between exports and FDII.⁴⁷ Likewise, there is also a unidirectional causation running from FDII to exports (EXGS) in the case of Malaysia, Philippines Sri Lanka and Taiwan. The remaining countries namely Indonesia, Nepal, Singapore and Thailand do not reveal any significant relationship as to the impact of FDII on exports.⁴⁸

14.1.5 Impact of FDII on Current Account Balance (CBAL)

The notion that the impact of FDII on a country's current account could be significant has been demonstrated by the Philippines, Singapore, Sri Lanka and Taiwan where a unidirectional causality is observed running from FDII to current account balance. However, feedback relationship between current account and FDII was detected by a unidirectional causality running from current account to FDII in Korea, Malaysia, and Thailand, suggesting that large current account deficits may attract substantial foreign direct investment in the countries. No predictable relationship was seen between FDII and current account balance in the rest of the SEACEN countries.

46. Barry Bosworth, The Brookings Institution and Susan M. Collins, The Brookings Institution & Georgetown University in their empirical study on panel data of 58 countries over the period of 1978-95 to see the regressions relating capital inflows to rates of investment and savings found that foreign direct investment has a large positive effect on savings followed by domestic investment. Unpublished meeting Draft paper on "Capital Flows to Developing Economies: Implications for savings and Investment" March 15, 1999.

47. Unidirectional causality running from FDII to exports was also detected in Korean country paper analysis using quarterly data for the sub-periods of 1993 to 2003, 1993 to 1997 and 1998 to 2003.

48. Using quarterly data with seasonal adjusted export value for the period 1998 and 2002, however, showed unidirectional causality running from FDII to exports in Thailand indicating a huge flow of FDI in the exports industries in the country (Thailand country paper analysis). Azizah Talib (1994) also found that the causation impact was relevant running from FDII to exports during the period 1981-1990 for Philippines, Singapore and Thailand.

Table 1.15
GRANGER CAUSALITY TEST
(DIRECT INVESTMENT)

COUNTRY	FDI → GDP	GDP → FDI	FDI → GDI	GDI → FDI	FDI → GDS	GDS → FDI	FDI → EXG3	EXG3 → FDI	FDI → CBAL	CBAL → FDI	FDI → UEMP	UEMP → FDI
1. INDONESIA												
Sample Size (1980-2002)												
F-Value	4.9551**	7.9172**	4.7045**	7.0313**	0.83296	2.18285	1.22674	0.29697	1.36809	0.31571	0.27037	0.62721
Significance Level	(0.02231)	(0.0045)	(0.02595)	(0.00701)	(0.4329)	(0.1483)	(0.32705)	(0.74805)	(0.2846)	(0.7340)	(0.7685)	(0.55384)
No. of Lags	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2
	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No	No
2. KOREA												
Sample Size (1980-2002)												
F-Value	1.18632	7.7502**	1.97576	10.098**	1.80625	10.7331*	3.2193**	8.7286**	0.3721	12.1362**	0.31306	23.5167*
Significance Level	(0.33242)	(0.00488)	(0.17312)	(0.0167)	(0.16922)	(0.00728)	(0.08959)	(0.02949)	(0.54949)	(0.00265)	(0.58271)	(0.00013)
No. of Lags	2/2	2/2	2/2	2/2	2/2	2/2	1/1	1/1	1/1	1/1	1/1	1/1
	No	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes
3. MALAYSIA												
Sample Size (1984-2002)												
F-Value	0.68452	0.30494	4.29032**	2.20361	0.67269	0.67535	9.9169**	1.94203	0.45467	5.15843**	1.56205	4.00696**
Significance Level	(0.54853)	(0.74320)	(0.0419)	(0.16532)	(0.5013)	(0.52888)	(0.00452)	(0.20143)	(0.64607)	(0.02631)	(0.25298)	(0.04828)
No. of Lags	No	2/2	3/3	3/3	2/2	2/2	3/3	Yes	No	Yes	No	Yes
	No	No	Yes	No	No	No	Yes	Yes	No	Yes	No	Yes
4. NEPAL												
Sample Size (1984-2002)												
F-Value	8.20159*	7.78392**	0.23352	0.22451	0.67241	0.8422	2.28833	0.3838	0.18016	0.36454	Not Applicable	Not Applicable
Significance Level	(0.03709)	(0.0179)	(0.63125)	(0.62048)	(0.1154)	(0.32174)	(0.29455)	(0.52449)	(0.6735)	(0.69597)	Not Applicable	Not Applicable
No. of Lags	3/3	1/1	2/2	2/2	2/2	2/2	No	No	2/2	No	No	No
	Yes	Yes	No	No	Yes	No	No	No	No	No	No	No
5. PHILIPPINES												
Sample Size (1980-2002)												
F-Value	6.8077**	0.3371	2.21401	0.24972	7.12982**	0.02217	4.16982**	0.00724	2.76259**	0.74921	0.77462	0.03358
Significance Level	(0.0179)	(0.56571)	(0.14377)	(0.78295)	(0.01561)	(0.88329)	(0.05611)	(0.93372)	(0.09518)	(0.48963)	(0.47846)	(0.96705)
No. of Lags	1/1	No	No	No	Yes	No	Yes	No	2/2	2/2	2/2	No
	Yes	No	No	No	Yes	No	Yes	No	Yes	No	No	No
7. SINGAPORE												
Sample Size (1984-2002)												
F-Value	0.2068	2.74217**	0.13925	0.23405	1.39415	1.29326	0.3068	1.41723	3.2108***	0.00144	0.05812	0.1698
Significance Level	(0.88973)	(0.05942)	(0.87112)	(0.79416)	(0.2784)	(0.30327)	(0.55786)	(0.27304)	(0.08959)	(0.97314)	(0.94385)	(0.84648)
No. of Lags	3/3	3/3	2/2	2/2	2/2	2/2	3/3	3/3	1/1	1/1	2/2	2/2
	No	Yes	No	No	No	No	No	No	Yes	No	No	No
9. SRI LANKA												
Sample Size (1992-2002)												
F-Value	0.86227	1.37992	8.8072*	0.58313	0.90659	0.07213	3.12807***	1.6094	4.97142**	1.44057	Not Applicable	Not Applicable
Significance Level	(0.44211)	(0.28177)	(0.0233)	(0.64356)	(0.34492)	(0.93073)	(0.05594)	(0.23216)	(0.01808)	(0.27875)	Not Applicable	Not Applicable
No. of Lags	2/2	2/2	2/2	3/3	2/2	2/2	3/3	3/3	3/3	3/3	No	No
	No	No	Yes	No	No	No	Yes	No	Yes	No	No	No
8. TAIWAN												
Sample Size (1980-2002)												
F-Value	7.42858**	0.17048	11.4589**	0.38273	10.0569*	0.68482	5.96535**	0.87326	3.94026**	1.15182	6.45886*	1.42583
Significance Level	(0.0173)	(0.64085)	(0.00065)	(0.53662)	(0.0096)	(0.03429)	(0.01323)	(0.43914)	(0.04501)	(0.84249)	(0.00849)	(0.27108)
No. of Lags	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
10. THAILAND												
Sample Size (1984-2002)												
F-Value	3.81222***	17.5098*	2.3409	16.1776*	6.4538***	9.0526*	0.30475	1.01823	0.89433	7.89578*	0.53258	1.02158
Significance Level	(0.05223)	(0.00038)	(0.13328)	(0.0053)	(0.01585)	(0.0057)	(0.74334)	(0.3929)	(0.52003)	(0.00748)	(0.80149)	(0.39179)
No. of Lags	2/2	2/2	2/2	2/2	2/2	2/2	2/2	No	No	Yes	No	No
	Yes	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No	No

* significant at 1% level
 ** significant at 5% level
 *** significant at 10% level

14.1.6 Impact of FDII on Employment (UEMP)

In an effort to gauge the directional impact of foreign direct investment on the employment of countries, the tests demonstrated that during the review period, only in Taiwan, was there sufficient evidence to conclude that FDII generates more employment as shown by unidirectional causality running from FDII to UEMP. Conversely, in Korea and Malaysia, there was an inverse relationship that unemployment rate effects FDI flows.⁴⁹ For other countries like Indonesia, Nepal, Philippines, Singapore, Sri Lanka and Thailand, foreign direct investment and employment do not seem to affect each other for the review period.

14.1.7 Overall Results

The overall results suggest that in Indonesia, Nepal, Philippines, Taiwan and Thailand, FDI has a strong influence on output growth while for Korea, Malaysia, Philippines, Sri Lanka and Taiwan, the impact of foreign direct investment looks significant in promoting exports. Further, a strong effect of foreign direct investment on correcting current account balance was also indicated in the Philippines, Singapore, Sri Lanka and Taiwan. The stimulation of domestic investment by the foreign direct investment flows was observed in Indonesia, Malaysia, Sri Lanka and Taiwan. Taiwan is the only country where FDI has a strong influence on many of the tested macroeconomic variables including the employment status of the country. On the other hand, in Korea and Thailand, the feedback effect from domestic investment and current account balance were more prominent in inducing foreign direct investment inflows into the countries.

14.2 Impact of Foreign Portfolio Investment (Inward) on Key Real and Monetary Sectors

14.2.1 Impact of FPII on GDP

The results of the causality test between foreign portfolio investment (inward) and national GDP as depicted in Table 1.16 suggests that FPII has a strong influence on the growth of GDP in the Indonesia, Singapore and Taiwan as a unidirectional causality is seen running from FPII to GDP in these countries.⁵⁰ Conversely, in Korea, Malaysia, Philippines and Thailand, a reverse direction with GDP causing

49. A similar result of unidirectional causality running from UEMP to FDII was obtained for Korea during 1993-97 and 1998-2003 using quarterly data (Korea country paper). However, for Singapore, unidirectional causality was detected running from UEMP to FDII for the period 1980-1998 using quarterly data (Singapore country paper).

50. The Country Paper of Singapore also reveals the above relationship of unidirectional causality running from FPII to GDP during both pre-crisis period and post crisis period.

FPI growth was observed implying that growth of GDP is important for attracting foreign portfolio investment flows.⁵¹ No predictable relationship was seen between FPII and GDP for Sri Lanka.⁵²

14.2.2 Impact of FPII on Key Interest Rate

Different key interest rates were used for the causality test of FPII and interest rates of the selected SEACEN countries.⁵³ The results show that bidirectional causality is seen between FPII and interest rate in the case of Singapore while unidirectional causality running from FPII to interest rate was observed for Indonesia. Interestingly, a feedback relationship between interest rate and FPII was seen for Sri Lanka and Thailand as a unidirectional causality was detected from the respective key interest rates to FPII. There was no predictable relationship between FPII and key interest rates in the rest of the other SEACEN countries.⁵⁴

14.2.3 Impact of FPII on Exchange Rate

A unidirectional causality is detected from FPII to nominal exchange rate for Indonesia.⁵⁵ Likewise, a feed back relationship between exchange rate and FPII was observed in Malaysia and the Philippines where there was a unidirectional causality running from nominal exchange rate to FPII. For the rest of the countries, no predictable relationship was observed.⁵⁶ However, it is important to note from

51. A similar result was detected in the case of Thailand (Country Paper) using quarterly data for the period 1993:1 to 2003:2.
52. Less degree of freedom may have affected the results in case of Sri Lanka. Mongolia and Nepal are not considered for these tests as they do not have portfolio flows.
53. Key interest rates selected for Indonesia, Korea, Malaysia, Philippines, Singapore, Sri Lanka, Taiwan and Thailand were (SBI, 1 month), (3 year Corporate Bond), (Average 3-month Inter-bank), (91-day Treasury Bill), (3-months Domestic Inter-bank), (Repo), (Overnight Inter-bank Call-loan) and (PR-14 days) respectively.
54. In light of the sensitivity of interest rate variables, quarterly data could have demonstrated a better relationship for this test. This argument is supported by the fact that in Korea (as reported in the Country Paper) a reverse causal relationship running from interest rate (corporate bond to FPII) was detected for the period 1993-97 using quarterly data. Likewise, in the case of Thailand (Country Paper), a unidirectional causality is seen running from foreign portfolio equity investment to both inter-bank rate and 14-day repurchase rate using monthly data for the period 1997:07 to 2003:10.
55. Bidirectional causation relationship was found running from FPII to nominal exchange rate also for the sample period from 1993:1 to 2002:4 (Indonesia Country Paper).
56. Looking at the volatility of the exchange rate variable, monthly or quarterly data would provide more information but due to availability of data on annual basis only for regional analysis, the breakdown into quarterly basis is not possible. This argument is verified by the fact that use of monthly data in Thailand country paper revealed bidirectional causality between foreign portfolio equity investment and exchange rate.

these results that the outlook and speculation on the value of the local currency can be major factors in influencing foreign portfolio investments in liberalised financial and capital markets, as borne out in the 1997 crisis, when the fluctuation and volatility of exchange rates in some of the SEACEN countries affected portfolio investments significantly.

14.2.4 Impact of FPII on Money Supply

In the causality tests, there are indications that monetary growth has a strong influence on foreign portfolio inflows in a number of SEACEN countries. The tests show that there is a bi-directional causality between FPII and broad money (M2) in Indonesia and Philippines while unidirectional causality running from FPII to M2 was detected for Singapore and Taiwan. Conversely, a reverse direction of causality running from M2 to FPII was observed in Korea, Malaysia and Thailand.⁵⁷ Sri Lanka is the only country which does not show any predictable relationship between FPII and money supply. The test results imply that there is a significant two way influence between FPII and money supply and it can be inferred that while an increase in money supply will, on the one hand, decrease FPI inflows, it will nonetheless also increase interest rates, thus attracting inflows of foreign portfolio investment into the country.

14.2.5 Impact of FPII on Stock Prices (STOCK)

Movement of stock prices is believed to affect portfolio investment flows and vice-versa to a larger extent especially when market prices are more volatile. The Granger causality tests revealed a bi-directional causal relationship between FPII and STOCK in Sri Lanka while unidirectional causality is seen running from FPII to STOCK in Indonesia and Korea. A feedback relationship is also detected in the case of Malaysia with unidirectional causality running from STOCK to FPII. No predictable directional relationship was detected in the Philippines, Singapore, Taiwan and Thailand. The majority of the countries did not show significant causality between foreign portfolio investment and stock prices perhaps due to the influence of other factors such as movement of foreign stock prices, higher yield on bond markets, the expectation on local currency and others.

57. M3 was used as monetary variable for Malaysia. Similar results were obtained in Korea's Country Paper using M3 and foreign portfolio investment (inward) for the period 1993-2003 where bidirectional causality has been detected.

Table 1.16
GRANGER CAUSALITY TEST
PORTFOLIO INVESTMENT

COUNTRY	FPI → GDP	GDP → FPI	FPI → INT	INT → FPI	FPI → NEX	NEX → FPI	FPI → M2	M2 → FPI	FPI → STOCK	STOCK → FPI
1. INDONESIA 1/ Sample Size (1980-2002) F-Value Significance Level No. of Lags	81.043* (3.40E-07) 1/1 Yes	0.08422 (0.77591) 1/1 No	17.596* (0.00059) 1/1 Yes	0.02037 (0.88854) 1/1 No	98.4598* (1.00E-07) 1/1 Yes	0.07807 (0.78402) 1/1 No	4.09897*** (0.03207) 1/1 Yes	4.17846*** (0.05281) 1/1 Yes	3.4541*** (0.03347) 1/1 Yes	0.88657 (0.1304) 1/1 No
2. KOREA Sample Size (1980-2002) F-Value Significance Level No. of Lags	1.68747 (0.21033) 1/1 No	3.74422*** (0.06886) 1/1 Yes	1.00769 (0.33703) 1/1 No	0.21508 (0.65186) 1/1 No	2.19888 (0.80877) 1/1 No	1.63786 (0.04382) 1/1 No	1.0704 (0.32307) 1/1 No	3.38745*** (0.09281) 1/1 Yes	5.30085** (0.03347) 1/1 Yes	2.51185 (0.1304) 1/1 No
3. MALAYSIA Sample Size (1984-2002) F-Value Significance Level No. of Lags	0.32078 (0.73215) 2/2 No	8.82323* (0.00517) 3/3 Yes	0.83113 (0.46116) 3/3 No	2.12653 (0.16565) 3/3 No	0.2151 (0.80877) 2/2 No	4.21353** (0.04382) 2/2 Yes	0.13319 (0.73889) 2/2 No	6.73186** (0.01232) 2/2 Yes	0.21819 (0.50737) 2/2 No	14.2112* (0.00089) 2/2 Yes
4. PHILIPPINES Sample Size (1980-2002) F-Value Significance Level No. of Lags	1.89528 (0.18456) 2/2 No	4.10352** (0.03789) 2/2 Yes	0.16108 (0.95267) 2/2 No	0.02078 (0.97948) 2/2 No	2.41485 (0.12326) 2/2 No	4.08963** (0.03873) 2/2 Yes	3.77243*** (0.04708) 2/2 Yes	6.09545** (0.01155) 2/2 Yes	0.08833 (0.93357) 2/2 No	0.05653 (0.94541) 2/2 No
5. SINGAPORE 2/ Sample Size (1984-2002) F-Value Significance Level No. of Lags	11.511* (0.0024) 1/1 Yes	1.9493 (0.17494) 1/1 No	4.8902** (0.03017) 1/1 Yes	4.441** (0.04933) 1/1 Yes	0.33172 (0.72382) 2/2 No	1.98898 (0.05944) 2/2 No	4.64481** (0.04692) 2/2 No	1.15601 (0.14125) 2/2 No	2.31413 (0.10249) 2/2 No	0.36597 (0.30344) 2/2 No
6. SRI LANKA Sample Size (1992-2002) F-Value Significance Level No. of Lags	1.01552 (0.42646) 2/2 No	0.28832 (0.76119) 2/2 No	0.10265 (0.9069) 2/2 No	9.8948*** (0.05183) 2/2 Yes	0.20683 (0.81976) 2/2 No	0.11808 (0.89103) 2/2 No	2.40812 (0.18517) 2/2 No	0.24851 (0.78506) 2/2 No	5.3823*** (0.05665) 2/2 Yes	33.4355* (0.00128) 2/2 Yes
7. TAIWAN Sample Size (1981-2002) F-Value Significance Level No. of Lags	10.4044* (0.0017) 2/2 Yes	0.34321 (0.71529) 2/2 No	0.05746 (0.93507) 2/2 No	0.26746 (0.76914) 2/2 No	2.70943 (0.10123) 2/2 No	0.88889 (0.42922) 2/2 No	8.74712* (0.03026) 1/1 Yes	2.37819 (0.14258) 1/1 No	2.38883 (0.12806) 2/2 No	0.7154 (0.49247) 2/2 No
8. THAILAND Sample Size (1984-2002) F-Value Significance Level No. of Lags	0.95611 (0.34476) 1/1 No	4.81699** (0.04554) 1/1 Yes	2.6649 (0.17520) 1/1 No	4.98511*** (0.089340) 1/1 Yes	0.79092 (0.4776) 2/2 No	1.7517 (0.21856) 2/2 No	2.61328 (0.2828) 1/1 No	3.58186*** (0.07928) 1/1 Yes	0.49038 (0.26519) 2/2 No	0.62518 (0.11453) 2/2 No

1/ Net FPI for causality for M2 and Stock and sample size is from 1984-2002.

2/ Sample size is from 1980-2002 for causality on M2 and Stocks.

* significant at 1% level
** significant at 5% level
*** significant at 10% level

14.2.6 Overall Results

The above results suggest that FPII has a significant impact on the national growth of Indonesia, Singapore and Taiwan. Monetary variables such as interest rate and exchange rate were more affected in the SEACEN countries by foreign portfolio inflows especially in the short-run period. The causal relationship between foreign portfolio inflows and money supply is very significant in almost all the SEACEN countries. However, it appears that impact of foreign portfolio inflows is less significant on stock price movements in most of the SEACEN countries.

15. Managing Private Capital Flows in the SEACEN Countries

One of the important lessons learnt from the Asian crisis is the need to successfully manage the flows of foreign private capital at the national level in order to prevent financial distresses while maximising their benefits. Foreign private capital in the form of foreign direct investment and foreign portfolio investment can affect all levels of an economy. While it is undeniable that inflows of the private capital have brought substantial benefits to the developing countries including the SEACEN countries, there are nonetheless real risks to contend with. The dangers are that capital flows may induce currency appreciation, reduce the scope for independent macroeconomic policy action, lead to greater exposure of external shocks, demands for protection in local markets, loss of control of foreign-owned domestic industries, disrupt national capital markets inducing asset inflation, increase volatility in financial and exchange markets and involve high sterilisation costs. Past experience shows that large inflows of private capital can create pressure that leads to inflation, lower domestic savings and a reduction in the domestic interest rate or the cost of capital and raise domestic asset prices and cause the appreciation of exchange rates. The effect, however, depends upon the volume of the flows, the macroeconomic framework, the microstructure of the flows and the incentives in the financial sector. The more the economy can direct capital flows into increased productive investment, the less effect the flows will have on interest rates and exchange rates. To avoid potential overheating of the economy due to surge in capital inflows, basically four policies depicted below are available to reduce net inflows of foreign exchange:

- 1) Imposing direct or indirect control on inflows to reduce the magnitude of gross capital inflows
- 2) Liberalisation of capital outflows or the accelerated repayment of public debt can be undertaken to reduce net inflows.

- 3) Facilitating trade liberalisation to counteract the implications of a net capital account surplus.
- 4) Eliminating all foreign exchange market intervention by floating the exchange rate.

Except for floating the exchange rate, all of these policies were generally used by authorities in recipient countries. Some SEACEN countries like Malaysia and Thailand, adopted capital control measures while for Indonesia, Korea, Malaysia and Thailand, nominal exchange rate policy continued to be directed to preserve external competitiveness so as to prevent excessive appreciation of the real exchange rate. The SEACEN countries adopted monetary stances which offset the impact of capital inflows on domestic monetary aggregates. Two kinds of policies can be pursued to restrict the magnitude of monetary expansion associated with a given amount of intervention in the foreign exchange market and they include:

- 1) *Sterilisation* which is implemented by contracting domestic credit to offset the expansion of the net foreign assets of the central bank through mechanisms such as sale of open market bond, central bank borrowing from commercial banks, shifting government deposits from commercial banks to the central bank, raising interest rates on central bank assets and liabilities and curtailing access to rediscounts; and,
- 2) *Increasing reserve requirements* on domestic financial institutions which reduces the impact of the expansion of the monetary base on the growth of broader monetary aggregates.

Sterilisation policies have been adopted by many of the SEACEN countries in the past, including Indonesia, Korea, the Philippines and Sri Lanka while changes in reserve requirements were utilised during past episodes of capital surges in Malaysia, the Philippines and Sri Lanka. Some countries have also adopted fiscal contractions to offset the impact of expansion on monetary aggregates. In fact, the balance between monetary policy and fiscal policy is a critical factor for managing capital flows. One long-term option could be to promote the mobilisation of increased public savings which will reduce demand pressures on domestic resources so as to allow for an easier monetary stance and lower interest rates, lessening the pull of high interest rates on short-term capital inflows.

Experience has shown that large inflows of FPI are more volatile and risky than FDI. FDI generally goes to new projects increasing demand in the capital goods market and for capital imports. The pressure for appreciation of the exchange

rate will be eased if the current account is allowed to run a larger deficit to affect the real transfer of resources which may be facilitated by further trade liberalisation. In case of portfolio investment, it may act more like direct investment if the resulting inflow is used for new investments. However, firms seeking funds abroad may undermine the domestic monetary policy as large capital inflows may destabilise a country's capital market leading to asset inflation, reducing domestic savings and also affect the volatility of the exchange rate due to its sensitivity to interest rate movements. In SEACEN countries such as Korea, Malaysia and Thailand where the equity markets are well developed and rank among the top twenty in the world, there is an urgent and increased need for readily available information and for effective prudential regulations to minimise market distortions even as the markets continue to expand. The reform and liberalisation of these markets will be necessary to promote the orderly absorption of foreign capital, particularly portfolio investment and short-term money market flows. In this context, it is worthwhile to briefly delve into the policies adopted by some of the SEACEN countries during the Asian financial crisis.

During the financial crisis, Indonesia successfully implemented prudential regulations on capital transactions to stem the tide of capital flows. It also floated the Rupiah in response to the rapidly dwindling reserves and to transfer a higher degree of risk premia to speculators.⁵⁸ After the financial crisis, Korea came up with various measures to liberalise capital flows which resulted in an increase in inward FDI/FPI during 1999-2000. It also established a strong foreign exchange information system to closely monitor the movements of foreign private capital in the country. Malaysia implemented capital controls in the wake of the crisis by fixing the ringgit against the US dollar on 2 September 1998 to contain speculation on the ringgit and to stabilise short-term capital flows. However, some controls on inflows and outflows were relaxed shortly through a structured levy system effective as of 15 February 1999, and policies on equity ownership for all sectors were also liberalised. In Philippines, during the crisis, the phenomenal growth of foreign investment was halted and the peso plunged to a record low against US dollar. The country utilised sterilisation policies through an increase in reserve requirements to reduce the impact of inflows into the banking sector.⁵⁹ It also subsequently embarked on structural reforms in the financial and banking sectors to counteract the impact of dampened investor sentiments resulting from both the global economic slowdown and 11 September 2001 terrorist attack.

58. Delano Villanueva and Lim Choon Seng, "Managing Capital Flows in SEACEN Countries: A Policy Agenda",- Unpublished Paper Presented at the EDI-CPBMES Workshop on " Managing Capital Flows in a Volatile Financial Environment", Bangkok, Thailand, 22-25, 1999.

59. Ibid.

Despite stable and sound macroeconomic fundamentals, the spill over effect of the Asian financial crisis hit the Singapore economy badly (a negative growth in second half of 1998 was recorded) and there was acceleration in net capital outflows since the fourth quarter of 1999. Singapore relied on its flexible monetary and fiscal policies to contain the negative impacts of the crisis. The country frequently used sterilisation policies by shifting government deposits –moving deposits from the Central Provident Fund and from the commercial banks to the monetary authority.⁶⁰ The Monetary Authority of Singapore adopted a more flexible exchange rate policy widening the band of Singapore dollar during times of increased volatility and uncertainty of the financial markets but relaxed the same when the situation started improving. Fiscal measures usually consisted of a package of cost-cutting measures such as reduction in rentals, utility charges, foreign worker's levies and wages.

Although Sri Lanka experienced some spill over effects from the crisis, they were not very severe owing to the fact that it has not fully opened its capital account and that the exchange rate was fixed to the US dollar. Beginning early 2001, Sri Lanka which basically relied on sterilisation through revising reserve requirements, adopted a free float exchange rate system which now makes the exchange rate more vulnerable to volatility by capital inflows and outflows although it has eased the pressure in domestic monetary management. Empirical studies show that the change in capital flows cause a change in money supply suggesting that the central bank needs to sterilise these flows. However, to avoid the effect of unexpected expansion and contraction of liquidity in the banking system, some prudential regulations along with fiscal measures need to be implemented. In response to the Asian crisis, Taiwan mainly used the exchange rate policy by devaluing its currency against US dollar. It also adopted sterilisation through shifting government deposits particularly for the assets of the postal system. Thailand floated its currency on 2 July 1996. After the crisis, apart from sterilisation through shifting government deposits, banking sector regulations were pursued such as the establishment of the Thai Asset Management Corporation and limiting the outstanding balance of the Baht borrowing companies to a contract maturity not exceeding 3 months from non-residents (September 2003).

In summary, the management of private capital flows in the SEACEN countries needs to adopt a two-pronged approach. The first approach is to develop a proper monitoring system for foreign private capital. This includes the proper definition of private capital flows in order to improve its coverage and efficiency in the

60. Ibid. Malaysia also adopted the same.

system for dissemination and measurement. A strong data base on private capital flows must also be built so that it can be easily availed for policy use. A proper monitoring system is also necessary to assess the actual nature, magnitude and volatility of the private capital inflows. It is, therefore important, to adhere to international standards when defining FDI and FPI so as to ensure a complete and proper coverage of the data base. It is also necessary to reduce the time gap in disseminating statistics on foreign private investment flows, following international measurement systems including the valuation and currency breakdown of the different types of the private capital inflows. The adoption of a universally accepted monitoring system is also to enable cross-country comparison.

The second approach is to take into account the durability of inflows - as to whether they are sustainable and to examine whether these flows are reversible or volatile so that policy makers can develop or implement prudential policies to manage the flows. In essence, the following strategies for managing private capital flows could be pursued:

- 1) Targeting (managing) the portfolio of foreign capital;
- 2) gradual liberalisation of capital flows; and,
- 3) allocating priority to foreign exchange earning sectors.

When managing the portfolio of foreign capital, it is important to take into account their magnitude while at the same time, examining the envisaged productivity of different kinds of foreign capital and their volatility. This will help in reducing the gap between currency and maturity mismatch in portfolio management. SEACEN countries should also take care not to liberalise their capital accounts until there are proper regulatory and supervisory mechanisms and appropriate macroeconomic policies in place so that the stability of the financial systems will not be jeopardised. Finally, policies should also be directed towards encouraging foreign capital to flow into foreign-exchange earning sectors which some of the SEACEN countries are already pursuing.

Causality tests done in some of the SEACEN countries reveal that portfolio investment inflows in these countries are sensitive to interest rate, exchange rate and monetary aggregates. This implies that the respective countries have recourse to implement relevant policies to influence the related macroeconomic and monetary variables for the management of flows. For example, to achieve a desirable and sustainable rate of foreign private capital inflows, a country must ensure that interest rates are consistent with international rates adjusted for risk and expected exchange rate movements. In summary, to modulate capital flows, countries may resort to sterilisation policies, use wider bands for exchange rate intervention, change reserve

requirements on foreign deposits, adjust short-term interest rates or impose a variety of taxes or fees or even direct controls on short-term foreign transactions. Furthermore, fiscal and trade policies should be complementary to accommodate the real transfer of foreign capital and limit demand driven inflationary pressure in the domestic economy. In addition, trade liberalisation needs to be promoted to improve absorption of capital inflows in the short-run and to develop foreign exchange earning capacity that will enable eventual repayment of external debts.

16. Summary and Conclusion

The monitoring and managing of private capital flows are essential if future financial crises are to be avoided. However, there are various obstacles which can hamper the development of an efficient and effective monitoring mechanism for private capital flows. For instance, there are issues of inconsistencies of statistical data relating to the definition, accounting practices, sources of data, coverage and compilation practices which affect the quality of analysis of investment flows, especially for developing countries. It has been claimed that the existing monitoring and compiling procedures has either underestimated or overestimated the position of private capital flows in many of the Asian countries including the SEACEN countries due mainly to different definitions, data sources, classifications and compilation practices followed by them. For better and systematic classification of these flows, multilateral agencies such as the OECD and the IMF have made efforts to develop proper guidelines and methodologies but the application of these guidelines and methodologies is not without problems. For instance, all but one SEACEN country use a predetermined threshold of 10 % or more of the ordinary share in the definition of FDI as recommended in the international standards set out in the IMF's BPM5 and the OECD's Benchmark Definition of Foreign Direct Investment. Some of them rely on investment approval authorities for the collection of FDI statistics. It was revealed in this study that the application of the 10% criteria to the definition of direct investment is not applied consistently in the participating countries.

The IMF has also developed the "Coordinated Portfolio Investment Survey Guide, 2002" for better classification and compilation of FPI flows statistics (assets) but problems have been noted in cross-border investment data which vary widely because of the different sources and methodologies used to compile them, making it difficult for cross country comparison. In general, many countries have not yet fully implemented the IMF Guidelines which impairs the comparability of international investment data across countries. Even where the Guidelines have been implemented and statistics are comparable, the information is not disaggregated into geographical and sectoral basis, compounding the difficulty of making more detailed analyses.

In this study, it was observed that not all the SEACEN countries are compiling and disseminating FDI data in compliance with the BPM5 of the IMF. Except for the Philippines and Taiwan, none of the SEACEN countries have been able to compile and report FDI statistics under the subcomponent of reinvested earnings. The periodicity and timeliness of data dissemination varies from monthly to quarterly to annual across countries and their main data sources are either from enterprise surveys and the International Transactions Reporting System (ITRS). With respect to geographic and industrial classification, all the SEACEN countries participating in the study (except Mongolia), compile geographic breakdown for inward FDI data while all (except Korea and Mongolia) compile industrial breakdown for inward FDI data. The countries, however, use various criteria and definitions while breaking the FDI data into geographical basis. Korea, Nepal, Philippines, Sri Lanka, Taiwan and Thailand are using the *transactor principle* while Indonesia, Malaysia and Singapore have been using *Debtor/Creditor principle*. Not all the countries value their external financial assets and liabilities at prevailing market prices. Malaysia, Singapore and Thailand have been found to compile inward FDI position data at market value. It was also clear that not all the SEACEN countries have included in FDI statistics, special transactions data such as for purchase and sale of land and buildings, transactions with offshore enterprises, transactions of special purpose entities and transactions of natural resource exploration.

In the case of FPI statistics, although all the 8 participating countries (Mongolia and Nepal are excluded as they do not have FPI flows) compile FPI data under inward equity securities (liabilities) , only 7 countries with an exception of Sri Lanka, compile data on debt securities. Korea does not disseminate data on equity securities while Malaysia, Philippines, Singapore, Taiwan and Thailand disseminate information on long-term and short-term debt securities issued by non-residents and owned by residents. FPI data is tracked with a varied periodicity and timeliness ranging from monthly to quarterly to annual for the different member countries. The main data sources for FPI statistics in most of the countries are from the ITRS and enterprise surveys or official surveys. As regards to the country attribution and residency status, not all the countries (except Korea, Malaysia and Thailand) have the provision for country attribution of residence by the issuer of a security while only Malaysia and Korea have the provision of identification of all resident holders of securities issued by non-residents. Most of the countries collate FPI data on an aggregate basis and none track data on a security by security basis. As for the classification by instruments and maturity, all the SEACEN members except Thailand have data on securities classified by various instruments and original maturity. Singapore, however, does not classify the securities by original maturity.

It can be concluded from the existing FDI and FPI compilation and monitoring practices of the SEACEN countries that they fall short of international standards. As a consequence, the SEACEN countries are currently faced with the following challenges on data quality and reliability:

1. As the ITRS is the major data source for FDI in the BOP for most of the SEACEN countries, and since the ITRS measures cash flows only, the data base is unable to capture reinvested earnings in most cases since these transactions do not involve cash flows. Moreover, ITRS does not capture reinvested earnings as it is only an imputed transaction, not a real one, whether cash or non-cash.
2. A good source of the information needed to calculate reinvested earnings is the financial statements of companies but they are available only on an annual basis and therefore cannot be used in the monthly/quarterly reports of the BOP, thus lengthening the time lag of compilation.
3. In some cases, even when monthly data can be solicited from stock exchange, they are basically estimates based on information obtained by the stock exchange from the annual financial reports of major direct investment enterprises for the previous year, leading to poor data quality that require periodic revisions.
4. The application of the 10% ownership criteria to FDI enterprises is not always possible in the ITRS system (e.g., Philippines and Taiwan). Some countries include enterprises even when the 10% ownership criteria is not met but they have an effective role in management (Korea) while some do not include enterprises if the 10% ownership criteria is not met, regardless of their role in management (Malaysia, Singapore, Thailand). These distinct differences and inconsistencies make cross country comparisons very difficult to say the least.
5. Although market price is recommended as the basis of valuation of flows and stocks, a number of the SEACEN countries use book values particularly for stocks. Moreover, while deriving flows data from stocks particularly for FPI data, the use of different exchange rates for conversion may compromise data quality.
6. The SEACEN countries face difficulties in applying the residency concept for FPI flows data as identifying the end-investor (resident/non-resident) is a difficult task. Currently, most of the SEACEN countries record transactions on securities that are conducted through fund managers/brokers which may lead to biasness on the data coverage.

7. Many of the SEACEN countries do not have outward flows data or are not in position to disseminate such data even if they can be collected. Likewise, some countries do not have data on outward flows for both FDI/FPI (e.g., Indonesia), thus limiting the data availability only to securities of the residents owned by non-residents. Mongolia and Nepal do not have information on FPI flows either due to capital control policies of the respective governments or the absence of a data compilation and monitoring system.
8. Unlike equity securities, most countries derive debt securities flows data from the changes of stocks (beginning and end period) and the absence of proper adjustments in the flows data may raise concern on the quality of the data.
9. For some SEACEN countries, data on actual inflows are available only at the end of each year, in between which an estimate is used to compile the BOP. For those countries which rely on approved investments in FDI, a significant difference exists between the approved and actual investments during any period of time making the data highly unreliable.
10. Finally, most of the SEACEN countries face difficulties in garnering information on an accrual basis (e.g., debt securities) as recommended by the BPM5.

The notion that FPI tends to be more volatile than FDI has been confirmed by a comparison of the coefficient of variation, which is a measure of the variability, of FDI and FPI. It was found that coefficient of variation for FPI is higher than that for FDI for five countries, namely Indonesia, Korea, Malaysia, Philippines, Singapore, Sri Lanka, Taiwan and Thailand both in pre-crisis (1990-96) and post-crisis (1997-2002) period. The high volatility of FPI requires that policies to attract FPI flows be cautious while making sure that information on FPI flows is accurate and reliable.

To maximize the benefits and minimize the risks from FDI and FPI flows, consistent, timely and accurate cross-country comparable data is necessary so that the economic analysis of impacts of these flows to the country's economic growth can be assessed, leading to appropriate policies to regulate these private capital flows. The Granger Causality Tests carried out to examine the direction of economic impacts of these flows on various macroeconomic and monetary aggregates suggest the following:

With respect to impacts made by FDI inflows, it can be inferred that in Indonesia, Nepal, Philippines, Taiwan and Thailand, FDI flows contribute to national output growth while for Korea, Malaysia, Philippines, Sri Lanka and Taiwan, FDI promotes

exports significantly. It was also observed that FDI has capacity for correcting current account imbalances as indicated in a few countries like Philippines, Singapore, Sri Lanka and Taiwan. The traditional convention that FDI promotes domestic investment was also proven for Indonesia, Malaysia, Sri Lanka and Taiwan. In Taiwan, FDI flows had a significant positive effect on promoting employment.

The overall results of the causality tests relating to the impact of FPI inflows suggest that FPI do have a significant impact on the output growth in Indonesia, Singapore and Taiwan. It was also revealed that the monetary variables such as interest rate and exchange rate tend to be affected by the FPI inflows particularly in the short-run. A strong causal relationship was also observed between portfolio inflows and money supply in almost all the SEACEN countries implying that monetary policy is or should be an important tool in regulating international investment flows, at least in the short-run. Conversely, the results also suggest that for the SEACEN countries, FPI flows do not have a significant impact on stock price movements implying the SEACEN stock markets have to be developed further so that a rational relationship with portfolio flows movements can be attained.

Based on the existing FDI and FPI monitoring and management practices of the SEACEN countries, it would seem that data on these private capital flows would be more useful for historical analysis rather than for making forecasts for policy purposes. For forward-looking analysis, the SEACEN countries have to first deal with developing a proper monitoring system of these flows which are in compliance with international standards where the definitions are homogeneous and the period of reporting timely. Effort should be made to improve the data coverage and for the adoption of an efficient dissemination and measurement system. A proper valuation system should be put in place and the desegregation of data by currency breakdown should be initiated as these are essential for estimating wealth effects. There is also a need to develop sources of data on an accrual basis wherever feasible. In conclusion, in order for the data quality on FDI and FPI to be improved, the foreign exchange information system needs to be upgraded in the respective countries and occasional surveys relevant to the countries, should be carried out domestically or sponsored by international organizations such as the IMF, to improve the accuracy and reliability of FDI and FPI statistics.

Bibliography

- (i) Adler M., and B. Dumas (1983), "International Portfolio Choice and Corporate Finance: A Synthesis", *Journal of Finance* 38:3:925-984.
- (ii) Asian Development Bank (2002), "Key Indicators: Statistical Population and Human Resource Trends and Challenges".
- (iii) Assaf Razin, "FDI Contribution to Capital Flows and Investment in Capacity", *NBER Working Paper Series No. 9204*, National Bureau of Economic Research, September 2002.
- (iv) Azizah Talib, "Foreign Direct Investment in the SEACEN Countries", - The SEACEN Centre, Kuala Lumpur Malaysia, 1994.
- (v) Barry Eichengreen, "Capitalizing on Globalization", *Asian Development Review*, Vol.19, No. 1, 2002, Asian Development Bank.
- (vi) Barry Eichengreen, Michael Mussa, Giovanni Dell'Ariccia, Enrica Detragiache, Gian maria Milesi-Ferretti, and Andrew Tweedie, "Capital Account Liberalization: Theoretical and Practical Aspects," IMF, Washington D.C. 1998.
- (vii) Bernard Laurens, and Jaime Cardoso, "Managing Capital Flows: Lessons from the Experience of Chile", *IMF Working Paper*; WP/98/168, December 1998.
- (viii) Cesar Calderon, Norman Loayza and Luis Servén, "Greenfield Foreign Direct Investment and Mergers and Acquisitions: Feedback and Macroeconomic effects", - World Bank *Policy Research Working Paper* 3192, January 2004.
- (ix) ESCAP, "Foreign Direct Investment in Selected Asian Countries; Policies, Related Institution-Building and Regional Co-operation", *Development Papers No.19*, 1998.
- (x) ESCAP, "Asian Economic Crisis: Causes, Consequences and Policy Lessons", *Development Papers* No. 20, 1999.
- (xi) Fabienne Fortanier and Maria Maher, "Foreign Direct Investment and Sustainable Development", OECD 2001.

- (xii) FitzGerald, E.V.K. "Policy Issues in Market Based and Non Market Based Measures to Control the Volatility of Portfolio Investment", *QEH Working Paper series- QEHWPS026*, Finance and Trade Policy Research Centre, University of Oxford, 20 June, 1999.
- (xiii) Frederic Lambert, Laurent Paul, " The International Investment Position: Measurement Aspects and Usefulness for Monetary Policy and Financial Stability Issues", Paper Prepared by Banque de France for Fifteenth Meeting of the IMF Committee on Balance of Payments Statistics at Canberra, Australia, October 21-25, 2002 (BOPCOM-02/74).
- (xiv) IMF, "World Economic Outlook-Trade and Finance," September 2002.
- (xv) IMF, "Balance of Payments Statistics Year Book; Part 1:Country Tables," 1998,1999, 2002 and 2003.
- (xvi) Michael Davis, "Foreign Direct Investment Data Collection: Overcoming Hurdles and Obstacles in FDI Measurement and Collection", Unpublished Paper, *International Investment Section, Australian Bureau of Statistics*.
- (xvii) IMF, "Coordinated Portfolio Investment Survey Guide", Second Edition, 2002.
- (xviii) IMF, "International Investment Position: A Guide to Data Sources" October 2002.
- (xix) IMF/OECD, "Survey Implementation of Methodological Standards for Direct Investment", May 1997.
- (xx) IMF/OECD, "Foreign Direct Investment Statistics-How Countries Measure FDI 2001", 2003.
- (xxi) Michael J. Brennan and H. Henry Cao, " International Portfolio Investment Flows," *The Journal of Finance* Vol.LII, No. 5, December 1997. .
- (xxii) Odier P. and B. Solnik, (1993)," Lessons for International Asset Allocation", *Financial Analysis Journal*, 49:2:63-77.
- (xxiii) OECD, "Foreign Direct Investment for Development; maximizing benefits, minimizing costs-Overview,"2002.

- (xxiv) OECD, "OECD Principles of Corporate Governance", 1999.
- (xxv) OECD, "OECD Benchmark Definition of Foreign Direct Investment", Third Edition 1996: Reprinted 1999.
- (xxvi) Prakash Loungani and Assaf Razin, "How Beneficial is Foreign Direct Investment for Developing Countries?", *Finance & Development*/June 2001.
- (xxvii) Reint Gropp and Kristina Kostial, "FDI and Corporate Tax Revenue", *Finance & Development*/June 2001.
- (xxviii) Susan Schadler, "Surges in Capital Inflows; Boon or Curse," *Finance & Development*/March 1994.
- (xxix) Percy S. Mistry, "Finance for Development," The OPEC Fund Pamphlet Series 33, August 2002.
- (xxx) Pindyck R.S., and Rubinfeld D.L., "Econometric Models and Economic Forecasts", Second Edition Copy right by McGraw-Hill, Inc, (1981).
- (xxxi) Pradumna B. Rana, "Surges and Volatility of Private Capital Flows to Asian Developing Countries: Implications for Multilateral Development Banks," *Occasional Papers* No. 19, December 1998, Asian Development Bank.
- (xxxii) Sohnke M. Bartyram and Gunter Dufey, "International Portfolio Investment: Theory, Evidence and Institutional Framework", May 15, 2001:<http://econpapers.hhs.se/paper/wpawuwpf/0107001.htm>
- (xxxiii) Tham Siew Yean, Andrew Kam Jia-yi, Liew Chei-Sing, "ASEAN Economics Cooperation: AFTA and the Competitiveness of the ASEAN - 5," Paper Presented at the 15th Convention of the Malaysian Economic Association on "*The Malaysian Economy at Cross Roads: Challenges & Opportunities*," July 22-23, 2003, Kuala Lumpur.
- (xxxiv) The SEACEN Centre, "Foreign Direct Investment in the SEACEN Countries"-edited by Azizah Talib, 1994.
- (xxxv) Yun-Hwan Kim and Purnima Rajapakse, "Mobilizing and Managing Foreign Private Capital in Asian Developing Economies," *Asia-Pacific Development Journal*, Vol.8, No. 1 pp 101-121, June, 2001, UN ESCAP.

- (xxxv) UNESCAP, "Financial Sector Reform Liberalization and Management for Growth and Stability in the Asian and the Pacific Region: Issues and Experiences," ST/ESCAP/1940, Copyright© United Nations 1999.
- (xxxvi) UNCTAD, 1999 a. "Foreign Portfolio Investment (FPI) and Foreign Direct Investment (FDI): characteristics, similarities, complementarities and differences, policy implications and development impacts," –TD/B/COM.2/EM.6/2, United Nations Conference on Trade and Development, Geneva, 15 April.
- (xxxvii) UNCTAD, 1999b, "Comprehensive Study of the Inter-relationship between Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI)," –UNCTAD/GDS/DFS/5, United Nations Conference on Trade and Development, Geneva, 23 June.
- (xxxviii) UNCTAD, "World Investment Report 2002: Transnational Corporations and Export Competitiveness".
- (xxxix) UNCTAD, Trade and development Board, "Report of the Expert Meeting on the Growth of Domestic Capital markets, particularly in Developing Countries, and its relationship with Foreign Portfolio Investment", Geneva, from 27 to 29 May 1998", TD/B/COM.2/12; TD/B/COM.2/EM.4/2 & 4/3, 18 June 1998.
- (xxxx) World Bank, "World Development Indicators, 2002."
- (xxxxi) World Bank, "Private Capital Flows to Developing Countries-The Road to Financial Integration", - A World Bank Policy Research Report, © Oxford University Press.
- (xxxxii) World Bank, "Global Development Finance 2003- Striving for Stability in Development Finance."

Appendix 1.1: Reporting FDI Inward Statistics to International Organisations

COUNTRY	DIRECT INVESTMENT INCOMEa/		DIRECT INVESTMENT FINANCIAL FLOWSb/		DIRECT INVESTMENT POSITION DATAc/		REMARKS
	Yes	No	Yes	No	Yes	No	
Indonesia	O		O		O		
Korea	O		O		O		1/
Malaysia	O		O		O		
Mongolia	O		O		O		
Nepal		O		O		O	2/
Philippines	O		O		O		3/
Singapore		O	O		O		
Sri Lanka	O		O			O	4/
Taiwan	O		O		O		5/
Thailand	O		O		O		

a/ (i) income on equity/dividends) 1/ Compiled since 2002 with reference year 2001.

(ii) income on debt 2/ DOI usually reports FDI statistics to some international organizations.

(iii) Reinvested earnings 3/- a/&b/ IMF (SDDS/ICS); ASEAN (ASCU); SEACEN (SEG)

b/ (i) equity capital - b/ ASEAN (WGFDIS); UNCTAD

(ii) other capital -c/ IMF (SDDS); ASEAN (WGFDIS); UNCTAD

c/ (i) equity capital plus reinvestment 4/ In accordance with SDDS requirement.

(ii) other capital 5/ Taiwan does not report FDI statistics to international organizations but

FDI data is put on CBC's website based on SDDS requirement.

Appendix 1.2: Periodicity and Timeliness and Revision Policy of Disseminated Equity Capital Data (Transactions)

COUNTRY	PERIODICITY 1/			TIMELINESS 2/			REVISION POLICY3/
	Monthly	Quarterly	Annual	Monthly	Quarterly	Annual	
Indonesia		○			○		every six (6) months
Korea	○			○			annual
Malaysia	○	○			○		quarterly/annual
Mongolia		○			○		annual
Nepal							HMC/Nepal is working on it
Philippines	○				○		**
Singapore			○			○	No revision policy in general***
Sri Lanka		○			○		annual
Taiwan	○			○			No revision policy
Thailand	○			○			4 times a year

1/ Periodicity refers to the frequency with which the data are compiled.

2/ Timeliness is measured as the period elapsing between the end of a reference period and dissemination of the data.

3/ Number and duration of revisions before the data is considered final.

* The approval of FDI data is available on periodically and timeliness basis at DOI. Nepal has only FDI commitment figure and lagged disbursement figure.

** every end-month of the quarter for current year statistics & every end-year for previous year's estimates.

***Quarterly data are provisional and so updated in the next issue of Monthly Digest of Statistics

Appendix 1.3: Major Sources of Data (FDI)

COUNTRY	ENTERPRISE SURVEYS		INTERNATIONAL TRANSACTIONS REPORTING SYSTEM (ITRS)		EXCHANGE CONTROL INVESTMENT APPROVAL AUTHORITY		OTHERS (PUBLISHED SOURCES, BILATERAL SOURCES, PRESS REPORTS)		REMARKS
	Inward	Outward	Inward	Outward	Inward	Outward	Inward	Outward	
Indonesia	✓		✓						
Korea			✓	✓/a					
Malaysia	✓	✓	✓	✓		✓	✓/b	✓	1.✓
Mongolia	✓	✓							
Nepal									2.✓
Philippines	✓	✓	✓	✓			✓	✓	3.✓
Singapore	✓	✓							
Sri Lanka			✓(supplementary)	✓(supplementary)	✓(BOI)	✓(ECD-CBSL)	✓	✓	
Taiwan			✓	✓	✓	✓			
Thailand	✓	✓	✓	✓			✓	✓	

1/a Information from the Ministry of Commerce, Industry & Energy is used as a secondary data source.

1.b Details of information vary between sources.

2./a Nepal FDI data are compiled and disseminated by DOI on registration basis of enterprises. NRB also prepares FDI data for BOP based on BOP Manual 5. Recently, BOP division of NRB has ventured to start compiling FDI data relying on enterprise surveys, ITRS and other sources.

3./ In Philippines the BSP also maintains a system of registration of foreign investment and loans- both inward and outward which covers cash investment and non-cash investment. Data on inter-company loans are also generated from the registered documents.

Appendix 1.4: Availability of Geographic Breakdown and Industrial Breakdown of FDI Statistics (Flows)

COUNTRY	GEOGRAPHIC DISAGGREGATION		INDUSTRIAL DISAGGREGATION		REMARKS*
	Inward	Outward	Inward	Outward	
Indonesia	✓		✓		
Korea	-	-			1.a and 1.b
Malaysia	✓		✓		
Mongolia	no	no	no	no	
Nepal	✓		✓		2✓
Philippines	✓		✓		3✓
Singapore	✓	✓	✓	✓	4✓
Sri Lanka	✓	✓	✓	✓	
Taiwan	✓	✓	✓	✓	
Thailand	✓	✓	✓	✓	

* If the disaggregation is done also for FDI income or FDI position data other than FDI flows data, please mention it in the Remarks column.

1.a Geographic disaggregation is possible on the basis of foreign exchange receipts and payments or of thenotification of investment plan, not by BPM5, but the reports carry no binding force to implement.

1.b Industrial disaggregation is possible only by the criteria of Reports of Investment intents submitted to Ministry of Commerce, Industry, and Energy.

2/Disaggregation is done only for approved figures.

3-/Monthly data showing country breakdowns for direct investment net flows (placements less withdrawals), but not direct investment income, are available for equity and inter-company loans. Data showing breakdowns by industrial sectors (1-digit SITC classification) have been compiled recently on equity only.

4-/From surveys, only positions not flows.

Appendix 1.5: Geographical Allocation of FDI Statistics

COUNTRY	GEOGRAPHICAL ALLOCATION		IF, "YES" METHOD OF ALLOCATION	
	Yes	No	Transactor Principle a/	Debtor/Creditor Principle b/
Indonesia	O			O
Korea	O		O	
Malaysia	O			O
Mongolia		O		
Nepal	O		O	
Philippines	O		O	
Singapore	O			O
Sri Lanka	O		O	
Taiwan	O		O	O
Thailand	O		O1/	O2/

a/ FDI transactions may be allocated to the country to which funds were paid or from which funds were received even if that country is not the country of direct investment enterprise or direct investor - transactor principle.

b/ The geographic allocation may be based on the country of the direct investment enterprise or direct investor even if the amount paid or received are to or from another country - debtor/creditor principle.

1/ Under the International Transaction Reporting System (ITRS), the recording of data is based on the transactor principle.

2/ However, under the surveys, it is based on the Debtor/Creditor principle.

Appendix 1.6: Treatment of Definitions for Identifying Direct Investment Enterprise Resident in the Reporting Economy

COUNTRY	APPLY BASIC CRITERIA OF 10% OF EQUITY OWNERSHIP THRESHOLD		USE A DIFFERENT PERCENTAGE OF OWNERSHIP AT THE THRESHOLD		APPLY CRITERIA DIFFERENT FROM THE PREVIOUS TWO		
	Yes	No	Yes	No	Yes	No	If yes, please specify
Indonesia	O			O		O	
Korea	O						
Malaysia	O			O		O	
Mongolia	O			O		O	
Nepal*	-	-	-	-	-	-	-
Philippines	O**			O	O		***
Singapore	O			O		O	
Sri Lanka	O			O		O	
Taiwan		O		O	O		****
Thailand	O			O		O	

* Nepal is yet to follow such treatment of definition.

** For stock.

*** In principle, the basic criterion is 10% or more ownership but however, for flows, all equity investments by nonresidents except purchased thru the stock exchange are defined as FDI.

**** Identification is based on application behavior itself as long as the foreign enterprise applies with the Investment Commission & gets approval, the investment counted as direct investment.

Appendix 1.7: Valuation of Assets

COUNTRY	FDI EQUITY CAPITAL VALUED AND RECORDED ON THE BASIS OF	
	MARKET VALUE	BOOK VALUE
Indonesia		✓
Korea		✓
Malaysia	✓	
Mongolia		✓
Nepal		✓
Philippines		✓
Singapore	✓	
Sri Lanka		✓
Taiwan		✓
Thailand	✓ ^{1/}	✓ ^{2/}

- 1/ The stock of FDI equity capital which is obtained from the surveys is recorded on the basis of market value.
2/ The flows of FDI equity is recorded on the basis of transactor principle but it is not sure whether it is recorded on the basis of book value as there is no information on the exchange rate used by the respective companies.

Appendix 1.8: Recording of FDI Statistics (Transactions) in Special Cases

COUNTRY	RECORDING OF CROSS-BORDER TRANSACTIONS IN REAL ESTATE WITH NON-RESIDENT ENTERPRISES/INDIVIDUALS				RECORDING OF TRANSACTIONS WITH OFFSHORE ENTERPRISES		RECORDING OF TRANSACTIONS WITH SPECIAL PURPOSE ENTITIES		RECORDING OF TRANSACTIONS WITH NATURAL RESOURCE EXPLORATION	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Indonesia		O		O				O		
Korea	O		O				O			O
Malaysia	O		O				O			
Mongolia		O		O				O		O
Nepal		O		O				O		O
Philippines	O		O							
Singapore	O		O				O		O	
Sri Lanka		O		O				O		O
Taiwan		O		O				O		O
Thailand	O		O				O		O	

Note: Practices for each country are the same of the inward and outward data in other cases.

Appendix 1.9: Availability of Inward and Outward Breakdown FPI Data by Type of Securities

COUNTRY	EQUITY SECURITIES				LONG-TERM DEBT SECURITIES				SHORT-TERM DEBT SECURITIES			
	Inward		Outward		Inward		Outward		Inward		Outward	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Indonesia	0			0	0		0		0		0	
Korea		0	0			0	0			0		0
Malaysia	0		0		0		0		0		0	
Mongolia												
Nepal												
Philippines	0		0		0		0		0		0	
Singapore	0		0		0		0		0		0	
Sri Lanka	0		0									
Taiwan	0		0		0		0		0		0	
Thailand	0		0		0		0		0		0	

Appendix 1.10: Reporting FPI Liabilities Statistics to International Organisations

COUNTRY	EQUITY SECURITIES		LONG-TERM DEBT SECURITIES		SHORT-TERM DEBT SECURITIES		BY COUNTRY OF RESIDENCE OF ISSUER	
	Yes	No	Yes	No	Yes	No	Yes	No
Indonesia	0			0		0		0
Korea		0				0		0
Malaysia	0		0		0		0	
Mongolia								
Nepal								
Philippines*	0		0		0			0
Singapore	0		0		0			0
Sri Lanka	0							
Taiwan**	0		0		0		0	
Thailand	0		0		0		0	

* For stocks only(IIP)

N.A.- Not Applicable

** Taiwan does not report FPI Liabilities statistics to international organisations. However, it reports external debt and bank's international assets and liabilities to the BIS.

Appendix 1.11: Periodicity and Timeliness and Revision Policy of FPI Data

COUNTRY	PERIODICITY 1/			Remarks	TIMELINESS 2/			REVISION POLICY*
	Monthly	Quarterly	Annual		Monthly	Quarterly	Annual	
Indonesia		0				0		6 months
Korea	0				0			annual
Malaysia		0				0		quarterly/annual
Mongolia								
Nepal								
Philippines	0					0		1/
Singapore		0	0			0	0	no revision reqd.2/
Sri Lanka		0				0		no revision reqd.
Taiwan	0				0			1-2 quarter
Thailand	0				0			4 times a year

* Revision Policy refers to the period of couple of revisions after which the information is granted as the final figure.

1/ Revision of estimates is done every end-month of the quarter for current year estimates and every end-year for previous years's estimates.

2/ Quarterly data are provisional and so updated in the next issue of Monthly Digest of Statistics. Quarterly and annual data are revised at the time of publication of annual Economic Survey of Singapore. Genreally data are considered final and no revisions are envisaged 2 years

Appendix 1.12: Major Sources of FPI Data

COUNTRY	REGULAR SURVEYS		INTERNATIONAL TRANSACTIONS REPORTING SYSTEM (ITRS)		EXCHANGE CONTROL INVESTMENT APPROVAL AUTHORITY		OTHERS (PUBLISHED SOURCES, BILATERAL SOURCES, PRESS REPORTS)		REMARKS
	Inward	Outward	Inward	Outward	Inward	Outward	Inward	Outward	
Indonesia	✓	✓					✓		*1
Korea	✓	✓	✓	✓					*2
Malaysia	✓	✓	✓	✓		✓	✓	✓	
Mongolia									
Nepal									
Philippines	✓	✓	✓	✓			✓	✓	*3
Singapore	✓	✓							
Sri Lanka			✓	✓		✓			
Taiwan			✓	✓	✓				
Thailand	✓	✓	✓	✓			✓	✓	

*1 Data resulted from survey are not published

*2 Regular surveys for outward is applied only for position data while in ITRS, transaction data is compiled both by ITRS and survey for BOP flow statistics.

*3 Another source of FPI data is Registration System (Custodian Bank's report) for both inward and outward data.

Appendix 1.13: Availability of FPI Data by Country Breakdown and Residence and Security by Security Approach

COUNTRY	RESIDENCE OF THE ISSUER OF THE SECURITY		RESIDENCE OF THE HOLDER OF THE SECURITIES		SECURITY BY SECURITY APPROACH a/		AGGREGATED APPROACH b/	
	Yes	No	Yes	No	Yes	No	Yes	No
Indonesia		0		0		0		0
Korea	0		0			0	0	
Malaysia	0		0			0	0	
Mongolia								
Nepal								
Philippines		0		0		0		0
Singapore		0		0		0	0	
Sri Lanka								
Taiwan		0		0		0		0
Thailand	0			0		0	0	

a/ where the information constitutes each holding of securities issued by non-residents owned by individual instrument held.

b/ where securities issued by non-residents owned are reported in aggregate for each counterpart country in a common (usually domestic) currency.

Appendix 1.14: Portfolio Investment (FPI) by Institutional Resident Sector

COUNTRY	GENERAL GOVERNMENT		BANKS		MONETARY AUTHORITIES		OTHERS*	
	Yes	No	Yes	No	Yes	No	Yes	No
Indonesia		0		0		0		0
Korea	0		0		0		0	
Malaysia	0		0		0		0	
Mongolia								
Nepal								
Philippines	0		0		0		0	
Singapore	0			0		0	0	
Sri Lanka		0		0		0		0
Taiwan		0	0			0		0
Thailand	0		0			0	0	

* Others may include non-financial corporations (private, public and quasi-corporations, insurance companies, pension funds, other non-depository financial intermediaries, private non-profit institutions and households.

Appendix 1.15: Geographical Allocation of FPI Statistics(Liabilities)

COUNTRY	GEOGRAPHICAL ALLOCATION		IF, "YES" METHOD OF ALLOCATION	
	Yes	No	Transactor Principle a/	Debtor/Creditor Principle b/
Indonesia		0		
Korea	0		0	
Malaysia	0			0
Mongolia				
Nepal				
Philippines	0		0	
Singapore		0		
Sri Lanka		0		
Taiwan		0		
Thailand	0		0	

Note: The debtor/creditor principle can attribute the liability to the correct country of holder

Appendix 1.16: Currency Breakdown of Securities (FPI)

COUNTRY	CURRENCY BREAKDOWN		IF YES, MARK () ON THE FOLLOWING WHERE APPLICABLE
	Yes	No	
Indonesia		✓	LOCAL CURRENCY US DOLLAR POUND STERLING DEUTSCHMARK JAPANESE YEN HONG KONG DOLLAR KOREAN WON SAUDI RIYAL Others
Korea ^{1/}	✓		
Malaysia ^{2/}	✓		
Mongolia			
Nepal			
Philippines	✓		
Singapore		✓	
Sri Lanka		✓	
Taiwan		✓	
Thailand		✓	

^{1/} US dollar, Sterling Pound, Japanese Yen and others.

^{2/} All except Saudi Riyal

Appendix 1.17: Classification of Securities by Instruments

COUNTRY	EQUITY INSTRUMENTS EI	LONG-TERM DEBT INSTRUMENTS LDI	MONEY MARKET INSTRUMENTS MMI
Indonesia ^{1/}	✓	✓	✓
Korea	✓	✓	✓
Malaysia ^{2/}	✓	✓	✓
Mongolia			
Nepal			
Philippines ^{3/}	✓	✓	✓
Singapore ^{4/}	✓	✓	✓
Sri Lanka ^{5/}			
Taiwan	✓	✓	✓
Thailand ^{6/}			

1/: EI- Ordinary share; LDI- Floating rate notes & others; MMI- commercial paper

2/: EI- Ordinary share, Preference share, Depository receipts and Shares in Mutual Funds & Investment Trusts; LDI- Zero-coupon bond, Euro bond, Mortgage backed bonds, Floating rate notes, Debentures, Non-participating preference shares(> 1 year) and depository receipts; MMI- Euro note Certificate of deposits, Revolving Underwriting Facility, Treasury bill, Bankers's Acceptance and Non-participating shares(< or equal to 1 year).

3/: data are available but not consolidated and/or dissemiinated because of confidentiality clause in data generation

4/: same as above.

5/: no classification

6/: Thailand does not classify the securities by instruments as mentioned above. It record the securities only in gross term as equity securities and long-term debts.

Appendix 1.18: Classification of Securities by Maturity

COUNTRY	By Original Maturity		By Duration (Long-Term/Short-Term)		Remarks
	Yes	No	Yes	No	
Indonesia	0			0	
Korea	0			0	
Malaysia	0		0		
Mongolia					
Nepal					
Philippines	0		0		
Singapore	0		0		By remaining maturity
Sri Lanka					Not applicable
Taiwan*	0		0	0	
Thailand	0			0	

* Although not classified in exact title of short-term and long-term as in BPM5, but debt category is separated under "bonds & notes" and "money market instruments" revealing the classification by duration of more than one year maturity and within one year maturity.

Appendix 1.19: Valuation of Securities

COUNTRY	BOOK VALUE		MARKET VALUE			REMARKS
	Yes	No	Yes	No	If Yes, Methods Used	
Indonesia	✓					
Korea			✓			
Malaysia	✓		✓			
Mongolia						
Nepal						
Philippines	✓					
Singapore			✓			
Sri Lanka	✓					
Taiwan			✓			
Thailand		✓*	✓			

* The stock of securities which is obtained from the surveys is recorded on the basis of market value.

** The flows of securities is recorded on the basis of transactor principle but whether it is recorded on the basis of book value is not ascertained as the BOT does not know the exchange rate used by the respective company.

PART II :

COUNTRY CHAPTERS

CHAPTER 2

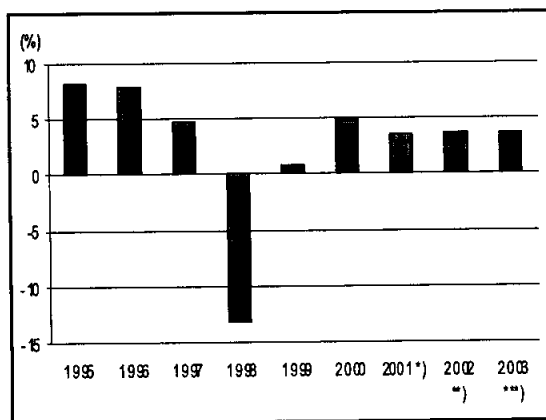
MANAGING AND MONITORING DIRECT INVESTMENT AND PORTFOLIO INVESTMENT FLOWS: THE CASE OF INDONESIA

by
Nanang Hendarsyah ¹
and
Andy Johan Prasetyo

1. Introduction

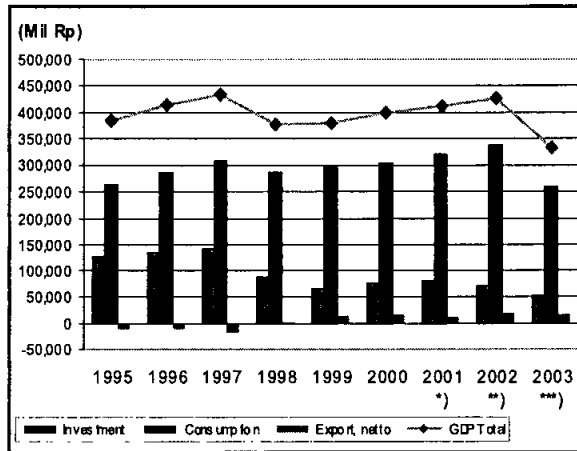
During 2002/2003, the Indonesian economy developed favourably as indicated by more stable macroeconomic conditions. Nonetheless, it remained burdened with structural problems, notably inadequate investments to support sustainable economic growth. The low investment was a result of high investment risks as reflected by limited lending by the banking system and deteriorating competitiveness to attract foreign direct investment. Accordingly, the overall economic growth during 2002/2003 was largely driven by consumption, which contributed to an unbalanced economic structure.

Chart 2.1
Economic Growth



1. Country researchers are Economists of the International Economic and Institutional Studies Division, Directorate of Economic Research and Monetary Policy and Balance of Payments Statistics Division, Directorate of Monetary Statistics, Bank Indonesia respectively.

Chart 2.2
Gross Domestic Product



Given the structural problems facing domestic banking system, efforts to attract capital inflows, particularly long-term capital remain a major issue in increasing domestic production capacity. History shows that in the past decade, the Indonesian economy, as an emerging market, had benefited significantly from long-term international capital flows.

However, it has also been shown that capital inflows could create problems in macroeconomic policy management. On the one hand, increased capital inflows helped Indonesia achieve strong economic growth during the 1990-to-1997 period. It alleviated capital constraint and smoothened out consumption and investment, creating a favourable climate for economic growth. On the other hand, capital inflows led to an overheating economy because of rapid monetary expansion, distorted relative prices and widening current account deficit, and increased risks in the financial sector. The rapid financial integration environment led to a greater volatility and sudden reversal of inflows as proven during the crisis of 1997-1998.

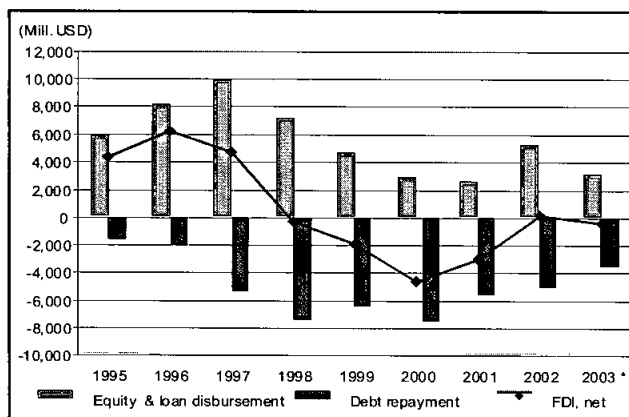
With this background, this Paper explores the salient features of FDI and FPI flows, data compilation practices, issues relating to improving data collection, and finally re-examining the relationship between real output and capital inflow.

2. Salient Features of Foreign Direct Investment (FDI)

The salient features of FDI can be identified by examining the performance during the pre and post financial crisis (before and after 1997). In order to avoid mis-interpretation, it would be better to have a look at the nature of FDI data. The

data relate to the direct investment of Indonesia and comprise equity capital including privatisation, and other capital such as loan disbursement and debt repayment. Therefore, a negative net FDI value does not mean that divestment is taking place. It can be the result of higher debt repayment relative to equity and loan disbursement.

Chart 2.3
Foreign Direct Investment



FDI is an important component of foreign private capital to Indonesia as it had proven to be resilient during financial crisis compared to other forms of foreign investment such as portfolio investment and short-term debt. In the pre-crisis period, Indonesia had been a very attractive market for foreign investors. Economic policy had become more market-oriented, as private sector investment had taken over the role of the main driver for economic growth. Net FDI flows constantly registered a surplus with the highest level registered at above USD 6 billion in 1996. This performance was supported by Government Regulation No. 20 of 1994, which permits up to 100% foreign ownership in direct investment. As shown in Chart 2.3, during the years from 1995 to 1997, the inward direct investment increased sharply from about USD 6 billion to more than USD 10 billion. The strong inward direct investment ended in 1997 with the onset of the Asian crisis.

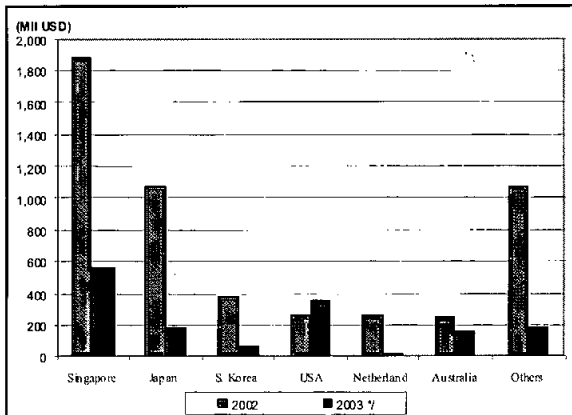
The 1997 economic crisis together with political and social disputes decreased foreign investment significantly in the following years. Indonesia suffered substantial negative FDI flows in the wake of the crisis. Net FDI flows fell sharply to record a deficit of USD 0.2 billion in 1998 followed by further deficits with the largest recorded at more than USD 4.5 billion in the year 2000. Indonesia's economy encountered particular vulnerabilities that caused the sharp fall-off in FDI. Continuing problems of financial governance, lack of credibility of the legal and judicial system,

political and security uncertainty, and issues regarding decentralisation of power to approve investments and impose regional taxes, altogether discouraged investors from making longer-term commitments. However, in the last two years (2002/2003), net FDI flows have improved slightly, marked by higher equity capital, particularly in 2002. This might be in due to the progress of the Government programme for state-owned enterprises privatisation and banking restructuring.

2.1 Category of FDI by Country of Origin

In order to identify the major foreign direct investors in Indonesia, it is important to list inward direct investment in the order of their country of origin (Chart 2.4). The Chart shows that for 2002, the primary foreign investor was Singapore (USD 1.9 billion), followed by Japan (USD 1.1 billion), South Korea (USD 0.4 billion), the United States (USD 0.3 billion), and the Netherlands (USD 0.2 billion). Meanwhile, in the first half of 2003, the major foreign investor was Singapore (USD 0.6 billion), followed by the United States (USD 0.3 billion), Japan (USD 0.2 billion), and Australia (USD 0.15 billion).

Chart 2.4
FDI by Country of Origin

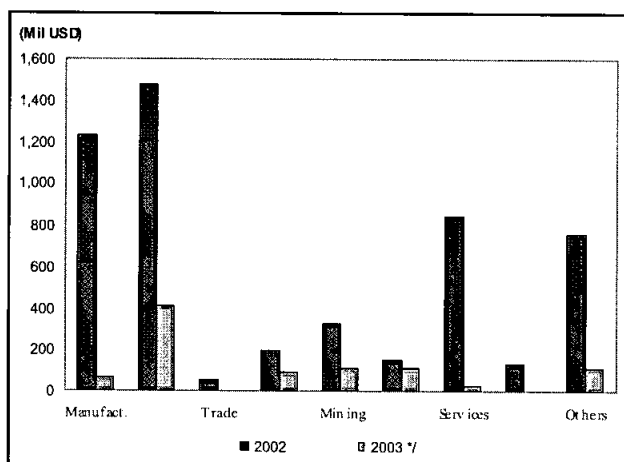


2.2. Category of FDI by Economic Sector

In terms of economic sectors (Chart 2.5) for 2002, most FDI was concentrated in the financial institution sector (USD 1.5 billion), followed by manufacturing industry (USD 1.2 billion), services (USD 0.8 billion), and mining sector (USD 0.3 billion). In comparison, the financial sector continued to be the most attractive sector (USD

0.4 million), while the mining and agricultural sectors stood as the next sectors FDI concentrated on (USD 0.1 billion) in the first semester of 2003.

Chart 2.5
FDI by Economic Sector



3. Salient Features of Foreign Portfolio Investment (FPI)

In tandem with the increasing trend of direct investment in Indonesia in the pre-crisis period, FPI had recorded surpluses steadily and reached the highest level of USD 5 billion in 1996. This was closely related to the Government Act no. 8 of 1995 on Capital Market, which relaxed the limitation of share ownership by foreign investors in both mutual fund and securities companies. Since the middle of 1997, however, market expectations and confidence suddenly shifted and triggered a reversal in portfolio investments. FPI flows recorded a deficit of more than USD 2.5 billion in 1997 (chart 2.6). This figure was in sharp contrast, for instance, to the volume of foreign reserves, which stood at USD 20.3 billion and USD 17.9 billion respectively in June 1997 and June 1998.

The component contributing to FPI deficit was debt securities which fell to negative USD 5.4 billion while equity securities still held on to a surplus of USD 2.8 billion, albeit much lower than the 1996 figure. Subsequently, net FPI flows remained in deficit even though at a decelerating pace, in line with the progress made in Indonesia's economic recovery.

Parallel to FDI development, FPI in 2002 started to record a surplus of more than USD 1 billion. This may be attributable to the successful initial public offerings

Chart 2.6
Foreign Portfolio Investment (FPI)

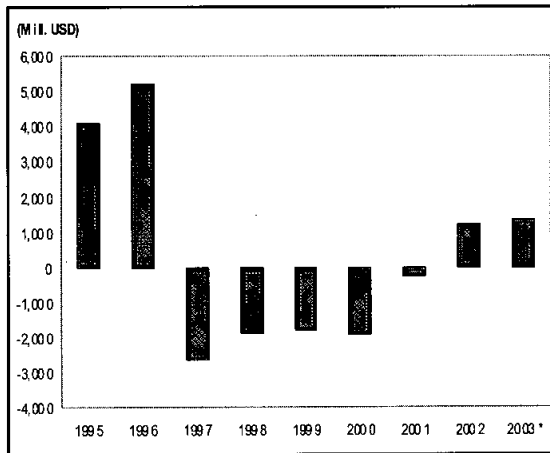
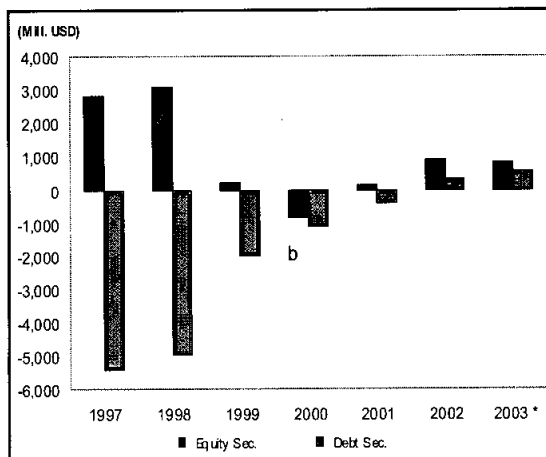


Chart 2.7
Equity and Debt Securities



(IPO) of state-owned enterprises such as Bank Rakyat Indonesia, PGN (state-owned gas utility company), which attracted foreign investors.

4. National Policy/Regulation on FDI and FPI

Policy/regulation on FDI and FPI issued by the Government, Bank Indonesia, the Coordinating Investment Board, and the Jakarta Stock Exchange are as follows:

Managing and Monitoring Direct and Portfolio Investment Flows:.....

No.	Types	Arrangements
1.	<p>Capital Transactions:</p> <p>i. Controls on transactions with non-residents</p>	<ul style="list-style-type: none"> - lending or provision of overdrafts in rupiah or foreign currency - placing funds with non-residents - purchase of rupiah-denominated securities issued by non-residents - inter-office transactions in rupiah - equity participation in rupiah with non-residents
2.	<p>ii. Controls on capital market securities</p> <ul style="list-style-type: none"> - Purchase locally by non-residents - Sale or issue locally by non-residents - Sale or issue abroad by residents 	<ul style="list-style-type: none"> - No limitation of shares, yet ownership of finance companies is controlled. - Foreign companies are permitted to issue Indonesian Depository Receipts (IDR) through custodian banks in Indonesia. - No control as long as the shares are not listed in the Indonesian Stock Exchange.
3.	<p>iii. Controls on bonds or other debt securities</p> <ul style="list-style-type: none"> - Purchase/sale or issue locally by non-residents - Purchase abroad by residents - Sale or issue abroad by residents <p>iv. Controls on money market instruments</p> <ul style="list-style-type: none"> - Sale or issue locally by non-residents - Purchase abroad by residents 	<p>No restrictions</p> <p>Banks are prohibited from purchasing securities denominated in rupiah issued by non-residents</p> <p>No restrictions, subject to offshore regulations.</p> <p>As stated in capital market and debt securities.</p> <p>As stated in capital market and debt securities.</p>

	- Sale or issue abroad by residents	Banks require approval from the COLT for certain maturity and amount, but it should not exceed 30% of the banks' capital.
4.	v. Controls on collective investment securities	Purchase locally by non-residents: should not exceed 1% of any person's fund.
5.	vi. Controls on derivatives and other instruments	<ul style="list-style-type: none"> - Prohibited if transactions are not associated with foreign exchange and interest rates. - Losses from transactions exceeding 10% of each bank's capital must be immediately reported to BI. - Forward and swap sales or option transactions against rupiah by a domestic bank to non-residents are limited to US\$3 million/customer, except for investment-related transactions. - Banks are prohibited from maintaining derivative exposures, as well as extending credit facilities and overdrafts for the purpose of derivative transactions to the bank's debtor.
	vii. Controls on credit operations	Prohibited for commercial credits (in general) and financial credits (by banks), while for guarantees, sureties, and financial backup facilities are allowed for banks under certain conditions.
	- By residents to non-residents	
	- To residents from non-residents	In general, no control on non-bank private sector, but reports on the borrowings have to be submitted to BI periodically. However, government/state owned company needs approval from the COLT for borrowings related to some development projects.
	viii. Controls on direct investment and liquidation	Only several sectors are controlled in light of direct investment scheme. In balance, some leniencies for foreign investors are applied. No controls over liquidation proceeds (after settlement of taxes and financial obligation in Indonesia).

Additionally, the Government has made significant revisions in the Act for FDI. With the provision of attractive facilities stipulated under the draft of the act, the Government expects Indonesia to become an attractive place for foreign as well as domestic investors.

5. Compilation Practice of FDI and FPI

The compilation practice of FDI and FPI illustrated in this Paper corresponds to the BOP data compilation practice conducted at Bank Indonesia. Accordingly, the FDI data comprise only direct investment by foreign investors in Indonesia which cover 'equity' and other forms of capital.

The equity capital includes state assets sales under privatisation and the Indonesia Banking Restructuring Agency (IBRA) Programme, while other forms of capital mostly consist of loans (disbursements and repayments). Equity data are derived from surveys. It was revealed that approximately 30% of capital inflows of direct investment enterprises are in the form of equity while the rest are in loans. Meanwhile, the 'foreign enterprises debt reporting system' maintained by Bank Indonesia provides the data on 'other capitals'. Under the system, banks and non-bank institutions are requested to report their foreign loans, both disbursement and debt repayment, to Bank Indonesia on a monthly basis. The net deficit of FDI in the BOP, therefore, implies that the repayment of private foreign debt could exceed loan disbursements as well as equity and state assets sales, and vice versa.

FPI data consist of equity and debt securities. Similar to the FDI data, the FPI data only covers the liability side (FPI inward). This means that the data do not reflect the flows of non-resident securities owned by resident. Equity securities data comprise gross securities transactions between resident and non-resident at the Jakarta Stock Exchange (JSX) and are presented in the JSX Bulletin on a monthly basis. Debt securities data covers securities transactions other than equity, such as bonds and notes. The data are obtained from the Treasury and Government Bonds Report, and Custodian Bank Report. Unlike equity securities data, debt securities flows data relate to changes between beginning and end of period stock.

It is very hard to obtain FPI data in terms of residency concept as it is difficult to identify the end investor (resident/non resident) due mainly to most securities transactions being made through the fund manager/broker.

6. Issues Relating to Compilation Practices and Efforts to Improve FDI and FPI Data

In view of the need to improve FDI and FPI data, Bank Indonesia has undertaken various steps to develop a 'foreign exchange monitoring system'. The system is still being refined for the provision of more accurate, comprehensive and timely data. In addition, Bank Indonesia has been strengthening close cooperation with data providers, such as the Investment Coordinating Board, the Jakarta Stock Exchange, the Capital Market Supervisory Agency, and the Indonesian Banking Restructuring Agency (IBRA). Other efforts such as conducting surveys and workshops, are also important in order to improve the quality of FDI and FPI data.

6.1. Implementing the Monitoring System for Foreign Exchange Activity

Starting in 2000, Bank Indonesia implemented a monitoring system of foreign exchange activity, which requires bank and non-bank financial institutions to report their own and their customers' transactions in the foreign exchange market to Bank Indonesia. The main objective of the system is to enhance data availability for BOP and IIP statistics (including FDI and FPI data). Although the system is not yet fully in place to provide more reliable data, due to various constraints in the implementation, it is nonetheless a starting point for the better quality FDI and FPI data in the future.

In addition to the above system, a foreign exchange monitoring system through the money market information system (PIPU) which was established in 1993, continues to undergo improvements to better scrutinise cross border capital flows. This system, which monitors spot and derivative foreign exchange transactions through interbank market, is regarded as "leading information" as transactions data can be collected in short time (one day lag).

6.2. Conducting Survey (FDI Survey and CPIS)

Bank Indonesia has conducted several surveys on FDI and FPI where the respondents include banks, non-bank financial institutions and corporate/enterprises. Although the response rates were not very encouraging, the results have been beneficial for improving the quality of FDI and FPI data. In order to foster closer cooperation with the respondents, Bank Indonesia organised several programmes to publicise, explain the importance of the surveys as well as to gather feedback from the respondents on the quality of the surveys.

6.3 Implementing the New Data Collecting System on Private Enterprises

Started in March 2002, Bank Indonesia also implemented a new data collecting system on private capital, namely the External Debt Information System. This system replaced the Debt Analysis and Management System (DAMS), which did not reflect the equity relationship of enterprises as stipulated in the BOP Manual and which merely classified direct investment enterprises based on the status specified by the Investment Coordinating Board (BKPM). Under the new system, direct investment enterprises are grouped based on their equity interest in domestic enterprises (10 percent or more).

6.4. Conducting Workshop on Mergers and Acquisitions (M&As)

Bank Indonesia will conduct more workshops on M&As as they have become one of the major contributors to the direct investment in Indonesia. The main purpose of the workshops is to gather information and exchange views on cross-border M&As among data suppliers, such as the Investment Coordinating Board (BKPM), the Capital Market Supervisory Agency (BAPEPAM), the Jakarta Stock Exchange (JSX) and the Ministry of State Owned Enterprises (MSOE). In addition, data on M&As will be updated with the provision of the latest data at the workshops.

7. Empirical Evidence : The Relationship Between FDI and Output Growth

The relationship between FDI and economic growth has been widely researched as evidenced by the voluminous empirical literature available for both industrial and developing countries. Neoclassical models of growth as well as endogenous growth models form the basis of most empirical works on the FDI-growth relationship. Their relationship has been studied through four main channels - (i) by looking at the determinants of growth, (ii) by exploring the determinants of FDI, (iii) by examining the role of multinational firms in host countries and (iv) by studying the direction of causality between the two variables.

As mentioned, since the early 1990s (until the crisis erupted in 1997) Indonesia had been one of the important recipient developing countries. Hence, this section focuses on the role played by FDI and FPI in the growth process along with other exogenous variables as determinants of output growth. Additionally, a causality test was performed to examine the causal relationship between FDI and output growth, and to investigate whether output growth in Indonesia is FDI-led (FDI-led growth hypothesis), or vice-versa. However, the causality test was carried out beyond the traditional two-variable relationship by with the development of a five-variable VAR model for production function, for the pre and post crisis periods.

7.1. The Impact of FDI on Industrial Output (Growth Determinant Equation)

The impact of FDI on industrial output is investigated by examining unit root properties and cointegration analysis using the procedure developed by Johansen (1995). Following Shan, Tian, Sun (1997), the production function model is modified in view of the situation in Indonesia, such as FDI behaviour and trend mentioned in the previous sections, as well as the availability of consistent data series. The long-run (cointegration relationship) model of FDI led-Growth is specified as follows:

$$\text{Log_IPt} = \alpha_1 + \alpha_2 \text{LogFDI} + \alpha_3 \text{LogFPI} + \alpha_4 \text{LogGNP (or LogBL)} + \alpha_5 \text{LogX} + \alpha_6 \text{LogEX} + \alpha_7 \text{GARCH} \quad (1)$$

Where :

Y	=	Industrial Production Index (as a proxy for real output)
FDI	=	Foreign Direct Investment_inward (in US\$)
FPI	=	Foreign Portfolio Investment_inward (in US\$)
GNP	=	Gross National Income per Capita at constant price
BL	=	Commercial Bank Loan to private sector
X	=	Export of Good (volume)
EX	=	Level of Exchange Rate (US\$/Rupiah)
GARCH	=	Exchange rate volatility

The cointegration equation and VAR (Vector Auto Regressive) are estimated using quarterly data in logarithm, except for exchange rate volatility (GARCH), which is for the period of 1993.01- 2002.04.

7.1.1 Hypotheses (H)

Following the above equation, the hypotheses below could be advanced with the insertion of factors affecting output growth in Indonesia.

(a) **H1:** *FDI and FPI_inward have positive relationship with output growth*

FDI could promote output growth as postulated by, among others, Todaro (1982) and Kruger (1987). Recently economists, in line with the new growth theory, argue that through capital accumulation in the recipient economy, FDI is expected to generate non-convex growth by encouraging the corporation of new inputs and new technologies in the production function of the recipient economy. Further, FDI is expected to augment the recipient economy's stock of knowledge with knowledge transfer, through labour training and skill acquisition on the one hand, and introduction of alternative management practices and organisational arrangement

on the other (de Mello and Sinclair 1995). As a result, a foreign investor may increase productivity in the recipient economy and FDI can become a catalyst for domestic investment and technological progress.

As in the case of FDI, the economic gain from FPI lies in the efficiency of investment, since the consumption smoothing effect is present in both cases and the same world interest rate prevails in the host country in the two regimes. Under some plausible conditions, however, the size of the aggregate stock of capital in the FDI regime is larger than in the portfolio regime. Therefore, FDI_inward enlarge the size of the aggregate stock of domestic capital. Bosworth and Collins (1999) provided such evidence for a sample of developing countries during the 1978-to-1995 period. Using similar samples, Hecht, Razin, and Shinar (2002) found that the effect of FDI_inward on domestic investment is significantly larger than that of portfolio investment_inward.

(b) H2: Export has positive relationship with output growth

The export variable is for export led growth hypothesis (ELG), which suggests a positive correlation between export growth and real output growth, reflecting the view that export-oriented policies contribute to economic growth. The theoretical rationale for this can be summarised (Abdulnasser and Manuchehr 2000) as follows; (i) the Keynesian argument that an increase in export leads to output expansion via the foreign trade multiplier, (ii) exports relax the binding foreign exchange constraint to allow increase in imports of capital and intermediate good, leading in turn to output growth, (iii) exports enhance efficiency through competition, and (iv) competition give rise to economies of scale and diffusion of technical knowledge in production, which are potentially important sources of growth.

(c) H3: GNP (real) per capita or commercial bank loan has positive relationship with output growth

The rationale of considering GNP per capita or commercial bank loan is that it is a proxy for potential demand (demand side) and subsequently for the availability of fund to expand production capacity.

(d) H4: The value of the domestic currency has negative or positive relationship with output growth.

The industrial structure of Indonesia's economy is characterised by its highly import content. For this reason, the exchange rate trend is perceived to have large impacts on production cost, which in turn will lower output growth. However, a

significant fall of the domestic currency value may also drive export volumes as the competitiveness for export oriented industry products will increase in the international market increase relative to that of competitor countries. This in turn will encourage more production through the trade multiplier effect.

(e) **H5:** *The volatility of exchange rate (risk) has negative relationship with output growth.*

Finally, country risk including economic, financial and political stability is important in promoting confidence for the production process as well as increasing productive capacity. Most importantly, expected or actual political instability constitutes a serious impact on output growth as it relates to uncertainties and increases risks and costs subsequently.

Numerous empirical evidences find a strong relationship between ‘country risk’ and ‘exchange rate volatility’ as exchange rate fluctuations respond instantaneously to risks associated with economic, financial, and political instability.

7.2 Exchange Rate Volatility

Exchange rate volatility is measured using ARCH (Autoregressive Conditional Heteroskedasticity), which was introduced by Engle (1982) and generalised as GARCH (Generalized Autoregressive Conditional Heteroskedasticity) by Bollershev (1986). The standard GARCH specification is as follows:

$$EX_t = \beta EX_{t-1} + \varepsilon_t \quad (2)$$

$$\sigma_t^2 = \psi + \alpha \varepsilon_{t-1} + \mu \sigma_{t-1}^2 \quad (3)$$

where equation (2) is the mean equation, which specifies the exchange rate as a function of the past value of exchange rate, and equation (3) is the conditional variance equation, while variance is a function of the mean, volatility of the previous period (the ARCH term) and variance of the last period forecast (the GARCH term). From the equation in Table 2.1, the GARCH series as an exchange rate volatility measure is generated for long-term equation purpose.

Prior to testing for the cointegration relationship between industrial output growth and the determinant variables, it is necessary to establish that they are integrated of the same order. To this end, the Augmented Dickey-Fuller test (ADF) was carried out on the time series in indifference and difference form. The result of the ADF

Table 2.1
GARCH Equation

Endogenous Variable	Log EX	Conditional Variance
	Mean Equation	Conditional Variance Equation
<u>Exogenous Variables</u>		
Log EX t-1	1.001298 [342.9314]	
Constant		0.001473 (3.686026)
ARCH (1)		1.163913 (2.570113)
GARCH (1)		0.261115 (1.658156)
R2		0.93754
DW		1.43668

Table 2.2
Unit Root Test – Augmented Dickey Fuller Test

Variables	Level	Lag (AIC)	First Diff.	Lag (AIC)
log_ip	-3.2917 ^c	1	-8.202269 ^{a,b,c}	1
log_exp_good	-3.4768 ^c	1	-5.320447 ^{a,b,c}	1
log_gnp	-2.5409	1	-4.085565 ^{a,b,c}	1
log_bank_loan	-1.8846	4	-3.316378 ^{b,c}	4
log_cpi	-0.6631	1	-3.435887 ^{b,c}	2
log_gdp	-2.5969	1	-4.092111 ^{a,b,c}	1
log_pi	-1.8799	1	-4.405397 ^{b,c}	1
log_fdi_inward	-1.7196	1	-6.024479 ^{a,b,c}	1
log_fpi_inward	-3.7071 ^{b,c}	1	-7.357829 ^{a,b,c}	1
dir	-2.8685 ^c	1	-3.394309 ^{b,c}	1
libor	-1.4195	1	-4.780453 ^{a,b,c}	0
log_REER	-1.9178	1	-3.287484 ^{b,c}	1
log_NER	-1.1280	1	-3.119843 ^{b,c}	1
log_cr	-1.6794	1	-2.926259 ^{b,c}	1

Note : the superscript a, b, and c denote significant at 1, 5, 10% respectively critical statistic computed by Mackinnon (1991).

test on the time series, expressed in natural logarithms except for GARCH, suggests that each series is a I(1) variable at 90% and 95% confidence level when re-applying the test after transformation (Table 2.2). The lag length is determined automatically by Akaike Information Criterion (AIC) method.

Most of the variables in Table 2.1 contain a unit root at level which indicates non-stationary time series. Engle and Granger (1987) pointed out that a linear combination of two or more non-stationary series may be stationary, or the non-stationary time series are said to be cointegrated, and may be interpreted as a long-run equilibrium relationship between the variables. The results of the Johansen Cointegration Test to examine long run relationship are presented in Table 2.3.

From the long-run equation, the short-run equation was specified using the ECM (Error Correction Model) model. The ECM model has the cointegration relation built into the specification so that it restricts the long-run behaviour of endogenous variables to converge to their cointegrating relationship, while allowing for short-run adjustment dynamics. The deviation from the long-run equilibrium is corrected gradually through a series of partial short-run adjustment. The short-run equation is presented in Table 2.4.

The cointegration analysis in Table 2.3 shows that FDI_inward, FPI_inward, Income (GNP per capita), Bank Loan, Export, have positive relationships with industrial output, in contrast to ER and Exchange Rate Volatility (GARCH) which have negative relationships. Almost all the variables are significant as indicated by high t-statistic (in parenthesis).

From Table 2.3, it is interesting to compare the impact of FDI_inward and FPI_inward on output production - in both equations, the size of the impact of FDI_inward on output growth is significantly larger than portfolio_inward. This is consistent with the more important role FDI has in enlarging the size of the aggregate stock of domestic capital, and in turn promote industrial output growth. FDI_inward also have a significant impact in the short-run model, particularly when the main driver factors, such as domestic income and bank loan, are taken out of the model specification (equation 4 in Table 2.4).

In the case of Income (GNP) and Bank Loan, it is not surprising that both of them have significantly large effects on industrial output growth in the long-run. The most disturbing factor of industrial output growth in the both long-run equations is exchange rate volatility. In the short-run model, exchange rate volatility has a large impact on industrial output growth, which possibly has a key role as a contributing factor to short-run dynamics of output growth in the industrial sector.

Table 2.3
Industrial Output Determinant Equation
Cointegration Relation (Based on Johansen Test)

Endogenous Variable	Log_IP	
Exogenous Variables	Equation 1	Equation 2
Log_FDI_Inward	0.739326 (2.18572)	0.189684 (3.04088)
Log_FPI_Inward	0.189047 (1.60282)	0.072161 (2.54438)
Log_GNP per Capita	2.820634 (2.88876)	
Log_Bank Loan		1.03349 (5.89168)
Log_Export	0.582188 (1.83398)	0.256151 (2.10372)
Log_EX	-1.698632 (-2.23263)	-0.838057 (-3.47913)
GARCH	-6.087901 (-2.21121)	-5.255741 (-5.31044)
Trend	-0.093954 (-2.34558)	-0.061076 (-4.35614)
Constant	-54.53983	-19.44315

Normalized cointegrating coefficient

t-statistic in ()

Lag Interval : 1 - 4

Table 2.4
Error Correction Model
Short Run Equation

Endogenous Var.	D(Log_IP)							
Short Run Eq.	1		2		3		4	
	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat	Coefficient	t-stat
D(Log_FDI_Inward)	0.043325	1.41472	0.054837	1.70836			0.052547	1.852077
D(Log_FPI_Inward)								
D(Log_GNP per Capita)	0.634856	1.81771	0.787614	1.70777				
D(Log_Bank Loan)					0.19378	1.72295		
D(Log_Export)	0.167981	1.74193	0.154029	1.48807	0.229529	2.34913	0.166614	1.828522
D(Log_EX)	0.162546	1.90492						
D(Log_EX(-1))			0.005651	0.05266				
D(Log_EX(-2))					0.202117	2.73321	0.126475	1.79829
D(GARCH)	-0.306303	-2.2399	-0.42208	-3.0777	-0.666959	-5.5152	-0.811359	-6.01455
D(GARCH(-1))							-0.226325	-2.35218
Constant	0.016216	1.32322	0.010394	0.71742	0.017869	1.35649	0.020632	1.736144
ECM_t-1	-0.180206	-4.2195	-0.218132	-4.5544	-0.264861	-6.7262	-0.311216	-7.36546
R2	0.65592		0.6212		0.64649		0.700498	
DW	2.26515		2.45205		2.14702		2.058345	

7.3 The Granger Causality Test

The Granger non-causality test developed by Toda and Yamamoto (1995) was used to test the hypothesis that industrial growth in Indonesia is Granger-caused by FDI_inward, versus the alternative hypothesis that industrial growth attracted FDI_inward to Indonesia. The procedure utilises the WALD test for restrictions on the parameters of VAR(k) where k is the lag in the system. Rambali and Doran (1996) have proved that the WALD method for testing Granger non-causality can be computable simply by using the Seemingly Unrelated Regression (SUR). Even though AIC and SC are employed to choose the lag length, the VAR model is estimated using several different lag structures to ensure that the result are not sensitive to the lag length choice.

The sample period is divided into pre-crisis (1993.01- 1997.04) and post crisis (1998.01 – 2002.04). The results in Table 2.5 suggests that in the pre-crisis period, the null-hypotheses of Granger non-causality from FDI to industrial output growth and the null hypotheses of Granger non-causality from industrial output growth to FDI can be rejected at the 1% and 5% significant level respectively. In this period, the results merely demonstrates that both industrial output and FDI_inward reinforce each other in the course of economic development during 1993 – 1997. However, in the post crisis period, both hypotheses could not be rejected in the causality test. The socio-political and financial system instability in 1998/1999 led to a sharp fall in the domestic currency value against major currencies, which disrupted the production process and led to sharp contractions in industrial output. As evidenced in Table 2.5, the null hypotheses of Granger non-causality from exchange rate to industrial output was rejected at the 5% significant level.

The financial market turmoil in 1997/1998 raises the question whether a sudden capital reversal of portfolio investment in 1997 and a drop in FDI-inward in 1998 have contributed to a sharp fall in the domestic currency value. For this, the Ganger non-causality test was also done to examine the linkage between exchange rate, portfolio investment, and FDI. The results are presented in Table 2.6 which shows that there is a two-way causality running between exchange rate and portfolio investment, while FDI flows play no role in influencing the exchange rate. This empirical finding supports the argument that portfolio investment flows could generally be perceived as volatile and destabilises the exchange rate.

8. Concluding Remarks

Indonesia has learnt that international capital flows have the potential to create problems for macroeconomic management if not managed properly. In light of

Table 2.5

VAR Pairwise Granger Causality/Block Exogeneity Wald Tests

Exclude	Sample : 1993:01 1997:04 (pre-crisis)			Sample : 1998.01 2002.04 (post-crisis)		
	Chi-sq	df	Prob.	Chi-sq	df	Prob.
Dependent variable: Log_output						
Log_FDI inward	25.35147	3	0.0000	1.801143	3	0.6147
Log_Export	9.870782	3	0.0197	0.052171	3	0.9969
Log_GNP	7.442981	3	0.0590	3.499171	3	0.3209
Log_EX	10.92455	3	0.0121	8.059154	3	0.0448
All	70.22573	12	0.0000	20.37818	12	0.0603
Dependent variable: Log_FDI inward						
Log_output	7.706252	3	0.0525	1.692337	3	0.6386
Log_Export	15.44565	3	0.0015	0.260637	3	0.9673
Log_GNP	23.92173	3	0.0000	2.599888	3	0.4575
Log_EX	5.232556	3	0.1555	1.190142	3	0.7554
All	172.6256	12	0.0000	4.100362	12	0.9816

this, decision makers have to be provided with comprehensive, reliable, accurate and timely data for the monitoring of capital movements through some form of system so that early and proper responses to external shocks can be taken. This monitoring system must take into account, the size as well as type of capital flows to enable the immediate identification on the nature of capital flows, whether they are temporary or permanent, and the degree of their mobility. In view of this, Bank Indonesia has been undertaking various steps to develop a foreign exchange monitoring system, for the provision of more accurate, comprehensive and timely data although it is being refined. With regard to the compilation practices and data sources for balance of payment statistics, Bank Indonesia also refers to the BPM5 Manual for reports to international organisations.

The risk of volatile capital flows, such as portfolio investment, as reflected in our empirical evidence (the SUR-VAR causality test), on both macroeconomic and policy variables, can be contained to certain extent by instituting a comprehensive management strategy. Indonesia's experience has shown that a mix of monetary, fiscal and external policies which are consistent and flexible coupled with a strong structural foundation must be in place to withstand exogenous shocks.

Given the limited capacities in which the Government and Bank Indonesia can implement an effective and consistent macroeconomic management strategy, and the measured pace in which the financial sector can be strengthened, Bank Indonesia

Table 2.6

VAR Pairwise Granger Causality/Block Exogeneity Wald Tests**Sample: 1993:1 2002:4**

Dependent variable: Log EX (\$/Rp)			
Exclude	Chi-sq	df	Prob.
Log FPI Inward	13.43223	3	0.0038
Log FDI Inward	0.025706	3	0.9989
All	15.98655	6	0.0138

Dependent variable: Log FPI Inward			
Exclude	Chi-sq	df	Prob.
Log EX	11.04214	3	0.0115
Log FDI Inward	5.567513	3	0.1347
All	15.59726	6	0.0161

has imposed temporary measures, such as the non-internationalisation of rupiah policy (PBI no. 3/3/2001), in addition to the prudential-type measures aimed at enhancing financial system soundness. The measure is generally aimed at restraining certain types of capital flows, particularly short-term capital, that could destabilise the financial system. However, while restrictive controls on short-term capital flows can serve as a shield against sudden and destabilising capital flows, they should only be implemented temporarily as capital controls are the wrong remedy for fundamental economic imbalances. They should be used only to provide a “breathing space” to enable the authorities to address other urgent issues, such as financial sector reforms and economic revival.

Given the significant impact of long-term capital flows (FDI) on the volume of investment and production capacities, as demonstrated empirically during the period of rapid economic expansion of the 1990s to 1997, and subsequently in the crisis years after 1998, efforts should be made to promote these long-term flows but they should be accompanied with sound policies and well functioning markets. This is in order that the FDI are channelled to their most productive uses, with substantially greater benefits. Ultimately, the business environment, political and economic stability, better legal framework, and good governance, have very important roles in attracting FDI to Indonesia.

References

- Indonesia-Japan Economic Working Group, Promoting Investment to Accelerate the Economic Revitalization: Direction and Development of Indonesia Investment, 2003.
- Kinoshita T., Remarks on Promoting Investment to Accelerate the Economic Revitalization.
- Bahmani-Oskee M. and Alse, J., "Export Growth and Economic Growth: An Application of Cointegration and Error Correction Modelling, *Journal of Developing Areas*, 1993.
- Chen, C.H., 'Regional Determinants of Foreign Direct Investment in Mainland China, *Journal of Economic Studies*, 1996.
- De Mello. L. R., Foreign Direct Investment-led Growth in the Asian Region', *The Developing Economies*, 1996.
- Enders, W., Applied Econometric Times Series, John Wiley and Son, New York, 1995.
- Granger, C.W.J., Some Recent Development in the Concept of Causality, *Journal of Econometrics*, 1988.
- Gujarati D., Basic Econometric 3rd Ed, Mc-Graw-Hill New York, 1995.
- Johansen, S., Statistical Analysis of Cointegration Vectors', *Journal of Economic Dynamic and Control*, 1988.
- Rambadli A..N. and Doran H.E., Testing for Granger Non-causality in Cointegrated System Made Easy, *Working Papers in Econometric and Applied Statistics 88*, Department of Econometrics, The University of New England, 1996.
- Toda, H.Y. and Yamamoto, T., 'Statistical Inference in Vector Autoregressive with Possibility Integrated Process, *Journal of Econometrics*, 1995.

CHAPTER 3

MANAGING AND MONITORING FOREIGN DIRECT AND PORTFOLIO INVESTMENT FLOWS IN REPUBLIC OF KOREA

by
Min-Woo, Kim¹

1. Introduction

Foreign direct investment (FDI) played an important role in the recovery of the Korean economy from the financial crisis. Korea endeavoured to attract foreign capital as a part of corporate and financial restructuring efforts after the crisis of 1997. At the same time, far more extensive opening of the capital market and liberalisation of foreign exchange system contributed to the increase of foreign portfolio investment (FPI) in Korea.

There are debates in Korea on the effect of the increase of foreign capital flows with the implementation of liberalisation measures. The possibility of sudden reversal of foreign capitals has spurred the related authorities to prepare contingency plans to cope with such a situation in light of the previous crisis.

In this context, it is necessary to have an effective monitoring and management system of foreign capital flows. First of all, demand for statistics of FDI and FPI has increased as they are fundamental resources for assessing economic situations and implementing effective policies to deal with different situations. Furthermore, study of the effects of FDI and FPI on domestic economies has also been the main subject of many economic analyses.

This Paper looks at the general monitoring and management system, data compilation practices, and recent trends of FDI and FPI in Korea. The causal relationship between FDI/FPI and macroeconomic variables was also analysed along with Korea's experiences with liberalisation of capital flows. Lastly some policy implications were drawn from the analysis.

1. The author is Economist of the Foreign Exchange Analysis Team at the International Department of The Bank of Korea. This paper represents the view of the author and is not the official opinion of The Bank of Korea. He expresses his appreciation to senior economist Soon-Ho, Lee (Foreign Exchange Analysis Team), Senior Economist Hyun-Woo, Jun (Foreign Exchange Monitoring and Information Team), and the staff of the Balance of Payment Team for helpful comments and suggestions.

2. Monitoring and Compilation Systems of FDI/FPI

2.1 Data Compilation Practices of FDI and FPI

In comparison with the data compilation practices specified in the IMF Manual (BPM5), which defines FDI as acquisition of 10 percent or more of a domestic company's ordinary shares or voting power, Korea includes other types of investments in its compilation of FDI.

FDI in Korea includes investors owning less than 10% of the ordinary shares, but have effective roles to play in the management of an enterprise after entering into the specific direct investment agreements, i.e., agreements specifying dispatch or appointment of officers, agreements concerning technical licenses or joint research/development projects, agreements specifying supply of products/raw materials for more than one year.

The FDI compilation practice in Korea also includes land and structures directly owned by non-residents while excluding reinvested earnings, trade credits, etc., in direct investment capital (equity capital and long-term loans are also included).

In the case of FPI, Korea follows the IMF Manual (BPM5), including as it relates to investments in four types of financial instruments: equities, bonds and notes, money market instruments, and financial derivatives.

Investors making direct investment in Korea must notify the Ministry of Commerce, Industry, and Energy of their investment plans. The MOCIE collects and releases data on investment notifications, classified according to region and investment type, and issues the data upon receipt of the investment funds, using the same classification.

The Financial Supervisory Service (FSS) is in charge of the registration of investor identification and operates a foreign portfolio investment management system (only for listed stocks and bonds), to keep track of the state of foreign investors' stock-holdings. In its management of FPI, the FSS collects data and releases statistics in listed stocks and bonds by the buying/selling amounts and balances of securities valued at market-prices, classified according to the investors' nationality and types of securities.

The Bank of Korea gathers data on FDI/FPI flows on a cash basis, through its Foreign Exchange Information System. Inward and outward FDI/FPI data are used to monitor the supply and demand situation in the FX market and compiled

to prepare the balance of payment statistics as specified in the SDDS. Meanwhile, the International Investment Position (IIP) is collected separately, by a survey of financial institutions, government sectors, corporations, and other related institutions.

2.2 Foreign Exchange Information System

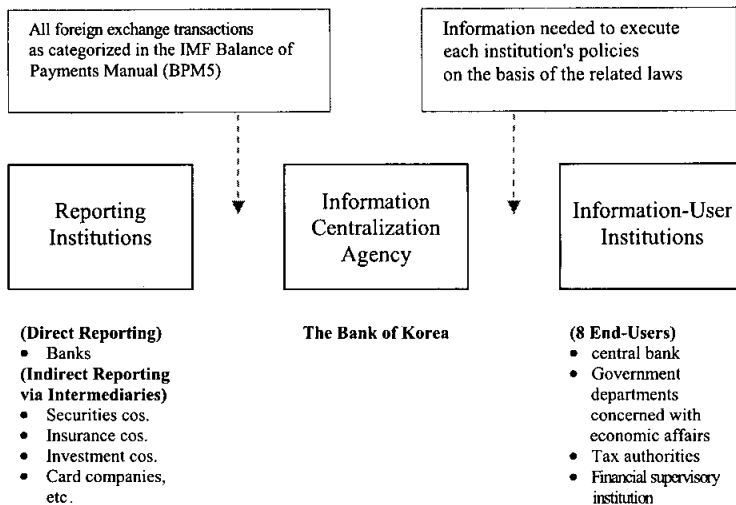
The Foreign Exchange Information System in Korea, initiated in September 2000, was set up for 3 purposes: to monitor foreign exchange flows and transactions, to facilitate effective ex-post management, and to collect information for compilation of relevant statistics.

The many reporting institutions includes all financial institutions which are namely, the foreign exchange banks, securities companies, insurance companies, investment companies, etc. The foreign exchange banks are directly connected to the information centralisation agency (The Bank of Korea), while the other financial institutions are connected indirectly via intermediate institutions, for example, the Korea Life and Non-Life Insurance Associations, Korea Securities Computer Corp., Korea Non-Bank Financing Association, etc. All foreign exchange trades, exports/imports, invisible trade, capital flows including FDI/FPI as classified in the IMF Balance of Payments Manual, and balance sheets in foreign currencies are reported through the system. There are 114 different types of reports with about 400,000 items of data gathered each day, in addition to other reports that are gathered monthly or quarterly.

The Bank of Korea plays the role of an information centralisation agency, gathering the data reported from the financial institutions as provided for in the Foreign Exchange Transactions Act, and provides the data to eight policy-making and implementing institutions.

The eight end-users consist of The Bank of Korea, Ministry of Finance and Economy, National Tax Service, Korea Customs Service, Korea Financial Intelligence Unit, Financial Supervisory Service, Korea Deposit Insurance Corporation, and Korea Center for International Finance. Each institution uses the information gathered by the system to achieve its policy objectives on the basis of the relevant laws.

Figure 3.1
The Structure of Foreign Exchange Information System



The main benefits of the system are the enhanced efficiency in the collecting and sharing of information, better monitoring and ex-post management, and more timely and accurate statistics compilation.

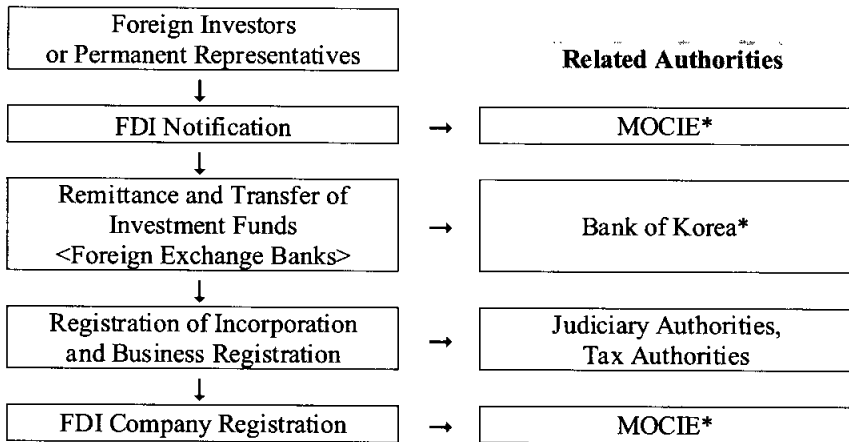
3. Phased Monitoring during FDI and FPI Procedure

3.1 Foreign Direct Investment Procedures

Although there are little restrictions in implementing direct investments in Korea, all foreign investors who are planning to invest must notify the related authority (the Ministry of Commerce, Industry, and Energy) of their investment plans. However, there is no binding contract in the notification that the investment plan must be implemented, and there are no limits on the usage of accounts for the remittance and transfer of funds.

The related authorities operate a monitoring system of foreign direct investment at each stage of notification, remittance and transfer of funds, and FDI company registration.

Figure 3.2
Procedure of FDI and Monitoring at Each Stage



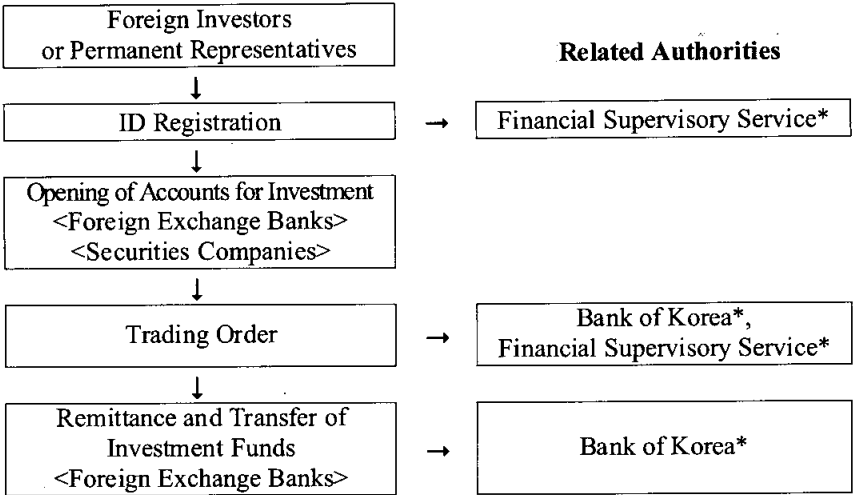
- Note : 1) The notification and registration procedure is done through the Korean Investment Service Center (KISC) using its one-stop service.
 2) * denotes the institution in charge of monitoring and collecting statistics at each stage.

3.2 Foreign Portfolio Investment Procedures

To invest in the Korean financial market, foreign investors should file registrations with the FSS and open specialised accounts used for portfolio investments cash flows only. Remittances and transfers of investment funds must always pass through the accounts designated exclusively for foreign portfolio investment, in the cases of both inflows and outflows. The requirement that an exclusive account be used is made for the purpose of monitoring, and The Bank of Korea monitors the daily cash flows of all accounts as reported by the foreign exchange banks.

As of the end of 2003, there were over 15,000 foreign portfolio investors in the Korean financial market. Securities companies and foreign exchange banks report their investments and settlement information to the Financial Supervisory Services and The Bank of Korea. The monitoring system for foreign portfolio investments are, therefore, also operated by the related authorities at each stage of registration, trading, and settlement.

Figure 3.3
Procedure of FPI and Monitoring at Each Stage



Note : * denotes the institution in charge of monitoring and collecting statistics at each stage.

4. Salient Features of FDI/FPI and Some Issues in Korea

4.1 Trends of Foreign Capital Flows

4.1.1 Overview

Foreign investments in Korea, which had previously remained at low levels, have shown sharp rising trends with the liberalisation of capital flows after the financial crisis.

Inward FDI/FPI accelerated with the recovery of the domestic economy from the crisis, with the biggest net inflows recorded in 1999-2000. However the scale of FDI has been contracting since 2001. Outward FDI/FPI, meanwhile, which showed fluctuating trends at the time of the crisis, have been increasing in scale again since 2001.

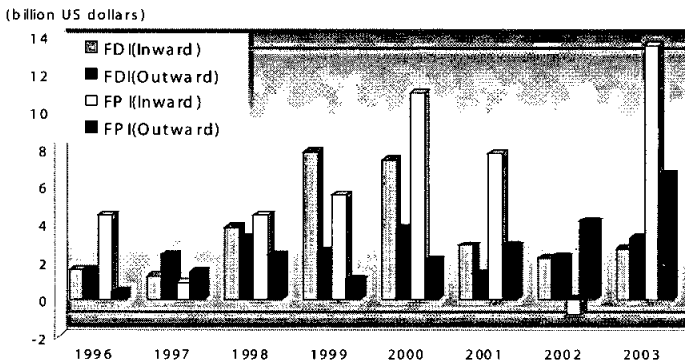
Managing and Monitoring Direct and Portfolio Investment Flows:.....

Foreign direct and portfolio investments recorded net inflows even in 1997, the year of the crisis, notwithstanding the fact that withdrawals exceeded investments (by a total of 1.6 billion US dollars) for four consecutive months between August and November of that year.

4.2 Trends of Inward FDI

Inward FDI, which showed its largest-ever net inflow in 1999, recorded continued net inflows through 2003. The scale of this net investment has been dwindling, however, for the several reasons.

Chart 3.1
Trends of Foreign Capital Flows in Korea



Note : Inward = Investment in Korea by foreign investors - Withdrawal of investment by foreign investors

Outward = Investment in Foreign countries by Korean residents - Withdrawal of investment by Korean residents

First, most of the structural reforms that attracted FDI were almost completed. Secondly, the slowdown in the global economy during 2001-2003 and deterioration of the domestic investment environment such as labour disputes, demand for higher wages, etc., discouraged incentives of FDI in Korea. Thirdly, the investment climate, in comparison with neighbouring competitor countries (for example China with its huge market and growth potential), were regarded as relatively less advantageous.

Table 3.1: Trends of Inward FDI

(in billions of US dollars)

	1996	1997	1998	1999	2000	2001	2002	2003p
Investment	1.9	1.8	4.2	9.5	9.4	4.4	3.4	4.4
Withdrawal	0.3	0.5	0.2	1.6	2.0	1.4	1.2	1.7
FDI (Inward)	1.6	1.3	3.9	7.9	7.5	2.9	2.2	2.7

Source : Foreign Exchange Information System of Bank of Korea (cash basis)

By type, since the financial crisis in 1997, acquisition of newly issued stocks has been the leading form of FDI, exceeding acquisition of outstanding stocks and long-term loans every year.

Table 3.2: Trends of Inward FDI by Type

(in billions of US dollars)

	1997	1998	1999	2000	2001	2002	2003p
Newly Issued Stocks	6.2	6.5	12.6	13.6	8.8	8.2	4.6
Outstanding Stocks	0.7	1.2	2.3	1.3	1.9	0.7	1.8
Long-term loans	0.1	1.2	0.6	0.3	0.6	0.2	0.1
Total	7.0	8.9	15.5	15.2	11.3	9.1	6.5

Source : Ministry of Commerce, Industry and Energy (notification basis)

By region, investments from the U.S. and the Europe region have almost always been well above 50% since 1997 (from 1997 to 2003, the average ratios of investment by region were 33.5% by Europe, 32.1% by US, etc.).

Table 3.3 Trends of Inward FDI by Region

(in billions of US dollars)

	1997	1998	1999	2000	2001	2002	2003p
US	3.2	3.0	3.7	2.9	3.9	4.5	1.2
Japan	0.3	0.5	1.7	2.4	0.8	1.4	0.5
Europe	2.4	3.0	6.4	4.4	3.1	1.9	3.1
Asia	0.8	1.5	3.1	2.3	1.5	0.9	1.0
Others	0.3	0.9	0.6	3.2	2.0	0.4	0.7
Total	7.0	8.9	15.5	15.2	11.3	9.1	6.5

Source : Ministry of Commerce, Industry and Energy (notification basis)

By industry, investments in services (especially in financial sector) have exceeded those in manufacturing except 1998 (from 1997 to 2003, the average proportion of total FDI taken by services was 61.2%, while that of manufacturing was 38.4%).

Table 3.4: Trends of Inward FDI by Industry

(in billions of US dollars)

	1997	1998	1999	2000	2001	2002	2003p
Agriculture	0.04	0.16	0.05	0.00	0.01	0.02	0.00
Mining	0.02	0.02	0.00	0.00	0.00	0.00	0.00
Manufacturing	2.35	5.74	7.13	6.65	3.09	2.44	1.70
(Chemical)	0.23	0.76	0.77	0.66	0.47	0.09	0.69
(Metal)	0.01	0.01	0.60	0.21	0.04	0.45	0.15
(Electronics)	0.29	1.38	3.00	2.41	1.01	0.29	0.30
(Machinery)	0.17	0.59	0.65	1.59	0.23	0.30	0.24
Services	4.57	2.94	8.36	8.57	8.19	6.65	4.76
Total	6.97	8.85	15.54	15.22	11.29	9.10	6.47

Source : Ministry of Commerce, Industry and Energy (notification basis)

4.3 Trends of Outward FDI

Outward FDI has been increasing recently, even though the scale remains below the highest figure of 3.8 billion dollars in 2000. There are two major reasons for this current increase:

Firstly, the globalisation of the world economy and domestic corporations' more aggressive marketing strategies toward foreign markets has increased outward FDI (market-seeking FDI). Secondly, the unappealing domestic situation related to management of enterprises domestically, for example, uncompromising labour disputes, higher wages, etc., is also a partial factor of increasing outward FDI, especially in labour-intensive industries (cost-saving FDI).

Table 3.5: Trends of Outward FDI

(in billions of US dollars)

	1996	1997	1998	1999	2000	2001	2002	2003p
Investment	1.8	2.6	4.4	3.3	4.6	2.6	3.0	4.2
Withdrawal	0.2	0.3	0.9	0.7	0.7	1.3	0.7	0.9
FDI (Outward)	1.6	2.4	3.3	2.6	3.8	1.4	2.3	3.3

Source : Foreign Exchange Information System of Bank of Korea (cash basis)

4.4 Trends of Inward FPI

Foreign portfolio investment has continued to show net inflows every year, except in 2002, and the scale has been increasing since the opening of the capital markets in 1992. In 2002, foreign portfolio investment recorded net outflows for the first time since 1992, because of the slowdown of the global economy and increase in the profit taking of foreign investors.

In 2003, foreign portfolio investment also recorded net outflows from February to April owing to the geopolitical risk related to the North Korean nuclear programme and the accounting scandal at SK (the fourth largest conglomerate in Korea). Spurred by the recovery of the world economy, however, FPI turned to show net inflows from May and recorded a historical high in the year.

Table 3.6: Trends of Inward FPI

(in billions of US dollars)

	1996	1997	1998	1999	2000	2001	2002	2003p
Investment	12.4	12.7	16.5	41.8	60.2	44.0	65.4	81.4
Withdrawal	7.9	11.8	11.7	36.3	48.8	36.5	66.2	67.9
FPI (Inward)	4.5	0.9	4.8	5.5	11.3	7.5	-0.8	13.5

Source : Foreign Exchange Information System of Bank of Korea (cash basis)

By region, inward FPI mainly came from the U.S. and there were also net inflows during 2001 and 2003 from Luxembourg, the Netherlands, the Cayman Islands, and Singapore. Investments from Malaysia, meanwhile, recorded net outflows.

Table 3.7: Trends of Inward FPI by Region

(in billions of US dollars)

	2001	2002	2003p	2001~2003
U.S.	2.89	0.50	4.60	7.99
Britain	0.62	-0.92	0.66	0.36
Netherlands	0.55	0.31	0.23	1.09
Luxembourg	0.63	0.42	1.57	2.62
Malaysia	-0.01	-0.69	-0.23	-0.93
Germany	0.02	0.08	-0.03	0.07
Ireland	0.20	-0.07	0.48	0.61
Cayman Islands	0.26	0.13	1.08	1.47
Singapore	0.42	-0.85	3.33	2.90
Others	1.93	0.26	1.83	4.02
Total	7.51	-0.83	13.52	20.20

Note : on the basis of cash flows passing through accounts exclusively for foreign portfolio investment

Source : Foreign Exchange Information System of Bank of Korea (cash basis)

By type of investor, investments made by investment companies accounted for the biggest portion of inward FPI followed by pension funds and other-type corporations.

Table 3.8: Trends of Inward FPI by Type of Investor
(in billions of US dollars)

	2001	2002	2003p	2001-2003
Investment companies	3.84	1.40	9.89	15.13
Banks • Securities • Insurance	0.70	-1.78	-0.63	-1.71
Pension funds	1.69	0.37	0.11	2.17
Hedge funds	0.45	-0.36	0.42	0.51
Other-type corporations	0.66	-0.26	3.80	4.20
Individuals and others	0.16	-0.19	-0.07	-0.10
Total	7.51	-0.83	13.52	20.20

Note : on the basis of cash flows passing through accounts exclusively for foreign portfolio investment

Source : Foreign Exchange Information System of Bank of Korea (cash basis)

By security type, investments were mostly targeted at stocks listed on the exchanges, while bonds and other securities (beneficiary certificates, CDs, etc.) received relatively small portions.

Table 3.9: Trends of Inward FPI by Security Type
(in billions of US dollars)

	1996	1997	1998	1999	2000	2001	2002	2003p
Stocks	3.9	0.6	4.4	1.8	11.6	6.9	-1.9	12.3
Bonds	0.0	0.2	2.1	0.6	-0.4	0.1	0.4	1.0
Others	0.5	0.1	-1.7	3.1	0.1	0.5	0.7	0.2
FPI (Inward)	4.5	0.9	4.8	5.5	11.3	7.5	-0.8	13.5

Source : Financial Supervisory Service, Foreign Exchange Information System of Bank of Korea (cash basis)

4.5 Trends of Outward FPI

Outward FPI is increasing steadily with the continuation of relatively stable movements in the foreign exchange markets and of low interest rates. Korean insurance companies are expanding their investments in foreign long-term securities, to overcome the problem of diminishing yields due to low domestic interest rate. Moreover, investments by individuals in foreign mutual funds are on the increase, owing to growth in the private banking business and to increasing demand for foreign currency assets for portfolio diversification.

Table 3.10: Trends of Outward FPI

(in billions of US dollars)

	1996	1997	1998	1999	2000	2001	2002	2003p
Investment	0.7	2.9	3.8	5.3	5.0	5.0	6.2	9.4
Withdrawal	0.3	1.4	1.4	4.1	2.9	2.1	2.0	2.7
FPI (Outward)	0.4	1.5	2.4	1.1	2.1	2.9	4.2	6.7

Source : Foreign Exchange Information System of Bank of Korea (cash basis)

5. Granger Causality Test of FDI/FPI and Macroeconomic Variables

5.1 Selection of Variables and Unit-root Test

Real economic variables including the industrial production index (representing output), production capacity index (representing investment), exports, imports, the unemployment rate, and the consumer prices index have been selected for statistical analysis, along with financial economic variables including the exchange rate, interest rate, stock prices index, and M3. Each selected macroeconomic variable is considered to have a direct or indirect relationship with inward FDI/FPI.

The application of a unit-root test, to test the stationarity of time series data, showed that all of the variables, except FDI, FPI, and exports, were non-stationary series. The variables with unit-roots also showed stationarity after being first differenced.

All of the data used in the statistical analysis are monthly data from January 1993 to September 2003. The sample is split into the two sub-periods, before and after the financial crisis, to compare the different aspects of each period.

The data used in analysis is presented at Table 3.11. The monthly industrial production index was used as a proxy variable for GDP, which is only released quarterly, and the production capacity index was the proxy variable for investment for the same reason.

Table 3.11: Description of the Variables

Variable	Abbr.	Variable	Abbr.
FDI	FDIN	M3 (s.a.)	MNEY
FPI	FPIN	Exchange rate	EXCH
Industrial production index (s.a.)	IDST	Interest rate (corporate bond)	INTR
Production capacity index	CPAT	Stock price index	STPI
Exports	EXPT	Consumer prices index	PRCE
Imports	IMPT	Unemployment rate (s.a.)	UNEM

5.2 Results of Granger Causality Test

The Granger Causality Test showed that inward FDI had significant effects on the increases of exports and inward FPI through the entire period, and significant relationship between FDI and other economic variables mentioned above was shown in the post-crisis period. Production capacity was affected by FDI after the crisis. FDI's effect on stock prices, which was statistically significant before the crisis, disappeared thereafter. On the other hand, FDI and industrial production exchanged mutual effects after the crisis. Imports, prices, and the unemployment rate had unidirectional effects on FDI² (as prices and the unemployment rate reflect the stability of the economy, those seem to be considered as important factors in decision on FDI).

2. The reason the effect of unemployment rate on FDI was not significant in the analysis in the entire period seems to be due to the structural change of the economy caused by the crisis in 1997. The unemployment rate rose drastically from 2.6 percent in 1997 to 7.0 percent in 1998.

**Table 3.12: Granger Causality Test of
Inward FDI and Macroeconomic Variables**

Null Hypothesis	1993 ~ 2003		1993 ~ 1997		1998 ~ 2003	
	F-statistic	P-value	F-statistic	P-value	F-statistic	P-value
CPAT \leftrightarrow FDIN	0.0813	0.7760	0.0215	0.8839	0.0261	0.8722
FDIN \leftrightarrow CPAT	0.2229	0.6377	0.0510	0.8222	4.0488	0.0483
EXCH \leftrightarrow FDIN	0.3343	0.5642	0.7000	0.4064	2.0186	0.1412
FDIN \leftrightarrow EXCH	0.0296	0.8637	0.0114	0.9154	2.6429	0.0789
EXPT \leftrightarrow FDIN	0.7124	0.4003	0.0234	0.9769	2.9093	0.0928
FDIN \leftrightarrow EXPT	22.0267	0.0000	6.1524	0.0040	9.9889	0.0024
FPIN \leftrightarrow FDIN	0.5780	0.5626	29.3836	0.0000	2.0889	0.1322
FDIN \leftrightarrow FPIN	24.3252	0.0000	26.0468	0.0000	7.7301	0.0010
IDST \leftrightarrow FDIN	0.0250	0.8747	0.9786	0.3269	4.4974	0.0149
FDIN \leftrightarrow IDST	0.1407	0.7082	2.6084	0.1120	3.6000	0.0330
IMPT \leftrightarrow FDIN	0.9728	0.3259	0.0541	0.8169	5.5202	0.0218
FDIN \leftrightarrow IMPT	0.4359	0.5103	2.7197	0.1048	0.6157	0.4355
PRCE \leftrightarrow FDIN	0.0336	0.8548	1.0799	0.3033	10.7775	0.0017
FDIN \leftrightarrow PRCE	1.5203	0.2199	0.0498	0.8242	0.2307	0.6326
STPI \leftrightarrow FDIN	0.0701	0.7916	3.0299	0.0873	0.2479	0.6202
FDIN \leftrightarrow STPI	0.0258	0.8727	4.8136	0.0325	0.7588	0.3869
UNEM \leftrightarrow FDIN	1.0233	0.3137	4.8481	0.0319	8.6902	0.0044
FDIN \leftrightarrow UNEM	0.1056	0.7458	2.3734	0.1292	0.9857	0.3244

Note : 1) Shaded areas (■) denote cases where the null hypothesis is rejected at the 5% significance level.

2) Lag lengths were determined by minimising the Schwarz information criterion after considering 1 to 12 lags.

The causal structure, effective before the crisis, of “interest rate → FPI → stock prices”, was weakened, and there was no statistically significant relationship between FPI and financial variables after the crisis. It seems to be due to the expansion of financial market and IT-related stock market rally led mainly by domestic investors during 1998-1999.

At the 10% significance level, the test results showed that interest rate and M3 had effects on FPI after the crisis (increase in M3 → decrease of FPI, rise of interest rate → increase of FPI).

**Table 3.13: Granger Causality Test of
Inward FPI and Macroeconomic Variables**

Null Hypothesis	1993 ~ 2003		1993 ~ 1997		1998 ~ 2003	
	F-statistic	P-value	F-statistic	P-value	F-statistic	P-value
EXCH ↔ FPI	1.5900	0.2082	3.7226	0.0589	2.1682	0.1227
FPI ↔ EXCH	0.5927	0.5545	0.0126	0.9109	1.8075	0.1723
INTR ↔ FPI	2.2983	0.1048	12.0132	0.0010	3.0339	0.0551
FPI ↔ INTR	0.9984	0.3715	0.4849	0.4892	2.3575	0.1028
MNEY ↔ FPI	2.7024	0.0487	1.3057	0.2581	2.4817	0.0692
FPI ↔ MNEY	3.1352	0.0282	0.1971	0.6588	0.3629	0.7800
PRCE ↔ FPI	0.3082	0.7354	0.0833	0.7740	0.1878	0.8292
FPI ↔ PRCE	1.0253	0.3618	0.1993	0.6570	0.1419	0.8680
STPI ↔ FPI	1.7656	0.1755	0.1842	0.6695	1.4394	0.2446
FPI ↔ STPI	0.5841	0.5592	4.0924	0.0480	0.8370	0.4377

Note : 1) Shaded areas (■) denote cases where the null hypothesis is rejected at the 5% significance level.

2) Lag lengths were determined by minimising the Schwarz information criterion after considering 1 to 12 lags.

Since 2001, however, with the Korean stock market mainly driven by foreign investors, the results of Granger Causality analysis using daily data show a uni-directional causal relationship from the exchange rate and stock price index to FPI. This seems to reflect the investment practices of foreign investors to a certain

extent. Foreign investors base their investment decision on both conditions of the foreign exchange market and stock market. They normally invest in foreign stock markets of countries where the local currency is expected to show a sustained appreciation in the foreign exchange market and the stock market condition is bullish.

Table 3.14: Granger Causality Test of Inward FPI Using Daily Data (2001–2003)

	EXCH → FPIN	FPIN → EXCH	INTR → FPIN	FPIN → INTR	STPI → FPIN	FPIN → STPI
F-statistic	9.3492	0.5964	1.7968	2.0538	35.9954	1.1356
P-value	0.0000	0.6175	0.1665	0.1289	0.0000	0.3384

Note : 1) Shaded areas (bold) denote cases where the null hypothesis is rejected at the 5% significance level.

2) Lag lengths were determined by minimising the Schwarz information criterion

6. National Policy Development and Korea's Experiences on FDI and FPI

6.1 Overview

FDI is allowed in all industries except those specified as reserved on a 'Negative' list. As of the end of 2003, the negative list consists of only two completely closed industries and 27 partially opened industries, out of the 1,121 industries listed in the Korean standard industrial classification. Business categories that are reserved are those which have the market natures of public goods such as broadcasting companies and electric power companies, and which most other OECD member countries have also reserved.

FDI investors and their companies are treated on equal terms with Korean nationals and enjoy more favourable treatment than Koreans do in terms, for example, of tax reductions, etc.

Indirect investment vehicles for foreign portfolio investment were first introduced in the form of open-end and closed-end funds in the early- and mid-1980s. Foreigners have been able to invest directly in Korean stocks since January 1992. At present, almost all restrictions governing foreigners' portfolio investment have been abolished. Aggregate and individual ceilings on the purchase of stocks listed on the Korean Stock Exchange and KOSDAQ exist for the stocks of only 23 domestic firms, which are regulated by separate acts.

Foreign investors are guaranteed the right to repatriate dividend incomes arising from stock or shares acquired by foreign investors, the proceeds from the sales of said stocks or shares, the principal amounts, interest and fees received pursuant to loan contracts or public loan agreements, and the prices received pursuant to technology inducement contracts.

6.2 Korea's Experiences with Liberalisation of Capital Flows

In order to promote further global integration, Korea has continued to liberalise FDI. Upon Korea's joining of the OECD on December 12, 1996, previously restrictive regulations on FDI were streamlined and brought to internationally accepted levels and further efforts have been made since the onset of the financial crisis in late 1997.

In the "Foreign Investment Promotion Act", all business sectors are liberalised in principle and brings Korea's FDI regime in accordance with the highest international standards. Korean restrictions on FDI apply now only in cases when the national security, public order, public health, the environment, or social morals are threatened.

After a series of liberalisation measures, there have been several disputes domestically about the benefits and costs of FDI inflows in Korea. The positive effects mentioned include improvements in corporate governance and transparency and increased employment, etc., while negative effects are the selling of viable corporations at excessively low prices, outflows from the country of the fruits of economic growth, and dominance of domestic markets by foreign capitals.³

For several years now, since it has been proven that the enterprises receiving FDI outperform other corporations, there are more emphasis now for FDI because of these positive effects.

3. Controversy over fire sale and market concentration is introduced in the paper of Lee and Yun, 2002.

Table 3.15: Business Analysis of FDI Enterprises in Korea in 2002**(%)**

	debt/equity ratio	ordinary income/sales ratio	times interest earned	net sales growth rate
FDI enterprises	62.6	14.3	660.4	12.9
Other enterprises	224.1	1.5	164.3	6.0

Source : The Bank of Korea

FDI has also contributed positively to Korea's recovery from the financial crisis in five economic aspects: increase in foreign exchange reserves; increase in domestic production and employment; increase in export and trade surplus; enhancement of technological capacity; and finally, facilitation of economic restructuring.⁴

With regard to FPI, there have been measures taken for the further opening of the capital market after the crisis in Korea. The individual limit of shareholding for foreigners rose markedly from 7 to 50 percent on December 12, 1997. Thereafter, the ceiling of shareholding for foreigners was completely lifted on May 25, 1998. Furthermore, all restrictions on the purchases of debt securities were abolished after 1997 crisis, although foreign investment in bonds is still rather low in Korea.

One issue with FPI is that the movements of the Korean stock market are mainly driven by foreign investors with their huge fund inflows while the domestic investors are sidelined. Furthermore, heated debates on the identity of FPI funds, whether they are hot money or not, have been raised when there are small disturbances in the FX market, which adds to skepticism about the market from time to time.

Foreign portfolio investors started to lead the Korean stock market at their own discretion when their trading value ratio exceeded 10% in 2001. Since then, net purchases of foreign investors decides the direction of the stock price index, with their huge fund flows each year. Table 3.16 shows the change of the Korea Composite Stock Price Index which coincides with the signs of net purchases of foreign investors, and which moves in the reverse direction of the domestic investors since 2001.

4. KIET, 2001.

Table 3.16: Trading Value Ratio and Net Purchases of Foreign Investors
(%, in trillions of KRW)

	1997	1998	1999	2000	2001	2002	2003
Trading Value Ratio ¹⁾	6.7	7.5	5.2	9.2	10.5	11.5	15.5
Net Purchases ²⁾	0.6	5.9	2.3	11.5	7.7	-2.6	13.8
KOSPI ³⁾	376.3	562.5	1,028.1	504.6	693.7	627.6	810.7
(Change of KOSPI) ⁴⁾	(-274.9)	(186.2)	(465.6)	(-523.5)	(189.1)	(-66.1)	(183.1)

Note : 1) (Trading value of foreign investors) / (Total trading value in the stock market)×100

2) Net purchases of foreign investors in trading value

3) Korea Composite Stock Price Index (January 4, 1980=100)

4) Change of Korean Stock Price Index compared with the end of the previous year

Source : Korea Stock Exchange, Financial Supervisory Service

One other issue concerning foreign investment has been the excessive outflows of dividends to foreign countries, yielding to the pressure from foreign investors. As of fiscal year 2002, the number of corporations paying dividends (including domestic and foreign payments) had doubled, compared with 1998, and the amounts of dividend payments had increased five times.

Table 3.17: Dividend Payments¹⁾ of Corporations Listed on Exchanges
(number of corporations, in trillions of KRW, %)

	1998	1999	2000	2001	2002
Number of corporations	309	422	559	640	674
Amounts of payments	1.0	2.3	3.0	2.9	5.2
Operating income/sales ²⁾	6.1	6.6	7.4	5.5	6.7
Ordinary income/sales ²⁾	-1.8	1.7	1.3	0.4	4.7

Note : 1) Fiscal year basis

2) Profit-sales ratio of all manufacturing corporations

Source : Korea Securities Depository

However, most foreign portfolio investors are found to have long-term investment interests and have invested in the stock market based on macroeconomic fundamentals and future-values of corporations. They have shown a far lower turnover ratio than domestic investors. They can, therefore, be said to have contributed to improvements in the value of corporations in the market and in investment practices, and they have also contributed to the protection of shareholders' rights, contrary to general view that they are short-term investors,

Table 3.18: Turnover Ratio of Listed Stocks

(%)

	1997	1998	1999	2000	2001	2002	2003
Foreigners	93.5	110.2	186.6	109.3	119.8	149.4	97.4
Entire Market	137.2	273.6	466.9	387.8	599.0	883.5	571.9

Source : Financial Supervisory Service

Finally, it cannot be denied that FDI and FPI have improved Korea's corporate management practices, led to positive effects on employment, and contributed to the development of the domestic financial markets. Policy considerations should pay more attention to attracting inflows of FDI and FPI and sustaining an attractive investment environment so as to lessen the negative side effects of foreign investment.

7. Policy Implications

Given the 'Impossible Trinity Hypothesis'⁵, which asserts the impossibility of the maintaining the three objectives of free private capital flows, exchange rate stability, and independent monetary policy, Korea does not have many monetary policy options relating to foreign investment. Korea is making efforts to achieve a higher level of monetary policy independence to stabilise prices, permit the free flow of private capital, and adopt a free-floating exchange rate system.

5. Frankel, 1999

However, considering the positive effects of FDI on macroeconomic variables and the benefits of FDI as long-term stable capital, the authorities must endeavour to attract greater FDI inflows to achieve long-run stable growth of the economy. Furthermore, host countries should make efforts to maximise the benefits of FDI according to their own situation. They should formulate their own policy instruments to maximize the advantages from FDI such as advanced management practices of FDI enterprises, improvement of technology, and others.

The results of analysis using recent daily data show that FPI is affected by the exchange rate. As FPI has the double-faced feature of increasing domestic financial market affluence, while also magnifying financial market volatilities, it is of utmost importance for the economy to prepare a monitoring system which enable authorities to keep a closer eye on portfolio investment fund flows. When the relationship between the exchange rate and FPI is considered, it is important to try to attract stable inflows of foreign portfolio investment based on FX market stability. Growth of domestic institutional investors and active participation in the market by domestic investors are also needed to further deepen the market so as to help to improve the resilience of domestic financial markets by contributing in the absorption of shocks which may be caused by some volatile foreign portfolio investment flows.

The sustaining of market stabilisation with sound economic fundamentals, even though there are not too many effective instruments for doing so in a more liberalised economy, cannot be over emphasised for developing countries.

8. Conclusion

Inward FDI/FPI in Korea started to increase in 1999-2000 due to the measures to liberalise capital flows after the financial crisis, while outward FDI and FPI have also been increasing. The scale of inward FDI is now contracting, owing to the increasing competition among countries to attract FDI and also to the completion of most financial and corporate restructuring in Korea, whereas outward FDI is showing a slow but steady growth. Inward FPI is still showing a strong net inflow trend, although a net outflow was recorded in 2002 for the first time since the opening of the capital market in 1992. The influence of inward FPI on the Korean financial market is getting stronger.

Considering the positive effects of FDI, continuous efforts to attract FDI inflows to ensure long-term stable economic growth are needed by developing countries. Moreover, each nation should make efforts to maximise the benefits of FDI, for example, by building cooperative labour-management relationships, put-

ting in place the fundamental conditions for technological advancement, improving productivity, etc. Finally, efficiency-seeking FDI should be sought by developing countries, to help the development of productivity in their economies.

Though foreign investments have positive effects, there is still possibility of negative side effects. Domestic financial market expansion is also needed in that means. For example, while foreign portfolio investors can be generally considered as investing based on a long-run fundamental basis, sufficient market size is needed to absorb the volatilities that might be caused by some foreign investors seeking high yields in the short term.

Risk management, including maintenance of socio-political stability and preparing contingency plans to cope with sudden reversals of foreign capitals, together with the adoption of an effective monitoring system, is also important to both attracting sound foreign capital and sustaining stable economic growth.

References

1. Coe , David T. and Se-jik Kim, ed., Korean Crisis and Recovery, IMF, KIET, 2002.
2. Enders, Walter, Applied Econometric Time Series, Wiley, 1995.
3. Frankel, Jeffrey A., "No Single Currency Regime is Right for All Countries or at All Times", *NBER Working Paper* 7338, NBER, 1999.
4. Granger, C.W.J., "Investigating Causal Relations by Econometric Models and Cross-spectral Method", *Econometrica*, July 1969, pp.424-438.
5. IMF, Balance of Payment Textbook, 1996.
6. KIET, Five Economic Effects of FDI, 2001.
7. Lee, Seong-Bong and Mi-Kyung Yun, "Assessment of Foreign Direct Investment Liberalization in Korea", Paper presented at the International Seminar : Economic Liberalization Policy since the Financial Crisis: Assessment and Future Agenda, Korea Institute for International Economic Policy, 7 March. Seoul: Korea Institute for International Economic Policy, 2002.
8. MOCIE, Consolidated Public Notice for Foreign Investment, 2003.
9. MOCIE, Trends in Foreign Direct Investment (Statistical Progress Report), Various Issues.
10. Park, Yung-Chul and Chi-Young Song, "Managing Foreign Capital Flows: The Experiences of Korea, Thailand, Malaysia and Indonesia." In G.K. Helleiner. ed. Capital Account Regimes and the Developing Countries, UNCTAD, Macmillan Press, 1998.
11. Yang, Doo-Yong, "Capital and Foreign Exchange Market Liberalization in Korea since the Crisis" Paper presented at the International Seminar: Economic Liberalization Policy since the Financial Crisis: Assessment and Future Agenda, Korea Institute for International Economic Policy, 7 March. Seoul: Korea Institute for International Economic Policy, 2002.
12. World Bank, Foreign Direct Investment in Emerging Market Countries, Report of the Working Group of the Capital Markets Consultative Group, 2003.

CHAPTER 4

FOREIGN DIRECT INVESTMENT AND FOREIGN PORTFOLIO INVESTMENT IN MALAYSIA

by

Amhari Efendi Nazaruddin ¹

1. Definition

Malaysia's concept, definition and classification of FDI and FPI are in conformity with the IMF's Balance of Payments (BOP) Manual, Fifth Edition (BPM5). The IMF defines FDI as 'foreign holdings of at least 10% ownership in the enterprise with a lasting interest'². Meanwhile, FPI³ covers transactions in equity, financial derivatives and debt securities that are traded or tradable. The benefits that direct investors (DI) expect to derive from a voice of management are different from those anticipated by portfolio investors (PI).

2. Compilation Practices of FDI and FPI Flows

Actual FDI and FPI flows are reported in the financial account of the balance of payments, released on a quarterly basis by the Department of Statistics, Malaysia (DOSM). DOS data refers to actual investments that have taken place in Malaysia. These data include all the major components of FDI, namely equity capital, reinvested earnings and other capital, and portfolio investment data by type of instruments, namely equity securities, debt securities and financial derivatives. In view of the breadth and depth of the data, official data is only available with a time lag of about 3 months.

To complement the existing data compilation by DOSM, Bank Negara Malaysia's Cash Balance Of Payments Reporting System (CBOP) captures data on actual flows with a shorter lag of 4 – 6 weeks. The CBOP System provides the actual records of all cross-border transactions between residents and non-residents, which are

-
1. Amhari Efendi Nazaruddin is Senior Executive at the Economics Department of Bank Negara Malaysia.
 2. The 'lasting interest' implies the existence of a long-term relationship between the direct investor and the enterprise and a significant influence by direct investor on the management of the enterprise
 3. The definition direct investment and portfolio investment may also be referred in Chapter XVIII paragraph 362 and Chapter XIX of BPM5, paragraphs 387 – 389 respectively.

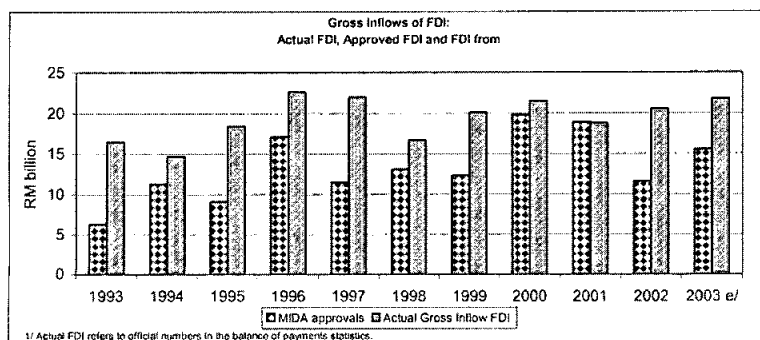
effected through the banking system, inter-company accounts maintained by residents and their non-resident counterparts and approved overseas accounts maintained by residents with financial institutions abroad. For FDI data, the CBOP System covers three areas, namely equity investment, inter-company loans and investment in real estate. However, the CBOP System cannot comprehensively capture all FDI flows because the system does not capture data on reinvested earnings (since there is no actual flows occurring between residents and non-residents) and investment in the form of machinery (in kind).

In addition to DOSM's QSIIS and BNM's CBOP data, BNM also participates in the IMF's Co-ordinated Portfolio Investment Survey (CPIS). The CPIS is being conducted in response to global asymmetries in reported BOP data, especially those in portfolio investment flows⁴. While DOSM's survey covers key companies holding securities in its aggregated value, the CPIS is able to segregate the country of issuer of securities held by residents (asset of country). Based on IMF's Survey of Implementation of Methodological Standards (SIMSDI) 2001 survey, 56 countries including Malaysia disclosed their FDI compilation and methodology to the IMF.

3. Salient Features of Pre- and Post-Crisis FDI

FDI continues to play a key role in supporting economic growth in Malaysia. Malaysia was among the first countries in the region to liberalise and encourage foreign participation in the economy. In 1998, foreign investors were allowed to have 100% equity provided they met specifications in terms of export-orientation

Chart 4.1



Source: Department of Statistics, Malaysia (DOS)

4. The coverage of the CPIS data for an individual economy typically corresponds to the coverage of portfolio investment assets in its international investment position (IIP) statement, as both follow the same concepts and definitions

and promoted industries. This encouraged large FDI inflows, particularly into the manufacturing sector, in the early and mid 1990s. This was reflected in the high value of manufacturing approvals, granted by the Malaysian Industrial Development Authority (MIDA), amounting to RM55 billion for the period 1993 -1997. The bulk of these FDI were channelled into the electrical and electronics, petroleum and coal, chemical and chemical products industries. Malaysia's good infrastructure coupled with the appreciation of the Japanese yen further encouraged the influx of FDI. To some extent, the changing global landscape had accelerated the relocation of industries from industrial to developing economies. In absolute terms, Malaysia benefited with an annual FDI inflow of between RM18 to RM20 billion, averaging about 7% of GDP during the 1990s.

The contagion effect of the 1997 crisis affected Malaysia mainly from the aspect of short-term flows, which were easily reversible. The impact on FDI was minimal, since on a gross basis, FDI inflows were stable, averaging RM 19.6 billion in the post-crisis period, compared with RM18.8 billion in the pre-crisis period.

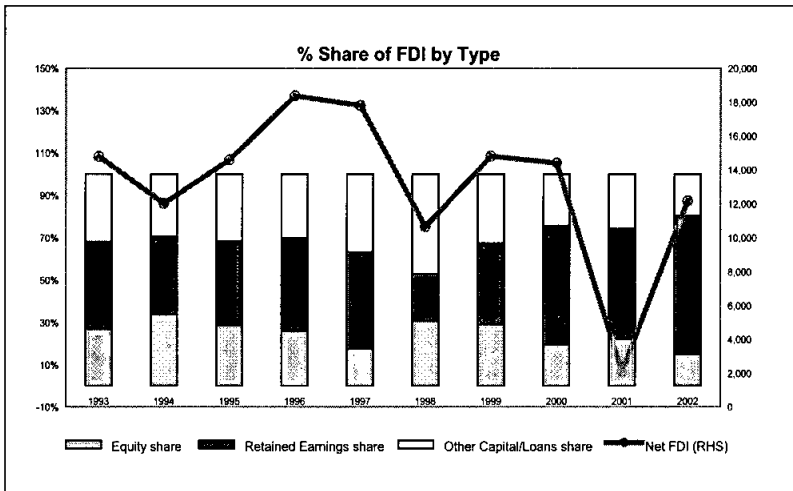
Table 4.1

Net Foreign Direct Investment 1999 - 3Q 2003

Year	Net FDI	
	RM million	US\$ million
1999	14,802	3895.3
2000	14,393	3787.6
2001	2,105	553.9
2002	12,173	3203.4
Quarterly		
1Q 2001	2,130	560.5
2Q 2001	1,893	498.2
3Q 2001	1,143	300.8
4Q 2001	-3,061	-805.5
1Q 2002	3,477	915.0
2Q 2002	2,291	602.9
3Q 2002	3,488	917.9
4Q 2002	2,917	767.6
1Q 2003	-484	-127.4
2Q 2003	3113	819.2
3Q 2003	2690	707.9

Source: Department of Statistics Malaysia

Chart 4.2



The stability of FDI flows during the post-crisis period was mainly attributed to sustained large reinvested earnings. Reinvested earnings accounted for about half of gross FDI for the period 1998 – 2002, higher than during the pre-crisis period. This was attributed to existing MNCs' upgrading and diversifying their activities via retained earnings for continued investment in the country.

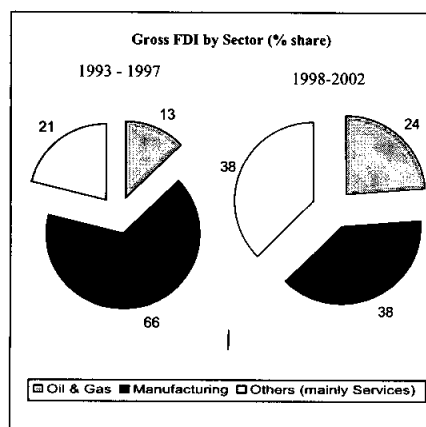
While FDI inflows continued to be significant in the manufacturing sector, FDI in the oil and gas sector as well as in the services sector have expanded more rapidly in the period 1998 - 2002. Both services and oil and gas sectors have experienced a significant increase in their share of FDI. While the FDI inflows into the manufacturing sector remains high, the rapid growth of new inflows into other sectors has led to a relative decline in its share to 38% in 1998 – 2002, compared with an average 65% in 1993 – 1997. Strategic alliances have also contributed to the higher growth of FDI into the non-manufacturing sectors, such as telecommunications, ports and financial services, among others.

Another feature of FDI in the post-crisis period is that the gross value of new flows tends to be lower, but contributes significantly higher value-add to the Malaysian economy. While the absolute magnitude of FDI in services is lower, they are also lower in import content but generate higher income and employment. As such, FDI inflows tend to be lower per investment payment project. The upgrading of production facility in the manufacturing sector saw the introduction of new technology and expertise that contribute towards raising productivity.

Managing and Monitoring Direct and Portfolio Investment Flows:.....

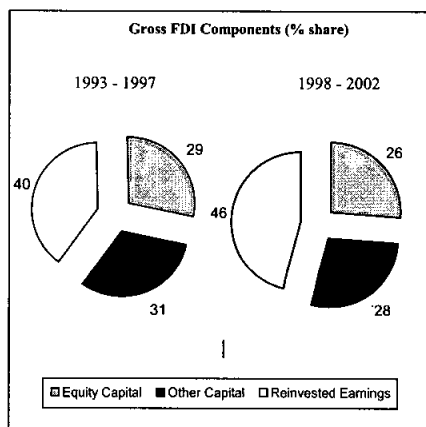
FDI also tends to concentrate on the higher value-added sectors, as the Malaysian economy transforms towards a services-oriented knowledge-based economy. As of end-2003, the Government has approved 1,695 regional facilities for foreign- and local-owned companies, comprising operational headquarters, international procurement centres and regional distribution centres. In the IT sector, the Multimedia Super Corridor (MSC) has continued to expand, hosting 283 foreign companies. FDI in services are increasingly broad-based, extending beyond the financing, insurance and business services sector into other major sub-sectors such as transport and communications, wholesale and retail trade and hotels as well as utilities. In the financial sector, a number of foreign banks have set up their treasury, back-office and data processing operations in Malaysia to facilitate their group operations in this region.

Chart 4.3



Source: DOS, BNM estimates

Chart 4.4



Beginning 1999, the Government embarked on a sequential liberalisation of the sectors to promote greater foreign equity participation in wider ranges of sectors. The measures include:

- Foreign equity ownership were relaxed in manufacturing (100%), telecommunication (61%), financial services (30%), insurance (51%) and securities (49%). The recent liberalisation in the shipping sector (70%) has witnessed the emergence of the Malaysian southern port as the fastest-growing regional shipping operations hub for two of the world's largest shipping companies.

Managing and Monitoring Direct and Portfolio Investment Flows:.....

- Rules on expatriate employment in manufacturing were relaxed. The Foreign Investment Council (FIC) guidelines were further liberalized to provide greater flexibility in foreign equity participation, acquisitions, mergers and takeovers as well as property ownership. In the case of acquisitions by foreign interests, the remaining equity can be held either by foreign interests or jointly by foreign and Malaysian interests (instead of Bumiputra equity of at least 30%).
- For the sectors under the purview of Bank Negara Malaysia, the guiding framework for liberalisation is the Financial Sector Master Plan (FSMP). The banking sector, which already has a strong presence of foreign-owned banks, has already seen significant liberalisation. For instance, for internet banking, Malaysia brought forward the effective date of implementation for the incumbent foreign banks to January 2002. Similarly, the liberalisation of the Islamic banking industry has been brought forward to 2004 from 2007, in line with the aim to promote Malaysia as a regional centre for Islamic banking.

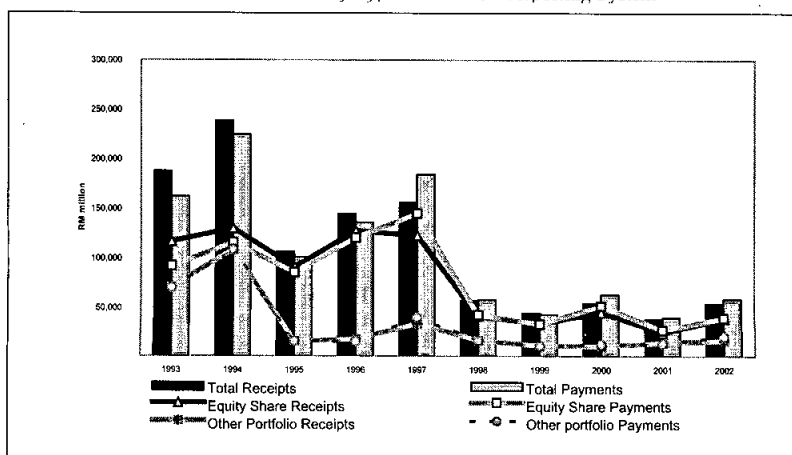
The measures to improve the administrative processes and minimise business costs are:

- The easing of the registration and reporting process, administration of taxes and incentives, protection of intellectual capital, land acquisition and labour laws under the relevant Ministries.
- MIDA designated as the Coordinating Centre for investment in the manufacturing and manufacturing-related support services sectors, to co-ordinate the development of both the manufacturing and support services sectors. This will create a more centralised approach to shorten the time for obtaining required approvals and permits.
- No foreign exchange restrictions on the repatriation of capital, profits, dividends and interest by foreign investors. Foreign exchange rules have been further liberalised to enhance the ability of businesses to manage their foreign exchange exposure.
- Maintaining competitive cost of doing business in Malaysia, especially tariff charges and utility bills.
- Develop a world-class transport network and communication infrastructure to ensure a high level of connectivity between businesses in Malaysia and the rest of the world.

Tax and non-tax incentives to promote specific industries are:

- The pre-package scheme modified to meet the specific needs of individual investors in promoted sectors/industries, including biotechnology, nano-technology, optics and photonics.
- Pioneer Status, Investment Tax Allowance, Industrial Adjustment Allowance, Infrastructure Allowance and deduction for selected expenses provided to encourage investment in other new growth areas such as education, tourism, health, consultancy services, marine, defense, aerospace, commercialized food production and biomass.

Chart 4.5: Portfolio Flows by Type –Cash BOP Reporting System



4. Salient Features of Pre- and Post-Crisis FPI

Malaysia began to compile the portfolio investment data in accordance with the BPM 5, with historical series beginning from 1999. Prior to 1999, long term and short-term equity flows data were not segregated and therefore the data in portfolio investment is not available. Data from the CBOP System showed that portfolio investment recorded substantial net inflows, averaging RM13.5 billion per annum during the period 1993 – 1996 but reversed to record net outflows in the period 1997 onwards except in 1999.

In the early 1990s, the privatisation and listing of Government-owned utility companies provided the catalyst for rapid development in the equity market.

In 1993, Malaysia achieved its sixth consecutive year of sustained growth above 8%. In addition, the inclusion of Malaysian stocks in the MSCI Indices, coupled with limited growth prospects in developed countries, prompted global funds to diversify its investments into Malaysia. As a result, the Kuala Lumpur Stock Exchange Composite Index (KLSE CI) hit an all time record high of 1341 points in January 1994.

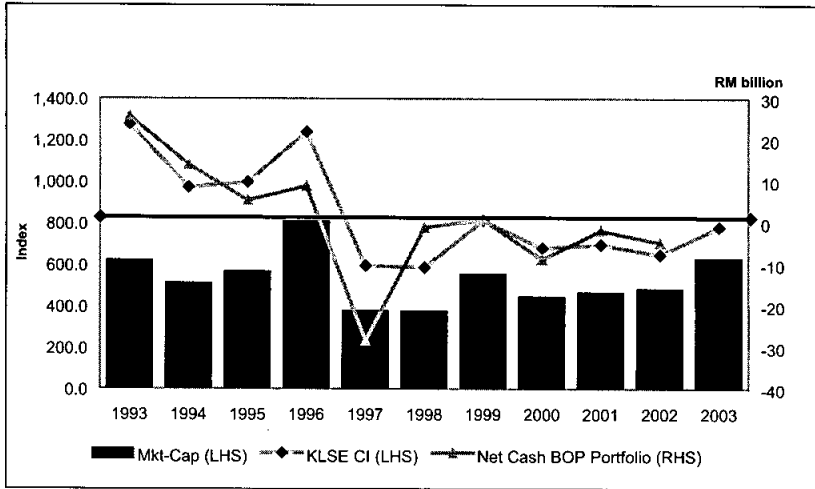
Table 4.2

Year	Portfolio Investment	
	RM million	US\$ million
1999	-4,392	-1155.8
2000	-9,395	-2472.4
2001	-2,466	-648.9
2002	-6,506	-1712.1
Quarterly		
1Q 2001	-2,403	-632.4
2Q 2001	-919	-241.8
3Q 2001	2,406	633.2
4Q 2001	-1,550	-407.9
1Q 2002	2,856	751.6
2Q 2002	-4,983	-1311.3
3Q 2002	-1,491	-392.4
4Q 2002	-2,888	-760.0
1Q 2003	-703	-185.0
2Q 2003	-638	-167.9
3Q 2003	617	162.4

Source: Department of Statistics, Malaysia

By mid 1990s, after the prolonged run up in the KLSE CI, portfolio investors adopted a more cautious approach in view of concerns of market being overextended. Following the intensification of the financial crisis from mid-1997 to late 1998, the regional currencies and stock markets, including Malaysian ringgit and KLSE CI, were adversely affected. There were increased speculative activities on the regional currencies and stock markets during the crisis. The volatility weakened both consumer and business confidence despite the sound economic fundamentals.

Chart 4.6: KLSE CI vs. CBOP Portfolio Flows



The volatility of the financial markets posed problems to many regional economies, prompting drastic measures by some regional countries. In the case of Malaysia, as a measure to contain speculation on the ringgit and to insulate the economy from destabilising external environment, selective exchange controls were introduced on 1 September 1998. In line with Malaysia's commitment that any such measure is temporary and not as a substitute for sound macroeconomic and financial policies, Malaysia had, after a period of only 5 months, on 15 February 1999, started to relax the measures on the flow of funds in and out of Malaysia through a structured levy system. The stability accorded by the policies had minimised the impact of volatile portfolio flows. The CBOP System showed that net portfolio outflows improved consecutively for three quarters beginning in the fourth quarter of 1998.

Global financial markets continued to take a biased view against the regional economies, especially on the issue of pace of corporate and banking restructuring in the post crisis period. This led to the low presence of foreign portfolio funds in the region despite commendable corporate restructuring, the impending reinstatement of Malaysia in the MSCI index and sovereign rating upgrades. There were some improvements in the portfolio flows into the region in 1999 and 2000, following the rapid growth in the global internet industry. Nonetheless, in the wake of the correction of the technology stocks in the US in early 2001, there was moderation in the portfolio flows. Nevertheless, the low foreign portfolio holdings in the regional stock markets have accorded an unusual degree of stability in the

regional markets. This relative stability has enabled Malaysia to gradually relax the selective exchange control measures.

Malaysia has developed two master plans - the Capital Market Master Plan and the Financial Sector Master Plan designed to enable the development of sophisticated financial markets and resilient banking sector. In March 2003, in an effort by the Government and other relevant authorities to ensure resilient and competitive capital market, ten new measures were introduced to further enhance the Malaysian capital market. The measures were aimed at enhancing investors' participation, liquidity, efficiency of capital raising process and strengthening the intermediary roles of the Malaysian capital market.

Notwithstanding relatively stable flows and the high foreign presence in all sectors of the economy, the Malaysian Government continues to ensure that policies remain supportive of attracting new foreign investments and that Malaysia remains a place of choice for companies seeking opportunities in this region. Most important is the commitment to sound macroeconomic policies to maintain low rates of inflation and stable exchange rates to benefit trade and investments.

CHAPTER 5

FOREIGN DIRECT INVESTMENT IN MONGOLIA

by

Ariunkhishig Gonchigdorj ¹

1. What is FDI?

Foreign direct investment occurs when an investor in one country acquires or expands its ownership of a business entity in another country and the equity participation is sufficient to give the investor management control. FDI has three components:

- Equity capital, the foreign investor's purchase of shares of an enterprise in a country other than its own
- Reinvested earnings, the direct investor's share of earnings not distributed as dividends by affiliates or earnings not remitted to direct investor
- Intra-company loans or intra company debt transactions, short or long term borrowing and lending of funds between direct investors and affiliate enterprises.

FDI is an outcome of following circumstances:

- The firm owns assets such as intellectual property (technology, brand names), organisational and managerial skills, and marketing networks to overcome disadvantages of foreign location
- There are some location advantages in dividing production across countries compared to producing in and exporting from the home country
- Profits of exploiting the assets in-house are greater than from licensing the assets to foreign firms and the benefits are sufficient to make it worthwhile for the firm to incur added costs of managing a large, geographically dispersed organisation in different legal and cultural settings.

There is a growing view in recent years that FDI is positively correlated with growth. Theoretically, this view has been bolstered by recent developments in growth theory, which highlights the importance of improvements in technology, efficiency, and productivity in stimulating growth. Positive externalities occur first, when local firm improves its productivity by copying technology used by foreign

1. Ms. Ariunkhishig Gonchigdorj is Economist at the Monetary Research Department of The Bank of Mongolia.

investors, second, when local firms are forced to utilise existing technology and resources more efficiently in order to survive the increasing competition, and finally, it can occur when foreign investor demonstrates new techniques and trains local workers, who later could be employed by local firms or start their own business. The factors that are important in making FDI decisions may include transportation cost, market size of the host country, agglomeration effects, factor costs, fiscal incentives, investment environment, and trade barrier.

2. Brief Review of Mongolia and the Economy

Mongolia is a large landlocked country located between two of world's largest markets, Russia and China. This provides Mongolia with the advantage of easy access to these main global players. Mongolia's population is about 2.5 million and the literacy rate is relatively very high at over 90 percent. Statistics of the National Statistics Office showed that the labour participation rate was 62.7 percent and while the percentage of registered unemployed was 3.4 percent as of the end of 2002.

Prior to 1990's, the economy of Mongolia was based on a centrally planned model, which was adopted for over sixty years, and was highly dependent on former Soviet Union. As for the foreign relations, the main trade partners were countries with the same economy or specifically, member countries of former Soviet Union and countries of Eastern Europe. Soviet financing, which once reached one third of the GDP, ended after its collapse. At the same time economic and political changes were brought to Mongolia by the peaceful revolution for democracy of 1990. Although the country suffered from high unemployment, hyperinflation, decline in the output at the beginning of the transition, economy has been stabilising since the mid-90's. As of 2002, inflation was 1.6 (the lowest since 1991) and GDP growth was 3.9 percent.

Privatisation of fully or partially state-owned enterprises, which is one of the main part of economy stabilisation programme, has been actively taken place since 1996. Between 1996 and 2000, over 900 enterprises were privatised by different methods. The State's share of the Trade and Development Bank, the biggest bank of Mongolia, was sold to joint consortium of Switzerland - USA in 2002 and the Agricultural Bank was privatised to a Japanese group in 2003. Privatisation of other valued companies - Gobi, the largest producer of cashmere products; the Mongolian airline, the only airline that provides both domestic and international flights; main gasoline distributor, NIC; and other companies - are in preparing to be privatised.

3. Foreign Direct Investment in Mongolia

The government of Mongolia has put great emphasis on creating a favourable environment for foreign investors both at the external and internal level. Mongolia has been a member of the World Trade Organisation since 1997 and has signed with 27 countries on the “Agreement on Avoidance of Double Taxation” and with 34 countries on the “Mutual Agreement of Investment Promotion and Protection”.

From 1990 till 2002, a total of 2400 foreign companies from 72 countries have made direct investment of over USD 800 million in Mongolia and the countries with highest share are China (282 million), Korea (71.5 million), Japan (48 million), USA (35 million) and Russia (31 million). In 2002, 374 companies were registered and made investments of USD 170 million which is higher by USD 47 million compared to 2001. The majority of the foreign investment went to the mining and quarrying sector and had thus resulted in a higher growth in recent years. For instance, in 1999, 2000, 2001, investments of USD 25, 17, 57 million respectively were recorded for this sector and the growth in these years were 3.2, 6.1, and 10.1 percent, respectively. The manufacturing sector, mostly textile industry is the second receiver of the foreign investment and a total of USD 31 and 38 million were made. Although FDI inflow into the financial sector is relatively lower compared to other sectors, it certainly is becoming one of the promising sector.

The Mongolian economy is dominated by agriculture and industrial output that is closely related to the agricultural sector, and mining and mineral activities. During recent years, at the industry and sector levels and within an overall market-oriented framework, priority is given to the development of domestic raw material processing industries, mining, tourism, information technology and infrastructure activities.

The **agricultural sector** accounts for about 20.7 percent of the GDP (2002) and livestock production comprises 78.9 percent of the total agricultural products. The agricultural land of Mongolia is 130.2 thousand hectares, of which 285.7 thousand hectare is for crop production.

Agro-processing industries have great potential in Mongolia due to an abundant local supply of high quality raw materials including cashmere, camel hair, wool, animal skins and hides and timber. The agro-industrial sector is expected to grow rapidly in future years. Cashmere, both raw and processed, is currently the second largest export item. The agro-food sector offers significant opportunities for expansion in both local and international markets. For example, Mongolian meat and animal by-products such as sausage casings and blood and bone meal, have

potentially large markets in Russia, Central Asia, the middle-East, Europe, Japan, and China.

Mongolia has a good potential for the **mining and mineral resources** sector as it has substantial deposits of copper, molybdenum, gold, uranium, zinc, rare earths, ferrous metals, fluorspar, phosphate and semi-precious stones. Several major mining operations were developed before 1989 with the assistance of the Soviet Union and the countries of eastern and central Europe. In recent years a number of private mining enterprises have begun operations. A new Minerals Law enacted on 1 July 1997, contains strict requirements for the processing of exploration and mining license applications, and guarantees secure tenure and transfer rights for license holders. The enactment of the Minerals Law and growing international recognition of Mongolia's favourable geological environment sparked an influx of both major and minor international mining companies into the country in pursuit of exploration and mine development programmes. Gold production has emerged as one of the most dynamic sectors of the Mongolian economy, and has attracted the interests of many of the international mining companies. During the early years of transition, the sector was opened to foreign investment and export with the result that gold production grew ten-fold between 1993 and 2001 with an output high of over 12 metric tonnes in 2001. To promote further gold production growth, the 10% gold tax was removed in 2001, and the Value Added Tax on gold was abolished.

Tourism is another sector with potential in Mongolia although the number of tourist arrivals to Mongolia was relatively small at only 50,835 in 2002, reflecting the country's lack of infrastructure, severe climate and only recent opening to the international market in addition to negative effect of SARS. The majority of the tourists are from South East Asia, the Pacific Rim and Europe. Mongolia has great potential as a tourist destination because of its vast, unspoiled steppes, mountains and deserts and its unique culture and history. Several opportunities for investment in the tourism industry are available through the government's privatisation programme, including construction and management of hotels and camps operating to international standards. The pristine environment, together with low labour costs and the particular niche market for an "off the beaten track" adventure type of tourism is a major deciding factor for investment in the sector. However, the relatively short duration of the tourist season is a particular disadvantage. Continued expansion in the tourism sector requires development of the transportation and hotel infrastructure, both requiring substantial capital investment. Closer liaison between the Russian and Mongolian authorities to increase the frequency of the Trans-Siberian Railway is required according to many investors in tourism. The new Tourism Law of Mongolia creates a favourable legal environment for further

development of the tourism sector. The tax exemptions and deductions entitled to export goods production, have, similarly, applied to the tourism sector, providing favourable investment conditions.

Transportation has great potential also in Mongolia because of vast distances and poor roads. However, the domestic and international air transportation system of Mongolia is relatively well developed. Mongolia currently has four international air carriers providing airline services, including MIAT, Air China, Korean Airlines and Aeroflot. The national airline, MIAT, provides domestic services to approximately 20 locations and flies to Russia, Japan, China, Singapore, Korea, and Germany. MIAT has in its fleet, an Airbus 310, Boeing 737 and two Boeing 727 planes for international flights and smaller aircrafts for domestic use. The airline is well placed to take advantage of the growth in tourist and business travels that is expected as the country develops. To facilitate this growth, the Ulaanbaatar Airport was renovated with a loan from the Asian Development Bank. The Civil Aviation Authority of Mongolia has signed international air agreements to develop air links with several additional countries. Furthermore, a feasibility study on constructing the second international airport that meets ICAO standards has started. While, the ground transportation system of Mongolia is not well developed, the central region of the country is, nevertheless, relatively well served by both rail and roads. Mongolia has 11,063 kilometers of improved roads, although only 1,303 kilometers are paved, which shows the potential for road development in Mongolia. The Millennium Road Project that will play an important role in making connections with the Euro-Asian infrastructure network and the Trans-Asian Road network, as well as for gaining access to the ocean, has been formally agreed to. The main railway line in Mongolia passes through Ulaanbaatar and connects the Chinese rail system in the south with the Russian Trans-Siberian line in the north, a distance of some 1400 kilometers. Rail carries the bulk of Mongolian cargo tonnage, due to spur rail lines that are connected to the major coalmines and the Erdenet copper mine. The rail system is run by a Mongolian-Russian joint venture. Within the guidelines for development of the railway transportation until 2011, reconstruction of rail systems started under a Japanese grant. Several rail freight forwarding companies such as Mongoltrans, Tuushin, and International Freight Forwarding Center are operating in Mongolia. These firms maintain links with foreign firms to coordinate the delivery of cargo to and from the border. In 2001, the representative office of Maersk Sealand, a world leader in global container transportation, was established in Ulaanbaatar. This allowed a shipment to and from Ulaanbaatar without middlemen in China, ensuring the safety of the cargo from origin to destination and dealing with the customs formalities. Several international package service companies, including Mongolia Central Office, DHL Worldwide Express and Federal Express are currently operating in Mongolia.

Communication and information technology s relatively well developed in the capital city and other large cities. The telecommunication network of the country was renovated and installed according to international standards by Alcatel of France and KDD of Japan. Moreover, a mobile telephone service, paging and data network, cable TV network, radio and TV broadcasting, and intranet networks are presently operating in Mongolia. However, the telephone density is higher in Ulaanbaatar, the capital city of Mongolia, and most of the centres of aimags have cellular phone service. However, communication is underdeveloped in rural areas. The relatively undeveloped telecommunications infrastructure is a key barrier to extending the benefits of information and communications technology to rural areas and people. Although small in scale, the information technology industry in Mongolia is a dynamic, rapidly growing industry with real potential to become a new economic sector providing job opportunities especially in the urban areas. Mongolia has a large, well-educated and young workforce with high technical skills. Overseas companies acknowledge and consider Mongolia as a possible cross border outsourcing area for ICT development. The Government of Mongolia has developed the medium-term ICT development strategy that identifies policy, legal framework, infrastructure, human capacity and private sector.

4. Legal Framework

4.1 Foreign Investment Law

The Foreign Investment Law was approved by the Mongolian Parliament on May 10, 1993 and the last amendments were made in January 3, 2002. This law has four sections - general provision, protection of foreign investment that includes rights and duties of foreign investors, operation of business entities with foreign investment, and miscellaneous which includes settlement of disputes.

According to the Law, foreign investment may take place in all areas of production and services; and in all parts of the territory of Mongolia where performing production and services is not prohibited by the laws of Mongolia. Foreign investment may occur through investment in:

- Freely convertible currencies and reinvested earnings in Togrog.
- Movable and immovable property rights.
- Intellectual and industrial property rights.

Foreign investment may take the following legal forms:

- A wholly foreign-owned business entity or a local branch or subsidiary of a foreign enterprise.

Managing and Monitoring Direct and Portfolio Investment Flows:.....

- A business entity jointly with a Mongolian investor.
- Investing directly through the acquisition of shares or other securities of an existing Mongolian business entity using freely convertible currency or togrogs yielded by an investment. Direct application for and award of, rights to exploit or process natural resources according to laws, regulations or product-sharing agreements.
- Marketing and/or management contract.
- Financial leasing or franchising.

Article 10 of the Law on Foreign Investment allows foreign investors to repatriate profits, capital contribution to registered capital, dividends and other financial assets or benefits resulting from asset sales, proceeds derived by withdrawing from, or dissolution of an investment. The following income, profit and payments to abroad shall be remitted without any barriers:

- allotted stockholders income and share dividends;
- allotted income after property and securities' sale, transfer of property right to other party, completion of an investment agreement and liquidation of an entity;
- principal and interest of debt or other identical payments;
- compensation payment for confiscated property;
- other income gained under the legislation of Mongolia.

A foreign investor shall have the following rights and privileges:

- Foreign direct investment is protected by the Mongolian Constitution and by the Law on Foreign Investment complemented by relevant legislation and regulations, as well as by international treaties and agreements to which Mongolia is a signatory.
- It is prohibited to expropriate assets or capital of foreign investors.
- Foreign investors receive treatment equal to that enjoyed by domestic investors in relation to the right to own, utilise and exploit assets and capital.
- Foreign investors are granted the following additional rights.
- The right to own, utilise and dispose of investment assets and to repatriate capital invested in Mongolia.
- The right to manage and to participate in the management of economic entities with foreign investment participation.
- The right to assign and transfer their and duties to other legal entities.

Disputes between foreign and Mongolian investors, as well as between a foreign investor and a Mongolian legal entity, shall be resolved at the courts of Mongolia

unless provided otherwise by international treaties, to which Mongolia is a signatory, or by a contract between the parties to the dispute.

Official government policy is to phase out tax incentives gradually and also to phase out other fiscal benefits that are inconsistent with Mongolian agreements with the World Trade Organisation (WTO) and the International Monetary Fund (IMF). Under the protection of 'grandfather' provisions, existing investors benefiting from such incentives will not be deprived of their incentives during the phasing-out period.

The Foreign Investment Law also contains a provision for a so-called Stability Agreement whereby investors will receive a certificate specifying any incentives the investor is entitled to under law. This provision aims to guarantee that large investments will benefit from a stable taxation environment after the initial investment has been made.

The Government has agreed to conclude Stability Agreement with any foreign investor that brings in at least USD 2.0 million. The duration of such Agreement may be up to 10 years if the amount involved is from USD 2.0 million to 10.0 million; is the amount over USD10.0 million the duration of the agreement may be up to 15 years.

The most important direct taxes relevant to foreign investors are the General Taxation Law, Economic Entity and Organisation's Income Tax Law and Personal Income Tax Law. The former two laws regulate the income tax on companies with foreign investment in Mongolia. These laws also apply to the permanent establishments of foreign entities with income in Mongolia and to commercial banks, credit agencies and insurance agencies and legal entities. The Personal Income Tax Law regulates the income tax on individuals.

The main law governing corporate taxation is the Economic Entity and Organisation Income Tax (EEOITL). All domestic corporations and resident foreign corporations are taxed on their net worldwide income from all sources. Non-resident and temporary resident corporations are taxed on their new Mongolian source income.

A business entity with foreign investment in the following areas are granted income tax preferences starting on the date on which production activities commence:

- Power and thermal plants and their transmission networks, highways, railways, airways, and engineering constructions and basic telecommunications networks
- 10 years of tax exemption and 50% tax relief in the subsequent 5 years.

Managing and Monitoring Direct and Portfolio Investment Flows:.....

- Mining and processing of mineral resources, oil and coal, metallurgy, chemical production, machinery, electronics - 5 years of tax exemption and 50% tax relief in the subsequent 5 year period.
- Business entities that export at least 50% of their produce, other than raw wool, cashmere and leather processing as well as road construction - 3 years of tax exemption and 50% tax relief in the subsequent 3 years.

Business entities in other economic sector may enjoy preferential tax treatment, if and when Government proposes it to Parliament and it approves such measures. If a foreign investor reinvests its share of dividends into the business, the taxable income will be adjusted by the amount reinvested. If the business entity is engaged in a number of activities, the main area of business operations shall be used in determining the tax preference.

CHAPTER 6

MANAGING AND MONITORING DIRECT AND PORTFOLIO INVESTMENT IN NEPAL

by

Bamadev Sigdel, Ph.D.¹

1. Review of the Nepalese Economy

Nepal is a land-locked country bordered by China in the north and India on three sides. The population growth rate is 2.2% per annum. About 86% of the population resides in rural areas and the literacy rate is 54%. The estimated per capita income of is US\$ 250. 80% of the population is engaged in agriculture which is the mainstay of the Nepalese economy contributing about 39% to the GDP. The contribution of the industrial sector to Nepal's GDP is about 21.1 %, employing about 5.8% of the labour force.

The economic performance of Nepal was weak in FY 2002, registering a negative growth rate for the first time in the past two decades. The real GDP growth fell to -0.6% in 2002 from 4.6% in 2001.² A series of domestic and international factors, especially the continued escalation of the insurgency, irregular monsoon and weak external demand, have exacerbated the economic down turn that began in 2001. Agricultural output dropped to 2.2%. Similarly, sectors such as industry and tourism were also hit hard by the insurgency and weak external demand. Industrial growth was lower than agriculture, plummeting to -3.3 %, the sharpest contraction in two decades. The service sector was also kept down by domestic security problems and declined to 1.4% in 2002 after expanding by 5.3% in 2001. The Nepalese economy is projected to grow by 3.0% and 4.0% respectively in 2003 and 2004, under the assumption of the restoration of law and order that will allow for private and public sector investment, continued global economic recovery and good weather conditions.

-
1. Dr. Sigdel is Deputy Director in the Research Department of Nepal Rastra Bank (Central Bank of Nepal), Kathmandu, Nepal. The author acknowledges Mr. Tula Raj Basyal, Executive Director (NRB), Dr. Dandapani Paudel (Director, NRB), Mr. Sushil Ram Mathema (Senior Economist, The SEACEN Centre), Dr. Sri Ram Paudel (Professor, Central Department of Economics, TU) for their useful comments and suggestions during the course of this study.
 2. ADB, Country Economic Review: Nepal, Asian Development Bank, Manila, June 2003, pp. 1-11.

Nepal is still lagging in terms of globalisation although economic liberalisation measures have been implemented since the beginning of 1990s. For example, Nepal's trade deficit to GDP remained at 14.1% at the end of 2002. As Nepal liberated her trading regime with concessions in tariffs and other measures, trade in totality increased with the accelerated growth in import trade rather than export trade. As a result, the contribution of exports trade to Nepal's GDP had remained almost static ranging between 5 to 11% for 12 years. The exchange rate of NRs with US Dollar was volatile depreciating by an average of 22.3% per year. Total debt, both internal and external, exceeded NRs 300 billion.³ In light of this, Nepal introduced the Tenth Plan (2003-2007) with the twin objectives of poverty reduction and sustainable development, brightening the prospects for development in Nepal in the coming decades. However, the prevalence of peace and good governance in the country would play significant roles to lift the Nepalese economy out of the doldrums.

2. Main Characteristics of FDI in Nepal

The history of organised industry in Nepal dates back to 1936 when the Nepal Company Act was enacted by the Rana Prime Minister, Juddha Sumsher. The first organised industrial venture was the Biratnagar Jute Mill which was established by Indian entrepreneurs in 1936. The Act which made provisions for the establishment of Joint-Stock companies in Nepal, attracted other Indian entrepreneurs to undertake ventures such as the Morang Sugar Mill, Raghupati Jutt Mill, Joddha Match Factory and a few others.⁴ During 1936 to 1951, some 65 joint stock companies were established in Nepal.⁵ The history of foreign investment dates back to 1950 with the first Indian capitalists such as Birlas and Golcha.⁶ The registration process of joint-ventures was, however, quite slow in during 1960s with less than 10 registered units.

Between 1986-2001, twenty-one LDCs such as Bangladesh, Ethiopia, Lao PDR and Sudan, to name of a few, actually saw FDI growth rates of more than 20% per annum. By the same token seven countries, including Afghanistan, Congo DPR, Maldives and Myanmar saw a rise from 10-20% FDI per annum.⁷ However,

3. Pyakuryal, Bishwambher, *Budget 2003 /04*, in 'New Business Age' (Monthly), Kathmandu, July 2003, pp. 15-16.

4. Katti, Bijaya, *Indo-Nepal Trade, Post WTO Dimension*, Kalinga Publication, New Delhi, 2001, pp. 80-83.

5. Sapkota, T.P., *Policy and Legislative Framework on Foreign Investment and Technology Transfer*, Business Age, November 2002, p. 11.

6. Mahato, B.P., and Timilsina, P.P., "Economic Development and Foreign Investment in Nepal", *Nepal Society for Applied Economics*, Kathmandu, p. 89.

7. Rana, Madhukar S.J.B, *Strategy for FDI Mobilization into Nepal*, Paper Presented to SCCI, Male, Round the Table Discussion, October 1, 2002, p. 8.

for small countries like Nepal and Cambodia, the FDI growth was less than 1% per annum. Worse yet, 15 other LDCs, including Bhutan experienced long-term decline in the annual growth of FDI. With the liberalisation of most South Asian countries including Nepal from 1990, the flow of FDI began to increase. India attracted the lion's share of FDI among nations followed by Pakistan, Sri Lanka and Bangladesh.

Data shows that up to July 1989, there were 59 joint-venture projects in Nepal with foreign investment worth NRs 466.84 million employing nearly 10586 persons and it rose further after 1990. In 1989/90 there were 30 foreign joint-venture projects with investments worth NRs 398.51 million and by 2001/2002, there were 96 projects worth NRs 6880 million employing about 6880 persons. Deterioration in the internal security situation adversely affected foreign investment inflows particularly after FY 2000/2001. As a result, during FY 2001/2002, only a total of 76 FDI-related projects were approved by Department of Industry, with the total project costs of Rs 3309.6 million of which NRs 1206.95 million was FDI. In 2002/2003, there were further declines to 71 FDI-related projects worth NRs 3525 million. All in all, there are 840 FDI-related projects in Nepal worth NRs 22602.91 million from 1989-2003. (Table 6.1).

A large portion of foreign investment has been channeled towards manufacturing followed by tourism and service. Of the total foreign investment, the manufacturing sector of Nepal succeeded in attracting nearly 50% of foreign investment. The tourism and service sectors attracted 23.93% and 21.43% of the total foreign investment respectively while none was targeted for agriculture. Energy, which can be a potentially lucrative sector for investors also failed to attract more foreign investment (Table 6.2). The larger proportion of foreign investments went towards the low technology consumer goods manufacturing and service enterprises which have little export potential.⁸ The trend of FDI, however, can be regarded as satisfactory given the poor economic and investment environment.⁹

By August 2003, some 840 joint-venture projects of various kinds were found to be operating in Nepal. Of the total registered projects with the Department of Industry (DOI), 340 were operational with 45 under construction, 210 approved, 22 closed, 71 cancelled and 152 ventures which had obtained licenses for operation. (Table 6.3). Therefore, although the inward flow of FDI has grown for Nepal, there is a considerable gap between approved and actual investments.

8. Poudyal, Sri Ram, and Sigdel, Bamadev, Private Sector Development, in Stefen J. Keeling (edt) 'Pro-poor Governance assessment Nepal', DFID, Kathmandu 2001, pp. 70-71.

9. See, the Kathmnadu Post, July 31, 2003, P. 9.

Out of the 840 foreign ventures, 33.2% are from India with the investment value of NRs 7861.42 million (279 projects). 10.4% are Japanese with 88 projects worth NRs 925.23 million. The other investors are from USA, China, Germany, South Korea and UK. Their share of investment stands at 10.1%, 9.2%, 4.5%, 4.5% and 3.3% respectively. Other countries have also invested in Nepal in various sectors of the economy but their contribution is, however, low and insignificant (Table 6.4).

From industrial statistics of DOI, it was revealed that of the total registered investments, some 814 (78.3 %) foreign enterprises were found to be concentrated in the Central Development Region followed by Western Development Region (6.2%) and Mid-Western Development Region (1.8%) while the Far-Western Development Region has failed to attract FDI. The above mentioned regions had attracted more FDI because of various infrastructural facilities such as, road, electricity, postal service, telecommunication network and proximity to Indian markets. The Eastern Development Region attracted more manufacturing foreign enterprises while the Central Development Region is hosting manufacturing, tourism services, agro-based and construction oriented foreign enterprises while the Western Development Region of Nepal attracted more tourism, manufacturing and service based foreign ventures (Table 6.5).

The flow of FDI in Nepal recorded a decrease of 47.75% in the first quarter of FY 2003/04, according to the DOI with the approval of 24 foreign investment projects. The total project cost and total fixed investment of the projects approved in the first quarter of 2003/04 stood at NRs. 545.57 million and NRs. 373.28 respectively employing 171 persons.¹⁰ The DOI officials attributed this decline to the poor investment climate and the internal security situation.

Nepal Rastra Bank started to maintain data on FDI from 1995 onwards and has included foreign investment in the banking and insurance sector which were not incorporated by the DOI. and this had led to the problem of comparability of NRB and DOI data. According to NRB data, NRs 387 million and NRs 1620.7 million of FDI flows were recorded for 1995/96 and 1996/97 respectively. This dropped sharply to NRs 232.6 million in 1999/2000 as most of the investors from the banking and insurance sector withdrew their investments from Nepal, mainly due to the insurgency.

10. The Kathmandu Post (Daily), October 30, 2003, P. 9.

The decreasing trend of FDI in developing countries, particularly LDCs throughout the world due to the global recession was another reason behind the declining FDI trend for Nepal. Internal conflicts and frequent changes in the government particularly after 1992 also contributed to the declining trend. The lack of good corporate governance and dynamism in the financial sectors also caused some firms to gradually withdraw their investments from Nepal (e.g. Indo-Suez, Arab Bank, Bank of Ceylon, Siam Commercial Bank, etc).¹¹ Those remaining were making profits from foreign exchange transactions and investment in government securities rather than lending for private sector growth.

The biggest impediments to steady FDI inflows to Nepal are instability and policies which are not conducive for long-term investment. Unlike countries like China and Malaysia where FDI is a 'provincial issue' under which each province is allowed to make independent decisions on improving infrastructure and compete amongst themselves to attract FDI, in Nepal, FDI is a strictly centralised issue. The creation of 'Industrial Clusters' is another policy initiative, which favours foreign investment in India and Taiwan. For example, Bangalore is the IT cluster of India, known as the 'Silicon Valley of the East'. Nicolas Stern, the eminent economist once argued that "in many countries, and it seems Nepal, the investment climate is damaged by poor infrastructure (electricity, road, communication and others), and by the problems of governance".¹²

Broadly speaking, Nepal faces two problems related to the promotion of FDI. The first is the poor environmental factor caused mainly by political and macroeconomic instability. The second is related to procedural ones. In spite of appropriate policies, FDI performance has lagged behind simply because of the slow implementation process. Bureaucratic delays and lethargy, mistrust and suspicion, inability to discriminate between foreign tourists and foreign investors, the cumbersome FDI procedures, corruption and lack of transparency in rules and regulations have all contributed to the lack of investment in Nepal.

3. Prospects of FDI in Nepal

Nepal's initiation for industrialisation is relatively new while its natural and human resources endowment have been barely tapped. Nepal's topographical diversity, natural resources, history and strategic location between two emerging

11. Rana, Madhukar S., FDI and Poverty Eradication in Nepal, 'The Kathmandu Post', October 16, 2002.

12. Stern, Nicholas, Improving Investment Climate in Nepal, in 'Business Age', Kathmandu, June 2003, p.17.

economies of China and India, have great potential for attracting FDI flows. In addition, the gradual move from a South Asian Preferential Trading Agreement (SAPTA) to South Asian Free Trade Area (SAFTA), and the accession to WTO would be helpful in creating an attractive environment for FDI.¹³ The following are some sectors which have potential in attracting FDI:

a) Hydropower

The country has the capacity to generate nearly 83,000 MW of hydroelectricity, of which 44,000 MW is thought to be economically feasible. At present, only 528 MW (less than 1.5% of the feasible capacity) is being generated, of which about 100 MW is from independent power developers.¹⁴ Thus, one major area of comparative advantage for Nepal is investment in hydropower development. Many high current rivers and rivulets existing in Nepal offer a tremendous potential for hydropower projects.

At present only 14% of the population is supplied with electricity. Since the supply of public power is not sufficient, the government is still purchasing power supply from the private sector and also importing from India. Apart from sales in the domestic market, there are good prospects of power exports to the Tibet Region and the neighbouring Indian States of Bihar and Uttar Pradesh, bordering Nepal. It is estimated that the Indian State of Bihar has a power demand of approximately 2300 MW, but only 1550 MW is met from installed capacity. Similarly, the State of Uttar Pradesh has a power demand of approximately 9330 MW, but only 5080 MW is met from installed capacity.¹⁵

b) Export Base Potentialities

One of the important incentives for FDI in Nepal is free access to the large Indian markets. By virtue of its proximity to India, close economic linkages between the two countries have manifested themselves, inter alia, through Indian investment and joint-ventures in Nepal. A number of Indian companies, including Dabur, Hindustan Lever, Colgate, etc., have established their manufacturing base in Nepal with the objective of exporting their finished products to the adjoining Indian states bordering Nepal.

13. K.C., Fatta Bahadur, Foreign Investment in Nepal and South Asia, in 'Issues of Governance in Nepal', Nepal Foundation for Advanced Studies/FES, Kathmandu, 2001, P. 57.

14. UN, An Investment Guide to Nepal, Opportunities and Conditions, UNCTAD, Geneva, 2003, P. 47.

15. Poudyal, Sri Ram and Sigdel, Bama Dev, Nepal-China Economic Cooperation: Present Status and Future Prospects, in 'Policy Study Series', Institute of Foreign Affairs, Kathmandu, 2000, P. 101.

c) Investment in Agriculture Sector and Related Activities

Nepal produces paddy, wheat, and maize as the main food crops and mustard and rapeseed as the major oilseeds. Nigerseed, which is in great demand in international markets for bird feeding, is emerging as an export oriented crop. In recent years, market oriented production of vegetables and fruits has increased, thus changing the subsistence pattern of agriculture. Also increasing in importance are organic tea, organic coffee, meat, milk, eggs, fish, vegetable seeds and oil and soya production. Having a diverse climate, Nepal can produce a variety of fruits ranging from apples to lychees for which there is growing demand from the India and China.

Probable enterprises that could be established in Nepal by Chinese investments include ventures for sugar, flour, paper, herbs, and their extracts, horticulture in fresh and processed forms, sericulture and silk production, fisheries and vegetables in processed forms".¹⁶ Thus, the agriculture and forestry sectors have high prospects for investments in Nepal especially by Chinese entrepreneurs. The prospects for exports of food to Tibet is also bright as there is an ever growing demand for food staples, vegetables and even livestock products via the northern border of Nepal and China.

d) Tourism

Tourism plays a very significant role in Nepal's economic development. The increase in tourism would generate more employment in tourist related sectors. As a tourist destination, Nepal is well known for major attractions such as the Himalayan ranges, national parks, diversified culture, beautiful terrain, historical and religious sites for both Buddhists and Hindus. All these attractions have great potential for FDI in tourist-related industries.

In light of the potential from tourist arrivals from China, Nepal Rastra Bank has made the Chinese currency 'Yuan' exchangeable for Nepalese currency to facilitate trade and tourism between the two countries. The major tourist arrivals have traditionally been from India, which accounted for some 18% of the total arrivals in 2002.

16. Poudyal and Sigdel, Op.cit., P. 101.

e) Health

The Government of late, has permitted the set up of private specialised health services which also have the potential to become lucrative for national and foreign investment in years to come. Policies to encourage the growth of this sector includes the provision of land for long-term lease in the hills to private sector investors to construct hospitals, health centres and educational institutions.

The pharmaceutical industry is another potential sector for foreign investment in Nepal as only about 10 % of the total demand is currently being met by the local pharmaceutical industries and the rest imported from India.¹⁷ It is estimated that about 70% of the nearly US\$ 80 million pharmaceuticals market is dominated by Indian companies.

f) Information Technology

The most common concern of potential foreign investors in Nepali IT and telecommunication sector has been the lack of skilled manpower and IT zones. In light of this, IT workers are being trained (about 4,000 IT workers are trained in various institutes every year in Kathmandu) and the government's Employment Promotion Council has started a training programme in cooperation with the private sector. Some universities in Nepal have also introduced IT courses recently for graduate and post graduate studies. Nepal could also tap IT technologies from India and China in terms of software and hardware sector development and could export such high valued products to the international market. Nepal would have comparative advantage in this sector because of its cheaper labour.

g) Textiles, Garment and Fashion Industry

Nepal can increase her exports of readymade garments through the diversification of both products and markets. With foreign investment, the apparel industry would enable Nepal to increase exports substantially and gain entry into the markets of Europe, Japan, Australia, and the emerging markets.

In summary, Nepal's comparative advantage lies in the five sectors of tourism, water resources, agro-enterprises, textile, and IT. Recent reforms in electricity and communication have opened these utility sectors to private investment. FDI opportunities also exist in (a) trade in primary products with India, (b) unlimited

17. NRB, *Attracting Foreign Direct Investment: Experiences and Challenges*, (Unpublished Report), *Op.cit.*, pp. 46-47.

non-reciprocal access to Nepali manufactured goods and services to provide for economics of scale (c) free Nepal-India movement of capital, foreign exchange and labour, (d) regional cooperation from SAPTA to SAFTA by 2010 and sub-regional cooperation through the SAARC growth quadrangle to access regional markets, (e) accession to WTO, (f) cheap and disciplined labour, (g) large reservoir of people who have lived and worked abroad as NRNs (non-residential Nepali) and PNOs, (people of Nepali origins) and (h) scope from the country's bio-physical and ethnic, demographic diversities.

3.1 NRNs, PNOs and FDI Prospects in Nepal

Nepal hosted the 1st NRN conference on October 11-14, 2003 in Kathmandu to explore the investment potential of NRNs. The Conference drew over 200 NRNs and PNO from 25 countries (not counting those from SAARC countries), senior government officials and entrepreneurs.¹⁸ It was discovered that NRNs were interested in investing in IT, hydropower, service sector, including the media and tourism sectors. The Government is formulating the necessary laws and regulations which would allow Nepalese residing overseas to do business in Nepal which could take the form of a 10 year visa or dual citizenship for NRNs to encourage them to undertake investment activities in Nepal.¹⁹ The Government also considers NRN investment at par with foreign direct investors and provides foreign exchange facilities in investment along with repatriation of profit and principal invested in the projects. The regulations on this are currently being set up and the forthcoming Act will make clear provisions for the NRN community investing in Nepal to repatriate profits in foreign currency. The Act is expected to resolve questions on transactions with Nepalese banks, investment in realty, investment in shares and bonds, loans from foreign banks and provisions on labour, tax, visa facilities, etc.

4. Tenth Plan and FDI

The Tenth Plan (2002-2007) focuses on the challenge of attracting direct and portfolio foreign investment to Nepal amidst intensive competition from other emerging countries since it is recognized that a large amount of capital investment is required for establishing, developing and expanding infrastructures such as energy, communication, roads, railways as well as industrial projects and financial institutions

18. The Himalayan Times (Daily), Kathmandu, October 13, 2003.

19. The Himalayan Times (Daily), Kathmandu, October 14, 2003. People living in foreign countries for more than 183 days and holding Nepali passports are considered as NRNs and people of Nepali origin residing abroad for three generation and presently foreign passports are taken as PNOs.

which is currently not met by domestic investments. The policies regarding FDI in the Tenth Plan include the following.²⁰

- Policy reforms in order to make environment conducive for foreign investments..
- In the process of attracting foreign investment, the regulations and laws for the operations of businesses relating to accounting, legal security, intermediation of foreign persons and institutions will be improved as determined by WTO.
- Special policies will be made to attract investments of NRNs.
- Direct and indirect foreign investors will be provided with physical facilities (communication, electricity, water, etc) and other incentives through the One Window System (OWS) in order to have an easy market access with the removal of existing administrative bureaucracy.
- When dissolving foreign investment companies that are not operational, a single exit procedure will be arranged for minimising administrative procedures and appropriate bankruptcy laws will be introduced by redefining existing provisions.
- Foreign direct and portfolio investments will be encouraged in such sectors as industry, water resource, tourist, road, railway, insurance and savings and investment management through the timely review of existing foreign investment policies.

5. Review on Foreign Investment Policies and Regulations

The Nepalese Government in its First Plan (1956-61) encouraged foreign investment technology in large-scale industries.²¹ In 1958, the Government formulated its first industrial policy making provisions for FDI particularly in medium and large scale industries and the Industrial Enterprises Act (IEA) was enacted in 1961 to give legality to FDI policies. The subsequent Periodic Plans of Nepal (1962-1965, 1965-1970) tracked the Industrial Enterprises Act of 1961 and in 1974, the Industrial Enterprises Act (IEA) was amended with the inclusion of criteria for establishing new industries, simplifying procedures for the granting of licenses and shortening the time and process for application approvals through one window. The Act also included incentives such as the exemption of income tax, duty free imports of raw materials and spare parts, exemption from excise duty and sales tax, preferential interest rates for investing in undeveloped regions and the allowance for foreign investors to repatriate 35% of profits.²²

20. Summary of *Tenth Plan (2003-2007)*, HMG/Nepal, www.npc.gov.np, 2003.

21. Karki, Bharat B., "Legal Regulation of Foreign Investment in Nepal: Industrial Sector Specific", in *Nepal Law Review*, Nepal Law Campus, Kathmandu, 1999, p. 3.

22. Sharma, Kishore, "Impact of Policy Reforms on Manufacturing Growth in Nepal", in *Asian Survey*, vol. xxxvii, June 6, 1997, University of California, USA, 1997, p. 550.

Nepal had a protectionist trade policy regime before 1991 to basically promote domestic output and create a base for industrialisation.²³ However, because of the socio-cultural and economic proximity with India, Nepal did not have options for deviating significantly from the Indian economy but has endeavoured to be more liberal in its trade policies reflected by its relatively low tariffs and its management of FDI through various measures.

The Foreign Investment and Technology Act (FITA) was promulgated in 1981 and in it, FDI was defined as “the share investment in the form of currency or tangible assets made by the foreign investor in the concerned industry and included the re-investment of earnings out of such investment”.²⁴ Any foreign firm, company, individual, government or international institution would come under the ranking of ‘foreign investor’ according to FITA.

Various facilities and provisions for foreign investors were provided for in FITA. For example, industries with 25% to 50% value added in their productions were granted full exemption from income tax for five years. Similarly, tourism based industries were granted full exemption from income tax for at least seven years and the industries established within underdeveloped areas in Nepal were exempted from excise duty for at least five years. Furthermore, facilities of convertible foreign currencies were also provided for joint-venture industries under FITA for the importation of necessary machineries, equipment and tools, spare parts and components, raw materials, technical consultancy and assistance and so on.

Nepal entered into the Enhanced Structural Adjustment Programme (ESAP) supported by the World Bank and IMF in 1992. Liberal policy reforms in line with globalisation have been introduced, giving top priority to privatisation. The successive Governments that came into power after 1990s introduced reforms in the industrial sector to attract FDI and effectively promote joint-ventures which include the Industrial Enterprise Act of 1992, the Foreign Investment and Technology Transfer Act of 1992 and the Foreign Investment and One Window Policy of 1992. The main thrust of these policies is on market driven strategies and the encouragement of private sector initiatives and enterprises.

The Foreign Investment and Technology Act of 1981 was replaced by the Foreign Investment and Technology Transfer Act of 1992, with amendments made in 1993. The preamble has been changed slightly to add “whereas in the process

23 IIDS, *Impact of Economic Liberalization in Nepal*, IIDS, Kathmandu, p. 1996, p. 12.

24 MOI, *Foreign Investment and Technology Transfer Act-1981*, Ministry of Industry, Kathmandu, 1986, p. 1.

of industrialisation of the country, it is expedient to promote foreign investment and technology transfer for making the economy viable, dynamic and competitive through the maximum mobilisation of the limited capital, human and the other natural resources”.²⁵ The Government introduced the FDI element in the Act by identifying foreign investment promotion as a prime strategy for achieving the objectives of increased industrial production, alleviating poverty, creating maximum employment opportunities and paving the way for improvement in the BOP situation. Foreign investments were expected to supplement domestic private investments through capital flows, technology transfer and providing Nepal with access to international markets.

The Foreign Investment and Technology Transfer Act of 1992 (amended) defines FDI as “foreign investments made by a foreign investor in any of the following:

- Investment in share (equity),
- Re-investment of the earnings derived from the investment as referred to investment in share (equity), and,
- Investment made in the term of loan or loan facilities”.²⁶

The objective of the Act was to attract and encourage foreign investments in the form of equity participation, direct investments in domestic production, re-investment of the earnings derived from such investments, creation of loans, and transfer of technology in the form of usage of technological rights, specialisation, formula, process, technical know-how and use of foreign-owned trade marks and foreign management.

The Act has also made FDI allowances on following:

- ❖ 100% foreign equity investment.
- ❖ Foreign investment in large and medium scale industries.
- ❖ Full remittances of profits, dividends and reparations of capital.
- ❖ Attractive concessions, and incentives such as “no income tax on dividend and income from exports, extremely low import duties (0.5% to 1%) on most of the industrial raw materials and capital goods, no duty on imported inputs for export items, fixed advance tax deduction of 15% except on tobacco products or alcoholic beverages and additional facilities like accelerated depreciation, 50% deduction on investment in pollution control device, etc.
- ❖ Facilities and concessions to foreign investors are provided through the “One Window System”.

25. MOI, Foreign Investment and Technology Transfer Act-1992, Ministry of Industry, Kathmandu, 1998, P. 4.

26. Ibid, P. 7.

The Industrial Enterprises Act of 1992 (with first amendment) also mentioned the prospect of forming an 'Industrial Promotion Board (IPB)' under the chairmanship of the State Minister for Industries.

The major functions, duties and powers of the IPB would include:

- ❖ Provision of necessary cooperation in formulating and implementing policies, laws and regulation pertaining to the industrialisation of the country,
- ❖ Pursuance of liberalised economic policies,
- ❖ Fostering coordination between policy making and the implementation of industrial policies, and,
- ❖ Smoothening the process of application for investment and provision of information on facilities and concessions.

The Act further provides for foreign nationals visiting Nepal to undertake investment surveys by the granting of non-tourist visas for up to six months. It also provides for the settlement of disputes between national and foreign investors by mutual consultations in the presence of the Department of Industry. If a dispute cannot be settled in this way, arbitration will be made in accordance with the United Nations Commission on International Trade Laws (UNCITRAL) rules. Such arbitration is to be held in Kathmandu in accordance with Nepal's law.²⁷ Other incentives in the Act include the following:

a) Approval

Approval for FDI is by the Department of Industry, for industries having fixed assets of up to 500 million rupees or by the Industrial Promotion Board (IPB), if this limit is lower. Fiscal and tax incentives for foreign investors are accorded depending on the type of industry. Industries promoting exports and other national priority industries are granted higher tax concessions and exemptions.

b) Foreign Currency Provision

Foreign investors who are allowed to convert foreign currency are permitted to repatriate the following at the prevailing exchange rate up to 75% of their earnings in convertible currency ²⁸ — the sale of the whole or any part of the equity investment, amount received as profits or dividends of foreign loans and amounts received under the agreement for transfer of technology.

27. Pundit, Shree Pd., Nepal Law On Foreign Investment, in IFDS 'New Policy Initiative for Trade and Investment', Institute for Development Studies, Kathmandu, 2001, P. 81.

28. Maskey, Pawan R., FDI Some Observation, in 'The Kathmandu Post', July 2, 2002, P. 4.

With the further amendments to the Foreign Investment and Technology Transfer Act of 1992 in January, 1996, additional incentives and facilities have been accorded to foreign investors as follows:²⁹

a) Equity Share

The amended FITA eliminated the minimum fixed capital requirement of NRs. 20 million for foreign investors in Nepal. Except for 21 industries, foreign investors are allowed to invest in almost all industries of various kinds that range from manufacturing to energy to mining. A 100% equity investment is allowed in medium and large scale industries with fixed capital investment up to NRs 20 million.

b) One Window Services

The Government established the One Window System (OWS) in the new industrial policy of 1992. The objective was “to make available on time, without hurdles, the facilities and concessions to the industries”. Specifically, the OWS provides for the following:

- i. Permission, facilities and other administrative services that are stated in the Foreign Investment and Technology Act, and,
- ii. Other infrastructural facilities (such as registration, land, electricity, telecommunication, water) and other services required by the investors.

The amendment of FITA also provides the DOI with authority to approve foreign investment projects up to NRs 500 million (about US\$ 8620 thousand). For investment above this amount, the DOI through the Industrial Promotion Board (IPB), is mandated to decide on approvals within 30 days from the receipt of an application in a prescribed form which contains essential information on the project such as total capital, source of finance, plant capacity, location of project, requirement of machinery, equipment and raw materials and the specific contribution to be made by foreign and local investors.

c) Tax Holidays and Exemptions

As per recent amendment of the FITA, interest income earned from loan investment is exempted from income tax. Dividends declared are exempt from income tax and only 15% income tax is levied on interest income on royalties,

29. Karmacharya, Binod K., South Asian Regional Cooperation in Trade and Investment: A Nepalese Perspective, CEDA, Kathmandu, April 1996.

technical and management fees. Other benefits and incentives include the Investment Promotion Protection Agreement, Security and Investment, Arbitrations and Avoidance of Double Taxation.

d) Repatriations, Royalties, Fees and Expatriates

Foreign investors who have received permission to invest in convertible currency are permitted to repatriate, at the prevailing rate of exchange, the proceeds from the sale of their equity, dividends and other benefits on foreign investments, principal and interest payments on loan, payment for transfer of technology and compensation for acquisition of any property. Royalties, technical services, fees and management fees are allowed as per corresponding agreement. Likewise, hiring of foreign technology and experts is possible with the prior approval of Department of Labour (DOL) and 75% of earnings could be remitted in convertible currency.

In July 2000, the Government formed a Fast Track Committee (FTC) with a view to make quick decisions on foreign investment related projects. The seven member FTC consist of the Prime Minister, Deputy Prime Minister, Finance Minister, Works and Transport Minister and Vice-chairman of National Planning Commission (NPC) and Chief Secretary.

Foreign investors could send a proposal directly to the FTC and decisions would be made in less than two weeks in consultation with concerned ministries regarding the building, operation and transfer (BOT) of the projects.

6. Review on Foreign Investment Related Rules and Regulations of NRB

Until the mid-1980s, Nepal's financial sector was closed to foreign banks and was effectively controlled by two state-owned banking institutions – Nepal Bank Limited (NBL) and Rastriya Baniyya Bank. Reforms in the market were taken in the middle of the 1980s with amendments to the Commercial Bank Act to remove the entry barrier placed on commercial banks.³⁰ The opening of the banking sector to joint venture banks will increase competition and help to improve the operational efficiency of the existing banks and provide better services to the expanding export and manufacturing sectors as well as to extend banking services to the rural areas for further financial deepening.³¹

30. Dahal, Madan Kumar (et.al.), Development Challenges for Nepal, Nepal Foundation for Advanced Studies (NEFAS)/FINNIDA, Kathmandu, March, 1999, P. 64.

31. Acharya, Meena and Khatiwada, Yuba Raj (et.al.), Structural Adjustment Policies and Poverty Eradication, Institute for Integrated Development Studies, Kathmandu, 2003, pp. 38-39.

The establishment of foreign bank branches would also mobilise external private financial resources to meet the large infrastructural development needs. It is expected that this policy would also contribute to the promotion of Nepal as a hub of global financial activities.³²

The opening of Nepal's financial system, began in 1984 with the establishment of the Nepal Arab Bank and gained momentum after the restoration of democracy.³³ Economic liberalisation has since formed the basic development strategy of the Government. Nepal's financial sector was dominated by the two large government-owned commercial banks (RBB and NBL), and competition in the financial system was enhanced only after the entry of three joint-venture banks (Nepal Arab Bank, Nepal-Indosuez Bank, and Nepal Grindlays Bank). As of mid-July 2002, there are 16 commercial banks.³⁴

While framing its licensing policy, the NRB has given emphasis on policy issues rather than administrative control measures and has granted operating licenses to commercial banks that fulfills its policy criteria. NRB issued the following new regulations for specific minimum paid-up capital for banks:³⁵

- As per new provision, a minimum of Rs. 500 million paid up capital is required for the opening of a new bank with its headquarters in Kathmandu Valley and its operation extended throughout the kingdom of Nepal,
- For a commercial bank established by domestic investors, 70% of the share capital at the maximum may come from the investor, and at least 30% of the paid-up capital has to be floated for general public subscription,
- For a commercial bank established under joint-ventures, foreign investors are allowed to invest 40% of the paid-up capital at the maximum and 50% of the capital at the maximum. However, at least 30% of paid-up capital has to be floated to the general public, and,
- Application for the establishment of new banks will be entertained within the stipulated time period fixed by the NRB.

32. Basyal, Tula Raj, Why Financial Sector Reforms in Nepal, in 'Rajaswa', Revenue Administration Training Centre, Lalitpur, Volume 1, April/May, 2001, P. 33.

33. AsDB, Rural Finance Development in Nepal, Asian Development Bank Office, Kathmandu, March 2000, P. 34.

34. NRB, Economic Report – 2001/02, Research Department, Nepal Rastra Bank, Kathmandu, 2003.

35. NRB, Economic Report – 1995/96, Research Department, Nepal Rastra Bank, Kathmandu, 1997, pp. 26-27.

A number of financial sector reform measures were initiated with financial and technical support of the World Bank in fiscal year 2000/01. The Nepal Rastra Bank Act of 2002 was promulgated to boost the financial reform programme through various rules and directives. It is stated in the Act that, "it is expedient to establish Nepal Rastra Bank to function as the central bank to formulate necessary monetary and foreign exchange policies, to maintain stability of price, to consolidate balance of payment for sustainable development of the economy of the Kingdom of Nepal"³⁶ NRB issued directives for commercial banks on April 3, 2001 and stipulated that this would be effective from mid-August 2001. Accordingly, a provision requires that commercial banks operating in Kathmandu Valley, maintain a compulsory minimum capital fund of Rs. 500 million. Similarly, with effect from November 2, 2002, a directive was also issued to hold investments with other banks (domestic as well as foreign) of maturity of up to 7 days at a maximum or deposits that could be demanded at short notice (48 hours) as money at call.³⁷

NRB has granted operating licenses to commercial banks that fulfill its policy criteria, emphasising on policy oriented issues with the prime objective of promoting efficient financial intermediation through increased competition. In this regard, a new licensing policy for opening commercial bank (domestic and joint-venture) was made effective from May 15, 2002 whereby new commercial banks are required to have a minimum paid-up capital of Rs. 1.0 billion³⁸. Permission would also be granted for the setting up of a head office in Kathmandu provided that the commercial bank is a joint-venture with a foreign bank or financial institution or it has a technical service agreement (TSA) for at least three years. This policy further stipulates that the investors of the commercial banks can hold up to 70% of the total share capital while 30% is required to be sold to the public. Foreign banks could invest a maximum of 67% of the total share of the commercial banks.

In the past few years, there has been no entrance of new joint-venture commercial banks while some foreign investment has also been withdrawn. In light of this, the maximum ceiling for foreign equity in joint-venture banks will be increased from the existing 67% at the request of reputed foreign banks.³⁹

36. NRB, Nepal Rastra Bank Act – 2002, Legal Department, Nepal Rastra Bank, Kathmandu, 2003, P. 1.

37. NRB, Economic Report – 2000/01, Research Department, Nepal Rastra Bank, Kathmandu, 2002, P. 23.

38. NRB, Economic Report – 2001/02, Op.cit.

39. NRB, Report on Monetary Policy for Fiscal Year 2003/04, Nepal Rastra Bank, Kathmandu, 2003, pp. 17-18.

Presently, the majority of joint-venture banks are providing banking services to established businesses while the smaller commercial banks are providing limited banking service to niche markets. A study of World Bank suggests that “the current restrictions on foreign ownership in relation to joint-venture commercial banks beyond 67% should be eliminated. Removing this restriction altogether may help to attract reputable banks that could bring good governance, management skills and technological benefits to the Nepalese financial sector.⁴⁰ It is felt that financial sector reforms need to be accelerated to increase the country’s saving potentialities and to channel funds efficiently into productive investments.

The Foreign Exchange Management Department (Forex) of NRB has issued some directives concerning agent activities of commercial banks (including joint-venture banks) in 2001. Commercial banks have to get prior permission from the Forex Department if they wish to set up their own accounts in foreign currencies.⁴¹ Similarly, such banks are not allowed to convert foreign currencies into Indian currency for purpose of making deposits abroad. However, the commercial banks are allowed to have their deposits in Indian currency in current deposits abroad. Provision is also given by the Forex Department (Directive 300) for the conversion of foreign investors’ dividends or profits in any convertible currency they choose.⁴² For this, the foreign investor has to fill an application form issued by the Forex Department providing information on the total repatriation amount, investment ratio on capital and activities of the firm. Directive 290 of the Forex Department issued on July 2001, provides for the declaration of FDI and FPI investment amounts by potential investors but these are largely ignored by investors due either to ignorance or apathy.⁴³

7. Compilation Practices of FDI in Nepal

In Nepal, the Foreign Investment and Technology Transfer Act of 1992 empowers the DOI to administer, implement and evaluate all foreign investment projects. The compilation, maintenance and publishing of statistical data related to industrial sector of Nepal (including FDI) is generally made by the DOI. The Department has twelve sections with 67 personnel which includes 24 officers and 43 assistants. The organisational structure is presented in Annex Chart 6.1.

40. WB, Nepal Financial Sector Study, The Development of the World Bank Private Sector Reform Division, The World Bank, October 2002, P. 58.

41. Foreign Exchange Department, The Directives Issued by NRB (In Nepali), Foreign Exchange Department, Nepal Rastra Bank, Kathmandu, 2002, Directive No. 288, pp. 117-118.

42. Ibid, Directive No. 300, pp. 131-132.

43. Ibid, Directive No. 290, pp. 120-121.

Presently, the DOI grants approvals for foreign investments with fixed asset up to NRs 1000 million. In case of an enterprise with fixed assets greater than NRs 1000 million, the approval is made by the Industrial Promotion Board (IPB). The Planning Section of the DOI compiles FDI related documents and the data is updated on a daily basis. The FDI data are based on approvals and therefore may not reflect the actual investments.

The DOI has not been able to track the activities of foreign investments very well as they lack the technical capacities and capabilities to do so. It has also failed to compile data on re-investments made by foreign joint-ventures. The DOI would need to be restructured and re-engineered to improve its function.

8. Issues Relating Compilation of FDI and Authorities' Efforts in Improving FDI Flow Data

It is realised that foreign capital and technology are an effective means to mobilise capital, human and natural resources in order to make the economy more efficient and competitive in the process of industrialisation of the country.⁴⁴ It is believed that the actual disbursement of FDI in Nepal would be much lower than the approvals (around 36.6%). In order to record accurate FDI inflows and actual disbursement of FDI, the concerned institutions such as the DOI has to set up an affordable and efficient monitoring unit.⁴⁵ However, the Foreign Investment Division of DOI is not well equipped to do this and it is imperative that the institutional capabilities of the DOI be developed through various training related to compilation and dissemination of FDI data.

Recently, the NRB has started collecting FDI related information under the guidance of IMF, following IMF Manual with the purpose of including FDI information in the balance of payment statistics. For this, the BOP Section is conducting a survey to gather relevant data from 130 FDI related joint-ventures in Nepal which will be completed by the middle of 2004. The survey is also expected to capture the data on reinvestment made by foreign ventures so as to estimate total FDI flows in Nepal. While the responses from these joint-venture companies have not been very forthcoming, it will, nonetheless be helpful as feedback to the Government for policy formulation relating to FDI.

44. MOF, Economic Survey-(2002-2003), Ministry of Finance, Kathmandu, 2003, p. 118.

45. Mathema, Sushil R; FDI Lacuna in Nepal, in 'The Kathmandu Post', July 14, 1999, p. 4.

9. Policy Recommendations

Foreign investments in Nepal are still not very significant in spite of provisions made in various regulations and exemptions because of the existence of various problems. In light of this, the following suggestions have been prescribed for the improvement in FDI climate and thereby attract more FDI in Nepal in the coming years:

1. A shorter registration period is necessary as presently, a foreign investor must wait 30 days for the approval under the FITTA before registration can be done.
2. Unless the security situation improves, foreign investments are not expected to increase.
3. Foreign portfolio investment should also be brought under the ambit of FITTA, which presently is not.
4. New anti-monopoly legislations and laws on the protection of industrial property are required.
5. There is a need to train skilled human resources in the DOI.
6. There is still lack of harmonisation among various corporate laws and acts such as labour law, company act, privatisation act and various banking regulations in Nepal. One major task is to coordinate these laws in the Foreign Investment and Technology Transfer Act in light of Nepal's accession to WTO.
7. The policies concerning FDI in the Tenth Plan of Nepal needs to be translated properly into laws. The FITTA of 1992 has not made provisions for non-nationalisation of foreign investment.
8. To attract FDI effectively there need to be close coordination among various authorities such as the Ministries of Commerce and Trade, Foreign Affairs, Finance and Central Bank so that a comprehensive strategy can be formulated.
9. The Board of Investment requires its own full time secretariat with qualified professionals to conduct research on trade and investment and formulate strategies on FDI and coordinating activities of relevant Government bodies and ministries .
10. Board members of the Board of Investment and staff of the DOI should have the requisite investment and negotiation skills.
11. The Ministry of External Affairs and Nepalese Embassies abroad need promote Nepal as an investment destination.
12. The existing one-window system should be implemented properly so as to encourage foreign and also domestic investments.
13. Tax rebates and tax exemptions should also be allowed to the investors in indigenous industries.
14. Legal, regulatory and accounting systems are not fully transparent and consistent with international norms yet. Though auditing is mandatory, professional

accounting standards are low and many practitioners are either poorly trained or lack business ethics. Under such circumstances, published financial reports concerning investment and trade are not reliable.

15. There is no regulatory system to encourage and facilitate portfolio investment in Nepal as only direct investment is permitted. Stocks for a few industrial firms are listed on the Nepal Stock Exchange. Foreign institutions are not allowed to purchase more than 25% of the capitalisation of firm in specified sectors such as tourism and power. The lack of transparency and unreliable corporate information remain as barriers to foreign investors.
16. NRB should conduct studies on the possibilities of capital account liberalisation and full convertibility of the Nepali currency as full convertibility is a vital requisite to economic liberalisation and for attracting foreign investments.
17. NRB should monitor FDI inflows in a systematic manner through linkages with DOI, MOI and other relevant Government departments.
18. With support from the NRB, DOI's FIPD should maintain a data base on total FDI inflows that includes information on investors. It should assess on a regular basis, the flow of FDI, examining whether excessive inflows or outflows are taking place, which investors are more volatile, and what policy actions need to be taken at micro and macro level.
19. The Government should consider the genuine demands and intentions of the NRNs/PNOs and simplify laws governing visas and repatriation of profit as the contributions of the NRNs should be maximized.
20. Nepal's banking sector should channel funds from NRNs and PNOs wishing to invest through the banking system safely and reliably.
21. Nepal should seek more export oriented FDI so as to have best practice technology which will have beneficial information spillovers on the export opportunities and hence could facilitate export activities of domestic enterprises as well.
22. Potential areas of investment for FDI such as hydropower, agro and forest-based industries, health and tourism based industries, and IT should be clearly made known to potential investors.
23. To encourage investment within the SAARC and SEACEN region, a green channel for investment, transfer of technology, joint-ventures, etc, should be set up on a regional basis.

References

1. Acharya, Meena and Khatiwada, Yuba Raj (et.al.), Structural Adjustment Policies and Poverty Eradication, Institute for Integrated Development Studies, Kathmandu, 2003.
2. ADB, Country Economic Review: Nepal, Asian Development Bank, Manila, June 2003.
3. Agrawal, Pradeep and Sahoo, Prabhakar, "China's Accesssion to WTO: Implication for China and India", in *Economic and Political Weekly*, New Delhi, June 21, 2003.
4. AsDB, Rural Finance Development in Nepal, Asian Development Bank Office, Kathmandu, March 2000.
5. Bajracharya, Puskar, Trade, Industry and Investment Situation: An Assessment, in 'Do We Need Economic Reform Phase II', Institute for Integrated Development Studies, Kathmandu, 2000.
6. Balasubramanyam, U.N. and Mahambara, V; Foreign Direct Investment in India, Lancaster University Management School, UK, 2003.
7. Bangkok Post, Bangkok, September 8, 2003, P. 2.
8. Basyal, Tula Raj, Nepalese Financial Sector: Quantitative Dimensions, in 'Banking Promotion (Nepali)', Nepal Rastra Bank, Kathmandu, Vol. 11, B.S. 2057.
9. Basyal, Tula Raj, Why Financial Sector Reforms in Nepal, in 'Rajaswa', Revenue Administation Training Centre, Lalitpur, Volume 1, April/May, 2001.
10. Chakrabarti, Avik, Determinants of FDI: A Comment on Globalization – Induced Changes and the Role of FDI Policies, University of Wisconsin, USA, 2003.
11. Chishti, Sumitra, Globalization, International Economic Relations and The Developing Countries, in 'International Studies Journal', Jawaharlal Nehru University, New Delhi, vol 39, no. 3, July-Sep 2002.
12. Chitrakar, R.C., Foreign Investment and Technology Transfer in Developing Countries, Avebusy, USA, 1994.

13. Dabadi, Hemant, Domestic and Foreign Investment in Nepal, in Sri Ram Poudyal (edt.), *Trends in Nepalese Econom*’, Centre for Policy Studies, Kathmandu, 1999.
14. Dahal, Madan Kumar (et.al.), Development Challenges for Nepal, Nepal Foundation for Advanced Studies (NEFAS)/FINNIDA, Kathmandu, March, 2001.
15. Dasgupta, Amit, “WTO and New Issues”, in *Economic Review Occasional Paper*, Nepal Rastra Bank, Kathmandu, no. 13, April 2001.
16. Dhakal, Ameet (et al), “Foreign Investment Export Process and Prospect”, in *New Policy Initiative for Trade and Investment*’, IFDS, Kathmandu, 2001.
17. DOI, Procedural Manual for Foreign Investment in Nepal, Department of Industries, Kathmandu, Nepal, April 2001.
18. Fan, Emma Xioqin, Technological Spillovers from Foreign Direct Investment, Economic Research Department, ADB, Manila, 2002.
19. Foreign Exchange Department, The Directives Issued by NRB (In Nepali), Directive No. 288, Foreign Exchange Department, Nepal Rastra Bank, Kathmandu, 2002.
20. IIDS, Impact of Economic Liberalization in Nepal, IIDS, Kathmandu, 1996.
21. K.C., Fatta Bahadur, Foreign Investment in Nepal and South Asia, in ‘Issues of Governance in Nepal’, Nepal Foundation for Advanced Studies/FES, Kathmandu, 2001.
22. Karki, Bharat B., “Legal Regulation of Foreign Investment in Nepal: Industrial Sector Specific”, in *Nepal Law Review*, Nepal Law Campus, Kathmandu, 1999.
23. Karmacharya, Binod K., South Asian Reginal Cooperation in Trade and Investment: A Nepalese Perspective, CEDA, Kathmandu, April 1996.
24. Katti, Bijaya, Indo-Nepal Trade: Post WTO Dimension, Kalinga Publication, New Delhi, 2001.
25. Kaur, Parminder, Scope for Cooperation in Currency Stability Among Asian Countries, The SEACEN Centre, Kuala Lumpur, 2002.

26. Kindleberger, C.P., *Multinational Excursions*, Cambridge University, MIT Press, USA, 1984.
27. Komiya, Ryutaro, *The Japanese Economy: Trade, Industry, and Government*, University of Tokyo Press, Tokyo 1990.
28. Krugman, P. and M. Obstfield, *International Economics* (3rd edition), Harper Collins, USA, 1994.
29. Kumar, Nagesh (edt), *Implications for the Next Phase Reform*, in 'Indian Economy under Reform: An Assessment of Economic and Social Impact', RIS, Bookwell, New Delhi, 2000.
30. Lama, Mahendra P., *Investment in South Asia: Issue, Constraints and Opportunities*, in Bhargava (et.al.) eds 'South Asia 2010: Challenges and Opportunities', Konak Publisher, New Delhi, 2001.
31. Lehmann, Alexander, "Foreign Direct Investment in Emerging Markets: Income, Repatriations and Financial Vulnerability", *IMF Working Paper* (WP/02/47), USA, March 2002.
32. Maharjan, Uttam, *First NRN Conference Boost to Foreign Investment*, in 'The Rising Nepal (Daily)', Kathmandu, October 24, 2003.
33. Mahato, B.P., and Timilsina, P.P.: *Economic Development and Foreign Investment in Nepal*, Nepal Society for Applied Economics, Kathmandu.
34. Makin, A.J., *International Macroeconomics*, Person Education Limited, London, 2002.
35. Maskey, Pawan R., *FDI Some Observation*, in 'The Kathmandu Post', July 2, 2002.
36. Mathema, Sushil R; *FDI Lacuna in Nepal*, in 'The Kathmandu Post', July 14, 1999.
37. Maxfield, Sylvia, *Gatekeepers of Growth: International Political Economy of Central Banking in Developing Countries*, Princeton Univeristy Press, USA, 1997.
38. Mody, Ashok (et.al.), "The Role of Information in Driving FDI Flows: Host-Country Transparency and Source Country Specialization", *IMF Working*

Paper (WP/3/148), USA, July 2002.

39. MOF, Budget Speech: The Fiscal Year 2003/2004, Ministry of Finance, Kathmandu, 2003.
40. MOF, Economic Survey-(2002-2003), Ministry of Finance, Kathmandu, 2003.
41. MOI, Foreign Investment and Technology Transfer Act-1992, Ministry of Industry, Kathmandu, 1998.
42. MOI, Foreign Investment and Technology Transfer Act-1981, Ministry of Industry, Kathmandu, 1986.
43. Morissef, Jacques and Neso, Oliver Lumenga, “Administrative Barriers to Foreign Investment in Developing Countries”, *World Bank Paper*, Washington D.C., May 2002.
44. Nakamura, Shin-ya and Oyama, Tsuyoshi, The Determinants of FDI from Japan and USA to East Asian Countries, Research and Statistics Division, BOT, Working Paper, Tokyo, 1998.
45. NRB, Attracting Foreign Direct Investment: Experience and Challenges (Unpublished Research Report), Research Department, Kathmandu, January 2003.
46. NRB, Economic Report – 1995/96, Research Department, Nepal Rastra Bank, Kathmandu, 1997.
47. NRB, Economic Report – 2000/01, Research Department, Nepal Rastra Bank, Kathmandu, 2002.
48. NRB, Economic Report – 2001/02, Research Department, Nepal Rastra Bank, Kathmandu, 2003.
49. NRB, Nepal Rastra Bank Act – 2002, Legal Department, Nepal Rastra Bank, Kathmandu, 2003.
50. NRB, Report on Monetary Policy for Fiscal Year 2003/04, Nepal Rastra Bank, Kathmandu, 2003.
51. Nunnenkamp, Peter, “Determinants of FDI in Developing Countries: Has Globalisation Changed the Rule of Games?”, Kiel Institute for World Economy, *Kiel Working Paper* No 1122, Germany, July 2002.

52. Paudel, Dandapani, International Capital Movements in the SEACEN Conuntries, The SEACEN Centre, Kuala Lumpur, 1995.
53. Poudyal, Sri Ram and Sigdel, Bama Dev, Nepal-China Economic Cooperation: Present Status and Future Prospects, in 'Policy Study Series', Institute of Foreign Affairs, Kathmandu, 2000.
54. Poudyal, Sri Ram, and Sigdel, Bamadev, Private Sector Development, in Stefen J. Keeling (edt) 'Pro-poor Governance assessment Nepal', DFID, Kathmandu 2001.
55. Pundit, Shree Pd., Nepal Law On Foreign Investment, in IFDS 'New Policy Initiative for Trade and Investment', Institute for Development Studies, Kathmandu, 2001.
56. Pyakuryal, Bishwambher, Budget 2003 /04, in 'New Business Age' (monthly), Kathmandu, July 2003.
57. Quoted by Wei, Yingqi, Foreign Direct Investment in China, Lancaster University Management School, UK, 2003.
58. Rana, Madhukar S., FDI and Poverty Eradication in Nepal, The Kathmandu Post, October 16, 2002.
59. Rana, Madhukar SJB, Strategy for FDI Mobilization into Nepal, A Paper Presented to the SAARC Chambers of Commerce and Industries, Male, October 1, 2002.
60. RIS, South Asia Development and Cooperation Report - 2002, Research and Information System for the non-Aligned and other Developing Countries, New Delhi, 2002.
61. Saggi, Kamal, Trade, Foreign Direct Investment and International Technology Transfer: A Survey, in 'The World Bank Research Observer', World Bank, Washington D. C., vol 17, No 2, Fall 2002.
62. Sapkota, T.P., Policy and Legislative Framework on Foreign Investment and Technology Transfer, Business Age, November 2002.
63. The Kathmandu Post, July 31, 2003.

64. Sharma, Kishore, Impact of Policy Reforms on Manufacturing Growth in Nepal, in 'Asian Survey', vol. xxxvii, June 6, 1997, University of California, USA, 1997.
65. Stern, Nicholas, Improving Investment Climate in Nepal, in 'Business Age', Kathmandu, June 2003.
66. Stern, Nicholas, Investment Climate in China: Lesson and Challenges, Paper Presented at the 'China Investment Climate Policy Forum', Beijing, December 3, 2002.
67. Summary of Tenth Plan (2003-2007), HMG/Nepal, www.npc.gov.np, 2003.
68. T. G. Srinivasan, (et.al.), South Asia's Integration into the World Economy, World Bank, Washington D. C. 1997.
69. Taylor M. P. and Saron, Lucio, Capital Flows to Developing Countries: Long and Short Term Determinants, in 'The World Bank Economic Review', World Bank, Washington D. C., vol. 11, no. 3, Sept 1997.
70. The Himalayan Times (Daily), Kathmandu, October 13, 2003.
71. The Himalayan Times (Daily), Kathmandu, October 14, 2003.
72. The Kathmandu Post (Daily), Kathmandu, October 4, 2003.
73. The Kathmandu Post (Daily), October 30, 2003.
74. Tseng, Wanda and Zebregs, Harm, Foreign Direct Investment in China: Some Lesson for Other Countries, IMF Policy Discussion Paper (WP/02/3), IMF, Washington DC, February 2003.
75. UN, An Investment Guide to Nepal, Opportunities and Conditions, UNCTAD, Geneva, 2003.
76. UNCTAD, World Investment Report – 1988, United Nations, New York, 1998.
77. UNCTAD, World Investment Report – 2003, United Nations, New York, 2003.
78. UNCTAD, World Investment Report – 2003, United Nations, New York, July 2003.

79. WB, Nepal Financial Sector Study, The Development of the World Bank Private Sector Reform Division, The World Bank, October 2002.

TABLES

Table 6.1: Foreign Investment Projects in Nepal (1989-2003)

Fiscal Year	No.	Total Project Cost	Total Fixed Cost	million NRs	
				Foreign Investment	Employment Number
Upto July 1989	59	5425.92	4581.82	466.84	10586
1989-90	30	2438.19	2139.60	398.51	9515
1990-91	23	863.56	690.74	406.28	2974
1991-92	38	3508.17	2902.10	597.84	5615
1992-93	64	17886.22	16210.81	3083.67	13873
1993-94	38	3733.23	3175.66	1378.76	4734
1994-95	19	1627.28	1247.85	477.59	2386
1995-96	47	10047.47	9398.54	2219.86	8032
1996-97	77	8559.25	6692.15	2395.54	9347
1997-98	77	5569.38	5142.32	2000.28	4336
1998-99	51	5334.92	4390.17	1671.22	2146
1999-00	71	2669.09	1910.24	1417.61	4703
2000-01	96	7917.62	6122.49	3102.56	6880
2001-02	76	3309.63	1550.89	1206.95	3711
2002-03	71	4863.35	3572.94	1770.77	3525
2003-04*	3	8.63	5.94	8.63	52
Total:	840	83761.91	69734.24	22602.91	92415

* From July to August, 2003.

** In first quarter of 2003/04, DOI approved additional 24 foreign ventures of different type of enterprises.

Source: Department of Industry, HMG/Nepal, Kathmandu, 2003.

Table 6.2: Foreign Investment projects in Nepal - Sector Wise (1989-2003)

million NRs

Types of Industries	No.	% In Total	Total Project Cost	Total Fixed Cost	Foreign Investment	Employment Number
Agriculture	14	1.67	428.15	375.20	94.38	986
Construction	16	1.90	922.10	747.10	507.86	1319
Energy Based	14	1.67	18717.90	17100.19	3204.72	4759
Manufacturing	412	49.05	34624.76	25324.22	9502.81	58767
Mineral	3	0.36	1153.14	1068.32	45.98	1129
Service	180	21.43	12206.34	10178.60	4841.35	11034
Tourism	201	23.93	15709.51	14940.61	4405.81	14421
Total:	840	100	83761.91	69734.24	22602.91	92415

Source: Department of Industry, HMG/Nepal, Kathmandu, 2003.

Table 6.3: Foreign Investment Projects in Nepal - Status Wise (1989-2003)

million NRs

Types of Industries	No.	Total Project Cost	Total Fixed Cost	Foreign Investment	Employment Number
Operational	340	40649.30	35248.44	8524.86	45805
Under Construction	45	7407.34	6699.46	1846.95	6088
Licensed	152	16345.58	12336.35	5088.72	17051
Approved	210	9221.73	6695.20	4404.14	12267
Closed	22	1653.74	1394.85	467.66	2045
Cancelled	71	8484.20	7359.93	2270.59	9159
Total:	840	83761.91	69734.24	22602.91	92415

Source: Department of Industry, HMG/Nepal, Kathmandu, 2003.

Table 6.4: Joint Venture Industries In Nepal - Country Wise (1989-2003)

million NRs

S. N.	Country	No.	% In Total	Total Project Cost	Total Fixed Cost	Foreign Investment	Employment Number
1	Australia	9	0.7	141.59	108.82	90.50	359
2	Austria	8	0.9	166.06	126.48	46.36	350
3	Bangladesh	10	1.1	330.67	175.74	99.22	3401
4	Belgium	1	0.1	7.00	5.98	5.95	30
5	Bermuda	6	0.7	1995.25	1694.03	118.27	1474
6	Bhutan	3	0.3	27.26	20.58	3.61	98
7	Brazil	1	0.1	11.07	2.50	4.43	137
8	Bri. Virg. Is.	4	0.4	3439.78	3301.19	1282.94	1210
9	Canada	8	0.9	721.08	629.11	573.90	1289
10	China	78	9.2	8054.09	6637.65	2501.17	7598
11	Denmark	4	0.4	521.92	467.18	30.14	236
12	Finland	2	0.2	10.00	6.86	4.55	91
13	France	21	2.5	441.17	375.63	110.94	1043
14	Germany	38	4.5	1691.88	1548.05	560.79	2657
15	Gwatemala	1	0.1	10.00	5.00	2.50	84
16	Hongkong	12	1.4	1221.79	1067.60	437.62	2064
17	India	279	33.2	29322.77	22473.00	7861.42	36346
18	Iran	1	6.1	5.00	1.80	1.00	0
19	Ireland	1	0.1	5.00	1.00	1.50	40
20	Isreal	3	0.3	605.60	504.38	73.50	82
21	Italy	13	1.5	1234.90	1121.40	188.81	295
22	Japan	88	10.4	2809.20	2421.26	925.23	5247
23	Malaysia	5	0.5	43.65	33.07	22.08	188
24	N. Korea	1	0.1	44.82	41.20	12.55	71
25	Netherland	9	0.7	1062.65	892.28	409.94	2052
26	Newzealand	7	0.8	283.63	228.66	17.07	1994
27	Norway	6	0.7	8033.59	6690.95	1059.99	494
28	Pakistan	10	1.1	307.34	222.17	129.47	1331
29	Panama	1	0.1	83.28	65.17	24.98	121
30	Philippines	4	0.4	934.18	859.53	50.35	1354
31	Poland	2	0.2	89.72	85.55	7.39	39
32	Russia	3	0.3	88.45	58.43	36.63	175
33	S. Korea	38	4.5	1703.95	1426.27	878.78	2951
34	Singapore	10	1.1	1607.07	1550.04	335.54	1166
35	Spain	3	0.3	23.72	20.26	18.97	25
36	Sri Lanka	3	0.3	79.15	55.90	37.41	83
37	Switzerland	18	2.1	513.90	441.86	135.88	324
38	Taiwan	6	0.7	337.64	304.00	143.37	571
39	Thailand	7	0.8	950.12	810.68	90.64	1106
40	Turkey	1	0.1	5.00	3.00	17.50	35
41	UAE	1	0.1	178.54	37.24	45.00	93
42	UK	28	3.3	1890.50	1626.14	168.71	5254
43	USA	85	10.1	12637.94	11504.60	4021.64	7839
44	Ukraine	1	0.1	90.00	82.00	14.70	18
Total:		840	100%	83761.91	69734.24	22602.91	92415

Source: Department of Industries, HMG/Nepal, Kathmandu, 2003.

Table 6.5: Approved Projects for Foreign Investment and Technology Transfer (Category-wise) (Up to February 2002)

S.N.	Category	EDR	CDR	WDR	MWDR	FWDR	Un-known	Total
1.	Manufacturing	37	308	41	10	7	2	405
2.	Tourism	6	140	42	3	-	-	191
3.	Service	4	156	12	1	1	-	174
4.	Agro-Based	1	10	3	-	-	-	14
5.	Energy-Based	1	9	4	-	-	-	14
6.	Construction	-	12	1	-	-	-	13
7.	Mineral	-	2	-	1	-	-	3
	Total	49	638	102	15	8	2	814
	In %	16.2	78.3	12.5	1.8	0.9	0.2	100.0

Source: DOI, Industrial Statistics – 2002/03, Department of Industry, Kathmandu, Table No. 9, P. 15.

Table 6.6: Foreign Investment and Nepal's Real GDP, Total Investment, Total Export Trade, Foreign Exchange Reserves and Budget Deficit (1988–2003)

(In NRs. Million)

Years	Foreign Investment	Real GDP (In Current Prices)	Total Investment	Total Export Trade	Foreign Exchange Reserves	Budget Deficit
1988/89	446.8*	15647.8	19415.0	4195.3	8310.8	-8547.5
1989/90	398.5	16389.3	19076.0	5156.2	11589.8	-8406.4
1990/91	406.2	17490.8	25074.0	7387.5	18656.6	-10655.1
1991/92	597.8	18337.1	31619.0	13706.5	24251.4	-11261.7
1992/93	3083.6	18878.0	39653.0	17266.5	33510.4	-11956.0
1993/94	1378.7	20439.7	44644.0	19293.4	42015.7	-11623.0
1994/95	477.6	20997.6	55231.0	17639.2	43084.9	-10547.7
1995/96	2219.8	22193.0	68017.0	19881.1	44438.2	-13824.2
1996/97	2395.5	23304.0	71084.0	22636.5	48541.4	-14361.9
1997/98	2000.2	24081.6	74728.0	27513.5	65157.7	-17777.8
1998/99	1671.2	25175.8	70061.0	35676.3	76650.8	-17991.4
1999/00	1417.6	26709.6	92272.0	49822.7	93858.1	-17667.0
2000/01	3102.5	27974.9	98313.1	55654.1	105172.5	-24188.1
2001/02	1206.9	27847.1	103616.0	46944.8	105901.2	-22940.7
2002/03	1770.7	28506.1	116266.0	49245.5	110393.1	-20095.0

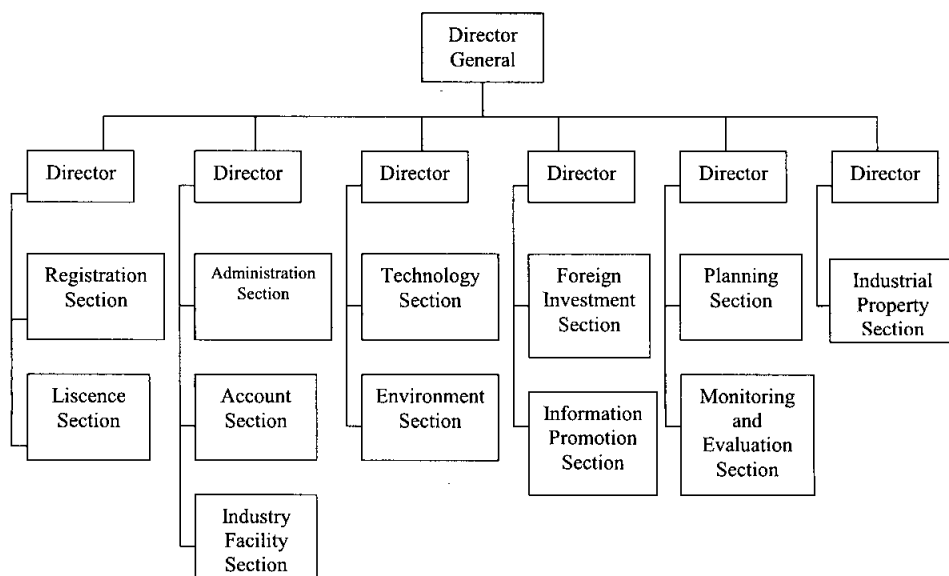
* From the beginning to 1989 cumulative figure of FDI in Nepal. FDI figures are on registration basis of enterprises.

– indicates deficit.

- Source: (i) Department of Industry, Kathmandu, 2003.
(ii) CBS, National Accounts of Nepal, Central Bureau of Statistics, Kathmandu, Various Issues.
(iii) MOF, Economic Survey – 2002/03, Ministry of Finance, Kathmandu, 2003, Table No. 14, P. 4.
(iv) MOF, Budget Speeches – 2003/04, Ministry of Finance, Kathmandu, 2003.
(v) NRB, Quarterly Economic Bulletin, Research Department, Nepal Rastra Bank, Kathmandu, Vol. XXXVIII, No. 1 & 2, 2003

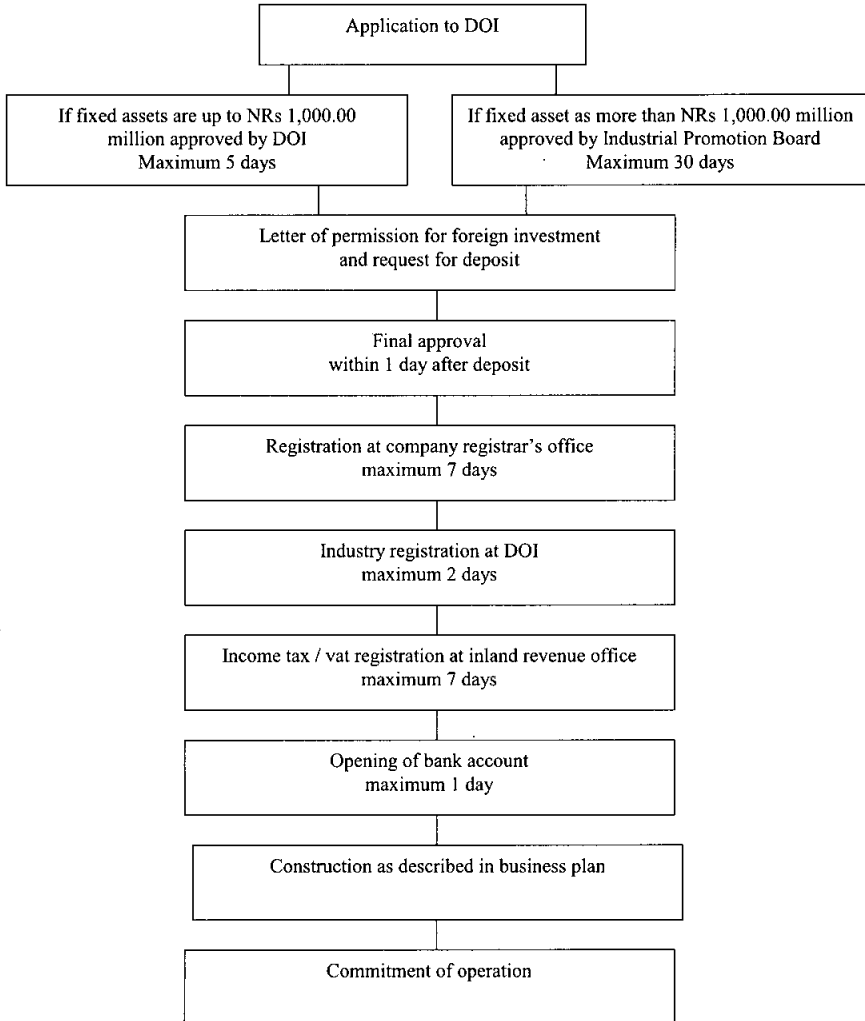
Annex 6.1

Organisational Chart of Department of Industry (DOI)



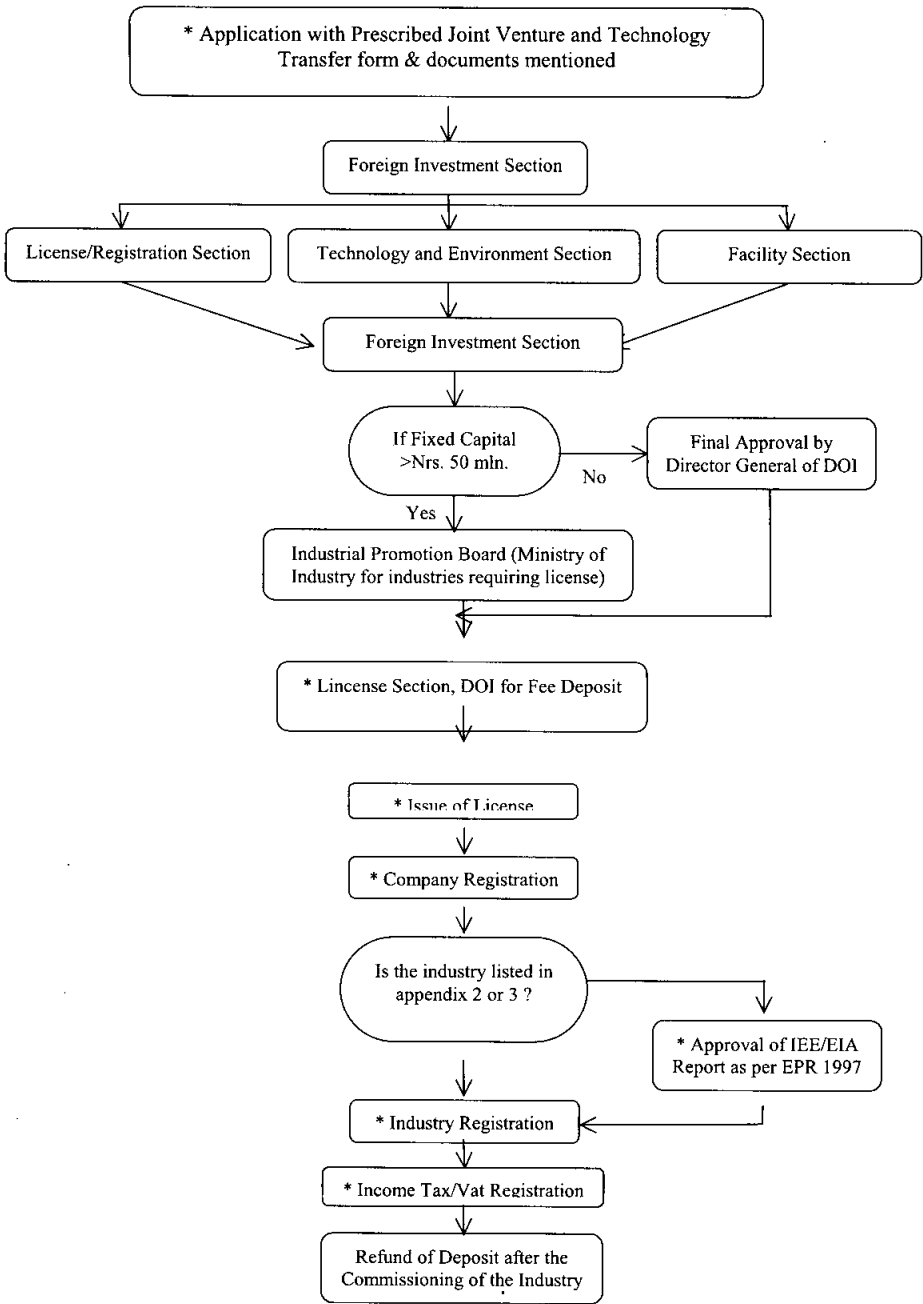
Source: DOI, Tripureshwor, Kathmandu, 2003.

Stages of Implementation of FDI Projects in Nepal



Source: UNCTAD, *An Investment Guide to Nepal: Opportunities and Condition*, UNCTAD, Chart IV, 2003, p. 57.

Application Procedures for Foreign Investors



Annex 6.4

Nepal Rastra Bank
Central Office
Foreign Exchange Division
Import Section

Name of The Bank:
Office:

S. No.

Date:

Bank Certificate for Foreign Investor

1. Name of Company:

(Invested by Foreign Investor)

2. Registration No. of Industry:

3. Name of Foreign Investor:

Address:

4. Industry / Company:

i. Authorized Capital:

ii. Paid-up Capital:

5. Probable Investment by Investor (Foreign):

i. Capital Amount:

ii. %age:

6. Foreign Currency Brought by Investor:

i. Foreign Currency:

ii. In NRs. (Amount):

7. Foreign Currency Deposited by Investor:

i. Name of Agency Bank:

ii. Date:

I certify that the investor has deposited foreign currency in this bank.

Certified by
Authorized
Personnel

Signature:

Source: NRB, The Directives Issued by Foreign Exchange Department, Foreign Exchange Department, NRB, Kathmandu, 2002, pp. 120-121.

CHAPTER 7

MANAGING AND MONITORING DIRECT AND PORTFOLIO INVESTMENT FLOWS: PHILIPPINES

by

Felicitas M. Barcelona ¹

1. Salient Features of Foreign Direct Investments (FDI) and Foreign Portfolio Investments (FPI) in the Philippines

1.1 Direct Investments

During much of the 1970s and 1980s, foreign participation in the Philippine economy was generally limited and even restricted in some of the most critical industries. In most cases, foreign ownership was limited to 40 percent.

The 1980s were difficult, with the economy experiencing the full impact of adverse external developments caused by the global recession. The adversities were reflected mainly in poor commodity prices, deteriorating terms of trade, and the consequently reduced trade flows. The US dollar strengthened against particularly all world currencies. International interest rates were at their highest levels, increasing the cost of servicing the country's external debt. These largely uncontrollable developments slowed down production, investments, and revenues.

In 1987, the Philippines launched a vast privatisation programme designed to divest the government of many of the businesses it had come to own during recent decades. While paring down government control of the economy, at the same time this aimed to promote economic development through the attraction of fresh infusions of capital to major industrial sectors needing rejuvenation. Foreign direct investments more than doubled to \$999 million in 1988 following renewed foreign investors' confidence in the economy and the rationalisation of investment incentives under the Omnibus Investments Code introduced in 1987. Inflows from new foreign investments in the country and foreign debt-equity conversions registered substantial increases.

In 1991, the extent of foreign ownership was increased to 100 percent except for the sectors in the transitory negative list². The first revision of the foreign

1. Ms Felicitas M. Barcelona is Senior Foreign Exchange Officer at the Department of Economic Research of Bangko Sentral ng Pilipinas.

2. Please see discussion on national policy on investments—the Foreign Investment Act of 1991.

investment negative list was done in 1994 and succeeding revisions were done every two years.

In 1994, US\$1,562 billion was registered as foreign direct investment. Of this amount, about US\$500 million represented a single transaction—the acquisition of 40 percent of the government-owned oil firm Petron by Saudi Aramco. In September of the same year, the Philippines eased the regulations affecting foreign companies in Build-Operate-Transfer (BOT) schemes. The move aimed to speed the implementation of capital intensive projects involving private sector participation (i.e., infrastructure projects including ports, highways, airports, power generation, telecommunications, etc.) and remove the ban on government financing of BOT projects.

Chart 7.1

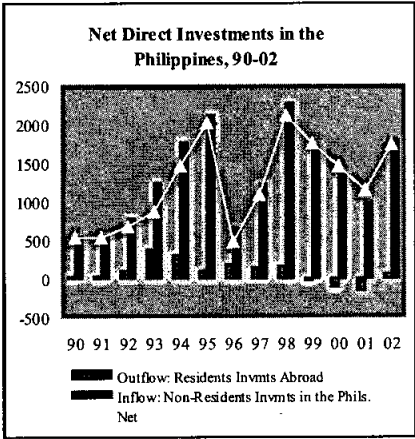


Chart 7.2

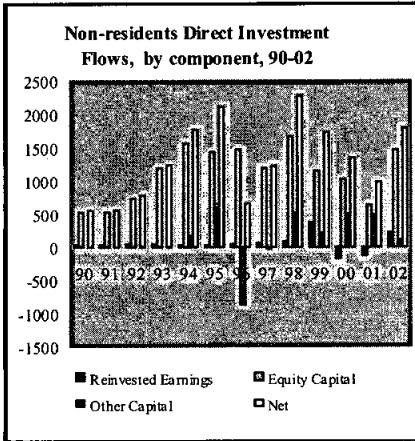


Table 7.1

Direct Investment
In million US dollars

Year	Inflow	Outflow	Net
1990	550	22	528
1991	554	27	527
1992	776	101	675
1993	1238	374	864
1994	1764	302	1462
1995	2112	98	2014
1996	656	182	474
1997	1222	136	1086
1998	2268	160	2108
1999	1725	-29	1754
2000	1345	-108	1453
2001	982	-160	1142
2002	1792	59	1733

Inflow: Net Non-residents' direct investments in the Philippines.

Outflow: Net residents direct investments abroad.

Table 7.2

Non-residents' Direct Investment Flows
In million US dollars

Year	Equity Capital	Reinvested Earnings	Other Capital	Net
1990	522	28	0	550
1991	522	34	-2	554
1992	734	42	0	776
1993	1195	43	0	1238
1994	1562	29	173	1764
1995	1436	23	653	2112
1996	1476	44	-864	656
1997	1193	56	-27	1222
1998	1667	85	516	2268
1999	1145	370	210	1725
2000	1024	-174	495	1345
2001	628	-127	481	982
2002	1467	219	106	1792

The Asian financial crisis in 1997 put a break to the phenomenal growth of foreign investment into the Philippines. From the onset of foreign exchange liberalisation in 1993 until 1996, direct and portfolio investment placements by non-residents as recorded in the Balance of Payments (BOP) averaged at an annual pace of 49 percent. As the Philippines suffered from the contagion effects of the crisis in 1997, direct investment placement by non-residents dropped by 19 percent.

However, the crisis also opened new opportunities. Business consolidation became extremely essential to stay viable and the Philippines was one of the beneficiaries of corporate merging.

Foreign direct investment placement pulled off a 40 percent growth in 1998 to a level of \$1.667 billion due largely to the first tranche of the Swiss manufacturing company buy-out of a resident manufacturing company's shares. Likewise, foreign participation in a number of local cement firms was recorded in the latter part of the year.

In 1999, gross placements in equities reached \$1 billion, albeit 24 percent lower than the 1998 level, propped up by the last tranche of the Swiss investment in a dairy firm. During that year, Switzerland ranked first among investing countries in the Philippines and made food manufacturing the top beneficiary of foreign capital infusion. Towards the end of the year, Singaporean funds were inwardly remitted to buy out a USA-registered fund management firm's stake in a local bank.

A cautious investment mood prevailed in 2000 with profitability threatened by the global economic slowdown particularly in the US and Japan, the country's major trading partners. Net foreign direct investment into the Philippines was lower by 22 percent than the comparative level in 1999. However, inter-company loans more than doubled compared with the previous year. Gross placements in equity capital dipped by 4 percent but still managed to go beyond \$1 billion, a level that had been sustained since the start of foreign exchange liberalisation in late 1992.

The passage of structural reforms in the financial and banking sectors in 2001 provided the much-needed incentive to counteract the dampening impact on investors' sentiment of the global economic slowdown as well as the September 11 terrorist attack. Net inflows of foreign direct investments were sustained in 2001 aggregating US\$982 million. However, this was lower by 27 percent than the net inflow recorded in 2000. Non-residents' placements of equity capital dropped by 42 percent to US\$697 million due to investors' greater aversion to risks. Nevertheless, these were mitigated by marked improvement in portfolio investments particularly equity securities which grew by 309 percent to a net inflow of US\$383 million from a net outflow of \$183 million in 2000.

Despite the cautious stance of investors following the slowdown in the global economy, foreign direct investments for the period January-December 2002 posted a sustained net inflow amounting to US\$1.792 billion, 82 percent higher than the net inflow recorded in 2001. This was made possible by the country's continuing pursuit of economic and financial reform programmes. Non-residents' investment in equity capital during the year was placed at US\$1497 million, 115 percent higher than the 2001 level of US\$697 million. The bulk of non-residents' equity investments came from Japan following the acquisition of equity shares by a Japanese firm in a local brewery company in March 2002 as well as from the US, largely on account of investments in an international cargo operations.

Between 1995-2002, Japan has been the main foreign direct investor in the Philippines accounting for about 28 percent of total foreign direct equity investments. The United States was the second largest investor with 20 percent share. Other major sources of foreign equity investments were Singapore, the Netherlands and France. In 2000, the United Kingdom led the European bloc, accounting for 89 percent of total equity investments from Europe. The telecommunications sector was the biggest recipient of UK's investment funds.

Equity funds for the period 1999-2002 were channeled mainly to the manufacturing sector. Investments were also traced to flow into the communications sector as well as banks and other financial institutions.

1.2 Portfolio Investments

1.2.1 Equity Securities

Investments in equity securities the Philippines registered net outflows in the 1980s mainly due to the debt crisis, which discouraged inflows of short-term capital. The trend reversed starting 1991 as net inflows were recorded following measures initiated by the government to reduce barriers to investment and simplify regulatory procedures. In 1994, US\$3 billion came into the Philippines as equity securities placements; however, US\$2.1 billion flowed out during the same year, leaving net portfolio equity investment close to the 1993 level at about US\$900 million. Portfolio placements in equity securities increased significantly from 1993 and reached \$7 billion in 1996 and 1997, bolstered by economic and political stability. In 1997, however, heavy withdrawals due to market uncertainties arising from the Asian crisis resulted in a net outflow of \$406 million, the first deficit to be recorded in portfolio equity investments since 1991.

Chart 7.3

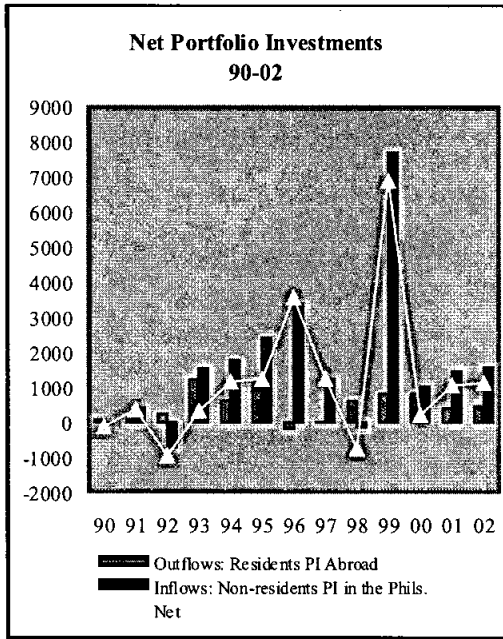


Chart 7.4

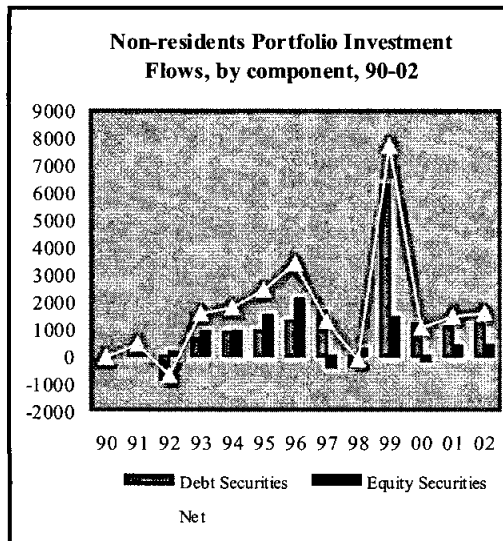


Table 7.3

**Portfolio Investment
In million US dollars**

Year	Inflow	Outflow	Net
1990	-52	76	-128
1991	419	58	361
1992	-715	239	-954
1993	1544	1220	324
1994	1771	615	1156
1995	2410	1183	1227
1996	3376	-184	3560
1997	1251	10	1241
1998	-144	605	-749
1999	7681	807	6874
2000	1019	812	207
2001	1449	399	1050
2002	1571	449	1122

Inflow: Net Non-residents' direct investments in the Philippines.

Outflow: Net residents direct investments abroad.

Table 7.4**Non-residents Portfolio Investment Flows
In million US dollars**

Year	Equity Securities	Debt Securities	Net
1990	-52	0	-52
1991	125	294	419
1992	155	-870	-715
1993	897	647	1544
1994	901	870	1771
1995	1485	925	2410
1996	2101	1275	3376
1997	-406	1657	1251
1998	264	-408	-144
1999	1410	6271	7681
2000	-183	1202	1019
2001	383	1066	1449
2002	404	1167	1571

Foreign investors remained cautious as the crisis deepened in 1998 and the value of the peso plunged together with the other Asian currencies. Trading of equity securities was relatively thin, with placements and withdrawals falling by 38 percent and 45 percent, respectively.

In 2002, investments in equity securities yielded a net inflow of US\$404 million, up by 5 percent from the previous year's net inflow of US\$383 million.

Based on BSP-registration records, the United Kingdom topped the list of investors in the Philippines, accounting for about 33 percent of the total registered portfolio investments in equity securities. The next largest investors were the United States (24 percent), Singapore (15 percent) and Hong Kong (14 percent). Foreign investments in equity securities tended to concentrate on public utilities (21 percent) and banks and financial institutions (19 percent). Remaining investments by sector were relatively minor—11 percent in commerce and real estate; and 7 percent in manufacturing.

1.2.2. Debt Securities

The Philippines returned to the international capital markets in 1992 after an absence of more than 10 years. Debt in the Philippines has mostly been incurred by the public sector to support budgetary requirements of the national government and to refinance maturing obligations. Over the last few years, the public sector has issued large amounts of treasury notes and central bank bills to finance infrastructure needs, manage liquidity and refinance old debt. The acceleration slowed in 1993 and more so in 1994, with a steady improvement in the country's fiscal balances mainly because it has achieved reducing the budget deficit. On the other hand, private debt consists mainly of commercial papers with short-term maturities. Although the financial liberalisation policies adopted in recent years assisted in the development of the private debt market in the longer term, the immediate effects have been felt more strongly in the banking sector and the stock market.

Beginning 1999, the public sector particularly the National Government re-entered the international bond market taking advantage of favorable market conditions for its sovereign bond issuances. Funds were raised to pump prime the economy and finance revenue shortfalls.

2. National Policy on Investments

Under the Foreign Investments Act of 1991 as amended by R.A. 8179, the government had made it official policy to attract, promote and welcome productive

investment from foreign individuals, partnerships, corporations and governments. The objective of this policy is to channel investments into activities contributing significantly to the process of industrialisation and socio-economic development within the Philippines, while at the same time remaining within the limits set by the constitution and laws of the country. Foreign investment is encouraged in enterprises that significantly expand employment opportunities for Filipinos; enhance the value-added of agricultural products; promote the welfare of Filipino consumers; expand the scope, quality and volume of exports and their access to foreign markets; aid the transfer of relevant technologies in the agricultural and industrial sectors, together with the supporting service sectors. Foreign investment is encouraged not only in the development of the export-oriented sector but is also welcome as a supplement to Filipino capital and technology in those enterprises serving mainly the domestic market.

2.1 Relevant Legislations

The following laws, rules, regulations and other government issuances issued since 1987, govern foreign investments in the Philippines:

- a. **Executive Order No. 226 (The Omnibus Investment Code of 1987)** - provides incentives to registered enterprises in preferred areas of investment as identified in the Investment Priorities Plan.
- b. **Republic Act No. 7042, as amended by Republic Act No. 8179 (The Foreign Investment Act of 1991)** - stipulates processes and conditions under which foreign nationals may do business in the Philippines.
- c. **Republic Act No. 7227 (The Bases Conversion Development Act of 1992)** - provides for incentives to enterprises located within Subic Bay Freeport Zone.
- d. **Republic Act No. 7916 (The Special Economic Zone Act of 1995)** - provides for incentives to enterprises located within Special Economic Zone.
- e. **Republic Act No. 7844 (The Export Development Act of 1994)** - provides for incentives to enterprises in export industry.
- f. **Republic Act No. 7721 (The Foreign Banks Act of 1994)** - liberalised the entry and scope of operations of foreign banks in the Philippines.
- g. **Republic Act No. 7652 (The Investor's Lease Act)** - allows qualifying foreign investors to lease private lands for an initial period of up to 50 years renewable for up to 25 additional years.

- h. Republic Act No. 7718 (The Build-Operate-Transfer Act of 1994)** - allows variations of schemes, eases restrictions on government financing and the setting of tolls and charges, and increases the opportunity for wholly foreign-owned corporations to undertake a project.
- i. Republic Act No. 7888 (An Act to Amend Article 7(13) of Executive Order 226, otherwise known as the Omnibus Investments Code of 1987)** – grants authority to the President of the Philippines to suspend the nationality requirement under the Omnibus Investments Code (Executive order No. 226) in the case of equity investments by multilateral financial institutions like the Asian Development Bank (ADB) or the International Finance Corporation (IFC).
- j. Republic Act 6957** as amended – regulates the financing, construction, operation and maintenance of infrastructure projects by the private sector.
- k. Tax Reform Act of 1997 (R.A. 8424)** – provides for revised tax schedules and other amendments to the national Internal Revenue Code, as amended.
- l. Republic Act 8762 (Retail Trade Liberalisation Act of 2000)** - allows foreign firms with a paid-up capital of US\$2.5-US\$7.5 million to own up to 100 percent of retail enterprises in the country, except in the first two years after the effectivity of the Law, during which foreign equity participation will be limited to 60 percent.
- m. Republic Act 8791 (The General Banking Act of 2000)** - forms the basic legal fabric governing the banking system, and is intended to modernize and further strengthen the banking sector by, among others, improving transparency, putting in place internationally accepted standards relating to risk-based capital adequacy, and enhancing competition, including through allowing foreign banks to acquire up to 100 percent of the voting stock of an existing bank within 7 years from the effectiveness of the Law.
- n. Republic Act 8792 (The Electronic Commerce Act of 2000)** - promotes and regulates the use of e-commerce in everyday business. The law will help facilitate operations, reduce the cost of doing business and integrate local industries into the global business networks.
- o. Republic Act 8979 (The Securities Regulation Code of 2000)** - authorises the judiciary to impose a punitive fine of up to triple the value of insider trading transactions. In addition, the law prescribes prison terms of between seven and 21 years for securities fraud, the same penalties provided by the statute

that it superseded. It also substantially raises the civil damages that can be levied against violators to between P50,000 and P5 million.

- p. Republic Act 9136 (The Electric Power Industry Reform Act of 2001)** - provides the legal framework for the restructuring of the electric power industry to accelerate the total electrification of the country and ensure the quality, reliability, security and affordability of the supply of electric power.
- q. Republic Act 9160 (The Anti-Money Laundering Act of 2001)** - creates a three-member Anti-Money laundering Council (AMLC) that is empowered to look into suspicious bank accounts of at least P4 million and initiate forfeiture of such deposits. The Council is headed by the Governor of the Bangko Sentral ng Pilipinas (BSP), with the heads of the Securities and Exchange Commission (SEC) and Insurance Commission (IC) as members.

2.2 Foreign Investments Act of 1991 (FIA)

The FIA provides the rules and regulations for foreign investments without incentives. The law clarified to foreign investors that the domestic market is open to them as long as the activity is not restricted in the foreign investment negative list. The regular negative list is amended every two years. Summarised below are the activities included under the 5th foreign investment negative list, which was promulgated in October 2002:

- a. *No foreign equity*: Mass media (except recording), services involving practice of licensed profession (except those exempted by law), retail trade enterprises with paid-up capital of less than US\$2,500,000, cooperatives, private security agencies, small-scale mining, marine resources, cockpits, nuclear/biological/chemical/radiological weapon activities.
- b. *Up to 20% foreign equity*: Private radio communication network.
- c. *Up to 25% foreign equity*: Private recruitment and locally funded public works unless exempted by law.
- d. *Up to 30% foreign equity*: Advertising.
- e. *Up to 40% foreign equity allowed*: Natural resources exploration/ development/ utilization; private lands, public utilities, educational institutions, rice and corn industry, supply contracts with government/government-controlled entities, public utility franchised-BOT projects, deep sea commercial fishing vessels, adjustment companies, and condominium units.
- f. *Up to 60% foreign equity*: SEC-regulated finance companies and investment houses.

2.3 Limitations on Foreign Firms' Access to Financing

- 1. Foreign firms' access to peso** - Foreign owned firms, like domestic companies, have access to peso funds from the Philippine financial system, without any ceilings imposed by the government.
- 2. Access to foreign loans** – Rules and regulations relative to foreign borrowings that apply to domestically owned firms should also apply to foreign-owned (but locally-incorporated companies). Generally, all foreign borrowings, irrespective of maturity and creditor, requires prior approval of and registration with the BSP to be eligible for servicing with foreign exchange to be purchased from the banking system.

2.4 Financial Regulations

There are three (3) categories on approval/registration of foreign currency loans under BSP Circular 1389, as amended:

1. Subject to prior approval by, and registration with, the BSP.
 - a. Loans irrespective of maturity, creditor and the source of foreign exchange for servicing thereof if:
 - guaranteed by government corporations and/or government financial institutions;
 - covered by foreign exchange guarantees issued by local commercial banks; and,
 - to be guaranteed by Foreign Currency Deposit Units (FCDUs) and specifically or directly funded from, or collateralised by offshore loans or deposits.
 - b. Loans with maturities in excess of one year to be obtained by private commercial banks and financial institutions intended for relending to public and private sector enterprises.
 - c. Other loans, irrespective of maturity, if to be serviced using foreign exchange purchased from the banking system.
2. Without prior BSP approval but subject to compliance with BSP registration requirements to be eligible to purchase foreign exchange from the banking system to service the loan.
 - a. Short-term loans of exporters/importers from offshore creditors other than Offshore Banking Units (OBUs)/local branches of foreign banks, which are chargeable against BSP-approved short term lending programmes of said creditors;

- b. Non-guaranteed medium-and long-term suppliers' credits covering importations of freely importable commodities under deferred letters of credit (L/C) or open account/documents against acceptance (OA/DA) arrangements with a term of more than one year; and,
 - c. Loans from parent companies provided these are used to finance eligible projects.
3. Without prior BSP approval and registration.
- a. To be reported to BSP by creditors concerned for registration purposes
 - Short-term FCDU loans of exporters/producers/ manufacturers;
 - Short-term loans of exporters/importers from OBUs/local branches of foreign banks who have submitted their respective short term lending programme and credit limit to the BSP.
 - b. To be reported by borrowers concerned
 - Other loans to be serviced with foreign exchange sourced from outside the banking system.
4. Projects Eligible for Foreign Financing
- Export-oriented projects;
 - Board of Investments-registered projects;
 - Projects listed in the Investments Priorities Plan;
 - Projects listed in the Medium-Term Public Investment programme; and,
 - Other projects that may be declared priority under the country's socio-economic and development authority or by Congress.

2.5 Taxation

1. Corporate income tax – gradual reduction of tax rates to 34% in 1998; 33% in 1999 and 32% in 2000 onwards.
2. Value Added Tax/Sales Tax – 10% imposed on sales of goods and services exceeding 200,000 pesos.
3. Income Tax Holiday (see Incentives)

2.6 Investment Incentives

1. Four to 8 years Income Tax Holiday (ITH)
2. Special 5% tax rate on gross income after the lapse of ITH
3. Tax and duty exemption on imported capital equipment
4. Unrestricted use of consigned equipment

5. Deduction for training expense up to 150%
6. Exemption from wharfage dues
7. Employment of foreign nationals
8. Exemption from 10% VAT on allowable local purchase of goods and services (e.g., communication charges)

2.7 Investment Applications

The following investment promotion agencies are involved in administering investment applications and granting incentives: (i) the Board of Investments (BOI), (ii) the Philippine Export Zone Authority (PEZA), (iii) the Subic Bay Metropolitan Authority (SBMA), and (iv) the Clark Development Corporation (CDC).

To qualify for incentives, a foreign investor should file its application with any of the investment promotion agencies (i.e., BOI, PEZA, CDC and SBMA) for registration regardless of foreign equity ratio. The BOI issues annually a list of preferred areas of investments eligible for incentives. The list is prepared in consultation with related government agencies and the private sector.

An investor interested in an export-oriented project may apply with PEZA and locate in one of the export processing zones.

2.8 Investment Assistance

A One-Stop Action Center (OSAC) for investment renders frontline services and assistance to investors. This office includes representatives of the different government agencies that possess the authority to act on all investment matters under their jurisdiction and thus facilitate the entry and setting up of investment in the Philippines.

2.9 Investment Fields/Sectors

The list of promoted sectors for investment under the 2003 Investment Priorities Plan (IPP) is attached as Annex 7.1.

2.10 Employment of Foreign Nationals

This may be allowed in supervisory, technical or advisory positions for five (5) years from date of registration. Foreign nationals may hold the position of president, general manager and treasurer (or their equivalent) of foreign-owned registered enterprises for ten (10) years from date of registration.

3. Reporting and Monitoring Systems (Covering Definition, Data Source, Coverage, Classification, Compilation Practices and Data Dissemination System)

In principle, the basic criterion for defining direct investment is at least 10 percent ownership of an enterprise. However, such definition requires a database that shows the equity structure of an enterprise, which can only be served by financial statements specifically the balance sheet of an enterprise. Generally, financial statements are available on annual basis. Thus, for a monthly compilation that relies on bank reports on foreign exchange transactions, it is considered that all equity investments, except equity securities transacted through foreign stock exchanges, are direct investments. The operational definition is an indirect application of the 10 percent criterion given the following assumptions: (1) it is unlikely that investors can acquire 10 percent or more of the company's total shares via stock exchanges; and (2) the motive of investors through the stock exchanges are speculative in nature and therefore is not an indication of the desire to have lasting interest in the company as direct investors should. Exception to this BOP compilation rule is the bulk purchase of shares by an investor through stock exchange that are identified through press releases.

3.1 Components of FDI

1. Equity capital - comprises equity in branches, all shares in subsidiaries and associates. Other than cash investment, it covers non-cash investment such as technical fees, equipment and debt that are converted to equity.
2. Reinvested earnings (RE) - consist of the direct investor's share (in proportion to direct equity participation) of earnings not distributed as dividends by subsidiaries or associates and earnings of branches not remitted to direct investor.
3. Intercompany debt - covers the borrowing and lending of funds—including debt securities and supplier's credits—between direct investors and subsidiaries, branches, and associates.

3.2 Coverage of Portfolio Investment

Portfolio investment transactions are classified by type of instrument such as:

1. Equity – comprises shares and stocks acquired through the stock exchange.

2. Debt securities - covers all tradable securities excluding those classified under equity securities. It includes:
 - ❖ Bonds and notes – debt securities with original maturities of more than one year (long-term).
 - ❖ Money market instruments – debt securities with maturities of one year or less.
 - ❖ Trading of Bonds in the secondary market – foreign currency denominated Philippine debt paper holdings of local commercial banks, thrift banks and local branches of foreign banks that were originally held by non-residents.

3.3 Data Sources

1. International Transactions Reporting System (ITRS) – serves as the primary database for the compilation of the BOP. The data submitted in the ITRS provides a record of placements/withdrawals in equity capital including the purchase/sale of condominium with banks acting as intermediaries. It also provides information on the purchase/sale of equity and debt securities. It is submitted by banks weekly to the BSP thru electronic transmission with one-week lag.
2. Cross-border transactions survey – conducted monthly to complement ITRS by capturing those transactions that bypass the banking system and therefore are excluded in the ITRS. This covers intercompany accounts and those settled through banks abroad. In 2004, the coverage of the survey will be expanded.
3. Investment Registration Records - the BSP maintains a system of registration of foreign investment, which under a deregulated environment is optional for foreign investors rather than mandatory. The incentive to register with the BSP lies in the assurance from the banking system of the availability of foreign exchange for repatriation of profit/dividend and capital withdrawal. Other than cash investment, it covers non-cash investment such as technical fees, equipment and debt that are converted to equity.
4. External Debt Statistics – cover liabilities of all sectors and institutions to non-residents. The external debt monitoring system allows presentation of statistics on various levels of disaggregation, such as (a) sectoral (public or private), (b) institutional (bank or non bank), (c) maturity category (short-term, medium term, or long-term), (d) type of debt instrument (loans, trade credits, debt securities and deposits), (e) creditor type (multilateral, bilateral, banks and

financial institutions, bond/note holders and other creditors), (f) creditor country, (g) interest rate, and (h) currency.

Similar to registration of investment, the incentive to register loan availment and bond flotation is the assurance from the banking system of the availability of foreign exchange for debt servicing.

Data on external debt are sourced mainly from bank reports and are supplemented by other information mostly through direct reporting of borrowing firms and major creditors.

5. Banking Statistics – provides data on banks' investments in subsidiaries as well as on equity and debt securities.
6. Other administrative records e.g., financial statements/balance sheets of companies sourced from the Securities and Exchange Commission (SEC) or posted on the company website.
7. Press releases - news reports are validated by calling or writing concerned companies/enterprises. Partner country data are also used to validate information. At present the Department of Economic Research (DER)-BSP has existing bilateral data exchange with Korea and Japan.

3.4 Data Availability

Preliminary monthly data are disseminated with a lag of 3 months after the end of the reference month. With the exception of the data on reinvested earnings, the data are revised following 2 timetables.³ More comprehensive annual (calendar year) data on reinvested earnings are disseminated approximately 12 months after the end of the reference year.

Foreign investment statistics are available in the BSP website (www.bsp.gov.ph) and in the BSP's monthly publication of the Selected Philippine Economic Indicators series. Monthly data include breakdown by components and by country of origin/destination as well as by industry/sector.

3. Revision policy calls for the revision of data every end-month of the quarter for current year statistics and every end-year for previous years' statistics.

3.5 Measures to Improve FDI and FPI Data

To improve the quality of the Balance of Payments statistics and close the reporting gaps specifically in FDI and FPI, the BSP instituted the following measures in 2003:

1. Launched a “Monthly Survey on Foreign Direct Investment and Related Data” with respondents covering the top 1000 corporations in the Philippines with foreign equity participation. The survey covers transactions of Philippine companies with direct investment abroad, selected balance sheet data (stocks) and other data (i.e., total revenue, profits, exports, imports, interest, dividends, etc.); and,
2. Shifted from monthly to quarterly reporting starting with the third quarter 2003 BOP report.
4. **Issues on Data Collection, Valuation and Flows-Stock Reconciliation and Evaluation of Effectiveness of Current Data Compilation System**
 - a. Difficulty in monitoring data on reinvested earnings due to the following:
 - *Database*: The ITRS is the major data source for FDI in the BOP. Since ITRS can only measure cash flows, that is, foreign currency remitted through banks, reinvested earnings will not be captured in the BOP compilation since this transaction does not involve cash flows.
 - *Periodicity of compilation*: The only record that could provide a good measure of reinvested earnings is the financial statements of companies. However, financial statements are available only on an annual basis, and therefore could not be used in the monthly reports on the BOP.
 - *Current method of compilation⁴*: The annual data on reinvested earnings are derived from the annual financial reports of direct investment enterprises obtained from the SEC. Press reports are also used for crosschecking of data.

4. The monthly data on reinvested earnings are estimates based on information obtained from the Securities and Exchange Commission (SEC) on the annual financial reports for the previous year of major direct investment enterprises, which are then apportioned according to the monthly pattern of exports for the particular enterprise during the previous year.

b. Valuation

Conceptually, market price is the basis for valuation of flows and stocks. In practice, however, book values from the balance sheet are used for stocks.

When the currency used in compilation differs from the currency of transactions (original currency), FDI flows are recorded using the exchange rate prevailing at the time of transactions. For a monthly compilation, the average exchange rate of the month under review is used. For stocks, the end-month exchange rate currency conversion is used.

5. Applicability of the IMF and OECD Guide on Definition and Compilation Practices

The Bangko Sentral ng Pilipinas (BSP) subscribes broadly to the concepts and coverage of Balance of Payments Manual 5th Edition (BPM5) in recording capital flows that subsequently support the data needs of policy-making. However, due to data constraints, the BSP maintains a set of operational definitions as discussed above adapted to the local setting but remains in concordance with the recommended international standards.

6. Central Bank and Other Authorities' Directives/Regulations

As a general policy, foreign investments need not be registered with the BSP. The registration of a foreign investment with the BSP is only required if the foreign exchange needed to service the repatriation of capital, remittance of dividends, profits and earnings shall be sourced from the banking system.

The present BSP policy is geared towards full liberalisation of foreign investments subject to limitations under the Constitution and other laws and the BSP charter. As regards the BSP charter, policy formulation for foreign investments are essentially made to protect the international reserves and exchange rate of the peso against the US dollar from excessive volatility as well as for accurate data reporting and monitoring for policy-making purposes.

6.1 Inward Foreign Investments

- a. As a general policy, foreign investments may be made without prior BSP approval.

- b. Only foreign investments whose future foreign exchange requirements for capital repatriation or dividend/profit remittance are intended to be sourced/purchased from the local banking system need to be registered with BSP.
- c. For investments made thru purchases by foreign investor through the Philippine Stock Exchange (PSE), BSP registration may be made through a local custodian bank (an authorised agent bank [AAB] or an Offshore Banking Unit [OBU]).
- d. Non-residents' investment in peso time deposits with an AAB has a minimum holding period of at least 90 days (circular 224 dated 26 January 2000) which investment, along with investments in government securities, are registerable by direct application with the BSP through the International Operations Department (IOD).
- e. Capital repatriation and dividend/profit remittances on BSP-registered investments effected thru the banking system are allowed without BSP approval upon presentation of proof of registration, i.e., a Bangko Sentral Registration Document (BSRD) and proof of sale/dividend declaration/notice.

6.2 Outward Foreign Investments

- a. Only outward investments exceeding US\$6 million per investor per year sourced from the local banking system are required to be approved and registered with the BSP. Investment of banks offshore shall be cleared with the appropriate supervisory department of the BSP followed by registration thru the IOD.
- b. Investments funded by the resident's own foreign exchange holdings such as withdrawals from FCDU accounts of residents or foreign exchange not required to be sold to local AABs for pesos or those sourced outside the local banking system need not be approved/registered by BSP.
- c. Foreign exchange received as dividend/earnings/divestment proceeds from outward investments funded by foreign exchange purchased from AABs shall be inwardly remitted within fifteen (15) banking days from receipt in the Philippines (circular No. 1389 as amended by Circular 5 dated 15 September 1993).

7. Granger Causality Test with Unit Roots Testing

To be able to determine whether there is any causal relationship between FDI and FPI inflows with key macroeconomic variables such as gross domestic product,

gross national product, unemployment rate, interest rate, exports of goods, imports and exchange rate, a series of Granger causality tests were made.

The data used in the analysis are quarterly data from 1981 to 2002⁵. The tests provided the following results (please see Annex 7.2 for details):

1. At 5 percent level of significance, with both 1-quarter and 8-quarter lags, the hypothesis that *changes in exchange rate does not Granger cause changes in FDI flows* can be rejected. However, there is no reverse causation from changes in FDI flows to changes in exchange rate. This means that the movement of the exchange rate would affect the movement of FDI.
2. At 5 percent level of significance, with 1-quarter lag, the hypothesis that *changes in real GDP does not Granger cause changes in FDI flows* can be rejected. Moreover, a reverse causation that changes in FDI flows does not Granger cause changes in real GDP, with both 1-quarter and 4-quarter lags, can also be rejected. The results are the same if real GNP is used.
3. At 10 percent level of significance, with 1-quarter lag, the hypothesis that *changes in exports of goods does not Granger cause changes in FDI flows* can be rejected. Moreover, a reverse causation that changes in FDI flows does not Granger cause changes in exports of goods, can also be rejected. The movement of exports will affect FDI flows since growth in exports means high production and a competitive economy, which encourage investments.
4. At 10 percent level of significance, with 1-quarter lag, the hypothesis that *changes in FPI does not Granger cause changes in imports* can be rejected. However, there is no reverse causation from changes in imports to changes in FPI flows.

It may be noted that the Granger Causality Test is sensitive to the period covered and to the number of lags hence different scenarios were considered.

5. Data prior to 1999 were preliminary run of BPM5-based concept and coverage of investment accounts and had not been released as official statistics. The shift to the BPM5 framework started only with the 1999 Philippine BOP statistics with no corresponding revision to the historical data. This preliminary run was just an attempt to come up with a consistent time series for the analysis of both direct and portfolio investment

There are other factors that affect the movements of FDI and FPI, i.e., political situation, security concerns, investment incentives, and monetary/fiscal policies. These factors contribute to the increase/decrease in investment commitments in a particular country.

8. Philippine Experience on Adoption of Different Policies in Managing Capital Flows (Basically Capital Control or Open Market Operations)

The Philippine experience with capital flows showed major episodes that transpired from 1990 to 2000. First, was the surge in capital flows in 1992 to 1996, followed by the Asian financial crisis in 1997 and the recovery from the crisis in 1999 to 2000.

The experience of the Philippines with capital flows in the 1990s demonstrates the challenges faced by policymakers in an increasingly integrated world economy. Some of the lessons that were emphasised by the experience were the increasing importance of flexibility and vigilance in monetary policy making, the vital role of domestic financial systems in coping with large flows of international capital, and the need to closely monitor capital flows.

Following are key measures and policies implemented by the BSP aimed at dismantling a number of controls, liberalising important areas to enhance competition and promoting stronger and more efficient financial institutions:

1. Foreign Exchange Liberalisation Efforts

- a. Deregulation of the Current Account. Bold reforms to deregulate the foreign exchange system, after four decades of exchange controls, began to be implemented in 1992 leading to the lifting of foreign exchange (FX) restrictions on current account transactions and the relaxation of certain capital account controls. These liberalisation measures were contained in BSP Circular No. 1389, dated 13 April 1993. Some of the major changes in the current account includes: the removal of the mandatory surrender requirements on all FX receipts as well as the mandatory inward remittance of all FX receipts from exporters; and, the lifting of restrictions on the purchase and sale of FX outside the banking system.
- b. Modification of the Rules on Foreign Borrowings and Foreign Investments. The rules on foreign borrowings and foreign investments were likewise modified to be consistent with the liberalised rules on current accounts. Specific provisions liberalising capital accounts include: allowing the full

and immediate repatriation of foreign investments, including profit remittances, except investments under the debt-to-equity scheme (later liberalised by a separate circular); allowing outward investments without prior BSP approval if the FX are not to be sourced from the banking system, although for outward investments to be sourced from the banking system a limit of US\$1 million per investor per year was set⁶; and, relaxing registration requirements on foreign loans and investments such that only those whose FX needs (for future debt servicing and repatriation of capital and remittances of dividends and profits) are to be sourced from the banking system need to register with the BSP. However, all external loans by the public sector, irrespective of FX arrangements, still require prior BSP approval.

In succeeding years, the BSP's liberalisation efforts were guided by the need to consider the economy's absorptive capacity amidst massive foreign capital inflows. These included: the lifting of the restriction on the repatriation of investments (including the remittance of dividends and profits) under the debt-to-equity conversion programme; allowing indirect exporters to borrow short-term FCDU loans without prior BSP approval, to fund both FX and peso export-related costs; and, raising the limit on outward investments to be sourced from the banking system, without prior BSP approval, to US\$3 million and further to US\$6 million.

The currency crisis of 1997, which resulted in the sharp depreciation of the Philippine peso, highlighted the adverse impact of a massive and quick reversal of short-term capital flows. To mitigate the impact of the Asian crisis, the BSP intensified its dollar sales during the speculative attack against the peso and complemented its market intervention with several upward adjustments of its overnight key interest rates. Moreover, the peso was allowed to trade within a wider range, with market forces determining its value. Greater exchange rate flexibility removed the incentive for speculation against the peso and helped conserve the country's international reserves.

2. Financial Sector Reforms

The respectable performance of the banking system during the period of regional turbulence may be attributed in large part to the reform measures implemented before and during the crisis.

6. This was later increased to US\$3 million and further to \$6 million.

The Philippine financial sector has undergone several episodes of policy reforms. In the 1980s, measures were adopted to enhance competition and improve supervisory and regulatory systems. In particular, interest rates were liberalised, controls on some foreign currency transactions were eased, universal banking was introduced, and minimum capital requirements were adjusted upwards.

In the 1990s, the reform effort was intensified, which included the following:

- A new independent central monetary authority was created;
- In line with the liberalisation of the domestic financial system, entry of foreign banks were allowed;
- Prudential regulations were further tightened;
- Liquidity cover on foreign liabilities were required;
- Rules of derivatives trading were issued; and,
- Cap on real estate loans was set.

When the 1997 Asian financial crisis struck, a programme of reforms was adopted with the primary aim of improving further the capacity of banks to face adverse shocks and reinforcing the existing institutional framework to deal with troubled banks.

Prudential regulation and supervision have been strengthened further to foster better banking governance and stronger market discipline. Among the specific measures are:

- Phased increase in minimum capitalisation requirement;
- Tighter regulations on the grant of loans and other credit accommodations such as insider loans (e.g. DOSRI loans);
- Redefinition of non-performing loans;
- Stricter provisioning requirements;
- Shift in supervisory focus from a compliance-based and checklist-driven assessment of banks' condition to a forward-looking and risk-based framework;
- Consolidated supervision of banks;
- Close monitoring of banks identified as potentially in distress;
- Limited bank entry only to viable entities meeting the prudential entry requirements;
- Expanded the disclosure responsibilities of banks;
- Adopted sound accounting rules in the compilation of financial statements, including those relating to the classification of loan accounts, loan loss provisioning and loan restructuring;
- Provided incentives to encourage bank mergers and consolidation;

Managing and Monitoring Direct and Portfolio Investment Flows:.....

- Strengthened regulatory oversight;
- Issued stricter criteria for new bank branches; and,
- Tighter rules governing derivatives transactions of banks/NBQBs/FIs and their subsidiaries/affiliates.

References

1. Bangko Sentral ng Pilipinas (BSP), Direct Investment Compilation Practices, Data Sources and Methodology, Metadata for the 2001 Survey of the Implementation of Methodological Standards for Direct Investment (SIMSDI), 2001.
2. BSP, Annual Reports and Other Publications.
3. Department of Economic Research, BSP, Various Technical Papers on Capital Flows.
4. Danao Rolando, A., Introduction to Statistics and Econometrics, University of the Philippines Press, 2002.

**PROMOTED SECTORS FOR INVESTMENT
UNDER THE 2003 INVESTMENT PRIORITIES PLAN (IPP)**

I. National List**A. Export Activities*****B. Mandatory inclusions**

All areas/activities, whose inclusion in the IPP are required under existing laws.

ACTIVITY

P.D. 705 Industrial Tree Plantation

R.A. 7103 Iron and Steel Projects*

R.A. 7942 Exploration, Mining, quarrying, Processing of Minerals*

R.A. 8047 Publication or Printing of Books or Textbooks*

R.A. 8479 Refining, Storage, Marketing and Distribution of Petroleum products*

R.A. 9003 Ecological solid Waste Management Act

C. Support to government Programs

1. Agricultural/fishery Production and Processing*
2. Energy Sources
3. Logistics
4. Drugs and Medicines*
5. Engineered products*
6. Information and communication Technology*
7. Infrastructure
8. Mass Housing Projects including Development and Manufacture of Housing Components*
9. Research and Development Activities, including Bio-technology
10. Social Service*
11. Tourism-related Projects as endorsed by the Department of Tourism*
12. Motion picture limited to films with historical and socio-cultural significance, and documentary films
13. New projects and bio-technology projects with a minimum project cost of US\$2 million not commercially undertaken in the Philippines as of 31 December 2001
14. Printing facilities

*With Modernization Program

II. Regional List

A. Industry Cluster

Industry clusters (ICs) endorsed by the Small and Medium Enterprise Development Council (SMEDC). ICs will be limited to only one (1) cluster per province.

B. ARMM List

The ARMM List covers priority activities, which have been independently identified by the regional Board of Investments of the ARMM in accordance with E.O. 458. The BOI-ARMM can grant registration and administer incentives to activities listed in the IPP, provided these are located in ARMM and subject to the General and Specific Guidelines.

1. Export Activities

2. Agriculture, Food and Forestry-Based Industries

- a. Processed Food
- b. Cutflower Production
- c. Pearl Culture and Processing
- d. Industrial Tree Plantation
- e. Shipbuilding and Watercraft
- f. Abaca Pulp Production and Processing
- g. Palm Oil Plantation, processing, refining and Germinated Oil Palm Seeds
- h. Coffee Processing
- i. Particle Board
- j. Activated Carbon Manufacturing
- k. Feeds Production
- l. Tobacco Plantation and Processing
- m. Production of Beverage Crops, but not limited to:
- n. Production of Plantation Crops and Other Medical Herbs/ Essential Oil Plants
- o. Production of Livestock and Poultry Beef
- p. Bricks and roofing Tiles Production
- q. Quality Seeds and Seedlings of Fruit Trees and Other Planting Materials Propagated Asexually or by tissue Culture
- r. Sugar cane plantation and refineries
- s. Sericulture
- t. Mosquito coil processing

3. Basic Industries

- a. Pharmaceuticals
- b. Textile and Textile Products
- c. Fertilisers

- d. Mining (Exploration and Development of Mineral Resources)
 - e. Cement – at least 1.0 million MTPY Capacity (clinked based)
4. **Consumer Manufacturers**
5. **Infrastructure and Services**
- a. Public Utilities
 - b. Telecommunications with International Gateways
 - c. Tourism
 - d. Industrial Service Facilities
 - e. Petrochemical Complex
 - f. Industrial Gases
 - g. Miscellaneous Chemical Products
6. **Engineering Industries**
7. **ARMM Priority and Tourism Areas**
 Listed below are potential tourist destinations, which need further exploration, and evaluation for intensified promotions, development and marketing.

NUCLEUS	GATEWAY	SATELLITE DESTINATION
Area I- Sulu Area II- Tawi-Tawi Area III-Lanao del Sur Area IV-Maguindanao Area V-Basilan	Jolo Bongao Marawi City Cotabato City Isabela	Sulu Province Tawi-Tawi Province Lanao del Sur Province Maguindanao Province Basilan Province

ANNEX 7.2

Pairwise Granger Causality Tests

Date: 03/05/04 Time: 17:02

Sample: 1981:1 2002:4

Lags: 1

Null Hypothesis:	Obs	F-Statistic	Probability
LFDI does not Granger Cause LEXRATE LEXRATE does not Granger Cause LFDI	87	1.00701 5.09633	0.31850 0.02657
LFPI does not Granger Cause LEXRATE LEXRATE does not Granger Cause LFPI	87	0.03277 1.84998	0.85679 0.17743
LGDPR does not Granger Cause LEXRATE LEXRATE does not Granger Cause LGDPR	87	2.84937 8.77584	0.09512 0.00397
LGNPR does not Granger Cause LEXRATE LEXRATE does not Granger Cause LGNPR	87	2.72560 6.69909	0.10249 0.01136
LINTR does not Granger Cause LEXRATE LEXRATE does not Granger Cause LINTR	87	0.28655 4.81355	0.59385 0.03100
LM does not Granger Cause LEXRATE LEXRATE does not Granger Cause LM	87	1.67941 1.21286	0.19855 0.27391
LUEMP RATE does not Granger Cause LEXRATE LEXRATE does not Granger Cause LUEMP RATE	87	0.07936 0.90179	0.77886 0.34503
LXGS does not Granger Cause LEXRATE LEXRATE does not Granger Cause LXGS	87	5.37184 2.52563	0.02290 0.11577
LFPI does not Granger Cause LFDI LFDI does not Granger Cause LFPI	87	19.9074 5.35270	2.5E-05 0.02313
LGDPR does not Granger Cause LFDI LFDI does not Granger Cause LGDPR	87	7.13532 6.03764	0.00907 0.01606
LGNPR does not Granger Cause LFDI LFDI does not Granger Cause LGNPR	87	7.53418 4.70244	0.00740 0.03295
LINTR does not Granger Cause LFDI LFDI does not Granger Cause LINTR	87	0.31890 0.86680	0.57377 0.35451
LM does not Granger Cause LFDI LFDI does not Granger Cause LM	87	15.5307 15.0170	0.00017 0.00021

LUEMPRATE does not Granger Cause LFPI	87	0.70157	0.40463
LFPI does not Granger Cause LUEMPRATE		2.06759	0.15417
LXGS does not Granger Cause LFPI	87	6.74787	0.01108
LFPI does not Granger Cause LXGS		5.25247	0.02442
LGDPDR does not Granger Cause LFPI	87	1.36819	0.24543
LFPI does not Granger Cause LGDPDR		15.9063	0.00014
LGNPR does not Granger Cause LFPI	87	1.41448	0.23766
LFPI does not Granger Cause LGNPR		13.1600	0.00049
LINTR does not Granger Cause LFPI	87	0.22243	0.63842
LFPI does not Granger Cause LINTR		1.22704	0.27115
LM does not Granger Cause LFPI	87	2.21255	0.14064
LFPI does not Granger Cause LM		9.01045	0.00353
LUEMPRATE does not Granger Cause LFPI	87	1.28592	0.26003
LFPI does not Granger Cause LUEMPRATE		2.41217	0.12416
LXGS does not Granger Cause LFPI	87	0.25504	0.61487
LFPI does not Granger Cause LXGS		11.2028	0.00122
LGNPR does not Granger Cause LGDPDR	87	54.2857	1.1E-10
LGDPDR does not Granger Cause LGNPR		47.1280	1.1E-09
LINTR does not Granger Cause LGDPDR	87	9.67735	0.00255
LGDPDR does not Granger Cause LINTR		4.73645	0.03234
LM does not Granger Cause LGDPDR	87	58.2346	3.3E-11
LGDPDR does not Granger Cause LM		0.16612	0.68462
LUEMPRATE does not Granger Cause LGDPDR	87	0.90088	0.34527
LGDPDR does not Granger Cause LUEMPRATE		0.85898	0.35668
LXGS does not Granger Cause LGDPDR	87	121.885	0.00000
LGDPDR does not Granger Cause LXGS		0.09122	0.76338
LINTR does not Granger Cause LGNPR	87	7.65418	0.00696
LGNPR does not Granger Cause LINTR		5.28312	0.02402
LM does not Granger Cause LGNPR	87	47.4380	9.7E-10
LGNPR does not Granger Cause LM		0.00978	0.92147

LUEMPLRATE does not Granger Cause LGNPR	87	0.54550	0.46222
LGNPR does not Granger Cause LUEMPLRATE		0.73141	0.39486
LXGS does not Granger Cause LGNPR	87	97.7921	9.7E-16
LGNPR does not Granger Cause LXGS		0.68529	0.41012
LM does not Granger Cause LINTR	87	1.28498	0.26020
LINTR does not Granger Cause LM		2.04719	0.15620
LUEMPLRATE does not Granger Cause LINTR	87	0.53602	0.46612
LINTR does not Granger Cause LUEMPLRATE		0.12473	0.72485
LXGS does not Granger Cause LINTR	87	2.94359	0.08991
LINTR does not Granger Cause LXGS		1.16745	0.28302
LUEMPLRATE does not Granger Cause LM	87	3.78162	0.05516
LM does not Granger Cause LUEMPLRATE		3.18771	0.07780
LXGS does not Granger Cause LM	87	0.01339	0.90815
LM does not Granger Cause LXGS		8.20330	0.00528
LXGS does not Granger Cause LUEMPLRATE	87	0.47165	0.49412
LUEMPLRATE does not Granger Cause LXGS		4.30317	0.04110

CHAPTER 8

MANAGING AND MONITORING DIRECT AND PORTFOLIO INVESTMENT FLOWS: COUNTRY PAPER ON SINGAPORE

by

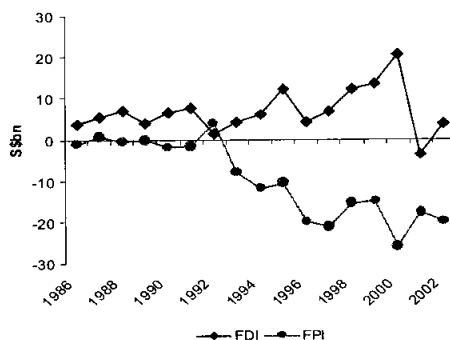
Clara Tan Mei Ping ¹

1. Salient Features of FDI and FPI during the Pre- and Post-financial Crisis Period

Singapore's small domestic market and lack of natural resources necessitated the adoption of an outward-orientated economic development policy from the outset. An integral part of this strategy is the policy to attract foreign direct investments (FDI). This, and the decision in the early 1970s to develop Singapore into an international financial centre, provided the impetus and rationale for capital account liberalisation. Full liberalisation of the capital account since 1978 has provided institutions and individuals in Singapore with the flexibility and freedom to make payments to non-residents. In turn, the absence of restrictions on capital remittances has encouraged non-residents to invest in Singapore. Indeed, the inflow of FDIs has been a key force behind Singapore's growth since the 1970s, as well as the development of Singapore's financial sector.

1. Clara Tan is Senior Economist at the Department of Economic Research at the Monetary Authority of Singapore. The paper had input from Lam Chern Woon, Economist; Tharmaratnam Shivani, Economist; and, Supaat Saktiandi, Senior Economist. The information in this paper is from publicly available sources. The views in this paper are solely those of the author, and should not be attributed to the Monetary Authority of Singapore.

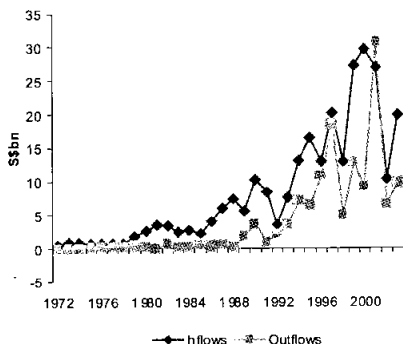
Chart 8.1: Singapore's FDI and FPI (BOP basis)
(S\$bn)



Source: Singapore Department of Statistics (DOS)

Net FDI has remained positive despite a surge in outward direct investment by Singapore-based companies since 1993. In the immediate aftermath of the Asian financial crisis, Singapore did not see a large fallout in FDI. However, in the past two years, the worldwide slowdown in economic activity and increased competition from other low-cost centres, such as China, led to a decline in investment activities

Chart 8.2: Singapore's Direct Investment Inflow and Outflow (BOP basis)
(S\$bn)



Source: DOS

In contrast, there has been a shift in foreign portfolio investment (FPI) to a deficit position since 1993 as excess savings were channelled abroad. Net purchases by residents of overseas equities and, to a smaller extent, debt securities have been the dominant form of portfolio outflows since 1993.

Chart 8.3: Singapore's Net Portfolio Investment (S\$bn)

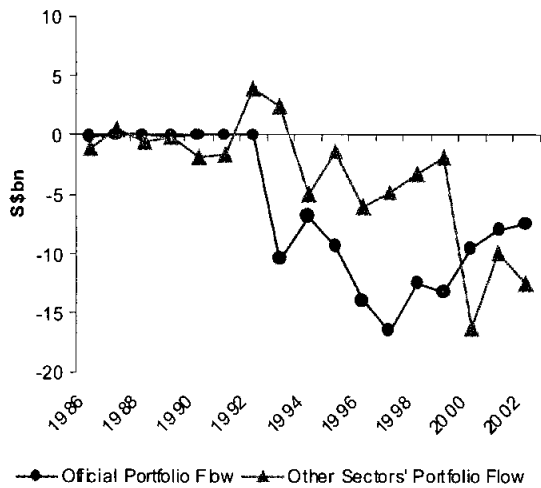
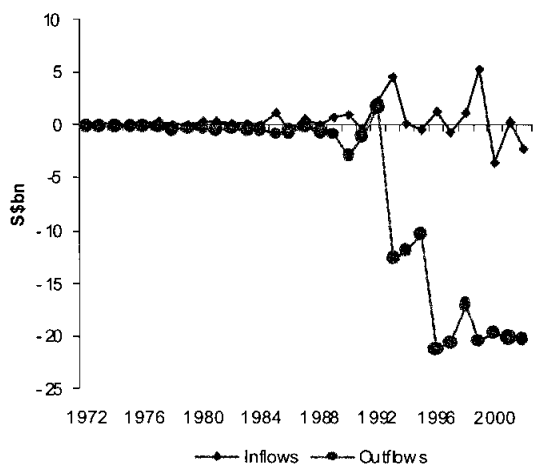


Chart 8.4: Singapore's Portfolio Investment Inflow and Outflow (S\$bn)



Source: DOS

Table 8.1: Singapore's FDI and FPI Flows, 1988-2002 (\$\$bn)

	Direct Investment (net)	Portfolio Investment (net)
1988	7.1	-0.6
1989	3.9	-0.1
1990	6.4	-1.9
1991	7.5	-1.6
1992	1.4	4.1
1993	4.1	-8.0
1994	6.1	-11.8
1995	12.1	-10.7
1996	4.3	-20.0
1997	6.8	-21.3
1998	12.1	-15.8
1999	13.3	-15.0
2000	20.5	-25.9
2001	-3.6	-17.8
2002	3.6	-19.9

Source: DOS

1.1 Managing Capital Outflows during the Asian Crisis

Despite its stable and sound fundamentals, the Singapore economy was not immune to the adverse spillover effects of the Asian financial crisis, with GDP growth turning negative in the second half of 1998². The impact of the crisis on the Singapore economy was manifested via a weaker NEER and higher domestic interest rates, particularly during the height of the crisis in early 1998.

Net capital outflows rose sharply to S\$30.0 bn (23% of GDP) in 1998 from S\$17.2 bn (13% of GDP) in 1997. This was mainly due to outflows via the banking sector. The reversal in the flow of bank and other liabilities from an inflow of S\$60.9 bn in 1997 to an outflow of S\$16.8 bn in 1998 was attributed mainly to foreign banks substantially scaling back net funds by their head offices in the light of heightened credit risks. The current account surplus rose to S\$31 bn (22.6% of GDP) in 1998 due to significant import compression, as economic activity slowed.

Table 8. 2: External Balance Adjustment

% of GDP	1996	1997	1998
Current Account Balance	15.2	15.6	22.6
Capital & Financial Account Balance	-10.3	-13.3	-23.1
Overall Balance	8.0	8.4	3.6
Net Official Reserves ¹	-8.0	-8.4	-3.6

Increase in assets = (-)

Singapore relied on flexible monetary and fiscal policies to contain the negative impact of the crisis. Given weakening aggregate demand and benign inflationary pressures, the MAS adopted a more flexible exchange rate policy, widening the band within which the Singapore dollar can fluctuate in response to increased volatility and uncertainty of the financial markets. As the currency markets became less volatile, the exchange rate policy band was subsequently narrowed to its pre-crisis width.

2. Singapore's GDP growth moderated sharply to 0.3% in 1998 from an average of 9.7% per year in the previous five years.

The Singapore government also provided support to the economy by implementing a S\$10.5 bn package of cost-cutting measures in November 1998, which was on top of the S\$2.2 bn off-budget package introduced in 1 July. The cost-cutting measures included a reduction in rentals, utility charges, foreign worker levies and wages³. Small local companies benefited from the Local Enterprise Financing Scheme, which enabled banks to co-share risks with the government when providing working capital to credit-worthy local companies.

After an anemic 0.9% growth in 1998, economic output expanded by 6.4% in 1999. Growth was led mainly by the rapid recovery in external demand, particularly in electronics, and private consumption.

2. National policy on FDI and FPI (both Inward and Outward) and Other Complementary Policies

Foreign investments underpin Singapore's open and heavily trade-dependent economy. Singapore has always maintained an open investment regime and is committed to maintaining a free market. Singapore's investment promotion strategy has successfully attracted many multinational companies (MNCs) to base their headquarters in Singapore. These MNCs engage in activities, such as high-end product manufacturing, research and development as well as high value-added services.

3. Reporting and Monitoring Systems of FDI and FPI (Covering Basically Definition, Data Source, Coverage, Classification, Compilation Practices and Data Dissemination System).⁴

3.1 Data Sources

The inward and outward FDI and FPI statistics are compiled by the Singapore Department of Statistics (DOS), a government body under the purview of the Ministry of Trade and Industry (MTI), in accordance with the guidelines of the IMF's Balance of Payments Manual, 5th edition. The data on foreign investment are compiled primarily from annual surveys. Preliminary quarterly data on direct investment financial flows (equity capital and other capital) are disseminated with a timeliness of two months after the end of the reference period. More comprehensive data are disseminated 15 months after the end of the reference

3. The government accepted the Committee on Singapore's Competitiveness (CSC)'s recommendation to reduce the employers' CPF contribution rate by 10% points. The CPF cut took effect from 1 January 1999.

4. Information is obtained from the metadata for the 2001 Survey of the Implementation of Methodological Standards for Direct Investment (SIMSDI) on the compilation practices, data sources, and methodology in use in 2001, IMF. The information is provided by DOS.

period on an annual basis. Published information (such as company accounts) is used as a secondary data source. DOS maintains the Commercial Establishment Information System (CEIS), which is a centralised database providing basic information on establishments.

3.2 Coverage

For these surveys, no major industrial sectors are excluded from the data.

3.3 Definitions

FDI is defined in the International Monetary Fund's Balance of Payments Manual, 5th edition (BPM5), as "investment that involves a long-term relationship reflecting a lasting interest of a resident entity in one economy (direct investor) in an entity resident in an economy other than that of the investor economy (direct investment enterprise). The direct investor's purpose is to exert a significant degree of influence on the management of the enterprise resident in the other economy." BPM5 recommends a minimum equity stake deemed necessary for an effective voice as 10%.

3.3.1 Foreign Equity Investment in Singapore

In Singapore's context, investments by foreign investors in Singapore affiliates (including Singapore branches of foreign parent companies) where they own at least 10% of the paid-up shares are recorded. Investment in Singapore companies with less than 10% equity interest is treated as foreign portfolio investment (FPI). Portfolio investment also includes debt securities such as bonds, debentures, notes, money market instruments and other securities issued by overseas government and companies.

3.3.2 Singapore's Investment Abroad

Direct investment by Singapore investors in overseas subsidiaries, associates, other affiliates and branches (collectively termed as "overseas affiliates") in which a local company owns at least 10% of the total paid-up shares.⁵ Investment in

5. An overseas subsidiary is a company incorporated outside Singapore in which a Singapore company owns at least 50% of the ordinary paid-up shares. An overseas associate is a company incorporated outside Singapore in which a Singapore company owns at least 20% but less than 50% of the ordinary paid-up shares. The definition of subsidiary and associate is in line with the accounting practice in Singapore. From the 1995 survey onwards, it was expanded to include investment in "other overseas affiliate", i.e. company incorporated outside Singapore in which a Singapore company owns at least 10% but less than 20% of the ordinary shares.

overseas companies with less than 10% equity interest is treated as foreign portfolio investment (FPI). The FDI abroad includes equity (paid up shares and attributable reserves) in the affiliate and the net outstanding debts owned by the affiliate to the Singapore parent company.

3.4 Classifications

3.4.1 Geographic Classification

Comprehensive data showing country breakdown for inward direct investment financial flows are disseminated 15 months after the reference period on an annual basis. In accordance with the international standards, the debtor/creditor principle is used as the basis for the geographic allocation of the data. The annual investment flow data are disseminated to the ASEAN Secretariat.

3.4.1 Industrial Classification

Comprehensive data showing a breakdown by industry for inward investment financial flows are disseminated 15 months after the reference period on an annual basis. The data are based on the industry of the resident direct investor or resident direct investment enterprise. The classification broadly corresponds to the nine major divisions of the United Nations International Standard Industrial Classification of All Economic Activities (ISIC). The annual investment flow data are disseminated to the ASEAN Secretariat.

3.5 Data Dissemination System

Several channels are used to disseminate the results of DOS' establishment surveys such as the Economic Survey of Singapore. The annual investment flow data by geographical and industrial classification are disseminated to the ASEAN Secretariat and published in "Statistics of Foreign Direct Investment in ASEAN".

Since August 1996, Singapore has subscribed to the Special Data Dissemination Standards (SDDS) established by the IMF. The purpose of the SDDS is to guide member countries in the provision of comprehensive, timely, accessible and reliable economic and financial statistics to the public. Singapore's current statistical policy of dissemination is in line with the good dissemination practices prescribed by the SDDS, which comprises of four dimensions, namely, coverage, periodicity and timeliness; access by the public; integrity of disseminated data; and quality of disseminated data.

4. Issues on Data Collection, Valuation and Flows-Stocks Reconciliation and Valuation of Effectiveness of Current Data Compilation System.

Over the years, DOS has continued its efforts in improving the survey coverage and incorporated data on FDI inter-company loans in the compilation of FDI statistics. For the Survey of Singapore's Investment Abroad (SOI), respondents are requested to provide the accounts of overseas affiliates, so that the relevant data can be extracted.

5. Central Bank and Other Authorities' Directives/Regulations on FDI and FPI

Singapore's economic policies and legal framework are conducive in attracting foreign investors. Apart from regulatory requirements in some sectors, the government screens investment proposals only to determine eligibility for various investment incentives. The legal system upholds the sanctity of contracts, and decisions are effectively enforced.

Exceptions to Singapore's general openness to foreign investment exist, for instance, in broadcasting, the domestic news media and retail banking. Section 47 of the Singapore Broadcasting Authority (SBA) Act restricts foreign equity ownership of companies broadcasting to the Singapore domestic market to less than 49%. The Newspaper and Printing Presses Act restricts equity ownership (local or foreign) to 5% per shareholder (raised from 3% in mid-2002), without the approval of the Government and requires all directors of a newspaper company to be Singapore citizens.

5.1 Liberalisation of the Financial Sector

MAS is proceeding step-by-step in reforming the financial sector, making careful incremental changes. This will give MAS time to boost its supervisory capabilities to keep abreast of the latest market development as well as give market participants time to adjust to the new environment. The changes that have been made in the financial market include more recent steps to further relax MAS' policy of non-internationalisation of the Singapore dollar.

5.1.1 During the 1970s

The early 1970s was also a new era in the banking history of Singapore. As a strategy to develop Singapore as a financial centre, the Government encouraged strong foreign banks to set up offices here. The first license to a foreign bank to

operate in Singapore was given to the First National Bank of Chicago in 1970. This inaugurated a more liberal admission policy for foreign banks and financial institutions into Singapore.

5.1.2 Post-Asian Currency Crisis, Particularly from 1998 Onwards

To ensure that local banks become globally competitive, MAS implemented a 5-year programme in 1999 to liberalise access by foreign banks to Singapore's domestic market. The programme included a package of new banking privileges and licenses for foreign banks⁶ to be granted over three years (1999-2001). The new privileges and licenses comprised the Qualifying Full Bank (QFB) privileges for up to six foreign banks and the Qualifying Offshore Bank (QOB) privileges for approved offshore banks. It also included steps to improve bank governance and allow greater foreign ownership of domestic banks.

While MAS has lifted the 40% foreign shareholding limit on local banks, it has also tightened safeguards on the accumulation of significant ownership of a local bank. For example, MAS' approval is required for foreign entities to increase shareholding beyond 5%, 12% and 20%. In terms of domestic deposits, the government's policy is to maintain the local banks' share at not less than 50% of total resident deposits.

In 1998, MAS relaxed its policy on the non-internationalisation of the Singapore dollar in order to broaden and deepen the capital markets. These measures made it easier for foreign entities to list S\$ denominated shares and issue S\$ bonds. However, proceeds must still be swapped into foreign currency before use outside Singapore. Financial institutions are also now allowed to engage freely in repurchase agreements of SGS or S\$ denominated bonds listed on the Singapore Exchange with non-residents provided there is full delivery of collateral. On 19 March 2002, MAS announced further measures to liberalise the S\$ non-internationalisation policy. These included the exemption of all individuals and non-financial entities from the S\$ lending restrictions, as well as the lifting of restrictions in several key financial activities for non-resident financial entities.

6 In 1999, MAS awarded four foreign banks Qualifying Full Bank (QFB) privileges and another eight banks Qualifying Offshore Bank (QOB) privileges. The QFB privileges allow the foreign banks to have additional branches and/or off-premise automated teller machines (ATMs), as well as to share ATMs amongst themselves. Offshore banks with QOB privileges will have their S\$ lending limit raised, and will also be allowed to accept S\$ funds from non-bank customers through swap transactions.

6. Direction of Economic Effects of FDI/FPI Flows on Key Macroeconomic Variables and Impact on Monetary Policy.

6.1 Selected Macroeconomic Variables and Unit-root Test

Macroeconomic economic indicators, such as nominal GDP, unemployment rate (UnN), consumer prices index and nominal effective exchange rate (NEER) were used for the statistical analysis. The unit root test was carried out to test the stationarity of the selected series.

FDI and FPI series were found to be stationary while the other macroeconomic variables were integrated of order one. The data used in the analysis were quarterly data from the late 1980s to 2003.

6.2 Results of Granger Causality Test

A Granger Causality test was conducted between FDI/FPI flows and the key macroeconomic variables for two periods: pre-crisis and crisis years (late 1980s to 1998) and post-crisis years (1999-2003). The tests were carried out with 1, 4 and 8 lagged periods to test the sensitivity of the direction of causality. The results of the test are shown in Appendix 8.1. It has been shown consistently in the tests that FDI Granger-causes changes in the unemployment rate and FPI Granger-causes changes in GDP during the pre-crisis and crisis period. During the post-crisis period, FDI Granger-causes changes in NEER and changes in unemployment rate Granger-causes FPI.

6.2.1 Pre-crisis and Crisis Years

The null hypothesis is that FDI does not Granger-cause changes in the unemployment rate and FPI does not Granger-cause changes in GDP. The test results are as shown below:

<u>Null Hypothesis:</u>	<u>F-statistics</u>	<u>Probability</u>
<i>At lag 8</i>		
FDI does not Granger-cause Δunemployment rate	2.906895	0.0225
Δ Unemployment rate do not Granger-cause FDI	0.357373	0.8801
<i>At lag 4</i>		
FPI does not Granger-cause ΔGDP	2.159077	0.0786
Δ GDP do not Granger-cause FPI	1.157864	0.3471

In the test of Granger causality between FDI and changes in unemployment rate, we reject the hypothesis that FDI does not Granger-cause changes in unemployment rate but we cannot reject the hypothesis that changes in the unemployment rate do not Granger-cause FDI at the 10% level of significance. Therefore it appears that Granger causality runs one-way from FDI to changes in the unemployment rate and not the other way.

Similarly, in the test of the Granger causality between FPI and changes in GDP, we reject the hypothesis that FPI does not Granger-cause changes in GDP but we cannot reject the hypothesis that changes in GDP does not Granger-cause FPI at the 10% level of significance. Therefore it appears that Granger causality runs one-way from FPI to changes in GDP and not the other way. However, it should be noted that "FDI Granger-causes changes in the unemployment rate and FPI Granger-causes changes in GDP" does not imply that changes in unemployment rate and GDP are the effect or the result of FDI and FPI respectively. Granger causality test simply measures precedence and information content and does not by itself imply that one causes the other.

6.2.2 Post-crisis Years

The null hypothesis is that FDI does not Granger-cause changes in NEER and changes in the unemployment rate do not Granger-cause FPI. The test results are as shown below:

<u>Null Hypothesis:</u>	<u>F-statistics</u>	<u>Probability</u>
<i>At lag 8</i>		
FDI does not Granger-cause ΔNEER	10.33443	0.0912
Δ NEER do not Granger-cause FDI	1.955177	0.3820
ΔUnemployment rate do not Granger-cause FPI	18.9569	0.0511
FPI does not Granger-cause Δ Unemployment rate	2.28333	0.3401

In the test of Granger causality between FDI and changes in NEER, we reject the hypothesis that FDI does not Granger-cause changes in NEER but we cannot reject the hypothesis that changes in NEER do not Granger-cause FDI at the 10% level of significance. Therefore it appears that Granger causality runs one-way from FDI to changes in NEER and not the other way.

Similarly, in the test of Granger causality between changes in unemployment rate and FPI, we reject the hypothesis that changes in unemployment rate do not Granger-cause FPI but we cannot reject the hypothesis that FPI does not Granger-cause changes in unemployment rate at the 10% level of significance. Therefore it appears that Granger causality runs one-way from changes in unemployment rate to FDI and not the other way.

6.3 Remarks

From the statistical results, direct investment and portfolio flows in the BOP seem to precede changes in unemployment rate and GDP over the period 1980 to 1998 (pre-crisis and crisis years). On improvements in GDP following positive portfolio flows in the BOP, this may reflect the period in the 1980s when capital inflows led to higher GDP growth. Since, however, there has been a net outflow of FPI.

During the post-crisis years, the Granger causality tests showed that there was significant results between FDI and changes in the S\$NEER, possibly highlighting the impact of capital inflow on the domestic foreign exchange markets

and reflecting movements of the domestic currency within the policy band. The tests also showed that changes in unemployment rate precede portfolio flow.

7. Country's Experiences on Adoption of Different Policies in Managing Capital Flows

7.1 Liberalisation of the Exchange and Capital Regime

As alluded to earlier, Singapore's capital account liberalisation can be viewed as part of the broader programme to develop Singapore into a major financial centre. Exchange controls were relaxed in stages, culminating in its complete removal by June 1978, to allow residents to borrow, lend and invest in all currencies and deal in spot and foreign exchange transactions. Non-residents too were freely allowed to make direct and portfolio investments in Singapore.⁷ Meanwhile, concessions were given to Asian Currency Units (ACUs)⁸ to promote the growth of the Asian Dollar market (ADM),⁹ which was established in 1968.¹⁰

The absence of capital controls has greatly facilitated the development of Singapore's capital and financial markets. By the 1990s, Singapore had become an important financial centre with most of the major financial institutions represented. For example:

1. By 1993, Singapore had become the world's fourth largest foreign exchange trading centre.

7. Government approval is required for foreign investment in residential and other properties zoned or approved for industrial and commercial use. However, since 1978 foreigners can freely purchase residential units in buildings of six or more stories and in approved condominium developments.

8. An ACU is a separate accounting unit established with a banking institution that has been approved by the MAS to operate in the Asian Dollar Market and it enjoys a concessional tax rate of 10% on its income. It is licensed to transact only in foreign currency and is prohibited from acquiring any asset or to incurring any liabilities denominated in Singapore Dollar. Notwithstanding these restrictions, an ACU is permitted to conduct a wide range of banking business with non-residents as well as residents.

9. Singapore has an active offshore Asian Dollar Market where financial institutions are engaged in non-Singapore dollar intermediation of deposits and loans, mainly at the shorter end of the maturity structure.

10. As a side note, by the late 1970s, formal trade barriers were largely removed. Currently, there is no import licensing requirement and with the exception of a few items, no import duties are levied. Export licences are required only for a handful of items, and there are no restrictions on the utilisation of export proceeds.

2. By 2003, there were 162 ACUs in Singapore, with assets totalling over US\$492 billion, almost 2.3 times the size of the domestic banking units.

3. The Singapore International Monetary Exchange (SIMEX)¹¹ is now the world's fifth largest derivatives exchange.

The relaxation of controls on Singapore's capital regime has also integrated the onshore financial market with the international market. In fact, MAS research found that free movement of financial capital, through covered interest arbitrage, has eliminated any risk-free differences between the expected returns on Singapore dollar-denominated assets and foreign currency assets.¹²

11. In December 1999, SIMEX was demutualised and merged with the Stock Exchange of Singapore (SES) to form the Singapore Exchange.

12. MAS Occasional Paper 11.

References

1. Direct Investment Compilation Practices, Data Sources and Methodology, Metadata for the 2001 Survey of the Implementation of Methodological Standards for Direct Investment (SIMSDI), 2001, DOS
2. Foreign Equity Investment in Singapore, various publications, DOS
3. Singapore's Investment Abroad, various publications, DOS
4. Economic Survey of Singapore, 2003

Appendix 8.1: Granger Causality Test Results

Lag 1

Pre-crisis and Crisis Period: late 1980s - 1998

Null Hypothesis: Y does not Granger-cause X

Y	X	F-statistics	P-statistics	Results
FDI	ΔGDP	3.262499	0.0772	FDI Granger-causes ΔGDP
ΔGDP	FDI	0.484923	0.4896	ΔGDP do not Granger -cause FDI
FDI	ΔUnN	5.094033	0.0291	FDI Granger-causes ΔUnN
ΔUnN	FDI	0.130762	0.7194	ΔUnN do not Granger -cause FDI
FDI	ΔCPI	3.181512	0.0808	FDI Granger-causes ΔCPI
ΔCPI	FDI	1.580278	0.2148	ΔCPI do not Granger -cause FDI
FDI	ΔNEER	0.000724	0.9786	FDI does not Granger-cause ΔNEER
ΔNEER	FDI	1.100497	0.2994	ΔNEER do not Granger -cause FDI
FPI	ΔGDP	10.61388	0.0021	FPI Granger-causes ΔGDP
ΔGDP	FPI	0.482032	0.4909	ΔGDP do not Granger-cause FPI
FPI	ΔUnN	4.961996	0.0312	FPI Granger-causes ΔUnN
ΔUnN	FPI	0.439795	0.5108	ΔUnN do not Granger -cause FPI
FPI	ΔCPI	3.514921	0.0669	FPI Granger-causes ΔCPI
ΔCPI	FPI	0.294492	0.5899	ΔCPI do not Granger -cause FPI
FPI	ΔNEER	0.112823	0.7384	FPI does not Granger-cause ΔNEER
ΔNEER	FPI	2.147805	0.1493	ΔNEER do not Granger -cause FPI

Post-crisis Period: 1999 - 2003

Y	X	F-statistics	P-statistics	Results
FDI	ΔGDP	1.124595	0.3047	FDI does not Granger-cause ΔGDP
ΔGDP	FDI	0.234856	0.6345	ΔGDP do not Granger-cause FDI
FDI	ΔUnN	0.38269	0.5449	FDI does not Granger-cause ΔUnN
ΔUnN	FDI	0.61224	0.4454	ΔUnN do not Granger -cause FDI
FDI	ΔCPI	1.411723	0.2521	FDI does not Granger-cause ΔCPI
ΔCPI	FDI	0.208613	0.6540	ΔCPI do not Granger -cause FDI
FDI	ΔNEER	9.859905	0.0063	FDI Granger-causes ΔNEER
ΔNEER	FDI	0.145594	0.7078	ΔNEER do not Granger -cause FDI
FPI	ΔGDP	2.34567	0.1452	FPI does not Granger-cause ΔGDP
ΔGDP	FPI	2.501366	0.1333	ΔGDP do not Granger -cause FPI
FPI	ΔUnN	0.14083	0.7124	FPI does not Granger-cause ΔUnN
ΔUnN	FPI	3.351686	0.0858	ΔUnN Granger -cause FPI
FPI	ΔCPI	1.872976	0.1900	FPI does not Granger-cause ΔCPI
ΔCPI	FPI	0.107372	0.7474	ΔCPI do not Granger -cause FPI
FPI	ΔNEER	0.136139	0.7170	FPI does not Granger-cause ΔNEER
ΔNEER	FPI	1.545378	0.2317	ΔNEER do not Granger -cause FPI

Lag 4

Null Hypothesis: Y does not Granger-cause X

Pre-crisis and Crisis Period: late 1980s - 1998

Y	X	F-statistics	P-statistics	Results
FDI	Δ GDP	1.332871	0.2707	FDI does not Granger-cause Δ GDP
Δ GDP	FDI	1.337072	0.2735	Δ GDP do not Granger-cause FDI
FDI	Δ UnN	1.081562	0.3880	FDI does not Granger-cause Δ UnN
Δ UnN	FDI	0.375674	0.8244	Δ UnN do not Granger-cause FDI
FDI	Δ CPI	1.216731	0.3196	FDI does not Granger-cause Δ CPI
Δ CPI	FDI	1.664502	0.1662	Δ CPI do not Granger-cause FDI
FDI	ΔNEER	2.524532	0.0450	FDI Granger-causes ΔNEER
Δ NEER	FDI	0.493680	0.7789	Δ NEER do not Granger-cause FDI
FPI	ΔGDP	2.159077	0.0786	FPI Granger-causes ΔGDP
Δ GDP	FPI	0.958780	0.4409	Δ GDP do not Granger-cause FPI
FPI	Δ UnN	1.158925	0.3493	FPI does not Granger-cause Δ UnN
Δ UnN	FPI	0.329008	0.8565	Δ UnN do not Granger-cause FPI
FPI	Δ CPI	0.890160	0.4971	FPI does not Granger-cause Δ CPI
Δ CPI	FPI	0.706255	0.6222	Δ CPI do not Granger-cause FPI
FPI	ΔNEER	3.029271	0.0210	FPI Granger-causes ΔNEER
Δ NEER	FPI	0.631689	0.6767	Δ NEER do not Granger-cause FPI

Post-crisis Period: 1999 - 2003

Y	X	F-statistics	P-statistics	Results
FDI	Δ GDP	0.860245	0.5392	FDI does not Granger-cause Δ GDP
Δ GDP	FDI	0.914784	0.4920	Δ GDP do not Granger-cause FDI
FDI	Δ UnN	0.364685	0.8615	FDI does not Granger-cause Δ UnN
Δ UnN	FDI	1.372220	0.3109	Δ UnN do not Granger-cause FDI
FDI	Δ CPI	0.594020	0.7058	FDI does not Granger-cause Δ CPI
Δ CPI	FDI	1.108850	0.4141	Δ CPI do not Granger-cause FDI
FDI	Δ NEER	2.375809	0.1144	FDI does not Granger-cause Δ NEER
Δ NEER	FDI	0.551882	0.7344	Δ NEER do not Granger-cause FDI
FPI	Δ GDP	1.037252	0.4470	FPI does not Granger-cause Δ GDP
Δ GDP	FPI	1.256200	0.3490	Δ GDP do not Granger-cause FPI
FPI	Δ UnN	1.070382	0.4315	FPI does not Granger-cause Δ UnN
Δ UnN	FPI	0.589252	0.6781	Δ UnN do not Granger-cause FPI
FPI	Δ CPI	1.219576	0.3678	FPI does not Granger-cause Δ CPI
Δ CPI	FPI	0.348865	0.8717	Δ CPI do not Granger-cause FPI
FPI	Δ NEER	0.239157	0.9361	FPI does not Granger-cause Δ NEER
Δ NEER	FPI	1.122926	0.4079	Δ NEER do not Granger-cause FPI

Lag 8

Null Hypothesis: Y does not Granger-cause X

Pre-crisis and Crisis Period: late 1980s - 1998

Y	X	F-statistics	P-statistics	Results
FDI	Δ GDP	0.980156	0.4723	FDI does not Granger-cause Δ GDP
Δ GDP	FDI	1.110467	0.3872	Δ GDP do not Granger-cause FDI
FDI	ΔUnN	2.906895	0.0225	FDI Granger-causes ΔUnN
Δ UnN	FDI	0.303966	0.9565	Δ UnN do not Granger -cause FDI
FDI	Δ CPI	0.780717	0.6232	FDI does not Granger-cause Δ CPI
Δ CPI	FDI	1.574577	0.1791	Δ CPI do not Granger -cause FDI
FDI	Δ NEER	0.779681	0.6241	FDI does not Granger-cause Δ NEER
Δ NEER	FDI	0.734963	0.6600	Δ NEER do not Granger -cause FDI
FPI	Δ GDP	1.483260	0.2095	FPI does not Granger-cause Δ GDP
Δ GDP	FPI	1.447763	0.2225	Δ GDP do not Granger -cause FPI
FPI	Δ UnN	0.793743	0.6139	FPI does not Granger-cause Δ UnN
Δ UnN	FPI	0.627726	0.7459	Δ UnN do not Granger -cause FPI
FPI	Δ CPI	1.678569	0.1496	FPI does not Granger-cause Δ CPI
Δ CPI	FPI	0.638539	0.7386	Δ CPI do not Granger -cause FPI
FPI	Δ NEER	1.152843	0.3621	FPI does not Granger-cause Δ NEER
Δ NEER	FPI	0.703325	0.6859	Δ NEER do not Granger -cause FPI

“UnN” refers to unemployment rate

Post-crisis Period: 1999 - 2003

Y	X	F-statistics	P-statistics	Results
FDI	Δ GDP	1.688892	0.4243	FDI does not Granger-cause Δ GDP
Δ GDP	FDI	0.211368	0.9559	Δ GDP do not Granger-cause FDI
FDI	Δ UnN	0.947832	0.6079	FDI does not Granger-cause Δ UnN
Δ UnN	FDI	0.357373	0.8801	Δ UnN do not Granger -cause FDI
FDI	Δ CPI	0.423330	0.8438	FDI does not Granger-cause Δ CPI
Δ CPI	FDI	1.686199	0.4248	Δ CPI do not Granger -cause FDI
FDI	ΔNEER	10.33443	0.0912	FDI Granger-causes ΔNEER
Δ NEER	FDI	1.955177	0.3820	Δ NEER do not Granger -cause FDI
FPI	Δ GDP	0.763522	0.6779	FPI does not Granger-cause Δ GDP
Δ GDP	FPI	0.672450	0.7176	Δ GDP do not Granger -cause FPI
FPI	Δ UnN	2.283333	0.3401	FPI does not Granger-cause Δ UnN
ΔUnN	FPI	18.95690	0.0511	ΔUnN Granger -cause FPI
FPI	ΔCPI	22.48405	0.0433	FPI Granger-causes ΔCPI
Δ CPI	FPI	0.603225	0.7502	Δ CPI do not Granger -cause FPI
FPI	ΔNEER	18.48754	0.0523	FPI Granger-causes ΔNEER
Δ NEER	FPI	0.239845	0.9425	Δ NEER do not Granger -cause FPI

CHAPTER 9

MANAGING AND MONITORING DIRECT AND PORTFOLIO INVESTMENT FLOWS: THE CASE OF SRI LANKA

by

Chandranath Amarasekara¹

1. Introduction

1.1. Direct Investment and Portfolio Investment in the Global Context

Until recent times, the common perception among economists has been that the greater the private capital inflows, the better the impact on the domestic economy. This was particularly an attractive premise for developing countries, which lacked domestic investment and were constrained by growing burdens of external debt. Accordingly, developing countries have taken several steps to promote private capital inflows. The efforts of developing countries were further supported by the so-called *push factors*, i.e., the investors in industrial countries finding investment in their home markets less attractive. Hence, the importance of private capital flows, as opposed to foreign borrowings, has grown significantly in recent times.

However, experience has shown that unregulated inflows, short-term flows in particular, are not without undesirable macroeconomic implications, some of which are real exchange rate appreciation, volatility in money supply, and unsustainable deficits in the current account. After the East Asian crisis, the possibility of sudden reversals of capital inflows has become a major policy concern for many developing countries. Large outflows too could cause lower investment levels and a reduction in growth prospects. Moreover, the East Asian crisis has demonstrated that such reversals of capital flows threaten the stability of the foreign exchange market, the financial sector and the entire economy as well.

1. Chandranath Amarasekara is an Economist in the Department of Economic Research of the Central Bank of Sri Lanka. The author acknowledges Dr. A.G. Karunasena, (Assistant to the Governor, CBSL), Dr. Uthum Herat (Additional Director, Department of Economic Research, CBSL), Mr. Ananda Silva (Senior Economist, Department of Economic Research, CBSL) Mrs. Swarna Gunaratne (Senior Economist, Department of Economic Research, CBSL), Dr P.N.Weerasinghe (Senior Economist, Department of Economic Research, CBSL), Mrs. Nalini Wijewardena (Senior Manager, Research Department, Board of Investment of Sri Lanka), and Mr. Sushil Ram Mathema (Senior Economist, SEACEN Centre), for their valuable guidance and comments.

Consequently, developing countries have adopted a more cautious approach with regard to the content, level, and sequencing of private capital inflows. International policies on capital flows that focus on minimising the likelihood of financial crises and providing means to deal with them, have also changed significantly over the past few years. Policymakers as well as researchers now believe that the availability of reliable and timely information on capital flows is the key to avoiding future crises.

1.2. History of Liberalisation in Sri Lanka

The first phase of Sri Lanka's economic liberalisation under an open economic regime commenced in 1977. Although there was a policy on Foreign Direct Investment (FDI) prior to 1977, inflows were small, since the general economic climate of the country was not conducive to the attraction of foreign investment. Particularly in the 1960s, the intensity of control increased progressively and reached a peak by the 1970s.

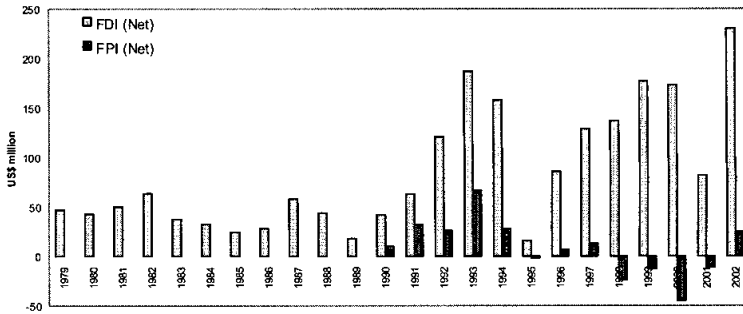
In 1977, Sri Lanka began introducing several measures to attract foreign investment: exchange control restrictions were relaxed; free trade zones were introduced; tax holidays and tax rebates were granted to foreign investors; and, the Greater Colombo Economic Commission (later Board of Investment (BOI)) was set up in 1978. As a result, in 1978, capital inflows as a share of GDP rose to 6 per cent from a level of under 1 per cent in the previous year. Private capital, both direct investment and loans, changed from a net outflow to a net inflow. However, persisting ethnic tensions, which escalated in the mid-1980s, led to higher defence related imports, disrupted exchange inflows from tourism, and made the investment climate less attractive. Thus, FDI experienced a sharp decline from US dollars 64 million in 1982 to US dollars 24 million by 1985.

The much-awaited second phase of economic liberalisation commenced in the early 1990s, with the initiation of a mass-scale privatisation programme and the liberalisation of the stock market investments. Subsequently, trade and payments systems were also further liberalised, and concerted efforts to increase private capital inflows were introduced in 1991. With the full liberalisation of current transactions in 1993, Sri Lanka accepted obligations under Article VIII of the IMF in 1994, while gradually relaxing the capital account transactions. Sri Lanka also abandoned its managed floating exchange rate regime and adopted a full float in 2001.

Similar to most of the developing countries where domestic savings are not adequate to meet the desirable levels of investments, attracting foreign investment

is vital for Sri Lanka's economic development. Sri Lanka requires high foreign investment inflows to fill up the projected national savings-investment gap of around 3-4 per cent of GDP each year, if it is to achieve the envisaged economic growth rates of 8-10 per cent per annum.

Chart 9.1
Net FDI and FPI Flows to Sri Lanka



Source: CBSL Annual Report, 2002

2. National Policy/ Regulations of FDI and FPI and Other Complementary Policies

2.1. Investment Inflows

Sri Lanka's inward FDI policy framework is extremely liberal and facilitating. The major objective of Sri Lanka's foreign investment policy is to attract capital through FDI and thereby generate high economic growth, create more employment, promote transfer of technology, develop management skills, and expand market access. As stated before, while the possibilities of raising capital within Sri Lanka are rather limited, FDI nonetheless, constitutes an integral part of the country's plan for future economic development.

With the introduction of policies aimed at economic liberalisation in 1977, Sri Lanka has been pursuing a liberal FDI policy: opening up all sectors to foreign investment, except a few restricted areas such as defence; providing attractive investment incentives; granting of national treatment to foreign investment; establishment of the Board of Investment for single clearance authority; and, setting up of export processing zones with flexible labor laws.

Most FDIs are eligible for automatic approval up to 100% and a wide range of incentives and concessions under Section 17 of the BOI Act. However, foreign investment that does not qualify under this Section of the BOI Act, on account of not meeting the required eligibility criteria, falls under Section 16 of the BOI Act that permits such investment to operate under the normal laws of the country. In April 2002, most of the restrictions that existed on inward foreign investment, mainly in the financial sector, construction, and utilities, were also removed.

Proceeds from the sale of liquidation of approved investments, along with any associated capital appreciation, are permitted to be repatriated in full. Expatriates leaving Sri Lanka for the country of their permanent domicile are permitted to transfer in full assets representing their retirement funds and savings. Foreign nationals who have operated small businesses in Sri Lanka are allowed to transfer the capital they originally brought into the country, together with a reasonable amount of savings, subject to certain limits.

Similar to most other developing countries, Sri Lanka, having realised the potential disrupting effects of free capital movement, has sought to promote long-term capital inflows, and not so much the short-term flows. Therefore, certain portfolio investment areas in Sri Lanka still remain closed to foreign participation.

However, non-national activity in the stock market is welcome. Foreign investment in equity is permitted, without restriction, in listed companies up to 100% of the equity of each company, other than those that fall into the categories of companies approved by the BOI with an originally agreed ratio between non-national and national shareholdings, and companies which restrict non-national participation beyond a certain limit with restrictive provisions in the Articles of Association. Investment in shares in Sri Lanka and repatriation of proceeds should take place through Share Investment External Rupee Accounts (SIERA) opened with commercial banks. Individuals, Regional Funds, as well as Companies incorporated outside Sri Lanka, are permitted to open SIERA accounts. The repatriation of proceeds arising out of investments made through SIERA accounts after June 1990 is not subject to exchange control regulations.

The purchase of collective investment securities locally by non residents is permitted only in the case of unit trusts, in which not more than 20 percent of the depository property may be invested in government securities.

Foreign investment in bonds or other debt securities is not permitted. Non-residents were allowed to invest only in the US dollar denominated Sri Lanka Development Bonds that were issued in 2001 and 2002. However, non-resident Sri

Lankans may invest in any real or financial asset through Rupee Accounts for Non resident Sri Lankan Investors (RANSI).

2.2. Investment Outflows

Outward direct investments by Sri Lankan residents are currently governed by the Exchange Control Act, under which all applications for investment abroad should be approved by the Minister of Finance, following a recommendation from the Controller of Exchange. Approval is given on a case by case basis, considering their chances of success. Permission is generally granted to resident establishments that have earned a substantial amount of foreign exchange in their existing businesses in Sri Lanka, thus, enabling them to extend their business for further promotion of export of goods and services from Sri Lanka.

However, establishments approved by the BOI are not required to obtain permission under the Exchange Control Act if they wish to make investments abroad, in so far as the investment is in respect of the business activities agreed upon with the BOI.

The newly proposed Foreign Exchange Management Act, which will replace the Exchange Control Act, would further relax some of the remaining restrictions on outward foreign direct investment and provide for the further liberalisation of investment abroad.

The purchase of shares or other securities of a participating nature abroad by residents is regulated. Investments under an employee share option scheme are permitted, subject to approval from the MOF. The purchase of bonds or other debt securities abroad by residents is not permitted.

The sale or issue of shares or other securities of a participating nature abroad by residents requires prior approval, while the sale or issue of money market instruments abroad by residents is not permitted. Likewise, the sale or issue of bonds or other debt securities in Sri Lanka by non-residents is not permitted, while, the purchase of real assets and other financial assets abroad by residents is also not permitted.

2.3. Other Complementary Policies

Sri Lanka's foreign investment policy includes several other supportive policies. The Constitution itself guarantees foreign investment in Sri Lanka. Article 157 of the Constitution provides for such protection, according to which, any treaty or

agreement between Sri Lanka and a foreign government for the promotion and protection of foreign investment has the force of law, and no executive or administrative action can be taken against such an agreement. This ensures the inviolability of bilateral protection agreements, provides for protection against nationalisation, guarantees prompt and adequate compensation if required, allows free remittance of earnings, capital, and business fees, and assures of settlement of disputes at the International Center for Settlement of Industrial Disputes (ICSID).

Moreover, Sri Lanka has already entered into investment protection agreements with as many as 24 countries. Sri Lanka is also a founder member of the Multilateral Investment Guarantee Agency (MIGA) of the World Bank, which provides guarantees against non-commercial risks such as those arising out of political changes, political instability and insecurity. Foreign investment in Sri Lanka also enjoys double taxation relief with 25 countries with whom Sri Lanka has signed Double Taxation Agreements. These relief measures are implemented mainly through reduced tax rates on dividends, interest, and royalties.

Most economists today accept the notion that the general investment climate is much more important than specific incentives to attract foreign investment. Tax concessions and other profit-related incentives are relevant only if the general business environment is conducive for profit making. Sri Lanka's situation appears healthy, even in this context. The 2003 *Index of Economic Freedom*, published by the Heritage Foundation, ranks Sri Lanka in terms of its "economic freedom" and the quality of its overall policy environment as the 80th out of 156 developed and developing countries. In the EIU's country forecast, Sri Lanka's overall score in the business environment ranking has improved from 4.99 for the historical period (1997-2001) to 6.03 for the forecast period (2002-2006), the higher rankings indicating a more attractive investment climate in the country. Sri Lanka's global ranking improves from 49th to 45th and its regional ranking moves from 14th to 13th, in comparison to the historical period. Sri Lanka is also ranked high for its liberal approach to foreign investment, with its global and regional rankings moving from 36th to 27th (out of 60 countries) and 8th to 4th (out of 16 countries), respectively.

3. Compilation Practices of FDI and FPI flows

In the context of the liberalisation of foreign investment flows, it has become necessary to have a proper monitoring system on current international transactions and the management of capital flows, in order to achieve the stabilisation objectives of the Central Bank of Sri Lanka (CBSL). At present, there are four sources of data on foreign investment flows:

1. Balance of Payments (BOP) Statistics compiled by CBSL, for monitoring and data reporting purposes;
2. Data received by the Department of Exchange control (ECD) of CBSL which monitors outward flows, used for monitoring and regulatory purposes;
3. Data collected by BOI on direct investment inflows for promotional purposes;
4. Data collected by the Colombo Stock Exchange (CSE) daily, on foreign purchases and sales of shares, debentures, etc. for monitoring purposes.

Data to compile BOP statistics are collected from all three other sources. To compile the financial account, FDI receipts data are provided by the BOI, since almost all of these investments are in respect of enterprises that come under the BOI. Outflows of FDI data are provided by the ECD and supplemented by the International Transaction Recording System (ITRS) of commercial banks, which records values of transactions by purpose and currency of each transaction. Portfolio investment in BOP includes data on sales and purchases of shares, bonds, debentures, etc. in quoted companies and is reported by the CSE. In the stock market, payments for shares or units are to be made in rupees through share investment external rupee accounts (SIERA) and payment of capital monies in respect of sale proceeds of shares/units, dividends, income from units and commissions are also to be made through SIERA. In the income account of BOP, inflows and outflows on earnings from direct and portfolio investment are collected through ITRS and SIERA transactions data.

ECD monitors current international transactions in order to ensure that such transactions are made only for the required bona-fide purposes. Authorised dealers are expected to exercise due diligence in releasing exchange for *bona-fide* transactions. In addition, banks are required to report their daily foreign exchange positions, and produce reports with respect to fund transfers through electronic fund transfer cards. ECD also monitors capital flows relating to non-resident share investments in Sri Lanka, performs the functions of processing applications for investments abroad by residents, and obtains the approval of the Finance Minister for such investments.

Based on the information received from the above sources, the relevant BOP statistics are published on a quarterly basis, usually with a lag of one quarter. Since the quarterly BOP figures are based on estimated values, adjustments are made when publishing annual data.

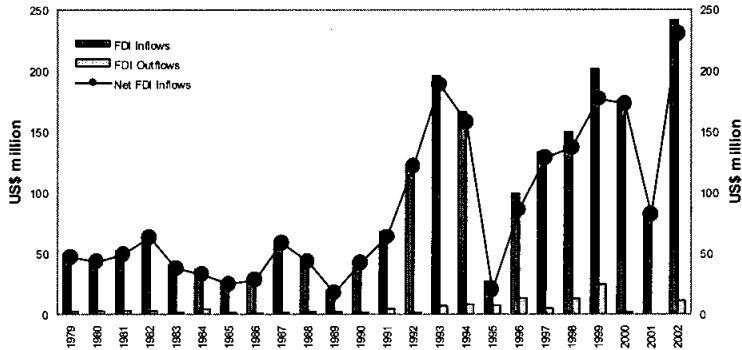
4. Salient Features of FDI and FPI flows

During the first phase of liberalisation, i.e. the period from 1978 to 1990, FDI inflows on average remained around US dollars 40 million per annum. In contrast,

in the period after 1990, net FDI began to grow, and except for 1995, has remained at high levels but with considerable fluctuations. The average net FDI during the period between 1991 and 2002 was about US dollars 130 million per annum. In 2002, net FDI inflows exceeded US dollars 200 million. FDI outflows also became a visible factor during the second phase.

Chart 9.2

FDI - Inflows and Outflows

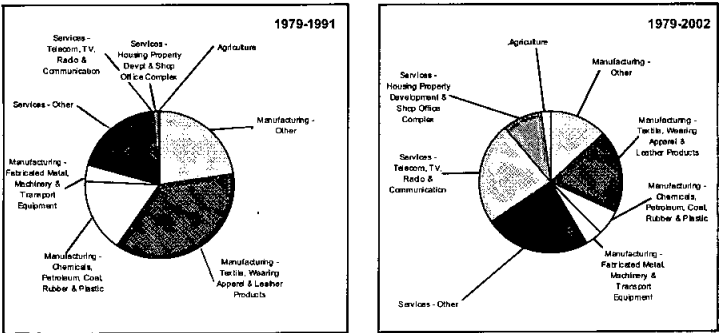


Source: CBSL Annual Report, Various Issues.

It is observed that in US dollar terms, although the average value of net FDI inflows is considerably high during the post Asian crisis period, the inflows have been much less volatile. For the pre-crisis period, the coefficient of variation, i.e., the ratio of standard deviation to the mean, of net FDI inflows was 0.76, but in the post-crisis period it is only 0.33.

Chart 9.3

Comparison of Sectoral Composition of Cumulative FDI Inflows
(1979-1991 and 1979-2002)



Source: BOI, Unpublished Data

Up to now, FDI flows into Sri Lanka, as in many developing countries that attempt to embark on an export oriented growth path, have been mainly in the production of labour intensive consumer goods. Being a late-late-comer to export oriented industrialisation, FDI in Sri Lanka have not led to the production of final goods using mature technology. Throughout the period under an open economy, the most significant enticement to direct investors has been the wearing apparel industry, which has now grown to become Sri Lanka's largest export. FDI into the manufacturing sector has been more than 75 per cent of total cumulative FDI, until 1991. However, when considering the cumulative FDI during the period 1979-2002, it can be seen that the services sector is the dominant sector, within which Telecom, TV, Radio and Communication is the largest single sector that attracts FDI. (See Chart 9.3)

Considering the number of projects, it is apparent that joint venture investments have been more popular than investments fully owned by foreigners. However, in respect of the value of investments, the latter have made better contributions to FDI inflows in most years. (Chart 9.4)

Chart 9.4

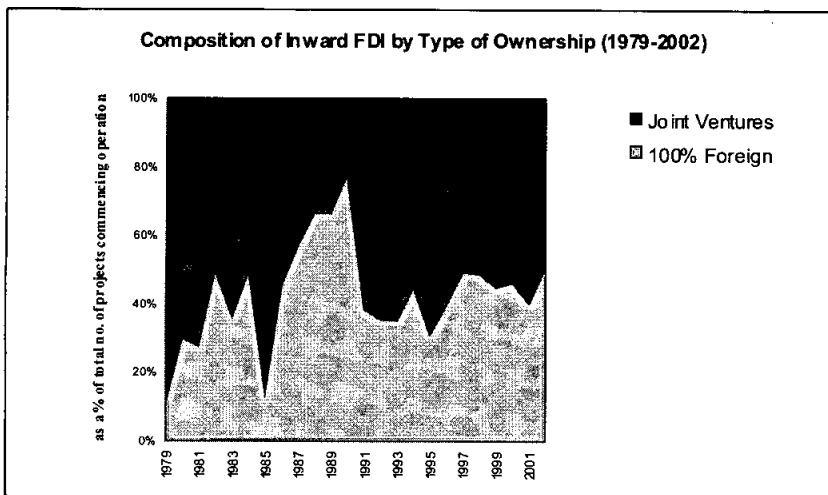
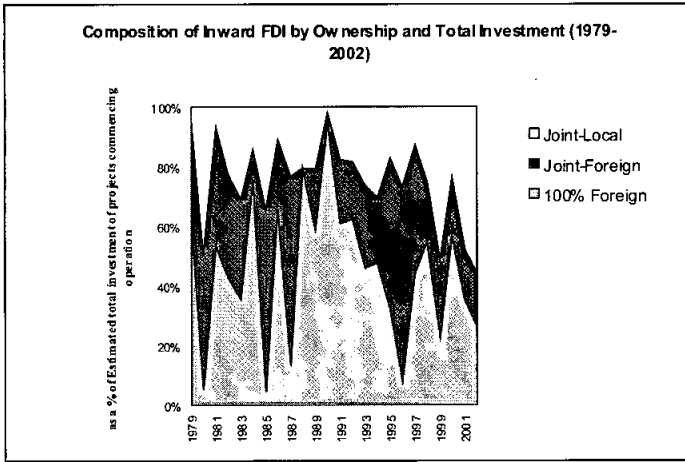


Chart 9.5



Source: BOI, Unpublished Data

Another salient feature of FDI in Sri Lanka is that although most of the investors in early years were from industrialised countries such as the United Kingdom, Germany, and Japan, more recent investment inflows have been from newly industrialised countries such as the Republic of Korea, Hong Kong, and Singapore. On a cumulative basis, the Republic of Korea commenced the largest number of investment projects in Sri Lanka, followed by Hong Kong, the United Kingdom and Japan. When the volume of investment is considered on a cumulative basis, the United Kingdom is the largest single investor in Sri Lanka, followed by Australia, Singapore, Japan, the Republic of Korea and Hong Kong.

Chart 9.6

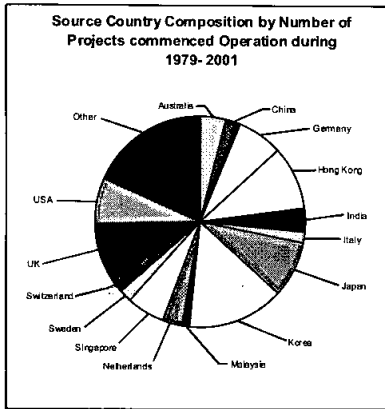
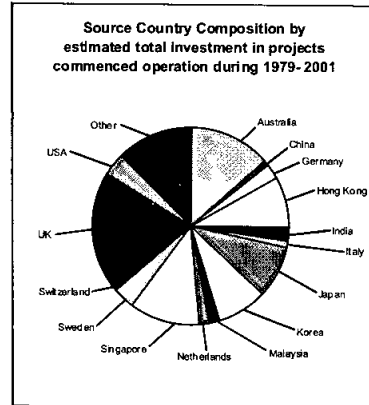


Chart 9.7

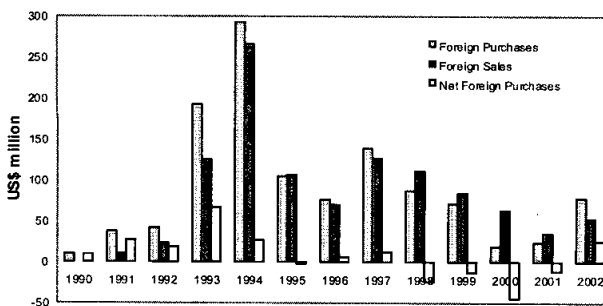


Source: BOI, Unpublished Data

As explained in Section 2 of this paper, portfolio inflows mainly refer to foreign purchases in the stock market. Foreign purchases, which were first allowed in 1990, increased rapidly to almost US dollars 300 million in 1994. However, after 1994, stock market activity by foreigners subsided, and net foreign purchases have remained at negative or near zero levels thereafter. Foreign ownership, which peaked at 20% of the market in 1997, bottomed at 11% in 2000. In Sri Lanka, stock market activity has remained highly volatile and has been driven by market sentiment as well as by the security situation in the country. Stock market activity by foreigners picked up again only in 2002 and the revival of the stock market activity continued in 2003, with stock market indices surpassing several previous highs.

Chart 9.8

Portfolio Investment - Stock Market Activity



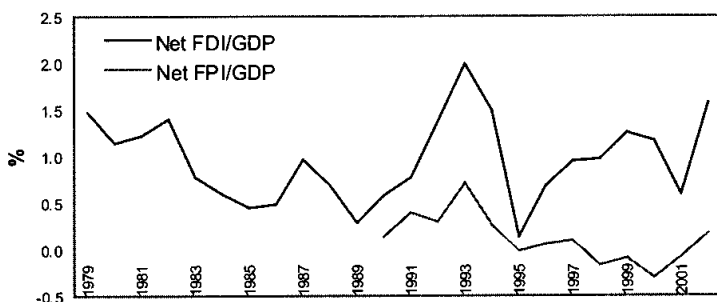
Source: Colombo Stock Exchange Fact Book, Various Issues

In respect of the net FPI inflows in US dollar terms, coefficients of variation for the periods 1990-1996 (pre-crisis) and 1997-2002 (post-crisis) show that the volatility has increased in the post-crisis years. Net FPI inflows were less volatile in the pre-crisis period, with the coefficient of variation being 0.95, while high volatility was seen during the post-crisis period with coefficient of variation being -2.75 (the negative sign is a result of the negative mean for the period 1997-2002).

In spite of Sri Lanka's continuous efforts to attract foreign capital flows, the volumes have not been satisfactory. Net FDI inflows have remained below 2 per cent of GDP while the net FPI inflows as a percentage of GDP have been negligible.

Chart 9.9

FDI and FPI as a percentage of GDP



Source: Colombo Stock Exchange Fact Book, Various Issues

5. Impact of Capital Flows on Key Macroeconomic Variables: Direction of Causality

In order to discern whether there is any causal relationship between FDI or FPI inflows and key macroeconomic variables such as Gross Domestic Product, exports, trade balance of BOP, overall balance of BOP, exchange rate, interest rate, real money supply and employment, a series of Granger causality tests² were carried

2. Granger causality tests are not without limitations. See Buiter, Willem H. Granger, "Causality and Policy Ineffectiveness: A Rejoinder", *Technical Working Paper* No 61, National Bureau of Economic Research, Massachusetts, October 1986, and Zellner, Arnold, "Causality and Econometrics," *Carnegie-Rochester Conference Series*, 10., K.Brunner and A.H.Meltzer, eds., North Holland Publishing Company: Amsterdam, 1979, pages 9-50. Some economists prefer the term "precedence" rather than "causality".

out. To maintain the stationarity of the time series data, the first differences of each variable were used to run the Granger causality tests. The tests provided the following results. (See Annex 9.1 for details)

1. At 5 per cent level of significance, with both 2-year and 3-year lags, the hypothesis that *changes in GDP do not Granger cause changes in net FDI flows* can be rejected. However, there is no reverse causation from changes in net FDI flows to changes in GDP.
2. At 5 per cent level of significance, with a 2-year lag, the hypothesis that *changes in the overall balance of the BOP do not Granger cause changes in net FDI flows* can be rejected. This suggests that volatility in the overall balance of the BOP Granger precedes fluctuations in net FDI flows. However, there is no reverse causation from changes in net FDI flows to the changes in the overall balance of BOP.
3. At 5 per cent level of significance, with both 2-year and 3-year lags, the hypothesis that *the volatility in nominal exchange rate does not Granger cause changes in net FDI flows* can be rejected. However, there is no reverse causation from changes in net FDI flows to the changes in nominal exchange rate.
4. At 5 per cent level of significance, with both 2-year and 3-year lags, the hypothesis that *changes in net FDI flows do not Granger cause changes in real money supply* can be rejected. This suggests that volatility in net FDI flows Granger cause changes in real money supply. However, there is no reverse causation from changes in net FDI flows to changes in real money supply.
5. All other relationships were found to be independent.

However, there were serious limitations in this analysis, particularly due to the small number of observations. Annual data, particularly on FPI and employment, were available only from 1990. This lowered the degree of freedom to work with and restricted the ability to reject the null hypothesis at most occasions. The small number of observations also limited the ability to increase the number of lags when running the tests, while Granger Causality tests are considered to be very sensitive to the choice of lag length. Also, as shown in Chart 9.9, the size of FDI as a percentage of GDP is small, while the size of FPI as a percentage of GDP is minute, which leaves one wondering whether these flows could have any sizable impact on the variables under review.

Even if it is concluded that macro variables are not greatly affected by to FDI and FPI, the outcome is likely to change when capital flows increase in future.

6. Observations and Conclusions

Several key issues need to be addressed with regard to foreign investment flows in Sri Lanka. These issues can be categorised under two broad themes:

1. Issues relating to foreign investment flows data.
2. Issues relating to further liberalisation and managing and monitoring a liberalised economy.

6.1. Improving Data Availability and Accuracy

The most important issue in the compilation of foreign investment data arises from the data reporting methods adopted by the BOI regarding FDI inflows. Data on actual inflows are not available until the end of each year, up to which time an estimate is used to compile BOP. Since the BOI's prime objective is promoting investment, its interest in the areas of statistical data collection and analysis is minimal. Also, due to the nature of investments, a significant difference exists between approved and actual investments during any period of time with data on approved investments easily obtained. The situation is further complicated by the fact that the BOI also approves projects initiated by local entrepreneurs, thereby creating an additional burden of differentiating these from foreign investment approved by BOI. This is further aggravated when considering joint venture enterprises, where BOI arrives at the share of foreign investment only through estimates. Furthermore, being a promoter of investment, the BOI does not collect data on closures and changes in ownership of enterprises already approved.

To a great extent, Sri Lanka follows the standard BOP classifications with regard to direct investment, portfolio flows, short-term flows, etc. in spite of worldwide arguments that these definitions are not neatly categorised in terms of the volatility and liquidity of the flows. Particularly in recent times, stock market acquisitions of commercial entities by foreigners and reversals of such acquisitions have taken place in Sri Lanka, thereby complicating the classification of FDI and FPI. Such impediments call for the strengthening of supplementary data sources such as enterprise surveys, ITRS and the financial press.

In order to compile International Investor Position (IIP) statistics as well as achieving full compatibility with the BPM-5, the CBSL is currently in the process of obtaining necessary technical expertise. Discussions have already commenced in this regard.

As already mentioned, current account transactions are wholly liberalised, and authorised dealers are permitted to release foreign exchange for all current international transactions sans restriction, exercising their judgment and discretion after satisfying themselves with the *bona fides* of such requests. It is not easy to monitor whether capital account transactions also take place in the guise of current transactions. Moreover, transactions through illegal avenues do occur, and monitoring such flows is practically impossible.

Sri Lanka is in the process of drafting a new Foreign Exchange Management Act (FEMA) to replace the existing Exchange Control Act. With the adoption of the new FEMA, ECD would be primarily involved in monitoring activities with a view to preventing unauthorised capital transfers and money laundering activities. It is also expected that decriminalising exchange management violations would lead to improved availability of data.

6.2. Concerns Relating to Further Liberalisation / Managing and Monitoring Issues

Policymakers and researchers have realised that it is difficult to distinguish between short- and long-term flows, thus making it hard to design capital controls targeted at short-term flows. Moreover, the very presence of capital controls would be discouraging to capital flows as a whole, even though such controls may target short-term flows. Sri Lanka's liberalisation must, therefore, attempt to find a balance between these two opposing factors.

The demand for investing abroad has also grown during the past few years by Sri Lankan conglomerates, commercial banks, and superannuation funds. On the other hand, whether non-nationals should be allowed to invest in debt securities including government papers is an ongoing debate.

The proposed FEMA would make provisions for the orderly management and regulation of foreign exchange with the objective of further liberalising dealings in foreign exchange. Furthermore, it would authorise the Minister of Finance, in consultation with the Central Bank, to issue orders effecting further liberalisation of the capital account.

Following the adoption of a free-floating exchange rate policy in early 2001, the exchange rate is now more vulnerable to volatility caused by capital inflows and outflows, although it has eased the pressure on domestic monetary management. Unanticipated volatility in exchange rates affects the country's trade and balance of payments position. On the one hand, a sharp real exchange rate appreciation

would lead to a loss in international competitiveness, thereby reducing exports, while on the other hand, a sharp real depreciation would result in importing inflation. Although the causality tests show that exchange rate volatility has preceded changes in FDI, due to the limitations of the test and the low level of investment flows to the country at present, attention should not be deflected from this potential issue. The intervention of CBSL would also affect the country's external reserve position.

Capital inflows and their reversals also lead to asset price volatility. Assets traded in the stock market, as well as real assets such as real estate, are prone to such volatility, affecting the other sectors of the economy. Furthermore, interest rates and money supply would become more volatile if sterilisation measures are taken. As confirmed by the causality tests, changes in net FDI flows cause changes in real money supply, suggesting frequent efforts by CBSL to sterilise the capital flows. The sudden expansions and contractions in liquidity will have an impact on the banking system, and unless proper prudential regulations are in place, this will make the banking system fragile.

Even under Sri Lanka's partial liberalisation that exists at present, policymakers find that monetary management is increasingly becoming complicated, and they are continually on the move to manage and/or monitor the impact of investment flows on the money supply, exchange rate, stock market, employment and economic growth, in general. Thus, further liberalisation of capital flows will make the operation of monetary policy more challenging through all four transmission channels of monetary policy.

Another key issue is the sustainability of Sri Lanka's peace effort. Sri Lanka's 20 year old civil war has adversely affected foreign investment in the country, and unless peace becomes permanent, long-term investment in the country would be constrained. Although there has been a revival of foreign investment inflows following the ceasefire agreement between the two warring parties in early 2002, its real impact on medium-term economic growth, depends on the sustainability of the peace effort. Political stability is mandatory if Sri Lanka is to maintain sustained high investment inflows.

6.3 Concluding Remarks

Sri Lanka has yet to liberalise its capital transactions in full, and therefore, does not sense the full impact of unregulated capital flows. However, with the processes of globalisation, economic integration, and the opening up of domestic capital markets, Sri Lanka will be faced with the challenge of reaping the maximum benefits from attracting global capital, while minimising the risks associated with

Managing and Monitoring Direct and Portfolio Investment Flows:.....

it. In this context, it would be a definite advantage to the country if proper means of monitoring investment flows, both to and from Sri Lanka are in place.

References

1. Ariff, Mohamed and Ong Gaik Ean, "East Asian Response to the Instability of Financial Markets, with Special Reference to Malaysia", in *The Management of Global Financial Markets*. Edited by Jan Joost Teunissen, Forum on Debt and Development: The Hague, 2000.
2. Athukorala, Premachandra, "Foreign Direct Investment and Manufacturing for Export", in *Dilemmas of Development: Fifty Years of Economic Change in Sri Lanka*. Edited by W.D. Lakshman, Sri Lanka Association of Economists: Colombo, 1997.
3. Bosworth, Barry P. and Susan M. Collins, "Capital Flows to Developing Economies: Implications for Saving and Investment", *Brookings Papers on Economic Activity 1*: Brookings Institution, 1999.
4. Central Bank of Sri Lanka, Annual Reports, Various Issues.
5. Central Bank of Sri Lanka, Economic Progress of Independent Sri Lanka, Central Bank of Sri Lanka: Colombo, 1998.
6. Edison, Hali J. and Francis E. Warnock, "A Simple Measure of Intensity of Capital Controls", *WP/01/180*, IMF: Washington DC, 2001.
7. Joint Study Group Report on India-Sri Lanka Comprehensive Economic Partnership Agreement. October 2003.
8. International Monetary Fund, Balance of Payments Manual, 5th Edition, IMF: Washington DC, 1993.
9. International Monetary Fund, International Capital Markets: Developments, Prospects, and Key Policy Issues, IMF: Washington DC, 1999.
10. International Monetary Fund, International Investor Position: A Guide to Data Sources, IMF: Washington DC. 2002.
11. International Monetary Fund, International Financial Statistics, Various Issues, IMF: Washington DC.
12. Ito, Takatoshi, "Capital Flows in Asia", *WP 7/34*, National Bureau of Economic Research: Massachusetts, 1999.

13. Kohli, Renu, "Capital Flows and their Macroeconomic Effects in India", *WP/01/192*, IMF: Washington DC, 2001.
14. Rajan, Ramkishan S. and Reza Siregar, "Private Capital Flows in East Asia: Boom, Bust and Beyond", *CIES Policy Discussion Paper*, September 2000.
15. Razin, Assaf, FDI Contribution to Capital Flows and Investment in Capacity, National Bureau of Economic Research: Massachusetts, September 2002.

Results of the Granger Causality Tests

Granger Causality tests were run using Eviews© Version 3.0 software. Data used are as follows:

NETFDI:	Change in net foreign direct investment in US dollar terms over the previous year (1979-2002)
NETFPI:	Change in net foreign portfolio investment in US dollar terms over the previous year (1991-2002)
GDP:	Change in GDP in US dollar terms over the previous year (1979-2002)
EXPORTS:	Change in exports in US dollar terms over the previous year (1979-2002)
TRADEBAL:	Change in the trade balance of the BOP in US dollar terms over the previous year (1979-2002)
BOP:	Change in the overall balance of BOP in US dollar terms over the previous year (1979-2002)
INTRATE:	Change in the 91-day Treasury bill rate over the previous year (1986-2002)
EXCHRATE:	Change in the US dollar/rupee exchange rate over the previous year (1979-2002)
REALMS:	Change in Board Money (M2) deflated by Colombo Consumer Price Index (CCPI) number over the previous year (1979-2002)
EMPLOY:	Change in employment over the previous year (1991-2002)

Data Sources: Central Bank Annual Reports-Variou Issues, Department of Census and Statistics- Quarterly Labour Force Survey-Variou Issues

Pairwise Granger Causality Tests (1979-2002)

NetFDI and GDP

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
GDP does not Granger Cause NETFDI	22	5.94994	0.01100
NETFDI does not Granger Cause GDP		0.39558	0.67933

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
GDP does not Granger Cause NETFDI	21	3.80904	0.03464
NETFDI does not Granger Cause GDP		0.25089	0.85938

NETFDI and EXPORTS

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
EXPORTS does not Granger Cause NETFDI	22	2.98707	0.07732
NETFDI does not Granger Cause EXPORTS		0.73268	0.49519

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
EXPORTS does not Granger Cause NETFDI	21	1.80808	0.19193
NETFDI does not Granger Cause EXPORTS		0.45727	0.71641

NETFDI and TRADEBAL

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
TRADEBAL does not Granger Cause NETFDI	22	3.52161	0.05253
NETFDI does not Granger Cause TRADEBAL		0.61974	0.54981

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
TRADEBAL does not Granger Cause NETFDI	21	2.14739	0.13999
NETFDI does not Granger Cause TRADEBAL		3.25047	0.05394

NETFDI and BOP

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
BOP does not Granger Cause NETFDI	22	3.62350	0.04889
NETFDI does not Granger Cause BOP		0.09646	0.90854

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
BOP does not Granger Cause NETFDI	21	2.94498	0.06949
NETFDI does not Granger Cause BOP		0.05043	0.98440

NETFDI and INTRATE

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
INTRATE does not Granger Cause NETFDI	15	1.52301	0.26461
NETFDI does not Granger Cause INTRATE		1.80546	0.21407

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
INTRATE does not Granger Cause NETFDI	14	0.89757	0.48852
NETFDI does not Granger Cause INTRATE		1.69609	0.25400

NETFDI and EXCHRATE

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
EXCHRATE does not Granger Cause NETFDI	22	4.60361	0.02525
NETFDI does not Granger Cause EXCHRATE		0.17536	0.84065

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
EXCHRATE does not Granger Cause NETFDI	21	5.22324	0.01253
NETFDI does not Granger Cause EXCHRATE		0.16243	0.91987

NETFDI and RealMS

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
REALMS does not Granger Cause NETFDI	22	2.39581	0.12116
NETFDI does not Granger Cause REALMS		3.87870	0.04096

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
REALMS does not Granger Cause NETFDI	21	1.32526	0.30573
NETFDI does not Granger Cause REALMS		8.72925	0.00163

NETFDI and EMPLOY

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
EMPLOY does not Granger Cause NETFDI	10	0.29198	0.75870
NETFDI does not Granger Cause EMPLOY	0.28372	0.76434	

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
EMPLOY does not Granger Cause NETFDI	9	0.07491	0.96790
NETFDI does not Granger Cause EMPLOY		1.59817	0.40724

NETFPI and GDP

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
GDP does not Granger Cause NETFPI	10	0.93622	0.45149
NETFPI does not Granger Cause GDP		1.21831	0.37067

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
GDP does not Granger Cause NETFPI	9	1.89011	0.36439
NETFPI does not Granger Cause GDP		0.63084	0.66099

NETFPI and EXPORTS

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
EXPORTS does not Granger Cause NETFPI	10	0.09389	0.91195
NETFPI does not Granger Cause EXPORTS		0.07149	0.93194

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
EXPORTS does not Granger Cause NETFPI	9	10.9967	0.08450
NETFPI does not Granger Cause EXPORTS		0.34886	0.79866

NETFPI and TRADEBAL

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
TRADEBAL does not Granger Cause NETFPI	10	3.11990	0.13199
NETFPI does not Granger Cause TRADEBAL		0.58157	0.59282

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
TRADEBAL does not Granger Cause NETFPI	9	1.68993	0.39274
NETFPI does not Granger Cause TRADEBAL		2.70289	0.28157

NETFPI and BOP

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
BOP does not Granger Cause NETFPI	10	0.53227	0.61721
NETFPI does not Granger Cause BOP		1.15562	0.38676

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
BOP does not Granger Cause NETFPI	9	4.11037	0.20185
NETFPI does not Granger Cause BOP		2.32804	0.31458

NETFPI and INTRATE

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
INTRATE does not Granger Cause NETFPI	10	0.24793	0.78947
NETFPI does not Granger Cause INTRATE		0.08818	0.91698

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
INTRATE does not Granger Cause NETFPI	9	0.40680	0.76672
NETFPI does not Granger Cause INTRATE		1.94789	0.35694

NETFPI and EXCHRATE

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
EXCHRATE does not Granger Cause NETFPI	10	4.31464	0.08152
NETFPI does not Granger Cause EXCHRATE		0.74325	0.52167

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
EXCHRATE does not Granger Cause NETFPI	9	13.7291	0.06865
NETFPI does not Granger Cause EXCHRATE		2.06391	0.34287

NETFPI and RealMS

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
REALMS does not Granger Cause NETFPI	10	1.93536	0.23852
NETFPI does not Granger Cause REALMS		1.00357	0.43010

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
REALMS does not Granger Cause NETFPI	9	0.70931	0.62988
NETFPI does not Granger Cause REALMS		0.55808	0.69241

NETFPI and EMPLOY

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
EMPLOY does not Granger Cause NETFPI	10	1.49278	0.31021
NETFPI does not Granger Cause EMPLOY		0.20473	0.82137

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
EMPLOY does not Granger Cause NETFPI	9	0.29306	0.83126
NETFPI does not Granger Cause EMPLOY		0.02633	0.99259

NETFDI and NETFPI

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
NETFPI does not Granger Cause NETFDI	10	1.02159	0.42462
NETFDI does not Granger Cause NETFPI		0.73522	0.52492

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Probability
NETFPI does not Granger Cause NETFDI	9	0.70571	0.63125
NETFDI does not Granger Cause NETFPI		0.89572	0.56591

CHAPTER 10

MANAGING AND MONITORING DIRECT AND PORTFOLIO INVESTMENT FLOWS: THE TAIWAN EXPERIENCE

by

Chien-nan Wang*

1. Introduction

Globalisation elevated foreign direct investment (FDI) to its peak at the end of the twentieth century. Afterwards, global economic decline caused global FDI to slide from US\$1,380 billion in 2000 to US\$620 billion in 2001. Despite this diminution, enterprises seeking continued growth can not avoid the globalisation trend. Taiwanese enterprises have maintained an outward-looking perspective and actively promoted FDI and global operations.

Likewise, foreign portfolio investment (FPI) is linked not only to a country's own but also to global capital market developments. For instance, the bursting of the equity bubble in the U.S. in 2000 caused a decline in global equity markets, while its recent recovery has resulted in more FPI to emerging markets, especially to East Asian Countries. Furthermore, an inflow of FPI has substantially aided the upswing in Taiwan's stock market.

In this paper, the salient features of FDI and FPI of Taiwan will be analysed, followed by a discussion of Taiwan's policy and regulations regarding FDI & FPI. Then, compilation practices and related issues will be explored, and a comparison with international standards will be outlined. Moreover, an empirical study between both FDI and FPI and macroeconomic variables will be implemented. Following this, capital controls and monetary policies to manage capital flows will be analysed. The conclusion is given in the final section.

* Dr. Chien-nan Wang is Assistant Director General at the Department of Economic Research of the Central Bank of China, Taipei. The author would like to thank Chu Wei for her tireless discussions and suggestions for this paper. Helpful comments from Yuh Shiow Cherng are also appreciated. The views and opinions expressed in this paper are solely those of the author and do not represent the views and opinions of the CBC.

2. Salient Features of FDI and FPI

2.1 FDI

According to UNCTAD, more than 90% of global outward FDI comes from developed countries. Less than 8% comes from developing countries, of which 60% comes from the four Asian dragons. In 2001, Singapore surpassed Hong Kong to rank first among the four dragons in terms of the scale of outward FDI, Taiwan ranked third, and S. Korea fourth.

Western Europe and the U.S. are also the main absorbers of FDI inflows. During the period 1996-2000, 73% of FDI entered into developed countries, with the aims of gaining market access and technological advancement. However, FDI flowing into developing countries mainly searched for production cost reduction. Taiwan's inward FDI doubled from an annual average of US\$1.2 billion during 1991-1995 to US\$2.44 billion during 1996-2000. However, the pace of growth was relatively slow compared to other countries, so its share of global FDI decreased from 0.52% to 0.29%. In 2001, Taiwan's inward share of global FDI increased to 0.56%, ranking third among the four Asian dragons.

The geographical distribution of Taiwan's outward FDI focused on Southeast Asia and the U.S. until the early 1990s. After 1993, mainland China and British Central America gradually took the lead. During the period 1996-2001, 53.2% of Taiwan's FDI found its way to Asia, where mainland China took 40.3%. At the same time, 44.3% of FDI went to the Americas, where British Central America took 25.5%. This geographical distribution reveals that Taiwan's outward FDI is becoming more regionalised and gravitating toward mainland China. In terms of a global FDI strategy, emphasis is put more on integrating manufacturing production and less consideration is given to technology acquisition and marketing channels.

From the perspective of a global investment base, Taiwan's inward FDI focused on four areas during 1996-2001: finance and insurance (24.2%), electronic and electrical products (21.1%), services (11.6%) and wholesale and retail business (10.1%). Therefore, FDI investors were interested in Taiwan's core manufacturing competitiveness and multifaceted service areas compatible with knowledge-based economic developments. The charts of inward and outward FDI, FPI, and Other Investment (OI) are shown in the Appendix.

2.2 FPI

From 1990, developed countries started to enthusiastically invest money in emerging markets. With the exception of the 1997 East Asian financial crisis and the world recession in early 2000, this trend of increasing FPI has continued. Normally, FPI to developing countries moves in step with developed countries' financial market tides and is also closely related to the host countries' economic situations. This FPI not only has the function of providing large-scale capital, but is able to demonstrate professionally efficient operations and sound corporate governance in emerging markets, thus resulting in virtuous capital market developments. However, on the other hand, international FPI can magnify the economic fluctuations of emerging markets. Excessive inward FPI can cause economic distortions, and quick and large-scale withdrawals can exacerbate a perverse situation, causing, for example, the recent East Asian financial crisis.

With the exception of the 1997 Asian financial crisis year, Taiwan's inward FPI, predominantly in the form of equity securities investment, has remained positive since 1991. Apart from 1997, Taiwan's inward FPI has surpassed inward FDI since 1992. Additionally, inward FPI surpassed inward OI on the BOP financial account for the period 1999-2001. The inward FPI during 2001 and 2002 was US\$11.1 billion and US\$6.6 billion, respectively. In terms of accumulated net inward remittances, foreign investment in Taiwan's stock market grew by 96 times from US\$0.45 billion at the end of 1991 to US\$43 billion at the end of 2002. Inward FPI also helped to enlarge the scale of Taiwan's foreign exchange market. Meanwhile, in the end of 2002, foreigners' holdings of the market capitalisation of Taiwan's stock reached 11.8%, and their share of the trading volume reached 9.97%. Except for 1997, foreigners have consistently been net purchasers in the stock market. Therefore, inward FPI has helped to expand stock market activities in a positive way. Nonetheless, some foreign investors engage in arbitrage between the stock market and futures market, thereby causing instability of respective prices. Since 2000, Global Depository Receipts (GDR/ADR) and European Convertible Bonds (ECB) have been popular means for Taiwan's large firms to raise extra funding. In 2002, the approved amounts of GDR/ADR and overseas corporate bonds (mostly ECB) were US\$4.4 billion and US\$7.5 billion, respectively.

Many developed countries have substantial outward FPI, which is viewed as a natural wealth diversification measure. In the past ten years, Taiwan's residents have accumulated a large amount of wealth. Increased globalisation has induced more outward FPI to diversify the risk. This trend is reinforced by Taiwan's tax deductibility of overseas investment income. Taiwan's outward FPI has surpassed inward FPI, outward FDI and outward OI since 1997. In 2000, the yearly growth

rate for outward FPI was 108.6%. Probably due to the recession, the yearly growth rates for the years 2001 and 2002 were not extraordinary, but still a substantial 23.2% and 26.4%. The outward FPI in 2002 was US\$15.7 billion. In the first half of 2003, the outward FPI was US\$20 billion, with a compounded yearly growth rate of 149.7%. The channels for outward FPI are mainly through banks' earmarked funds and juridical persons' or high worth individuals' foreign investments, complemented by securities investment trust enterprises' overseas funds, securities firms' overseas investment and insurance companies' increasing participation.¹

3. National Policies and Regulations on FDI and FPI

3.1 FDI

Before the July 1987 revision of the *Statue for Foreign Exchange Regulation*, inward foreign direct investment needed the approval of the authorities, including the Ministry of Economic Affairs (MOEA), the Ministry of Finance (MOF) and the Central Bank of China (CBC). However, obtaining approval was in general quite easy and the CBC generally did not reject applications based on foreign exchange management concerns. The policy direction was to open up capital inflows but remain cautious regarding capital outflows. The 1987 revision resulted in a two-tier system: (1) direct investment with government approval had no remittance constraint for residents and non-residents; (2) besides that, there was an extra aggregate inward remittance quota that could be used for residents. Direct investment capital inflows could be viewed as free from July 1987 onwards, subject to the competent authority's approval.²

With the implementation of the *Statue for Foreign Exchange Regulation* in December 1970, only financially sound companies with approval could invest outwardly. The CBC might reject applications based on foreign exchange management concerns. The exchange control was focused on outward remittances. The 1987 revision of the *Statute* resulted in a two-tier system similar to that for inward investment. Because the CBC would not restrict remittances for competent authority-approved cases, outward direct investment could be viewed as free from July 1987 onwards.

1. Insurance companies' outward FPI has become quite substantial since 2001. One reason is the low domestic interest rate environment has forced insurance companies to seek higher returns overseas. The other reason is the revision of the *Insurance Act* in January 2003 which raised the overseas investment limit for insurance companies from 20% to 35%.
2. For specific industries based on the competent authority's industrial policy concerns, there are some remaining ceilings for (FDI+FPI equity investment) on telecommunications (first category 49%), air transport (general 33.33%, cargo 50%), broadcasting, etc.

3.2 FPI

The first incidence of foreign investment in Taiwan's securities occurred in May 1983, when the securities investment trust enterprise (SITE) was set up to issue depository receipts overseas to absorb foreign money for domestic securities. Qualified foreign institutional investors (QFII), including qualified banks, insurance companies and fund management institutions (later enlarged to incorporate securities firms and other investment institutions), were first allowed to directly invest in Taiwan's securities in 1990. SITE's and QFII's investments were subject to total and individual institution quantity ceilings and share ceilings. The total institutions' quantity ceilings were raised several times and then abolished in February 1995. The share ceilings were raised several times, and finally abolished in December 2000, with the exception of specific industries based on industrial policy concerns. However, a quantity ceiling remained for a single QFII, and this ceiling was raised several times up to US\$ 3 billion starting from November 2001. Non-QFII foreigners were first allowed to invest in the domestic securities market in March 1996, where each single individual/juridical person had an annual balance quota of US\$5 million/20 million. The juridical person's quota was subsequently raised to US\$50 million in June 1997. The distinction between QFII & non-QFII, and the remaining quantity ceilings, were finally abolished in October 2003. Additionally, the application procedures were largely simplified. Domestic listed companies were allowed to issue ECBs overseas in 1989 and GDRs overseas in April 1991. They were allowed to list on overseas stock markets in June 1997.

In 1986, partly due to heavy appreciation pressure, approval was given for the NT dollar Earmarked Trust Funds to be set up to invest in foreign securities. There was no ceiling on the investment amount, and the trust duration cap and floor and the minimum holding period requirements were removed in February 1990. The CBC allowed foreign currency earmarked funds to operate in September 1991, but the shareholders were subject to an annual remittance ceiling. In July 1996, the scope of domestic financial institutions to run trust funds for the purpose of investing in foreign securities was relaxed. In July 2003, the quantity ceiling for these overseas funds was removed. During August to September 2003, SITES with discretionary investments and fund of funds were allowed to incorporate authorized foreign funds as investment objectives, and principle-guaranteed funds were allowed to invest the principle in foreign securities. Even though Taiwan Depository Receipt (TDR) have been allowed to be issued in Taiwan since June 1992 (only used in four instances), formal guidelines for foreigners to issue depository receipts and bonds in Taiwan were not provided until February 1996. Foreigners were allowed to issue stocks in Taiwan from June 1997 onwards; they were also

allowed to issue DRs in Taiwan based on their holdings of Taiwan's listed stocks from September 2003 onwards.

4. Issues Regarding National Policies for Foreign Investment Flows

4.1 Hedge Fund

In recent financial upheavals such as the 1997 East Asian financial crisis and the 1992 Exchange Rate Mechanism crisis of the European Monetary System, hedge funds were viewed as precipitating major movements in asset prices, either through the sheer volume of their transactions or via the tendency of other market participants to follow their lead. Hedge funds are characterised as: (1) the share holders are a small group of institutions and high-worth individuals; (2) adopting a broad and flexible operating style such as extensive use of derivatives; (3) searching for absolute profit (profit amount or rate) instead of relative profit (better performance relative to the stock index, for example). Hedge fund is a large category, holding substantial funds to operate globally, particularly in the FX area. It can work similar to ordinary mutual funds, with emphasis on fundamentals and long-term holdings; however, it can also be speculative and attempt to corner the market. Little concrete information is available about the extent of hedge funds' activities. No consensus exists on their implications for financial stability and on how policy should be adopted. It is worthwhile to have a deeper and more extensive understanding of these large fund holders and identify the investment behaviour to be regulated instead of rejecting hedge funds as a whole.

4.2 FDI Strategy

Each country has its own attitude toward managing FDI, which reflects their underlying development strategy. Regulation of inward FDI reflects concerns about the control of key industries and the degree of welcoming toward foreign investors' funds and technologies. Regulation of outward FDI reflects concerns about industries' hollowing out vs. using the world as a production base. In the case of Taiwan, each FDI inflow needs to be approved, while FDI outflows need only to be reported ex post. The more restrictive attitude toward FDI inflows as compared to outflows is an outward development strategy. It is worthwhile doing a cross-country comparison of the underlying development strategy and evaluating the degree of successfulness. Moreover, it is useful to investigate what are the effective measures to achieve the success.

4.3 The Structure of Capital Flows

The same comparison applies to FPI. Taiwan's regulation used to be more rigorous toward FPI inflows as compared to outflows. The gradual opening toward capital inflows cum the QFII system, and deepening the financial market and strengthening the financial infrastructure, served to shield Taiwan during the East Asian financial crisis. Taiwan's increasing FPI outflows also warrant more opening toward FPI inflows. Table 10.1 is an excerpt from Mathema (2003):

Table 10.1 Net Capital Flows Position of Selected SEACEN Countries: 1990-2001

Unit: US\$ million or percent

Country	Total Capital Flows	Direct Investment	Percent %	Portfolio investment	Percent %	Other Investment	Percent %
Korea	83954.0	1558.0	1.9	92786.0	110.5	-10390.0	-12.4
Singapore	-87229.0	35658.0	40.9	-76264.0	-87.4	-46623.0	-53.5
Taiwan*	-51116.0	-23394.0	-45.8	-2202.0	-4.3	-25520.0	-49.9

* Taiwan figure is revised.

Korea, Singapore, and Taiwan are members of the four dragons, with similar status in the emerging markets. Over the period 1990-2001, both Singapore and Taiwan sustained substantial current accounts surpluses (accumulating to US\$ 136.4 billion and 107.1 billion, respectively), while Korea was a distant third (US\$ 27.4 billion). However, the structure of their financial account is quite different. Korea has a much more substantial net inward portfolio investment, while Taiwan has a substantial net outward direct investment. Singapore maintains a more balanced structure with a substantial net inward FDI and net outward FPI. All three countries have a substantial net outward Other Investment. What is the optimal capital flow structure for these countries and what are the policies helping to achieve the optimum? The case of Singapore, which benefited more from inward FDI (in terms of both financial resources and technical and managerial know-how), while relieving appreciation pressure through substantial outward FPI (also profiting from the world portfolio investment market), seems to be worth more consideration

5. Reporting and Monitoring Systems of FDI and FPI Flows

5.1 Definition

Compatible with the international standard set out in the Fifth Edition of the *IMF Balance of Payments Manual (BPM5)*, the CBC adopted the following definition for foreign direct investment (FDI) and foreign portfolio investment (FPI):

1. Direct investment refers to a lasting interest of the direct investor in the direct investment enterprise. The components of direct investment capital transactions, which are recorded on a directional basis (i.e., resident direct investment abroad and nonresident direct investment in Taiwan, R.O.C.), are equity capital, reinvested earnings, and other capital associated with various inter-company debt transactions. FDI is not recorded on a strict asset/liability basis, but on a directional basis.
2. Portfolio investment components, classified under assets and liabilities, are equity securities and debt securities. Equity securities cover shares, stocks, and participation, or similar documents, such as depository receipts. Mutual funds and investment trusts are also included in equity securities. Debt securities are subdivided into bonds and notes, money market instruments, and financial derivatives.

5.2 Sources for FDI Data

There are two major sources of FDI flow data. The primary data source is provided by the CBC, which is also the exchange control authority. The investment approval authority, the Investment Commission of the Ministry of Economic Affairs (MOEAIC), provides the supplementary data.

The major source of the CBC's FDI data comes from foreign exchange (FX) remittance statistics reported by the foreign exchange banks, with detailed classification compatible with the IMF's International Transaction Reporting System (ITRS). Though the ITRS only registers the cash transactions, the CBC makes some adjustments or enhancements so that the FDI data are more compatible with the accrual basis: (1) financial account entry is based on banks' balance sheet entry; (2) non-cash acquisition of equity is included, such as the provision of capital equipment or technological know-how; (3) stock dividends enters the FDI investment income account as reinvested earnings and undistributed branch profits. Moreover, the FDI data source covers transactions in domestic currency, both for NT dollar deposit account and FX deposit account transactions. Nonetheless, transactions through accounts with nonresident banks are hard to measure on an accrual basis, supplementary enterprise surveys would be needed.

Inward FDI needs to be approved by the MOEAIC *ex ante*, where the inward FDI data are produced. The data coverage is broad except for two leakages. First, some inward FDIs may be in terms of substantial equity share purchases, which are registered with the Securities and Futures Commission (SFC) of the Ministry of Finance. Moreover, the Ministry of Economic Affairs (MOEA) allows foreign direct investors to register with the Science Park and the Export Processing Zone, not through the MOEAIC.³ However, as for outward FDIs, both *ex ante* approval and *ex post* reporting are viable routes to acquire needed foreign exchange. If there is an approval letter from the competent authority, there is no limit on acquiring the needed foreign exchange. If there is no approval letter, there are annual FX quotas for individuals (US\$ 5 million per individual) and legal entities (US\$ 50 million per corporation) that can be used. However, for all outward FDIs toward mainland China, *ex ante* approval are required. Because firms may want to hide their outward FDI behaviour, the MOEAIC's grasp of outward FDI data is potentially lacking. The MOEAIC FDI statistics also include geographic allocation data, based on a debtor/creditor recording principle.

5.3 Sources for FPI Data

The primary source of FPI data is provided by the CBC based on ITRS. The transactions through which foreigners change ECBs and GDRs into common stocks and stock dividend distributions are also recorded. The other data source is the data bank maintained by the Taiwan Stock Exchange Corporation (TSEC). The Securities and Futures Commission (SFC) preserves and publishes the foreign portfolio investors' (institutional and individual) remittance data through the TSEC data bank. However, there is one difference between the CBC data and the SFC data on foreign investors' remittances. That is, the SFC statistics do not include the foreigners' investments intermediated by SITE, which are viewed as indirect investments. However, the CBC statistics include these items due to their induced capital flows.

5.4 Reporting Requirements and Monitoring

There are two FX transaction reporting requirements: the general reporting requirement and the large-scale transaction reporting requirement. General reporting requires filing with relevant documents and the reporting form on every transaction above NT\$0.5 million, while the reporting form is not required for smaller amount transactions. All the forms need to be sent to the CBC by noon the next day after transactions. The large-scale reporting system was adopted after the outset of the

3. The CBC's FDI statistics have incorporated the Science Park and Export Processing Zone data.

East Asian financial crisis in July 1997, which helped the CBC to monitor a large number of capital flows on a real time basis. Forward transactions above US\$1 million as well as spot transactions above US\$0.5 million for individuals and above US\$1 million for legal entities need to be reported immediately by foreign exchange banks through the computer network connecting them to the CBC. Moreover, depending on individual items, for approved FDI and FPI above US\$3 million or US\$5 million, immediate reporting by telephone to the CBC is required.

These reporting requirements, especially the one related to large-scale transactions, help the CBC to closely monitor the market. When abnormal activities are revealed by these statistics, the CBC will first identify the nature of the disturbances, and may adopt moral suasion, punitive measures or FX market intervention to restore stability.

6. Various Issues on the Current Data Compilation System

6.1 The 10% Share Rule to Distinguish between FDI and FPI

The separation line between FDI and FPI may not be clear. Foreigners with a substantial investment in domestic equity shares may have similar motivation to long-term foreign direct investors. The IMF suggested to its member countries to use a 10% share holding as the separating line, where a share ratio higher than 10% is viewed as FDI. In the case of Taiwan, the investors registered with MOEAIC are entitled for FDI, while those registered with SFC are entitled for FPI. The 10% share rule is not used. However, the rule will be adopted when the data bank is ready.

6.2 Valuation

The IMF and the OECD recommend that market value should be used to value FDI and FPI. However, for FDI and FPI financial flows and income transactions, the market value is surely used due to the current nature of BOP flows. Nonetheless, the international investment position (IIP) uses accumulated flows and the market prices vary. The valuation problem refers to the stock positions. In the CBC's IIP compilation, outward FDI is valued by the book value from the balance sheet of the direct investors, as their investment targets are often neither listed companies nor over-the-counter (OTC) companies. As for inward FDI, if the investment targets are listed or OTC companies, thus market valuation will be used; if the targets are not such companies, book value (often net worth) will be used. Mergers and acquisitions (M&A) used to be classified as FDI, thus the FDI valuation rule was applied. The recent opening to hostile

takeovers should be classified as FPI, where the FPI valuation rule is applied. Other M&As apply the FDI valuation rule.

The IMF and the OECD also recommend market price valuation for FPI. The CBC statistics follow this guideline to value equities and debt securities that are listed on organised markets or are readily tradable. As for equities that are not quoted on the stock exchange nor traded regularly, they are valued either by the price of quoted shares with similar characteristics or by networth. For debt securities that are not readily tradable, the net present value is used to estimate the market value.

6.3 Stock Data Compilation

Some words about the IIP compilation by the CBC would be informative. IIP measures the stock of an economy's external financial assets and liabilities. In principle, the statistics should be based on current market prices. Due to the lack of enterprise surveys for the BOP statistics, the CBC uses more estimation methods than other countries in compiling IIP statistics. Currently, the CBC has done trial IIP compilations for the years 2000 and 2001, and the IIP (2002 & 2003) will be first formally published in June 2004. The FDI position can be classified into equity capital investment and inter-company loans. For the liability side of the inter-company loans, there are stock data available from *External Debt Statistics*; for the asset side, the stock data are estimated from accumulated flows. Equity capital investments are estimated in terms of outward FDI by residents and inward FDI by nonresidents. Outward FDI is estimated by multiplying the book value of the listed companies and OTC companies by the accumulated investment flow ratio of these companies vs. all residents. Inward FDI is the summation of three parts: (1) the multiplication of current market price to the nonresident investment shares of listed companies and OTC companies; (2) the networth to estimate the nonresident holding of equities of other domestic companies; (3) the registered capital or networth to estimate the investment stock of nonresidents in their Taiwan branches or subsidiaries. As for the FPI position, the inward investment position by nonresidents is based on the current market price. The outward investment by residents can be classified into private sector and banks, the position estimate of the former is based on juridical person's market-value outward investment, divided by the juridical person's share among the total accumulated outward investment; the position estimate of the banks is based on the book value of the banks' balance sheets due to the lack of market price data.

6.4 Flows-Stocks Reconciliation

The BOP registers the financial and non-financial flow transactions between residents and non-residents during a certain period, while the IIP registers the stock of external financial assets and liabilities at a particular point. Table 10.2, the reconciliation statement, gives an example of the relation between the IIP and the BOP. The IIP at the beginning of the period adds the BOP flows, plus other changes in position, and equals the IIP at the end of the period.

Table 10.2 An Example of the Reconciliation Statement

		BOP						
	Position at the beginning of the period		Financial account transactions	Other changes in position			Position at the end of the period	
				Price Changes	Exchange rate ch.	Other adj's.		
IIP	Assets	120	-15	7	-2	1	111	Assets
	Liabilities	100	5	0	4	-2	107	Liabilities
	Net IIP	20	-20	7	-6	3	4	Net IIP

Note: Excerpt from Chu, Wei and M. F. Tsai (2003).

While the CBC has compiled the 2000 & 2001 IIP, the reconciliation statement has not been made. The reason is that since the CBC does not use the survey method to compile the IIP, many items in the IIP are estimated. On the other hand, the BOP is mainly compiled from reporting numbers based on ITRS. The two systems are thus difficult to reconcile. In practice, “other changes in position” or “other adj’s” are often taken as residual terms in the reconciliation statement to satisfy the stock-flow reconciliation equation, thus making the statement uninformative.

6.5 Disseminating FDI and FPI Data

The CBC publishes the FDI and FPI flow statistics (BOP) on a quarterly basis, with a two-month lag. The government investment authority (MOEAIC) publishes the FDI flow statistics monthly based on approvals, with a one-month lag. The government securities authority (SFC) publishes the FINI (foreign institutional

investor) and FIDI (foreign individual investor) flow data on a monthly basis, with a half-month lag. If there are any error corrections, they are done within two months. However, the data based on approvals are seldom revised. The planned annual IIP statement dissemination starting from June 2004 will be published within two quarters after the end of each year. While Taiwan is not a member of the IMF, the CBC posts the FDI/FPI data on its website <http://www.cbc.gov.tw/> based on the SDDS requirement. There is also a breakdown of debt securities by original maturity (bonds and notes, money market instruments), but not by currency of issue. Moreover, the CBC provides the Bank of International Settlement (BIS) with the quarterly locational financial statistics of local banks, including, for example, international assets and liabilities of local banks by instruments or by customer, with a five-month lag.

6.6 Evaluation of the Current Data Compilation System

Foreign exchange banks in Taiwan are important agencies to conduct foreign exchange operations. The CBC regulation on them was first stipulated in 1961, and currently the title and the content of the regulation are being changed in order to be more compatible with today's liberalised environment. The FX transactions are also reported by the foreign exchange banks. This data compilation system based on ITRS is done efficiently and correctly which produces two major benefits: (1) the BOP (FDI & FPI) statistics are published timely, with little revision needed; (2) timely and correct data provide the CBC with useful information for FX regulation and management in a liberalised environment. The success of the foreign exchange bank system may in part be due to Taiwan's isolated-island environment, which makes the regulation of the FX banks easier to effectively implement. Moreover, the CBC is both the administrator supervising the ITRS reporting system and the exchange control approval authority. The FX regulation is thus successfully conducted via the reporting system. Without transaction documents or approval, the FX will not be provided.

7. Data Compatibility with International Standards

7.1 IMF Guide on Definition and Compilation Practices

The BOP statistics and the IIP statistics compiled by the CBC are based on the guideline provided by the IMF's *Balance of Payment Manual, Fifth Edition, 1993 (BPM5)* and supplemented documents. The CBC adopts the BPM5 definition on various terms and tries to comply as much as possible with the accrual basis, the market valuation principle and other IMF compilation standards.

7.2 Compatibility with the SMSDI Areas

In May 1997, the IMF and the OECD launched the “Survey of Implementation of Methodological Standards of Direct Investment (SIMSDI), which was a comprehensive survey of data sources, collection methods and dissemination and methodological practices for FDI statistics, including FDI financial flows, income and position data. One hundred and fourteen countries replied to the survey. The SIMSDI information was updated for all OECD countries and for 31 of the 85 other IMF member countries that had responded to the 1997 SIMSDI. The four years between the 1997 survey and the 2001 update saw areas with significant improvements in the FDI statistics, including some areas where more than 75% of countries surveyed now follow the international standards; also some areas where, despite improvement, the majority of countries do not yet follow the international standards. We shall investigate the compatibility of the CBC’s FDI compilation practices with the 2001 SIMSDI update according to the areas highlighted in that report.

7.2.1 Areas with Marked Improvements

- **Non-cash acquisitions of equities, such as through the provision of capital equipment:** The CBC’s FDI statistics do include non-cash acquisitions of equities as FDI, through the provision of equipments, materials, goods and services, and through technology transfer.
- **Inter-company loans and financial leases:** The CBC uses the intermediate- and long-term inter-company loan data from the *External Debt Statistics* in compiling the inward FDI statistics, under the category of “Other capital”.
- **Real estate owned by nonresidents:** Purchases and sales of land and buildings by nonresidents are classified by the CBC’s BOP statistics under “Other Investment” instead of FDI. This CBC compilation practice is compatible with the BPM5 guideline. Moreover, nonresidents were not allowed to purchase or sell real estate until recently, the transaction amount is thus limited and changing the compilation category is not a pressing problem.
- **Activities of special purpose entities (SPEs):** The CBC’s BOP statistics do not treat SPEs as a special category. Some transactions of SPEs, such as loans, are classified as “Other Investment”.
- **Activities of offshore enterprises:** The CBC’s BOP statistics do not treat offshore enterprises as a special category either.
- **Expenditure on natural resource exploration:** Direct investment transactions from the direct investor to the direct investment enterprise that are used for exploration and the right to undertake natural resources exploration in the host economy are recorded under the FDI account as equity capital. Only one

Taiwanese company, the Chinese Petroleum Corporation, conducts this outward FDI activity. No inward FDI belongs to this category.

7.2.2 Areas with More Than 75% Compliance Rate

- **Use of the 10% ownership rule for identifying FDI:** The CBC plans to but is not successful yet in using the 10% ownership rule in compiling BOP or IIP. The barrier lies in the difficulty to separate the original investment from the overall equity shares. The data of the individual's holding of a company's shares is available from the SFC, while the data on the individual's original investment is available from the MOEAIC. The SFC is currently coordinating with the MOEAIC to get appropriate individual investment data. Once the data barrier is removed, the 10% ownership rule will be adopted.
- **Inclusion of equity capital between affiliated banks and between affiliated financial intermediaries:** The CBC does include this equity capital change as FDI. The data sources vary: (1) the primary data source used by the CBC to compile FDI statistics comes from its Department of Financial Inspection (before 2001Q3) and the Bureau of Monetary Affairs of the Ministry of Finance (after 2001Q3). Domestic banks and local branches of foreign banks need to file financial reports to this department, even if the transactions are not registered with the ITRS system due to transactions through nonresident banks as an example; (2) some banks or intermediaries also file reports with the MOEAIC; (3) financial institutions other than those in (2) report through the ITRS system.
- **Inclusion of data on the activities of SPEs or offshore enterprises:** Overlapped with area (7.2.1) items.

7.2.3 Areas Where, Despite Improvements, the Majority of the Countries Surveyed Do not Yet Follow the Applicable International Standards

- **Inclusion of activities of indirectly owned direct investment enterprises-use of the fully consolidated system (FCS):** Since the 10% ownership rule is not adopted, the FCS certainly can not be applied.
- **Time of recording FDI income on equity and income on debt:** Both income records (on equity and on debt) are a mixture of cash basis and accrual basis. The data sources from the government and banks are mainly on an accrual basis, while the other sector sources are based on the ITRS system (cash basis).
- **Recording of reverse investment transactions when the FDI relationship is in one direction only:** Since the 10% ownership rule is not adopted, the reverse investment recording can not be applied.

- **Inclusion of FDI transactions data on the activities of quasi-corporations involving construction enterprises and mobile equipment:** Construction enterprises and mobile equipment are recorded under “goods” of the current account in the CBC’s BOP statistics.
- **Valuation of FDI positions (assets and liabilities):** For inward FDI involving listed or OTC company shares, market value is used. For other inward FDI and outward FDI, indirect measures are used.

7.3 Compatibility with the CPIS

The Coordinated Portfolio Investment Survey (CPIS) is the parallel of the SMSDI in the portfolio investment field. However, the CPIS focuses on the cross-border holdings of portfolio investment assets, and is broken down by the economy of residence of the issuer, which can be useful to derive position data on the liabilities position of non-participating countries. The 1997 and the 2001 surveys have been conducted and the 2002 survey is proceeding.

According to Chu and Tsai (2003), the 2001 CPIS deduced that the equity securities investment of Taiwan is similar to the CBC’s IIP statistics. However, debt securities investment data do not match well. There are two possible reasons: (1) the CBC’s IIP does not use market price valuation for debt securities, and (2) the debt securities in the CBC’s IIP is based on the debtor’s external debt statistics, while the CPIS uses creditors’ statistics. The CPIS lags in time behind the CBC’s IIP and External Debt statistics.

8. The Relation between FDI/FPI Flows and Key Macroeconomic Variables

8.1 The Theory

Early literature explains FDI in microeconomic terms and focuses on market imperfections and the expansion of market share by multinational firms. Subsequent literature emphasised firm-specific advantages due to product quality or cost advantages.

As noted by Froot(1993), FDI may require neither capital flows nor investment in capacity. The equity purchase can largely be financed by host country lenders. Razin (2002) views the characteristics of FDI from the corporate governance perspective and thus differentiates FDI from FPI based on management incentive and capability. In a perfect capital market, all forms of capital flows (FDI, FPI, international loans (OI)) are indistinguishable, in that they all provide the same capital inflows, thus allowing more efficient intertemporal allocation of consumption. The

unique advantage of FDI is the potential for better micromanagement, based on industrial specialisation from the source country and the incentive to pursue proper management due to the controlling interests. Therefore, FDI contributes more to economic growth of the host country than other forms of capital flows. Razin and Sadka (2002) also show that, given plausible production function forms, the size of the aggregate stock of capital is larger under FDI than under portfolio equity flows.

8.2 The Empirical Evidence

We use a VAR/VEC model to study the interaction among five variables: real GDP growth rate (rgdpgr), domestic investment (gdir), net FDI flows (nfdir), net FPI flows (nfpir), and net Other Investment flows (noir). The latter four variables are expressed as GDP percentages. Domestic investment consists of outlays in addition to the fixed assets of the economy plus net changes in the level of inventories. The data source for the FDI, FPI and OI flows is the CBC's *BOP Quarterly*, while the data source for the other two variables is the *National Income in Taiwan Area* compiled and published by the Directorate-General of Budget, Accounting and Statistics of Taiwan, ROC. The period covered is 1981Q1-2003Q3.

The VEC exploits the data information most efficiently. By using this model we can investigate the pairwise Granger causality and long-term cointegration relation. While the emphasis of the empirical analysis is on the impacts of individual capital flows on the economic growth rate and domestic capital formation, we also investigate the reverse causality to see how economic growth and domestic investment affect capital flows.

Routine procedures follow. The augmented Dicky-Fuller (ADF) test is adopted to explore the unit root of the five variables. The result is shown in Table 10.3. It shows that rgdpgr and gdir are I(1), while nfdir, nfpir and noir are stationary. Based on Sim's test, a VAR with a maximum of four lags is established. The corresponding VEC with a maximum of three lags is found to have a single cointegration vector based on the rank test shown in Table 10.4.

Table 10.3 The Unit Root Tests

Variables		rgdpgr	gdir	nfdir	nfpir	noir
ADF tests	No. of lags	4	4	4	4	4
(with	Level	-2.38	-1.45	-3.42*	-4.65**	-7.06**
intercepts)	Ist difference	-6.45**	-5.68**			

Note: * significant at 5% significance level based on Mackinnon critical value.

** significant at 1% significance level based on Mackinnon critical value.

Table 10.4 The Johansen Cointegration Tests

Rank tests of the no. of cointegration vectors	Trace statistics	Max-Eigen Statistics
No cointegration vector	106.78**	61.50**
At most one cointeg. vector	45.28	25.97

Note: ** significant at 1% significance level.

The cointegration vector is:

$$RGDPGR+0.788GDIR-35.057NFDIR-27.502NFPIR+26.39NOIR-0.255=0$$

(0.00)	(0.00)	(0.04)	(0.11)	(0.00)
<u>0.00</u>	<u>0.00</u>	<u>0.09</u>	<u>0.10</u>	<u>0.00</u>

The number in parentheses are the p-value of the X^2 statistics used to test the significance of the cointegration coefficients; the underlined number is the p-value of the V^2 statistics used to test the significance of the adjustment coefficient, or to test weak exogeneity.

In this long-term relationship, the signs of the FDI flows and the FPI flows show that both of them promote domestic economic growth and domestic investment. The effect of FDI is significant, which demonstrates that, in contrast to Froot's (1993) observations, FDI does matter in promoting growth and investment in Taiwan. The FDI effect appears larger than the FPI effect in terms of the size of the coefficients, which indirectly supports the micro-management view of Razin

(2002) about FDI. Moreover, international loans (OI) have a negative impact on growth and investment. This may demonstrate that inward Other Investment (OI) is not aimed for fixed investment in the host country but, rather, reflects the need for hedging, portfolio management, corresponding bank relations, etc. Domestic currency appreciation expectations may shrink banks' FX deposit accounts and cause repatriation of foreign assets (capital inflows). However, appreciation will decrease the investment and economic growth rates, thus creating a negative relation between them and OI flows. Moreover, the negative relation between the economic growth rate and domestic investment/GDP ratio is puzzling. However, rising GDIR may represent either rising domestic investment or decreasing net export/consumption. Moreover, regarding the cointegration relationship, maintaining a positive relationship between RGDPGR and NFDIR & NFPIR, and also between GDIR and NFDIR & NFPIR, will imply a negative relation between RGDPGR and GDIR.

The cointegration relationship also shows that in the long run, domestic economic growth and investment have positive impacts on FDI flows and FPI flows. The impact is larger for FPI than FDI. This is compatible with the fact that international portfolio investments are more flexible than FDIs to move to growing areas.

The weak exogeneity test shows that there is a more independent role for FDI/FPI flows to affect real economic growth/domestic investment than the other way around. All the adjustment coefficients toward the long-run equilibrium are significant at the 10% significance level. The adjustment coefficients of RGDPGR, NFDIR and NOIR have negative signs, representing mean reversion and stable adjustment. However, the adjustment coefficients of GDIR and NFPIR have positive signs.

The short-term pairwise Granger causality relation on the Vector error correction (VEC) model among first difference terms is shown in Table 10.5. The results show that no short-term Granger causality exists among FDI/FPI flows and economic growth/domestic investment. Therefore, the interactions among them are intrinsically long-run and adjust toward equilibrium.

Table 10.5 Pairwise Granger Causality on the VEC Model

Null Hypothesis	Wald Test	
	Chi-square	Probability
FDI flow does not cause real economic growth rate	2.94	0.40
Real economic growth rate does not cause FDI flow	3.44	0.33
FPI flow does not cause real economic growth rate	4.93	0.18
Real economic growth rate does not cause FPI flow	2.85	0.42
FDI flow does not cause gross domestic investment	2.39	0.50
Gross domestic investment does not cause FDI flow	6.80	0.08
FPI flow does not cause gross domestic investment	0.60	0.90
Gross domestic investment does not cause FPI flow	3.60	0.31

In summary: (1) FDI has a larger effect on domestic investment and output growth than FPI; (2) Domestic investment and output growth have more pronounced effects on inward FPI than inward FDI.

9. Taiwan's Experiences in Adopting Different Policies to Manage Capital Flows

From the 1980s onwards, financial liberalisation and internationalisation have become the dominant trend in Taiwan. This development has had a deep impact on policies to manage capital flows. Capital account opening is certainly an inevitable trend under the current environment of liberalisation. Nevertheless, Taiwan has adopted a sequential approach to the opening of its capital account, accompanied by monetary policies to sterilise the domestic impact from capital flows. Furthermore, Taiwan's regulations regarding the capital account have been largely liberalised and remaining restrictions are mostly indirect or informal.

9.1 Capital Control

Under the trend of capital account liberalisation, it is not timely to talk about capital control. Though certain regulations remain, they are mostly in the process of being removed and the regulations toward FDI are basically liberalised. The remaining management scheme for FPI, the QFII system, was removed in October 2003. The persistent regulation lies in the report requirement via the foreign exchange banks. Failure to report, or being given disqualification as revealed by the report,

will cause rejection of the requested foreign exchange. FX banks, general FX reporting requirements, large-scale transaction reporting requirements and foreign exchange position management for FX banks, are the four major components of the CBC's FX regulation, supplemented by a managed float exchange rate system to stabilise the FX market.

9.2 Monetary Policies to Sterilise Capital Flow Impacts

In a small open economy like Taiwan, the behaviour of base money is dominated by changes in foreign assets, which are affected by the balance of payments situation and therefore can not be effectively controlled by the central bank. Table 10.6 shows that over the forty-one years between 1962 and 2002, the increase in net foreign assets has been the dominant factor affecting increases in base money, amounting for 93 percent of the increase in the period 1962-1970, 174 percent in the period 1981-1985, and 603 percent in the period 1986-1987. Only in the period 1988-1990, when net capital outflow outweighed the current account surplus, did net foreign assets show a negative contribution of 63 percent to changes in base money. The number is even higher after 1990, showing increasing importance in foreign assets.

Table 10.6 also shows the increasing importance of changing domestic assets in order to sterilise the NFA impact. The following monetary instruments and institutional settings were designed for sterilising the balance of payments effect on money supply in order to promote financial stability and maintain the stability of both the internal and external value of the NTD.

Major policy instruments affecting the changes in the net domestic asset components of base money are: (i) adjustment of rediscount rates and the management of rediscount and refinancing facilities; (ii) open market operations; and (iii) accepting redeposits from the postal savings system. After the money market was established in the 1980s and operating well, the CBC used open market operations as the most important tool for sterilisation. For example, during 1986-1987, 65% of the US\$36.6 billion capital inflow was sterilised by open market operations, through issuance of short-term type-B treasury bills, short-term and two-year CBC certificates of deposits, and six-month to three-year CBC savings bonds. Accepting redeposits is a unique and flexible tool for the CBC to sterilise as compared to other countries. It is the second most important tool among the above three instruments.

Table 10.6 Factors Affecting Changes in Base or Reserve Money

Unit : NT\$100 million or percent

Period	Base Money B (reserve money)		Net foreign assets (NFA)		Net domestic assets (NDA)	
	B	% of B	NFA	% of B	NDA	% of B
1962-70	155	100	145	93.55	10	6.45
1971-75	546	100	408	74.73	138	25.27
1976-80	1,209	100	1,104	91.32	105	8.68
1981-85	2,251	100	3,909	173.65	-1,658	-73.65
1986-87	2,782	100	16,769	602.77	-13,987	-502.77
1988-90	4,566	100	-2,881	-63.1	7,447	163.1
1991-96	4,960	100	3,660	73.79	1,300	26.21
1997-98	126	100	1,154	915.87	-1,028	-815.87
1999-2002	3,217	100	24,026	746.84	20,809	-646.84

Source: Financial Statistics Monthly, CBC, various issues.

‘+’-‘-’ Contributing to Increase/Decrease in Money Base from the CBC’s Balance Sheet.

10. Conclusion

After 1993, mainland China captured a large portion of Taiwan’s outward FDI. The 1997 East Asian financial crisis had little effect on FDI flows, and the global boom in FDI heading toward the end of the millennia was not sufficiently captured by Taiwan. National regulation used to be more cautious toward inward FDI; however, FDI in both directions is basically liberalised now.

The inward and outward FPI channels were established in 1980s. Starting from 1990, inward FPI grew substantially, both reflecting domestic sequential deregulation and the regional trend. Outward FPI grew substantially in the second half of 1990s as a wealth diversification measure. The deregulation for outward FPI has also accelerated since then. The 1997 crisis impact lasted for only one quarter.

Hedge funds have large resources and flexible operating styles that can either promote efficiency or increase speculation. In the final stage of capital (financial) account liberalisation, Taiwan’s regulators do need to have a deeper and more

extensive understanding of these large fund holders and identify the investment behaviour to be regulated. As for the optimal composition of international capital flows, Taiwan's structural problem is likely to be the weak flow of inward FDI.

Taiwan's primary FDI/FPI data source is from the reporting through the foreign exchange banks, and the compilation is based on ITRS. The CBC made some modifications so the compilation is close to accrual basis. Timely general reporting requirements and large-scale transaction reporting requirements provide authentic data, real-time monitoring and appropriate regulation in a liberalised environment.

The CBC tries to use market price valuation as much as possible in compiling the IIP data. Due to the lack of surveys, the CBC uses more estimates in compiling the stock data. The compilation is compatible with the IMF's *BPM5* standard. It is also mostly compatible with the SMSDI and the CPIS, though the 10% share rule to distinguish between FDI and FPI is still pending.

The empirical study in this paper shows that FDI has a larger effect on domestic investment and output growth than FPI, while domestic investment and output growth have more pronounced effects on inward FPI than inward FDI. The influence of FDI/FPI on macroeconomic variables is more independently controlled than the other way around.

FX banks, general FX reporting requirements, large-scale transaction reporting requirements and foreign exchange position management for FX banks, are the four major components of the CBC's FX regulation. The CBC adopts three policy measures to sterilise the capital flow impacts: open market operations, accepting redeposit from the postal savings system, and adjustment of rediscount rates and the management of rediscount and refinancing facilities.

References

1. Chiu, Paul C. H. (1992), "Money and Financial Markets: The Domestic Perspective," Taiwan: from Developing to Mature Economy, edited by Gustav Ranis, Westview Press.
2. Mathema, Sushil R. (2003), "Issues and Proposed Outlines: Managing and Monitoring Direct and Portfolio Investment Flows: A Comparative Study of the SEACEN Countries," The SEACEN Centre.
3. Chu, Wei and M. F. Tsai (2003), "Report on SEACEN Workshop on International Investment Position," Manila, October.
4. CBC (2003), "Taiwan's International Investment Position Tables," BOP division, the Department of Economic Research, May.
5. Montaje, Marie (2004), "Basic Concepts and Methods of Direct Investment and Portfolio Investment Monitoring and Reporting Systems," SEACEN Workshop on Managing and Monitoring Direct and Portfolio Investment Flows, Port Dickson, Malaysia, January.
6. IMF, OECD (2003), *Survey of Implementation of Methodological Standards of Direct Investment*, 2nd edition, Washington.
7. IMF (2002), *Coordinated Portfolio Investment Survey Guide*, 2nd edition, Washington.
8. Froot, Kenneth A. (1993), "Japanese Foreign Direct Investment," *US-Japan Economic Forum*, edited by Martin Feldstein and Kosai.
9. Razin, Assaf (2002), "FDI Contribution to capital flows and Investment in Capacity," *NBER Working Paper*, No. 9204.
10. Razin, A. and E. Sadka (2002), *Labor, Capital and Finance: International Flows*, Cambridge University Press, New York and Cambridge, England.

Appendix 10.1

Figure 10.1 Outward and Inward FDI Unit: US\$ million

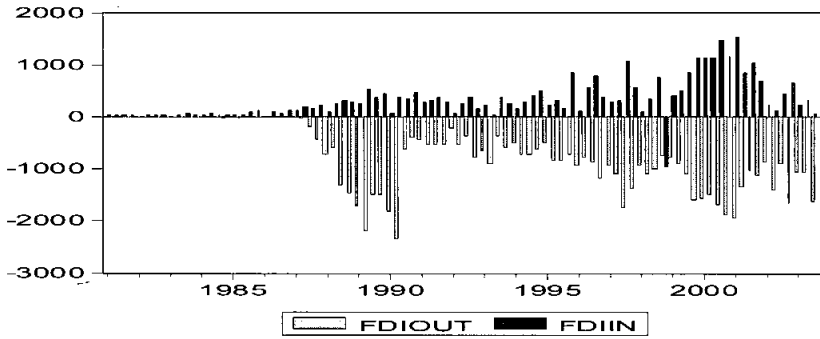


Figure 10.2 Outward and Inward FPI Unit: US\$ million

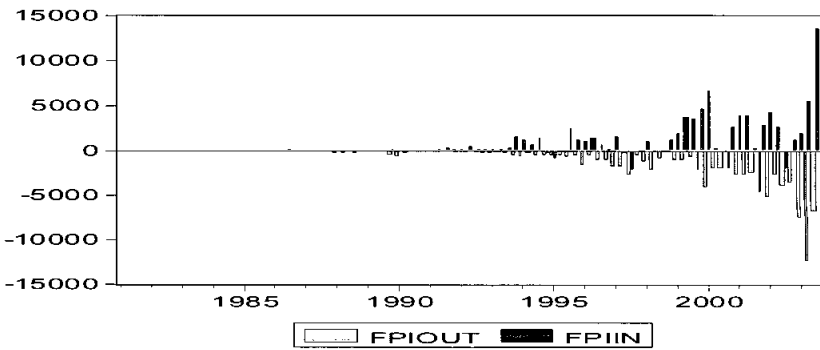
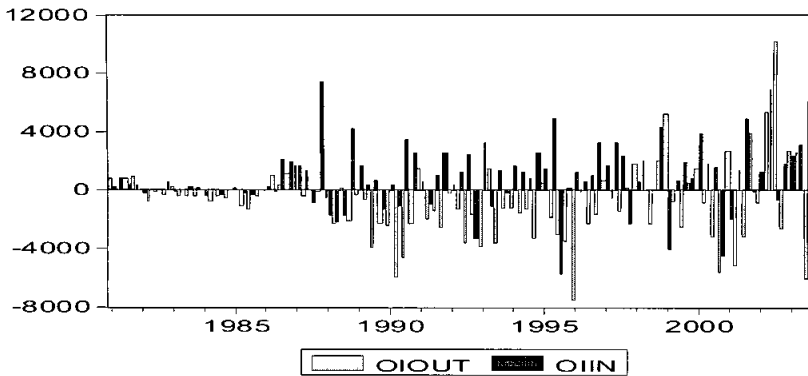


Figure 10.3 Outward and Inward OI Unit: US\$ million



CHAPTER 11
MANAGING AND MONITORING DIRECT AND PORTFOLIO
INVESTMENT FLOWS IN THAILAND:
A COMPREHENSIVE STUDY OF THE SEACEN COUNTRIES

by

Ubonrat Jantarangs¹

1. Introduction

The Asian economic and financial crisis that began in the late 1990s has forced countries to re-examine the role of capital flows in economic development and the risk of capital flight associated with it. This paper summarises the salient features and developments of inward and outward foreign direct and portfolio investment (FDI/FPI) in the case of Thailand before and after the crisis, the reporting and monitoring systems, the data compilation practices, as well as related regulations and policy experiences. Using Granger causality test, this paper also attempts to explain the dynamics between FDI/FPI and key economic and monetary policy variables in the context of Thailand.

2. Salient Features and Developments of Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI) in Thailand

2.1 Definition

Thailand's balance of payments data are compiled in accordance with the methodology outlined in the fifth edition of the IMF's Balance of Payments Manual (BPM5), which defines FDI and FPI as follows:

FDI: Reflecting the lasting interests of nonresidents of an economy in a resident entity. A direct investor may invest in equity capital (at least 10 percent), lend to affiliates, and reinvest earnings. However, the lack of data has excluded reinvested earnings from Thailand's FDI statistics.

1. Ubonrat Jantarangs is Economist in the Balance of Payment Analysis Team, Monetary Policy Group, at the Bank of Thailand. The views expressed in this paper are the author's and may not represent those of the Bank of Thailand. The author is grateful to Alisara Mahasandana, Songtum Pinto, Titanun Mallikamas, Jittima Kupthanon and Jeerapan O-Lanthanasate for their constructive comments and helpful suggestions, and to Nuannute Thanaanekcharoen who supplied most of the data in this paper.

FPI: Referring to transaction that involves buying and selling of equity securities (less than 10 percent), debt securities such as bonds, notes, money market instruments and financial derivatives with the exception of securities classified as direct investment and reserve asset.

2.2 Developments of inward FDI and FPI in Thailand before and after the 1997 Crisis

2.2.1 Inward FDI

During 1989-1996, inward FDI averaged at USD 2.0 billion or 1.8 percent of GDP in Thailand, an astonishingly low level when private investment and exports were booming, averaging at 31.9 and 37.5 percent of GDP respectively during the same period. In fact, Thailand's financial liberalisation programme that began in the late 1980s (especially the establishment of the Bangkok International Banking Facilities (BIBF) in 1993), coupled with highly stable US Dollar/Thai Baht exchange rate under the basket-pegged regime, allowed and even encouraged domestic businesses and multi-national corporations (MNCs), to borrow from overseas at lower costs than domestic credit and equity financing. A lot of MNCs switched from inter-company loans or direct loans to BIBF borrowing in order to finance investment and imports of capital goods during this period (Table11.1).

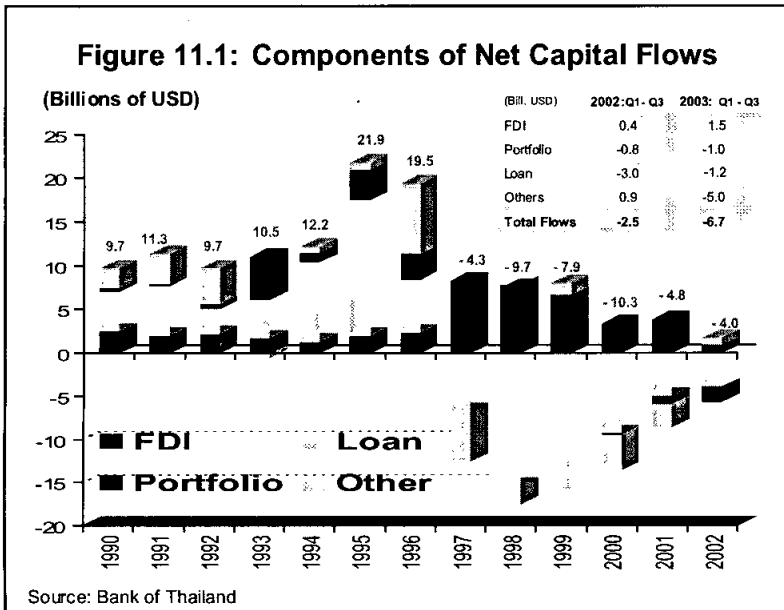


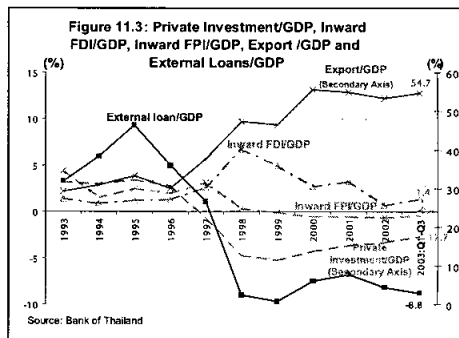
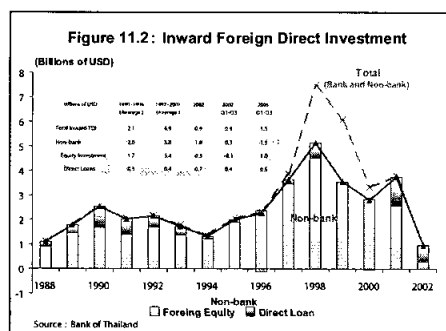
Table 11.1: MNC's Direct Loans and Net Borrowing from BIBF During 1993-1995

(Millions of USD)	1990-1992 Average direct loans	1993		1994		1995	
		Direct loans	BIBF	Direct loans	BIBF	Direct loans	BIBF
Industry	262	154	1,495	54	2,617	-38	2,535
Food	21	24	240	4	206	1	221
Metal & non-metalic	25	17	213	7	249	12	495
Chemicals	40	29	186	-31	323	24	503
Electrical machinery & appliances	63	40	206	38	368	-106	226
Textiles	15	-23	128	-9	176	-9	220
Construction materials	1	1	97	0	247	0	314
Machinery & transport equipment	25	37	95	-11	324	25	75
Petroleum products	45	0	8	10	190	7	146
Others	28	28	322	46	532	8	334
Construction	19	14	91	10	153	3	184
Trade	79	16	584	61	1,069	16	606
Financial institutions	227	0	262	0	1,048	0	907
Mining & quarrying	5	11	3	8	-14	8	14
Services	19	-14	218	-5	331	6	-66
Real estate	28	176	460	-159	638	108	464
Others	8	-1	232	1	479	-1	237
Total	662	362	3,345	76	6,320	109	4,892

Sources: Bank of Thailand

As a result, outstanding private foreign debt exploded from 31.6 percent of GDP in 1989 to 59.7 percent of GDP in 1996 while FDI remained very low.

One should be aware of this systemic “financing preference bias” when making country comparison on FDI. Before the 1980s, inward FDI was the principal means that cross-border investment could be financed. This is no longer true in the age of deep financial globalisation. Countries with higher leverage ratios



(debt/equity), especially through the banking system, may require less FDI (by current definition) than countries with lower leverage ratios to finance the same level of investment.

Inward FDI in Thailand increased significantly during 1997-1998 (peaking at USD 7.5 billion or 6.7 percent of GDP in 1998) due to capital injection into the banking and non-banking sectors in response to operating and exchange losses, as well as very high domestic interest rates, following the crisis. During the same period, companies with no access to foreign capital were especially hit by the banking credit crunch. Debt-to-equity conversion also contributed to the increase in FDI in this period.

Table 11.2: Additional FDI Outflows in 2002

Factors (Million USD)	Outflow
1. Restructuring of MNCs	417
2. FRA	241
3. Equity Repurchased by Thai Companies	287
Total	945

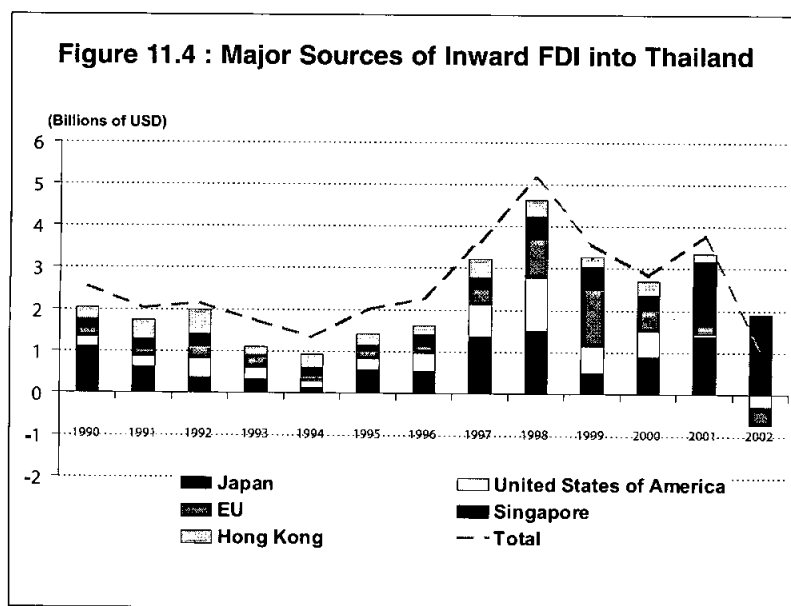
Although inward FDI has slowed down since then amid continued stagnant economy and low capacity utilisation, it still averaged at USD 4.4 billion during 1999-2001, doubling the USD 2.0 billion average before the crisis as a result of foreign investment in assets of closed finance companies acquired by the Financial Restructuring Authority (FRA).

In 2002, inward FDI declined significantly to only USD 0.9 billion or 0.7 percent of GDP. The decline was observed in both equity investment and direct loans because of the waning flows of M&A worldwide, prolonged excess liquidity, improved corporate earnings, and continued low capacity utilisation (approximately 60 percent in 2002, compared with 75.0 percent on average during 1995-1996). There were also additional FDI outflows from (1) financial restructuring of some MNCs in Thailand, whereby they borrowed from overseas to buy shares back from their parent companies (2) the remittance of profits and investment by

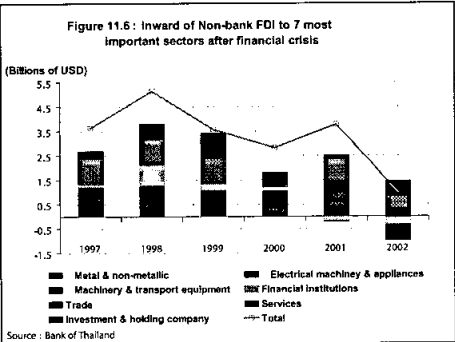
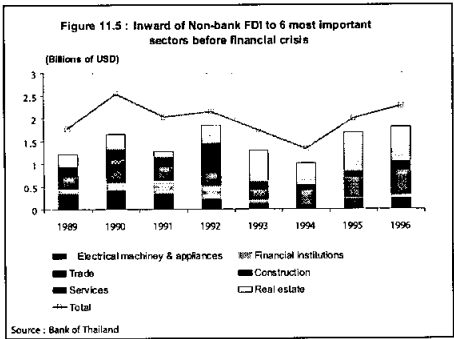
foreign companies who had invested in the FRA assets, and (3) equity buy-back by Thai companies. These were, in fact, a reversal of what happened in the early years of the crisis.

In the first 11 months of 2003, inward FDI rebounded, amounting to USD 1.4 billion compared with USD 0.9 billion during the same period of last year. This was due to lower equity outflows and higher equity inflows in several important sectors, including vehicles and equipments, metal and non-metallic, and real estate sectors which saw the fastest-growing demand from domestic consumers. This was also in line with increased capacity utilisation from 59.3 percent in 2002 to 66.2 percent in 2003.

Although the percentage of inward FDI to GDP has been small, FDI companies have contributed significantly to Thai exports. Sectoral analysis shows that FDI has been concentrated in the export-oriented industries, including computer and parts, integrated circuits and parts, telecommunication equipment, electrical appliance, transformers, generator and motors, chemical products, vehicle parts and accessories, base metal products, insulated electric wire cable and petroleum products. These industries accounted for approximately 40 percent of Thailand's total exports.



Japan has always been the important source of FDI in Thailand, especially in the automobile and electronics industries, while FDI from the U.S. and the EU have been more volatile. However, FDI from Singapore has gained importance in recent years, especially in the telecommunication and mobile phone industries to serve domestic demand.



Specific developments of banking and non-banking inward FDI in Thailand are summarised below:

	Before the 1997 crisis	After the crisis
Banking FDI	<ul style="list-style-type: none">▪ Because of the policy restricting the entry and expansion of foreign bank branches, FDI into the Thai banking sector was almost negligible².	<ul style="list-style-type: none">▪ FDI into the Thai banking sector increased in the three years following the crisis when the new policy was set to help recapitalise and strengthen the banking system. Specifically,<ul style="list-style-type: none">- In 1997, the 49-percent foreign ownership limit was relaxed for banks.- Domestic banks were encouraged to find foreign strategic partners to help improve productivity, capital base, and overall financial strength. <p>As a result, four domestic banks have become majority-owned by foreign banks.</p>

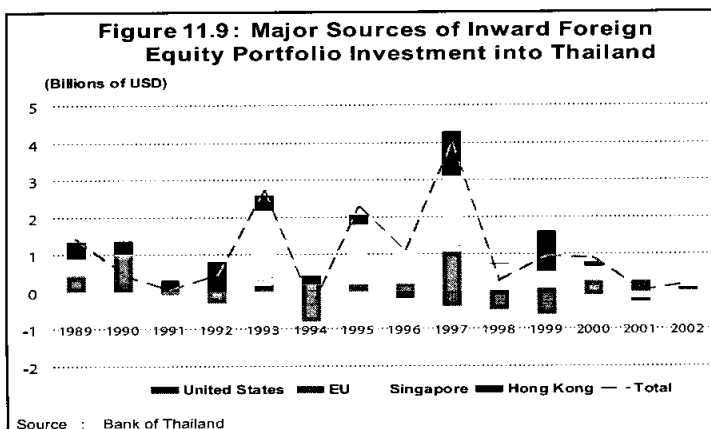
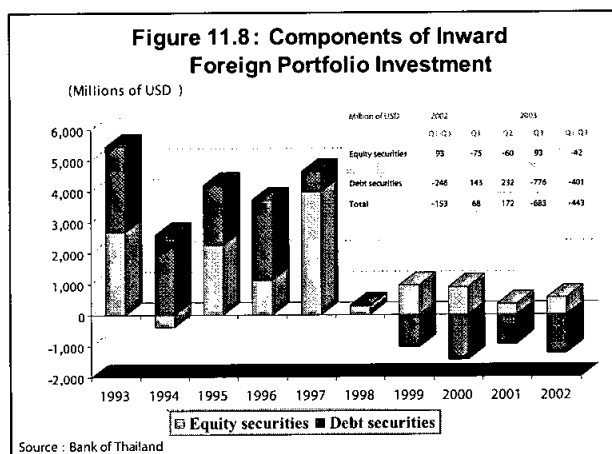
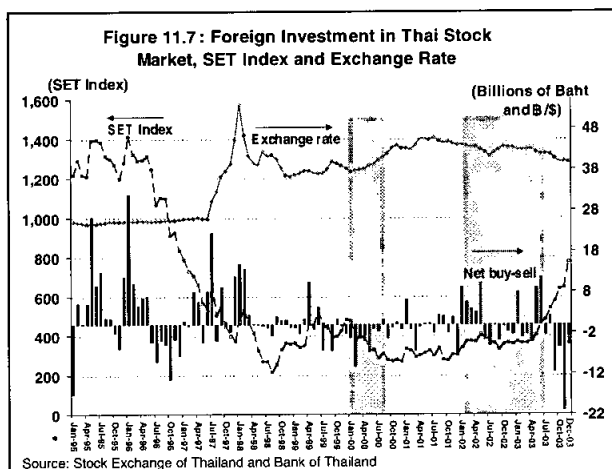
2. Borrowing by foreign bank branches from their parent companies are treated as foreign debts, as opposed to direct loans, since the branches only perform an intermediary function.

	Before the 1997 crisis	After the crisis
Non-banking FDI	<ul style="list-style-type: none"> ▪ Direct loans were a small component of non-banking FDI, due to the success of the BIBFs. The multinational corporations had shifted their funding from direct loans to the borrowing from BIBFs. (Table 11.1 and Figure 11.1) ▪ The 5 most important recipient sectors of FDI were real estate, trading, electrical machinery & appliances, and construction sectors. (Figure 11.5) 	<ul style="list-style-type: none"> ▪ Direct loans continued to be a small component of non-banking FDI. However, they have increased markedly since 2001 as more MNCs have adopted a globally-integrated approach in funding whereby funds are shifted from affiliates with excess liquidity to those that need them via direct loans. ▪ The 5 most important recipient sectors of FDI have changed to trading, electrical machinery & appliances, machinery & transport equipment, metal & non-metallic, and investment & holding company sectors. FDI into the real estate and construction sectors have diminished significantly from the pre-crisis period as they were hurt the most by the crisis (Figure 6). ▪ In 2002, while FDI into most sectors declined, FDI into the service sector, particularly the mobile phone businesses that served domestic demand, increased markedly.

2.2.2 Inward FPI

Inward foreign equity investment in Thailand has been volatile and has had more influence on stock price movement than investment by domestic investors.³ This is even more so after the crisis when exchange rate expectation has become another significant factor determining FPI movement in the Thai stock market. (Figure 11.7)

3. Chayawadee Chai-anant (2003) found that net purchases by foreigners were positively correlated with stock returns (price change plus dividend return) in Thailand during 1994-1998. In contrast, net purchases by local investors exhibited negative correlation with stock returns.

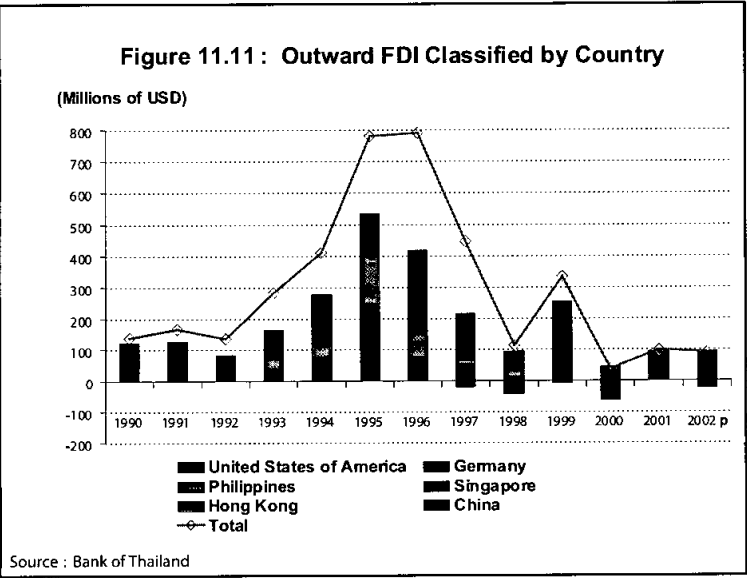
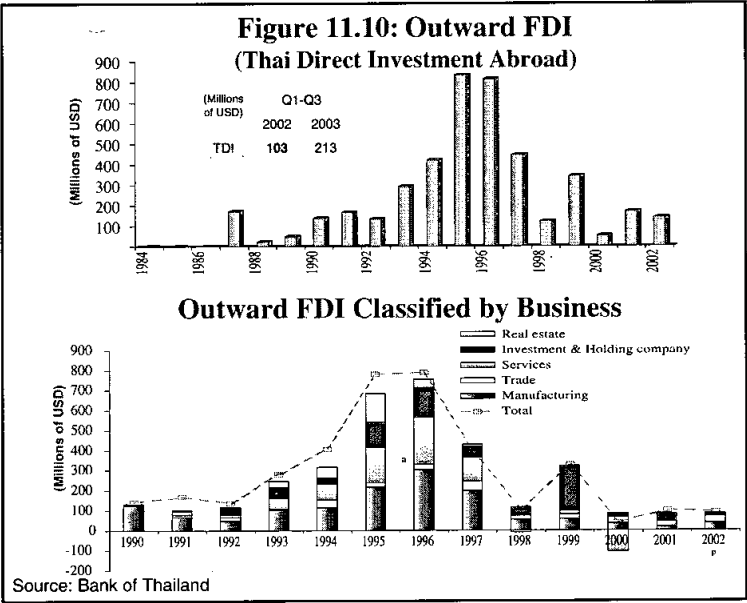


Hong Kong and Singapore have been important sources of FPI in Thailand while FPI flows from the United States and the EU have been more volatile. (Figure 11.9) However, the data may not accurately identify end-investors, since part of FPI from Hong Kong and Singapore may have originated in other regions with more distant time zones.

Specific developments of the banking and non-banking inward FPI in Thailand are summarised below:

Before the 1997 crisis	After the crisis
<ul style="list-style-type: none"> ▪ Inward foreign equity portfolio investments were high in the early 1990s as a result of capital account liberalisation and positive economic outlook. Foreign investors were interested mainly in the property and banking sectors, thus causing the property and banking stock indices to rise from 598 and 229 points in 1990 to peak at 2,267 and 1,050 points respectively in 1993. However, the equity flows slowed down afterward and became very volatile. ▪ Inward foreign debt security investments were also high, mainly from issuing debentures abroad by large non-banking businesses. During this period, the exchange rate risk was commonly overlooked because of the artificial stability of US Dollar/Thai Baht exchange rate under the basket-pegged regime. 	<ul style="list-style-type: none"> ▪ Inward foreign equity portfolio investments increased dramatically in 1997 after the floating of the Thai Baht in July. The currency depreciation (by 75 percent in 6 months), as well as continued stock price decline, helped attract foreign investors in this period. ▪ In 1998, the negative outlook on the economy and the stock market set in. As a result, inward foreign equity portfolio investment dropped sharply to only USD 0.3 billion in 1998 from USD 4.0 billion in 1997. ▪ Inward foreign equity portfolio investments decreased in line with a steadily declining stock index, as well as negative outlook on the Thai economy and volatile currency. However, it has picked up since 2002 and recorded a high growth in 2003, following the marked improvement in economic fundamentals, corporate earning and currency outlook. ▪ Net debt security inflows have declined significantly after the crisis (and recorded net outflows since 1999) as large current account surplus and improved corporate earning have allowed companies to pay off their foreign lenders. Low interest rate policy since 1999 has also prompted them to refinance their foreign debts with domestic funds.

2.2.3 Outward FDI or Thai Direct Investment Abroad



Before the 1997 crisis	After the crisis
<ul style="list-style-type: none"> Because of the restrictive policy and high domestic investment returns, outward FDI was almost negligible. More than 90 percent of outward FDI were in equity. <p>It mostly went into the manufacturing, investment and holding companies, service and real estate sectors.</p> <ul style="list-style-type: none"> Outward FDI increased from the early 1990s as a result of policy relaxation in 1994. It increased from USD 0.1 billion in 1990 to USD 0.8 billion in 1996. The important recipient countries of outward FDI were the United States, Hong Kong, the Philippines and China, accounting for over 50 percent of outward FDI during 1990-1997. 	<ul style="list-style-type: none"> Outward FDI has decreased significantly since the crisis, recording only USD 0.1 billion in 2002, in line with weak financial position of parent companies in Thailand. Thai investors have shifted their investment to Singapore and Hong Kong in line with increased intra-trade, while reducing their investment in the United States. The real estate sector is no longer a significant recipient of outward FDI.

Table 11.3: Outward Foreign Portfolio Investment

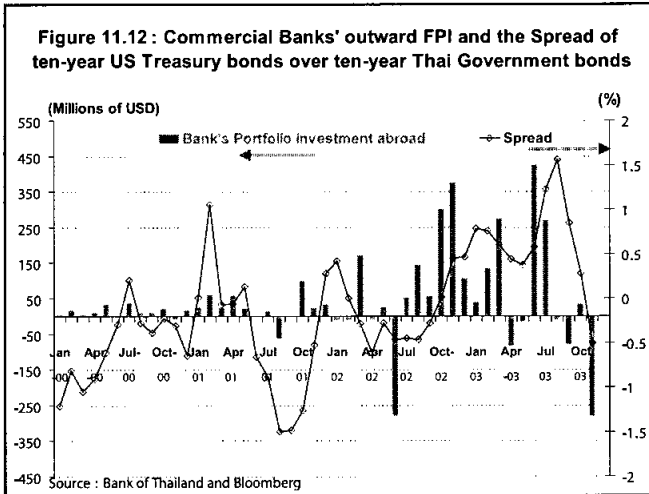
Millions of USD	1997	1998	1999	2000	2001	2002p	2003p		
Total	74	-16	0	159	289	904	484	336	182
1. Equity securities	0	0	0	0	0	0	0	0	0
1.1 Government	0	0	0	0	0	0	0	0	0
1.2 Bank	0	0	0	0	0	0	0	0	0
1.3 Other sector	0	0	0	0	0	0	0	0	0
2. Debt securities	74	-16	0	159	289	896	484	336	182
2.1 Government	0	0	0	0	0	0	0	0	0
2.2 Bank	44	-15	0	154	288	917	444	327	179
2.3 Other sector	30	-1	0	5	1	-21	40	9	3
of which private non-bank	30	-1	0	5	1	27	40	9	3

p = preliminary figures

Source: Bank of Thailand

2.2.4 Outward FPI

Portfolio investment abroad has mostly been investment in debt securities by banks. (Data before 1997 was not available). This is because of the exchange controls imposed on the non-banking sector. Since 2000, banks have markedly increased investment in debt securities abroad in order to cover their forward FX position resulting from increased hedging demand from customers. Additionally, higher yields abroad has also been a significant factor, especially since 2002 when the U.S. Treasury bond yield has become higher than that of the ten-year Thai government bonds. To promote Thai residents' investment abroad and offer alternative investment opportunities due to temporary excessive savings, Bank of Thailand has therefore, relaxed some exchange control regulations as following (more detail in section 5): 1) Since 2002, a number of mutual funds have been allowed to make portfolio investment abroad up to USD 200 million in total in a



given year. 2) Since July 2003, some institutional investors have been permitted to invest in sovereign and quasi-sovereign debt instruments issued by non-residents. As a result, outward FPI pertaining to private non-bank sector has been increasing since 2002.

3. Compilation Practices of FDI and FPI flows

The main sources of FDI and FPI data in Thailand are from:

- Foreign exchange reports by commercial banks to the Bank of Thailand (BOT) under the International Transaction Reporting System (ITRS).

- Quarterly and yearly surveys on external debts and international investment position (IIP).

Data Compilation Method	Details	Lag of Data (Until dissemination)
ITRS	<ul style="list-style-type: none"> ▪ Under the Exchange Control Act (1942), all foreign exchange (FX) transactions must be conducted through authorised banks. Currently, authorised banks are required to report all spot and forward foreign exchange transactions above USD 10,000 to the BOT on a monthly basis. Purpose of each transaction must also be specified in the report. ▪ FDI and FPI data are reported in Foreign Exchange Transaction (F.T.) Forms. 	<ul style="list-style-type: none"> ▪ Lag of 2 months.
Surveys	<ul style="list-style-type: none"> ▪ To obtain the stock data on FDI and FPI, the BOT has conducted annual International Investment Position (IIP) survey since 2001. The survey covers only the private non-banking sector, since data on the banking sector has been reported extensively to the BOT for supervision purposes. To start with, a population survey covering more than 40,000 companies was conducted in 2001 to establish the initial stock data. After that, sample surveys covering about 2,500 companies, accounting for more than 80 percent of total population equities, have been conducted annually. ▪ The BOT conducts quarterly external debt survey to adjust the data on non-banking debt security flows. This survey covers about 2,700 companies, accounting for roughly 80 percent of total outstanding debts of non-banks. 	<ul style="list-style-type: none"> ▪ Lag of 6 months for IIP data. ▪ Lag of 3 months for quarterly external debt survey.

The BOT also monitors FDI, FPI and foreign exchange movement closely through market intelligence and other indicative sources:

- (1) Close communication with authorised banks.
- (2) Daily reports of foreign exchange transactions of over USD 1 million.
- (3) Weekly telephone survey of 9 major commercial banks to obtain summary data on foreign exchange transactions in the past week, classified by purpose of transaction.

- (4) Data on secondary equity investment by foreigners are compiled and reported by the Stock Exchange of Thailand (SET) on a daily basis. The data include only companies listed on the SET.
- (5) Data on applications, approvals, and certificate issuance of projects under the Board of Investment (BOI)'s privilege program are a useful leading indicator of FDI flows. However, the data compiled by the BOI must be used with precaution because (i) they only include companies that apply for BOI's privilege and (ii) they count the total value of each project, regardless of the actual inflow of foreign direct investment.

Monthly FDI and FPI data are disseminated on the Bank of Thailand website (<http://www.bot.or.th>) and daily data on Thai stock market is posted on the Stock Exchange of Thailand website (<http://www.set.or.th>).

4. Issues on Data Collection and Effectiveness of Current Data Compilation System

One weakness of Thailand's financial liberalisation programme in the early 1990s was the inadequate capability to monitor capital flows more closely and accurately. To correct this, the Bank of Thailand has implemented a major overhaul of its capital flow data compilation and processing. There have been a number of significant efforts taken by the BOT to improve the FDI and FPI data compilation as follows:

- The BOT has reconciled flow data (from ITRS) and stock data (from surveys) of FDI and FPI and made appropriate adjustments on valuation change. The practice not only creates more reliable data but also identify the country's exposure to valuation change. Since the ITRS is reported on actual cash basis, reinvested earning is still the missing part of FDI flow statistics. Although the International Investment Position (IIP) surveys by the BOT since 2001 have produced data on reinvest earning, further consideration must be taken before they could be used in the FDI and BOP statistics, especially due to long time lag and the untested reliability of the data.
- The BOT revised foreign exchange report forms in November 2000 to obtain more detailed data on capital flows classified by type.
- The BOT has launched a major overhaul of the data compilation system for the past few years by introducing the new Data Management System (DMS) to improve the efficiency and reliability of data compilation and processing through electronic and automated reporting. The system is expected to move

towards a real time basis for some data. At present time, the coverage of data includes financial institutions and financial markets. The final phase of the DMS is to be completed by 2004.

Although much success has been achieved in the area of BOP statistics, improvement could be made further in the area of short-term flow data and information, especially when it has a direct effect on exchange rate movement. In this regard, the central bank bilateral meeting and the SEACEN capital flows expert group have allowed central banks in the region to share more information and update on exchange market developments on a regular basis.

5. Related Policy/Regulations on FDI and FPI

5.1 Current Capital Controls on FDI and FPI

Foreign investments in Thailand, both direct and portfolio investments are freely permitted. Non-residents may lend in foreign currency to residents without restriction. Both capital and loans can be freely transferred into the country and must be surrendered to an authorised bank or deposited in a foreign currency account with an authorised bank in Thailand within 7 days. Foreign investments in Thailand with promotional privileges from the Board of Investment are accorded various incentives and special benefits.

Repatriation of investment funds and repayment of overseas borrowing in foreign currency can be remitted freely upon submission of supporting evidences. Direct foreign investments by Thai residents or lending to their affiliated companies abroad not exceeding USD10 million per year do not require authorisation. For the amount above this limit, permission must be obtained from the Bank of Thailand. Buying immovable assets or securities abroad also requires approval from the Bank of Thailand.

To offer alternative investment opportunities for Thai investors, controls on portfolio investment abroad have been relaxed twice as follows:

Since 2002, a number of mutual funds, namely, AJF-Global Convertible Bond Fund, ING Thai Asian USD Bond Fund, MFC Global Equity Fund, Global Balance Fund of Funds and Ruang-Khao Global Balance have been allowed to make portfolio investment abroad up to USD 200 million in total in a given year.

Since July 2003, 6 types of institutional investors, namely, life insurance companies, government pension funds, social security funds, mutual funds (excluding

private funds), provident funds and specialized financial institutions have been allowed to invest in debt securities abroad up to USD 500 million in total in a given year. However, the demands for investment in foreign debt securities are higher than the original limit. Therefore, Bank of Thailand will approve the total investment amount. As of August 2003, the total demand for investment in foreign debts securities is USD 2.4 billion.

5.2 Foreign Ownership Limit

Banks and finance companies: Since 1997, foreign banks with sound financial status and high potential to help improve productivity in management and operation of Thai financial institutions have been allowed to hold more than 49 percent of total shares in Thai financial institutions for 10 years. Beyond 10 years, if foreign owners still end up holding more than 49 percent of total shares, they will not be forced to sell off their shares but they will not be allowed to acquire additional shares.

Non-bank companies: With the enactment of the Foreign Business Act of 1999, Thailand has also allowed foreign ownership above 49 percent for certain non-banking businesses, such as wholesaling and retailing for all categories of goods with more than Baht 100 million in capital. Following the Act, the Board of Investment has also relaxed its foreign ownership limit criterion when granting investment privileges to start-up manufacturing companies.

To promote foreign investment in companies listed in the Stock Exchange of Thailand (SET), the Thai Non-Voting Depository Receipt (NVDR) Company Limited was established in 2001 as a subsidiary of the SET. The NVDR Company issues NVDRs to foreign investors who want to invest in underlying stocks, warrants, and Transferable Subscription Rights (TRS). Under this arrangement, the NVDR Company acts as domestic nominee for foreign investors and is not subject to foreign ownership limit. By investing in NVDRs, foreign investors are entitled to all financial benefits (i.e., dividends, right issues or warrants, capital gains) of underlying stocks, except for voting right.

5.3 The Board of Investment (BOI)'s Privilege Programme

The BOI offers two types of privileges to start-up investment: tax-based privileges (such as tax holidays or tariff exemption) and non-tax privileges.

Tax-based privileges depend on several factors. Although all projects receive some common privileges, additional ones are granted to projects locating in Special

Investment Promotion Zones, producing for exports, or engaging in priority industries such as agricultural industry, fashion, automotive, ICT & electronics. Corporate income tax may be exempted or reduced for a number of years, but the total amount of a project's tax break is capped at 100 percent of invested capital. Exemption of import duty on raw or essential materials may be granted if they are used in manufacturing for exports.

Non-tax privileges include permit to bring in foreign workers and the right to own land, regardless of location, industry, or condition.

6. Thailand's Experiences on Capital Controls, Foreign Exchange Management, and Open Market Operations.

Thailand's experiences on capital controls, foreign exchange management, and open market operations can be separated into three periods: the pre-crisis, the crisis, and the post crisis periods.

6.1 The Pre-Crisis Period (1990-1996)

Stable exchange rate and financial liberalisation measures, especially the establishment of the Bangkok International Banking Facilities (BIBFs) in 1993, resulted in excessive foreign debts (with little hedging) and overheated economy in the first half of the 1990s. Asset price bubble (in the stock and real estate markets) and current account deficit also built up tremendously. Although a combination of large current account deficit, fiscal surplus, and the BOT's absorption through the repurchase market and issuance of central bank bonds helped sterilise part of the capital inflows, monetary aggregates were still growing very fast due to high money demand. Under the basket-pegged exchange rate regime that aimed to target exchange rate, open market operations (mainly intervention in the repurchase market) was only effective in smoothing out interest rate fluctuation, without really affecting its direction in a meaningful way. In fact, increased demand for funds resulted in higher domestic interest rates which in turn drew even more capital inflows. It was not until 1995 and 1996 that the BOT took action by increasing non-remunerated reserve on short-term (less than one year) non-resident Baht deposits and foreign borrowing by financial institutions as a policy signal to curve the overheated economy and foreign debts. Since the increased reserve on short-term foreign borrowing was based on original maturity, and not remaining maturity, financial institutions simply extended the maturity of new foreign borrowing to one year, without really reducing the overall level of borrowing.

In 1996, the overvaluation of the Thai Baht and intense export competition from China and other emerging markets dealt a serious blow to Thailand's exports and economic outlook. Speculation against the Thai Baht and a series of runs on finance companies led the BOT to carry out buy-sell FX swap transactions to replenish market liquidity that was being drained through the exchange rate defense. The BOT's swap operation also helped keep gross international reserves stable, while net reserves declined. In May 1997, the BOT prohibited the Thai Baht credit extension to non-residents without bona fide underlying trade and investment transactions, since currency speculators would need the Baht to settle their currency short-sell positions. This "two-tier market" measure was quite effective in curbing off-shore currency speculation, but did not necessarily help to strengthen the currency amid the financial and economic crisis. No other significant capital controls were imposed during this period.

6.2. The Crisis Period (1997-2001)

After the floating of the Baht on July 2, 1997, Thailand entered the IMF assistance programme in August 1997, and for the first two years the monetary and fiscal policies were contractionary to fight against inflation. Open market operations were still centred around the repurchase market. The two-tier market measure remained in effect until January 1998 when it was relaxed to allow delivery of the Thai Baht to non-residents without bona fide underlying trade and investment transactions up to 50 million Baht per entity. Some additional capital control measures were introduced during this period to help achieve exchange rate stability, including (i) the reduction in maximum foreign-currency holding period from 15 days to 7 days, (ii) the reduction in maximum term of trade credit provided by Thai exporters from 180 days to 120 days, and (iii) the requirement that Thai residents who owned foreign-currency deposit accounts must prove that they have foreign-currency payment obligations within the next 3 months.

6.3 The Post-Crisis Period (Since 2002)

After the new Thaksin government took office in 2001, a number of economic stimulation programmes have been implemented with great success, for example, the village fund programme, the public health insurance programme, the low cost housing programme, and the export promotion programme. The Thai Asset Management Corporation was also established to deal with the NPL problem of public and private banks. Over time, confidence returned and portfolio inflows came back to invest in the stock market, pushing the SET index from 304 at the end of 2001 to 356 and 772 at the end of 2002 and 2003, respectively. However, FDI has been small since the overall capacity utilisation remains low (a little above

60 percent) and excess domestic liquidity still exists. Later, the authorities felt confident enough to relax capital controls on portfolio outflows to capture higher returns abroad as summarised in Section 5.1 of this paper. As a result, investment in foreign portfolio by the non-banking sector has increased from USD 1 million in 2001 to USD 27 million in 2002 and USD 52 million during January-September 2003.

When certain signs of currency speculation emerged, the BOT made an announcement in September 2003 to request cooperation from financial institutions to limit their outstanding balance of the Baht borrowing or engaging in transactions comparable to the Baht borrowing with a contract maturity not exceeding 3 months from nonresidents without bona fide underlying trade and investment transactions up to 50 million Baht per entity. In October 2003, the BOT made additional announcement to limit end-of-day balance of nonresident Baht accounts to Baht 300 million per non-resident.

7. The Relationship between Inward FDI/ FPI and Key Macroeconomic Variables

There have been a growing number of empirical literatures on the impact of foreign investment on the economy. Some recent studies have reported positive effects of FDI and FPI on macroeconomic variables (Borzenstein et al., 1998; Bekaert and Harvey, 1998-2000). Another study found that FPI has no significant effect, while FDI has influence on macroeconomic volatility (Durham, 2003).

This paper investigates the impact of inward FDI and FPI flows on macroeconomic and monetary policy variables in Thailand by employing the Granger causality test. The Augmented-Dickey-Fuller (ADF) unit root tests are conducted to test and transform data to attain stationary time series for the causality test. (Details of methodology and results are shown in Appendix 11.1). Quarterly data (1993:1 to 2003:2) and monthly data (1997:07 to 2003: 10) are used, depending on availability. For example, gross domestic product, private investment and consumption are available only on a quarterly basis. Monthly data are only available since 1997. Moreover, some macro economic variables are employed to test with FDI and FPI flows are different due to the different nature of flows.

The Granger causality test found a unidirectional causality from nominal gross domestic product and private investment to inward FDI. This is to be expected since economic growth and investment are powerful pull factor for inward FDI. On the other hand, inward FDI has not caused GDP and private investment. This may be because of the small share of inward FDI to GDP and to private investment

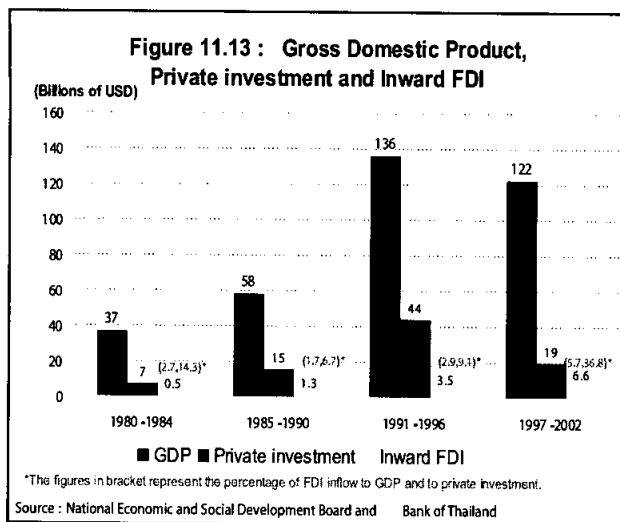
Direction of Causality from Granger's Tests

$$Y_t = \alpha_0 + \sum_{i=1}^n \alpha_i Y_{t-i} + \sum_{i=1}^n \beta_i X_{t-i}$$

Inward Foreign Direct Investment

Result from data group 1 (Quarterly data)					
Y	X	Lags (quarter)	F-Statistic	Probability	Results
ΔFDI	ΔGDP	4	0.41015	0.79977	FDI \nrightarrow GDP
ΔGDP	ΔFDI _{In}	4	6.60443	0.00071	GDP \rightarrow FDI
ΔFDI	ΔExport(sa)	4	2.99298	0.03557	FDI \rightarrow Export(sa)
ΔExport(sa)	ΔFDI	4	1.01901	0.41455	Export(sa) \nrightarrow FDI
ΔFDI	ΔPI	3	0.0544	0.98294	FDI \nrightarrow Pri_Inv
ΔPI	ΔFDI	3	3.62486	0.0237	Pri_Inv \rightarrow FDI
ΔFDI	ΔDD	4	0.30069	0.87499	FDI \nrightarrow DD
ΔDD	ΔFDI	4	5.83291	0.00152	DD \rightarrow FDI
ΔFDI	Inflation	5	1.33788	0.28096	FDI \rightarrow Inflation
Inflation	ΔFDI	5	2.08653	0.10078	Inflation \nrightarrow FDI

FDI = Inward foreign direct investment, GDP = Nominal gross domestic product, Export(sa) = Seasonal adjusted export value, PI = Private investment, DD = Domestic demand and Inflation = Inflation rate



(approximately 2.2 percent of GDP and 11.6 percent of private investment during 1990-2002).

- The Granger causality test also found a unidirectional causality from inward FDI to export. This is in line with the fact inward FDI has been concentrated in the Thai export sector. The important recipient sectors for inward FDI into Thailand after the crisis are electrical machinery and appliances, machinery and transport equipment, metal and non-metallic which accounted for 40.7 percent of total exports during 1998-2002.
- The test discovered a unidirectional relationship from domestic demand to inward FDI. The MNCs have expanded their investment to be close to the customer base. Based on the BOI's investment project data during 1996-April 2003, FDI to serve domestic demand accounted for 69.6 percent, while the rest was for exports.
- The test could not find significant causality between inward FDI and inflation rate.



Inward Foreign Portfolio Investment

Results from data group 1 (Quarterly data)					
Y	X	Lags (quarter)	F-Statistic	Probability	Results
Δ FPI	Δ GDP	4	2.07406	0.11102	FPI \nrightarrow GDP
Δ GDP	Δ FPI	4	2.3007	0.08352	GDP \nrightarrow FPI
Δ FPI	Δ PC	4	2.80746	0.04459	FPI \rightarrow PC
Δ PC	Δ FPI	4	2.62053	0.05611	PC \nrightarrow FPI
Δ FPI	Δ PI	4	1.15966	0.34962	FPI \nrightarrow PI
Δ PI	Δ FPI	4	4.75068	0.00472	PI \rightarrow FPI
Δ FPI	Δ Inflation	4	2.61045	0.05681	FPI \nrightarrow Inflation
Δ Inflation	Δ FPI	4	0.99602	0.4261	Inflation \nrightarrow FPI

FPI = Inward Foreign portfolio investment, GDP = Nominal gross domestic product, PC = Private consumption, PI = Private investment, CR/GDP = Credit to gross domestic product and Inflation = Inflation rate

- The Granger causality test found that inward FPI caused private consumption while it did not cause nominal gross domestic product, private investment and

inflation rate. Therefore, the effects of FPI on most macroeconomic variables were unclear since Thai businesses have traditionally relied on credit more than equity financing.

- The test discovered that PI attracted inward FPI to Thailand.

Results from data group 2 (Monthly data)					
Y	X	Lags (quarter)	F-Statistic	Probability	Results
FPEI	Δ SET	4	0.72444	0.57863	FPEI \nrightarrow SET
Δ SET	FPEI	4	0.75668	0.55751	SET \nrightarrow FPEI

FPEI = Foreign portfolio equity investment and SET = Stock market index

- The test could not find significant causality between inward foreign equity portfolio investment and stock market index. This may be because there were many other internal and external factors that could influence the Thai stock market such as the movement of foreign stock prices, the expectation on Thai Baht, political issues and the economic fundamental outlook. Moreover, foreign investments in the Thai stock market have also come from the non-resident Baht deposit accounts that may not be captured by foreign equity portfolio investment statistics.

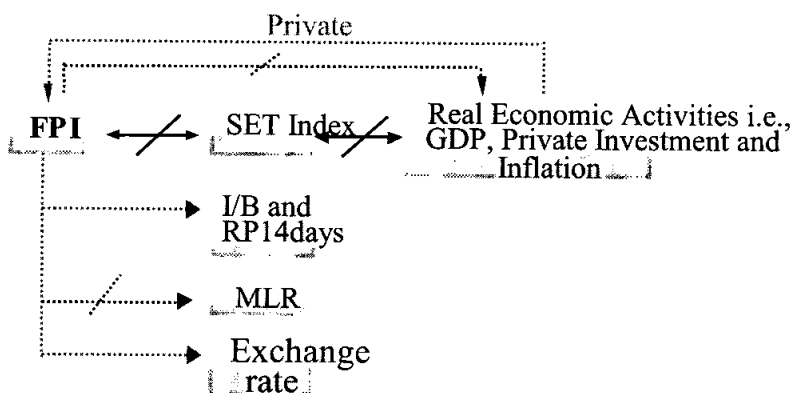
Results from data group 2 (Monthly data)					
Y	X	Lags (quarter)	F-Statistic	Probability	Results
FPEI	IB	4	4.31098	0.00385	FPEI → IB
IB	FPEI	4	0.14061	0.96646	IB ↗ FPEI
FPEI	RP 14D	4	12.6198	0.00000014	FPEI → RP14D
RP14D	FPEI	4	0.79052	0.53578	RP 14D ↗ FPEI
FPEI	Δ MLR	4	0.22059	0.92593	FPEI ↗ MLR
ΔMLR	FPEI	4	1.4972	0.21443	MLR ↗ FPEI

FPEI = Inward foreign portfolio equity investment, IB = Interbank rate, RP 14D = 14-day repurchase rate and MLR = Minimum lending rate (Prime rate)

- The Granger causality test found a unidirectional causality from inward foreign portfolio equity investment to short-term interest rates: interbank rate and 14-day repurchase rate (which is Thailand's monetary policy rate). However, it did not cause the minimum lending rate (prime rate). This implies that FPEI flows were short-term in nature.
- Finally, the test found causality between FPEI and exchange rate. This means that the movement of FEPI would affect the movement of exchange rate and vice versa. This is to be expected since after Thailand floating the Baht and foreign investors have been being very bullish about the Baht value and the Baht assets after the new Thaksin government taking office in 2001.

Result from data group 2 (Monthly data)					
Y	X	Lags (quarter)	F-Statistic	Probability	Results
FPEI	EXRATE	4	4.93064	0.00162	FPEI → EXRATE
EXRATE	FPEI	4	5.81008	0.00049	EXRATE → FPEI

FPEI = Inward foreign portfolio equity investment and EXRATE = Exchange rate



8. Conclusion and Policy Recommendation

Managing and monitoring direct and portfolio investment flows has always been a challenge to policymakers, especially after the Asian crisis. Suitable and flexible policies regarding these flows would certainly be beneficial to recipient countries. To this end, the understanding of the dynamic nature of FDI and FPI flows is crucial. This paper explains and analyses FDI and FPI before and after the crisis in the context of Thailand. A number of key points could be made as follows:

- (1) FDI in Thailand has been quite low, averaging at only USD 2.0 billion or 1.7 percent of GDP during 1989 – June 2003, excluding the period during 1998-2001 when there were large recapitalisation in the banking and non-banking

sectors to cover losses from the crisis. This is because investment in Thailand has been heavily financed by bank credits, especially borrowing from the Bangkok International Banking Facilities during 1993-1996. One should be aware of this systemic "financing preference bias" when making country comparison on FDI.

- (2) Although the percentage of FDI to GDP has been small, companies with FDI have contributed significantly to Thai exports because they have been concentrated in the export industries, including electrical machinery and appliances, telecommunication equipment, generator and motors, and metal products. The Asian crisis has also shown that companies with high FDI were able to withstand the economic and financial crisis better. Aside from low leverage ratios that shield them from banking crisis and liquidity crunch, they also have access to capital and know-how from their parent companies. Therefore, making FDI cheaper than other sources of financing should be desirable policy for all emerging market economies.
- (3) By nature, FPI in Thailand has been volatile and has had a larger effect on stock price movement than by investment from domestic investor. Hong Kong and Singapore have been important sources of FPI in Thailand while FPI flows from the United States and the EU have been more volatile. However, the data may not accurately identify end-investors, since part of FPI from Hong Kong and Singapore may have originated in other regions with more distant time zones.
- (4) The Bank of Thailand has implemented a major overhaul of its capital flow data compilation and processing. Although much success has been achieved in the area of BOP statistics, improvement could be done further in the area of short-term flow data and information, especially when it has a direct effect on exchange rate movement. Because of diverse experiences within the SEACEN countries, this comprehensive study may result in some useful recommendations and cooperation in this area.
- (5) Except for some controls on Thai residents' investment abroad, Thailand has always been free of capital controls since the early 1990s. Even amid the crisis and growing internal pressure to impose capital controls to curve currency depreciation, only a few selective measures against pure currency speculations were taken. This policy stance has proven beneficial to Thailand as confidence and capital inflows have returned more quickly after fundamental problems with the economy and financial system have been resolved. Exchange rate flexibility has also helped keep Thai export competitive to facilitate economic recovery.

References

1. Balance of Payments Manual, Fifth Edition (1993), International Monetary Fund, Chapter 18-19.
2. Bekaert G. and C. Harvey (2000), "Foreign speculators and Emerging Equity Markets," *Journal of Finance*, Vol. 55 (April), p.565-613.
3. Bank of Thailand Economic Focus (1998), *Focus on the Thai Crisis*, April-June, Vol.2, No.2.
4. Chayawadee Chai-anant (2003), "Friends or Foes? Foreign Investors in the Thai Stock Market During 1994-1998," *Bank of Thailand Discussion Paper*, DP/04/2003.
5. Damodar N. Gujarati (1995), *Basic Econometrics*, Third Edition, p.718-722.
6. Douglas H. Brooks, Emma Xiaoqin Fan and Lea R. Sumulong (2003), "Foreign Direct Investment in Developing Asia: Trends, Effects, and Likely issues for the Forthcoming WTO Negotiations," *ERD Working Paper Series*, No.38.
7. Durham, J.B. (2000), "Econometrics of the Real Effect of Cross-border Capital Flows in Emerging Markets," *Queen Elizabeth House (QEH) Working Paper*, Number 52.
8. Durham, J. B. (2003), "Absorptive Capacity and the Effects of Foreign Direct Investment and Equity Foreign Portfolio Investment on Economic Growth," *European Economic Review*, forthcoming.
9. Durham, J. B. (2003), "Foreign Portfolio Investment, Foreign Bank Lending, and Economic Growth," *International Finance Discussion Papers*, No 757.
10. Edison, J., R. Levine, Ricci, and T. Slok. (2002), "International Financial Integration and Economic Growth," *NBER Working Paper Series*, No. 9164.
11. Granger, C.W.J. (1980), "Testing for Causality: A Personal Viewpoint," *Journal of Economic Dynamics and Control*, Vol.2, p. 329-352.
12. Habibullah Khan and Koh Bee Leng (1995), "Foreign Direct Investment, Export and Economic Growth in the Three Little Dragons: Evidence from Cointegration and Causality Tests," *The Singapore Economic Review*, Vol. 42, No. 2 p. 40-60.

13. John Gionea. (2003), *International Trade and Investment*, An Asia-Pacific Perspective.

APPENDIX 11.1

Results of the Unit Root Tests

The augmented Dickey-Fuller (ADF) test is employed to determine whether each data series is stationary.

This study comprises 2 groups of data as follows:

Group1: Quarterly data series from 1993:1 to 2003:2

Group2: Monthly data series from 1997:07 to 2003:10

In short, group 1 data is employed to study the impact of inward FDI and FPI on economic activities, including gross domestic product, private investment, private consumption, domestic demand, export and inflation rate. Group 2 of data is employed to study the impact of inward FDI and FPI on interest rate, exchange rate and stock index.

The results of stationarity test:

Group1: The results indicate that every series except for inflation rate exhibits a unit root at 5 percent critical value. They are stationary at the first difference.

Series	p ^a	AIC	D.F. t-stat ^b	MacKinnon	ADF test's Result ^d
FDI	1	1.349392	-1.847561	-2.6059	Accepted
D FDI	2	1.423776	-5.323608	-3.6117	Rejected*
FPI	4	1.947272	-1.246311	-2.6092	Accepted
D FPI	3	1.942109	-4.522972	-3.6171	Rejected*
GDP	1	4.485807	-2.705835	-3.1949	Accepted
DGDP	1	4.545807	-4.286656	-3.605593	Rejected*
PI	9	3.046827	-1.077648	-1.949609	Accepted
D PI	1	3.027295	-2.741679	-2.625606	Rejected*
PC	2	3.512302	-2.752672	-3.1949	Accepted
D PC	2	3.594352	-3.704312	-3.6117	Rejected*
DD	1	4.654403	-2.305851	-3.1931	Accepted
D DD	1	4.767927	-3.172431	-2.9378	Rejected**
Inflation	1	2.568018	-3.899776	-3.5247	Rejected**
Export(sa)	7	1.777448	-1.421627	-2.945842	Accepted
D Export(sa)	11	1.789261	-3.996739	-3.626784	Rejected*

Note: a. p is the optimal lag length which gives the smallest AIC

b. Augmented Dickey-Fuller t-statistic is the t-statistic on the coefficient of the lagged test variable (X_{t-1})

c. * Significant at the 0.01 level

** Significant at the 0.05 level

*** Significant at the 0.10 level

d. Ho: non-stationary

e. D refers to the first differential operator

Definition: FDI = Inward foreign direct investment, FPI = Inward foreign portfolio investment,

GDP = Nominal gross domestic product, PI = Private investment, PC = Private consumption

DD = Domestic demand, Inflation = Inflation rate, and Export(sa) = Seasonal adjusted export value

Group 2: The results indicate that the series that are stationary at level data are inward foreign direct investment, inward foreign portfolio equity investment, exchange rate, interbank rate, and 14-day repurchase rate. Meanwhile, the minimum lending rate and stock index are stationary at the first difference.

Series	p ^a	AIC	D.F. t-stat ^b	MacKinnon Critical ^c	ADF test's Result ^d
FDI	8	14.25124	-5.562528	-3.521579	Rejected*
FPI	1	12.99965	-4.80986	-2.597025	Rejected*
FPEI	2	-2.144701	-5.148365	-3.524233	Rejected*
EXRATE	11	3.8972	-3.996368	-3.521579	Rejected*
I/B	14	2.415265	-4.499703	-3.531592	Rejected*
RP14D	13	-0.564893	-16.97536	-3.536587	Rejected*
MLR	9	0.029916	-2.871767	-3.473447	Accepted
D MLR	13	0.118223	-10.72558	-4.090602	Rejected*
SET	9	10.36679	-2.474429	-2.901779	Accepted
D SET	30	10.38027	-5.255941	-4.090602	Rejected*

Note: a. p is the optimal lag length which gives the smallest AIC

b. Augmented Dickey-Fuller t-statistic is the t-statistic on the coefficient of the lagged test variable (X_{t-1})

c. * Significant at the 0.01 level

** Significant at the 0.05 level

*** Significant at the 0.10 level

d. Ho: non-stationary

e. D refers to the first differential operator

Definition: FDI = Inward foreign direct investment, FPI = Inward foreign portfolio investment,

FPEI = Inward foreign portfolio equity investment, EXRATE = Exchange rate, I/B = Interbank rate

RP14D = 14-day repurchase rate, MLR = Minimum lending rate, and SET = Stock index