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Indonesia, Malaysia and the East Asian Crisis:
An Analysis of Remedies

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Contents

List of figures and tables

Abbreviations

Preface and Acknowledgments

Chapter 1 – The ‘Rise’ of East Asia – The East Asian Miracle

1.1 Growth and Development in East Asia: Overview of the East Asian Miracle

1.2 The ‘East-Asian’ Miracle

1.2.1 The View of the World Bank, ADB and Hali Hill

1.2.1.1 The World Bank Study

1.2.1.2 The View of ADB

1.2.1.3 The View of Hali Hill

1.2.2 Different Views: Jomo, Krugman and other Scholars

1.2.2.1 The View of Jomo

1.2.2.2 The View of Paul Krugman

1.2.2.3 The View of other Scholars

1.3 A Deeper Look at Indonesia

1.3.1 A Brief Overview

1.3.2 Early Independence and the Sukarno Era: 1949-1965

1.3.3 The New Order and President Soeharto: 1966-1998

1.3.3.1 A Short Overview

1.3.3.2 A Deeper Look

1.4 A Deeper Look at Malaysia

1.4.1 A Short Overview

1.4.2 The Early Years of Independence

1.4.3 The Period After the Riots in 1969

1.4.4 The Dr Mahathir Mohamad Era Until the Early Crisis Period

1.5 Conclusion

Chapter 2 – The East Asian Crisis

2.1 Chronology of the Crisis

2.1.1 A Chronology of the Crisis in Indonesia

2.1.2 A Chronology of the Crisis in Malaysia

2.2 Causes and Theoretical Models

2.2.1 Causes

2.2.2 Theoretical Models

2.2.2.1 The Three Generations of Crisis Models

2.2.2.1.A First-Generation Crisis Model

2.2.2.1.B Second-Generation Crisis Model

2.2.2.1.C Third-Generation Crisis Model

2.2.2.1.C.a Ahgion, Bacchetta and Banerjee (2000; 2001; 2004)

2.2.2.1.C.a1 Ahgion, Bacchetta and Banerjee (2000;
2001)

2.2.2.1.C.a2 Ahghion, Bacchetta and Banerjee (2004)

2.2.2.1.C.b Chang and Velasco (1998a, b) and Cèspedes, Chang
and Velasco (2000)

2.2.2.1.C.c Krugman (1999a, b; 2001)

2.2.2.2 The 'Financial Instability Hypothesis' by Hyman P. Minsky

2.3 Conclusion

Chapter 3 – Remedies at Disposal for Countries

3.1 Domestic Policies: Countries and their Instruments at Disposal

3.2 Aid from Outside: International Financial Community, International Organizations and
Closely Connected Countries

3.2.1 International Financial Community

3.2.2 International Organizations

3.2.3 Closely Connected Countries

3.3 Conclusion

Chapter 4 – Country Specific Remedies: Differences of Policies Applied to Indonesia and Malaysia

4.1 Country Presentation: Commonalities and Differences

4.2 Policies Applied by Indonesia

4.2.1 Political Events in Indonesia

4.2.2 Economic Developments

4.3 Policies Applied by Malaysia

4.3.1 The First Stage of Policy Response

4.3.2 Turning Around Policies – The Introduction of Capital Controls

4.3.2.1 The Banking Sector Restructuring

4.3.2.2 Ownership and Governance in Malaysia

4.3.2.3 Political Implications of the Crisis

4.3.3 The Role of Capital Controls and the Controversy

4.4 Conclusion

Chapter 5 – Comparing Indonesia and Malaysia – A Qualitative Approach

5.1 Governance

5.2 Corporate Governance

5.2.1 Corporate Governance: Introduction

5.2.1.1 The OECD and the Initiatives on Corporate Governance

5.2.2 Corporate Governance in Indonesia and Malaysia

5.2.2.1 Corporate Governance in Indonesia

5.2.2.2 Corporate Governance in Malaysia

5.2.3 Corporate Governance in the Banking Sector

5.2.3.1 Corporate Governance in Banking Sector in Indonesia and Malaysia

5.3 Comparing Government Revenues and Expenditures

5.4 Conclusion

Chapter 6 – Comparing Indonesia and Malaysia – A Quantitative Approach

6.1 Data

6.2 Hypothesis

6.3 Methodology

6.3.1 Indicator Analysis

6.3.1.2 Expected Results

6.3.2 Difference-In-Difference Analysis

6.3.2.1 The Model

6.3.2.2 The Methodology

6.3.2.3 Expected Results

6.3.3 Ordered Logistic Regression Analysis

6.3.3.1 The Model

6.3.3.2 The Methodology

6.3.3.3 Expected Results

6.3.4 Quantile Regression Analysis

6.3.4.1 The Model

6.3.4.2 The Methodology

6.3.4.3 Expected Results

6.4 Conclusion

Chapter 7 – Discussion of Results

7.1 Indicator Analysis

7.2 Difference-In-Difference Analysis

7.3 Ordered Logistic Regression Analysis

7.3.1 Discussion of Results

7.4 Quantile Regression Analysis

7.4.1 Discussion of Results

7.5 Conclusion

Chapter 8 – Conclusion

8.1 Conclusion and Future Discussion

References

Appendix

Figures

- Figure 1.1 A Functional Approach to Growth
- Figure 2.1 Vulnerability in Southeast Asia
- Figure 2.2 The Process Leading to the Crisis
- Figure 3.1 Impossible Trinity
- Figure 3.2 Monthly Interest Rates in Indonesia, Malaysia and the USA
- Figure 3.3 IMF Prescription/East Asia Dilemma
- Figure 4.1 Monthly Change of Exchange Rates (vs. the US Dollar) of Indonesian Rupiah and Malaysian Ringgit
- Figure 4.2 Indonesia's Oil Production and Consumption
- Figure 4.3 Malaysia's Oil Production and Consumption
- Figure 4.4 Restructuring Plan of the Banking Sector in Malaysia
- Figure 4.5 Implementation of Recommendations into the Financial Sector Masterplan (2001-2010)
- Figure 5.1 Governance in Indonesia (1996, 2000, 2002-2005)
- Figure 5.2 Governance in Malaysia (1996, 2000, 2002-2005)
- Figure 5.3 Governance: Indonesia vs. Regional Average (2005)
- Figure 5.4 Governance: Malaysia vs. Regional Average (2005)
- Figure 5.5 Governance: Indonesia vs. Income Category Average (2005)
- Figure 5.6 Governance: Malaysia vs. Income Category Average (2005)
- Figure 5.7 Governance: Indonesia vs. Malaysia (2005)
- Figure 5.8 Framework of Corporate Governance
- Figure 5.9 The Indonesian Agenda on Corporate Governance Implementation
- Figure A.4.1 Monthly Exchange Rate Movement of Indonesian Rupiah
- Figure A.4.2 Monthly Exchange Rate Movement of Malaysian Ringgit
- Figure A.7.1 Indonesia: Exchange Rate
- Figure A.7.2 Malaysia: Exchange Rate
- Figure A.7.3 Exchange Rates: Daily Change (percentage,1990-2005)
- Figure A.7.4 Real Effective Exchange Rate
- Figure A.7.5 Indonesia: Interest Rate

- Figure A.7.6 Malaysia: Interest Rate
- Figure A.7.7 Indonesia: JSX Composite Index
- Figure A.7.8 Malaysia: KLSE Composite Index
- Figure A.7.9 Stock Market Indices, Monthly Change (percentage)
- Figure A.7.10 JP Morgan Trade Weighted Index Indonesia vs. Malaysia (1990-2005)
- Figure A.7.11 Capital Flight (Net): Indonesia vs. Malaysia
- Figure A.7.12 Indonesia: Financing
- Figure A.7.13 Malaysia: Financing
- Figure A.7.14 Indonesia: Trade Indicators
- Figure A.7.15 Malaysia: Trade Indicators
- Figure A.7.16 Indonesia: Labour Market
- Figure A.7.17 Malaysia: Labour Market
- Figure A.7.18 Indonesia: Money Supply
- Figure A.7.19 Malaysia: Money Supply
- Figure A.7.20 Indonesia: Export Markets
- Figure A.7.21 Malaysia: Export Markets
- Figure A.7.22 Indonesia: Share of Export Products
- Figure A.7.23 Malaysia: Share of Export Products
- Figure A.7.24 Indonesia: Fund Position
- Figure A.7.25 Indonesia: CPI vs. CPI Food

Tables

Table 1.1	Convergence and Growth Rates of Real GDP
Table 1.2	Structural Change (percentage Share of Sectors in GDP)
Table 1.3	Share of Manufacturing Value Added in GDP (percentage)
Table 1.4	Social Development Indicators
Table 1.5	Contrasting Interpretation of Southeast Asian's Success Issues
Table 1.6	Growth Theories and East Asia
Table 1.7	Basic Economic and Monetary Data
Table 1.8	Indonesia and Malaysia – Basic Information
Table 1.9	Indonesia: Debt Outstanding to Foreign Commercial Banks (Billions of US\$)
Table 1.10	Indonesia: Summary of Deregulation in Banking, Deposit and Loan Markets
Table 1.11	Pre-Crisis Situation of Indonesia
Table 1.12	Malaysia: Summary of Deregulation in Banking, Deposit and Loan Markets
Table 1.13	Net Capital Flows to East Asia, Indonesia and Malaysia (Millions of US\$)
Table 1.14	Pre-Crisis Situation of Malaysia
Table 2.1	Currency Movement and Depreciation (in Local Currency per US Dollar)
Table 2.2	Chronology of the Crisis
Table 2.3	Net Capital Flows to East Asia (Millions of US\$)
Table 2.4	Distribution of Loans by Country of Origin (Major Creditor's Country of Provenience) – End of June 1997 (Millions of US\$)
Table 2.5	Loan Maturity: Maturity Distribution of Lending of BIS Reporting Banks – Until June 1997 (Millions of US\$)
Table 2.6	Lending by BIS Reporting Banks – End of June 1997 (Millions of US\$)
Table 2.7	Key Economic Variables of East Asian Economies Before the Crisis
Table 3.1	Exchange Rate Regimes in the Crisis Countries before the East

Asian Crisis

Table 4.1	Outstanding Local Currency Bonds in East Asian Crisis and East Asian Emerging Countries
Table 4.2	Net Private Capital Flows to Indonesia, Malaysia, the Republic of Korea and Thailand (1990-2001) (Billions of US\$)
Table 4.3	Short and Total Debt in Indonesia and Malaysia (1991-2004)
Table 4.4	Inflation in Indonesia, Malaysia, the Republic of Korea and Thailand (1991-2005) (percentage Change of Consumer Price Index over Previous Year)
Table 4.5	Indonesia's Official Reserves
Table 4.6	Changes in the Distribution of Natural Revenue since Decentralization in Indonesia
Table 4.7	Overview of Key-Points of Policy Package in September 1998 for Indonesia
Table 4.8	Loan Classification and Reserve Requirements in Malaysia in 1997-1998
Table 4.9	Progress of Corporate Debt Restructuring in the Four East Asian Crisis Economies (1999)
Table 4.10	Methodology and Degree of Methodological Rigor of East Asian Crisis Country Studies
Table 4.11	Summary of Key Findings on 'Effectiveness' on Controls on Capital Outflows
Table 5.1	Governance in Indonesia
Table 5.2	Governance in Malaysia
Table 5.3	Scores of Five Areas of Corporate Governance for East Asian Countries
Table 5.4	Total Score for all 10 Questions Asked on Investor Perception in East Asia
Table 5.5	Rankings of East Asian Countries on Corporate Governance (2000-2004)
Table 5.6	Corporate Governance Ratings in Southeast Asia (2001)

Table 5.7	Indonesian Ratings for Macro-Determinants of Corporate Governance (2001-2004)
Table 5.8	Indonesian Ratings for Macro-Determinants of Corporate Governance (2003 and 2004 with Comments)
Table 5.9	Malaysian Ratings for Macro-Determinants of Corporate Governance (2001-2004)
Table 5.10	Composition of External Finance for East Asian Economies (in percentage Shares of Total)
Table 5.11	The Costs of Banking Crises
Table 5.12	Overview of the Banking System and NPLs, End 2002 (in percentage)
Table 5.13	Challenges in Governance of Financial Institutions
Table 5.14	Percentage of Bank Capital to Assets in East Asian Economies (in percentage)
Table 5.15	Corporate and Financial Sector Comparison for Asian Crisis Countries (1998 and 2003)
Table 5.16	Share of Total Deposits (in percentage)
Table 5.17	Indonesia: Actual and Projected Central Government Revenues and Expenditures (Deflated, in Billions of 2003 Rupiah – Year-Over-Year Percentage Change in Brackets)
Table 5.18	Malaysia: Actual and Projected Central Government Revenues and Expenditures (Deflated, in Billions of 2003 Ringgit – Year-Over-Year Percentage Change in Brackets)
Table 7.1	Results: Indicators of Indonesia and Malaysia
Table 7.2	Results: Difference-in-Difference Analysis: Monthly Data
Table 7.3	Results: Difference-in-Difference Analysis: Quarterly Data
Table 7.4	Indonesia: Descriptive Statistics of Corporate Data Used
Table 7.5	Malaysia: Descriptive Statistics of Corporate Data Used
Table A.3.1	Interest Rates in Indonesia, Malaysia and the USA
Table A.4.1	Overview of Capital and Exchange Control Measures Before and After September 1 st 1998
Table A.5.1	Summary of Questionnaires and Answers

Table A.5.2	Legal and Regulatory Environment
Table A.7.1	Indonesia: Ordered Logistic Regression – ALL (1991-2004)
Table A.7.2	Indonesia: Ordered Logistic Regression – EX-FINANCE (1991-2004)
Table A.7.3	Malaysia: Ordered Logistic Regression – ALL (1991-2004)
Table A.7.4	Malaysia: Ordered Logistic Regression – EX-FINANCE (1991-2004)
Table A.7.5	Indonesia: Quantile Regression (1991-2004)
Table A.7.6	Malaysia: Quantile Regression (1991-2004)

Abbreviations

ACC	Asian Consultative Council
ACGA	Asian Corporate Governance Association
ADB	Asian Development Bank
AGRI	Asian Growth and Recovery Initiative
AGRP	Asian Growth and Recovery Program
AMF	Asian Monetary Fund
APEC	Asia-Pacific Economic Cooperation
APT	ASEAN-Plus-Three
APTSP	ASEAN-Plus-Three Surveillance Process
ARIC	Asian Regional Integration Center
ASEAN	Association of South East Asian Nations
ASP	ASEAN Surveillance Group
BIS	Bank for International Settlement
BNI	Bank Negara Indonesia
BNM	Bank Negara Malaysia
BPS	Badan Pusat Statistik
CAR	Capital Adequacy Ratio
CDRC	Corporate Debt Restructuring Committee
CEF	Compensatory Financing Facility
CPI	Consumer Price Index
CR	Current Ratio
EIA	Energy Information Administration
EU	European Union
FDI	Foreign Direct Investment
G-7	Group of Seven
G-10	Group of TEN
GNP	Gross National Product
GDP	Gross Domestic Product
HIBOR	Honk Kong Inter-Bank Offered Rate
HPAEs	High-Performing Asian Economies

IBRA	Indonesian Bank Restructuring Agency
IBRD	International Bank for Reconstruction
IDA	International Development Agency
IFI	International Financial Institutions
IGAAP	International Generally Accepted Accounting Principles
IIMA	Institute for International Monetary Affairs
INDRA	Indonesian Debt Restructuring Agency
IMF	International Monetary Fund
IOSCO	International Organisation of Securities Commissions
IPO	Initial Public Offering
JBIC	Japan Bank of International Cooperation
JIBOR	Jakarta Inter-Bank Offered Rate
JSE	Jakarta Stock Exchange
KLCI	Kuala Lumpur Composite Index
KLSE	Kuala Lumpur Stock Exchange
LNG	Liquefied Natural Gas
MFG	Manila Framework Group
MIDA	Malaysian Industrial Development Authority
NDP	National Development Policy
NEP	New Economic Policy
NIE	Newly-Industrializing Economy
NMI	New Miyazawa Initiative
NPLs	Non-Performing Loans
NTBs	Non-Tariff Barriers
OECD	Organization for Economic Co-Operation and Development
OLS	Ordinary Least Squares
OM	Operating Margin
OPEC	Organization of the Petroleum Exporting Countries
PER	Price/Earnings Ratio
PPM	Post-Program Monitoring
PPP	Purchasing Power Parity
RM	Malaysian ringgit
ROA	Return on Assets

ROE	Return on Equity
RP	Indonesian rupiah
SC	Securities Commission
SES	Stock Exchange of Singapore
SOEs	State-Owned Enterprises
SRR	Statutory Reserve Requirement
UMNO	United Malay National Organisation
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
USA	United States of America
US\$	US dollar
WTO	World Trade Organization
WWII	World War II

Preface and Acknowledgments

'The world seems not to have learned from experience in the past. It may do so in the future.'
(Charles P. Kindleberger (1996), p. 19).

The unprecedented and stable economic growth of many East Asian countries in the second half of the last century attracted the attention of many economists, institutions and the international financial community. The sudden outbreak of the crisis in summer 1997 in Thailand and its fast spread across the region and beyond was a surprise to most observers. The policy actions taken during the Crisis differed across the economies although the recovery of most of the crisis hit countries was rather fast following a 'V-recovery'.

This dissertation tries to explain the outcome and differences of the two major policy actions that were taken by countries during and shortly after the East Asian Crisis, i.e. the so-called 'orthodox' policies following mainly the policy advice of the IMF and the 'unorthodox' policies as imposed by Malaysia. The analysis of these two policy actions will be discussed on the example of Indonesia and Malaysia covering qualitative and quantitative analyses. The goal of this study is to show that countries have at disposal 'orthodox' as well 'unorthodox' policies in a crisis situation. Furthermore, this dissertation should show that the selection of economic policies should consider the circumstances leading to a crisis and the possible threats and benefits of the various policy choices. This is done by analyzing the policies used during a third-generation crisis on the successful example of Malaysia and the less successful example of Indonesia.

This dissertation has been benefited from the comments of my supervisors, Prof. Kunibert Raffer and Prof. Michael Landesmann, and discussions during the research visit at the Asia-Europe Institute (Universiti Malaya, Kuala Lumpur/Malaysia) in 2005/2006. Furthermore I would like to thank Prof. Yuriy Kaniovskyi and Prof. Alfred Steinherr for the discussions and impulses given. For any remaining errors I assume the responsibility.

1

The 'Rise' of East Asia – The East Asian Miracle

In the 1990s East Asia experienced a 'rise and fall' in the international financial community: the rise was the so-called 'East-Asian Miracle' (World Bank, 1993) while the fall of the region came in 1997/1998 due to the experience the East Asian Crisis.

From a closer study of these two periods one can see that the 'miracle' was in fact not a miracle, as economic growth was long-term - characterized by the decision of sticking to specific economic policies only if they seemed to be beneficial to their economies. The crisis on the other side was a sudden shock in the financial market – a sudden reversal of short-term capital flows. A sharp reversal of this kind of capital flows put all currencies in the region under pressure. In July 1997 Thailand let the currency float and within a few months the crisis spread to other countries within this region. Nobody expected this a few months prior to the onset of this crisis, as traditional signs of vulnerability failed. An example of perception of the IMF just a few weeks before the crisis broke out can be found on Indonesia (IMF 1997)

Nevertheless the crisis economies recovered very soon (following a V-shaped recovery) with one exception, i.e. Indonesia where the recovery took much longer.

This chapter will give a short overview of the 'East-Asian Miracle' and study in more detail the growth since political independence of the presently studied economies, Indonesia and Malaysia.

1.1 Growth and Development in East Asia: Overview of the East Asian Miracle

'The emergence of Asia [...] on the world economic scene has been a remarkable story [...] Asia is in the midst of an economic and social transformation unrivalled in history. In virtually every dimension, life in Asia is changing at a pace never seen before in any part of the world during a comparable period of time'(ADB, 1997, xi, 1).

This quote summarizes what happened over the period since the 1960's in the following countries: Hong Kong, (South) Korea, Singapore, and Taiwan which were followed only a few years later by Indonesia, Malaysia, Thailand and to some extent by the Philippines; all economies are grouped together as high-performing Asian economies (HPAEs).

Growth and Development in the East Asian region was the highest in the world for the period of 1965 to the mid of the 1990s. Looking at Tables 1.1 to 1.4 below it can be seen that countries in East Asia experienced high economic growth and transformation during this period.

As Table 1.1 shows real GDP growth rates were in all periods higher (with the exception of the Philippines) than comparable economies, i.e. middle-income countries, South-Asian economies and Latin America. The picture is even clearer by looking at GDP per capita relative to USA where the impressive growth of the East Asian economies can be seen with at least doubling numbers, again with the exception of the Philippines. A very impressive example of this Singapore where GDP per capita relative to GDP increased by almost 470 % from the years 1965 to 1995.

Furthermore Table 1.2 shows the structural change in the economies. From, a table it can be seen that the share of agriculture and industry decreased while the weight of the services sector increased significantly; this pattern emphasizes the economic development over the period and the shift towards more developed economies.

Table 1.3, which illustrates the share of manufacturing value added in percentage GDP. Hong Kong, Korea, Singapore and Taiwan increased from 1965 to 1980 their share of manufacturing value added in percentage GDP, this value decreased from 1980 to 1995. Which emphasize the pattern and results derived from Table 1.2 that the service sector increased its importance in these countries in the 1990s e.g. in Hong Kong and Singapore their change to a financial centre played an important role. The other East Asian economies were still experiencing a high contribution of manufacturing to GDP in the 1990s. Furthermore this indicator shows the reliance on manufacturing in the East-Asian economies as a growth engine.

Finally, Table 1.4 shows the advances of social development here can be seen that the HPAs experienced an improvement in some main indicators and compared again to the three reference groups, middle-income countries, South-Asia and Latin America, they were

outperforming them (with the exception of Thailand). This is remarkable and shows that the gains from economic growth have been distributed among population.

Most East and Southeast Asian countries gained their independence after World War II: Indonesia in 1949, Malaysia in 1957, Singapore in 1963, and Korea in 1948. The political systems implemented in the first period after independence included all different kinds, from authoritarian regimes to Western liberal democracies, where the latter did not last very long. In South Korea, Thailand, and Indonesia in the 1950s the military became the most important force. Indonesia experienced a one-party military regime until 1998. Authoritarian regimes could be found elsewhere until the late 1980s/early 1990s in Thailand, South Korea, and Taiwan, while Malaysia and Singapore, both technically had a Westminster style democracy, ruled by one dominant party.

From Table 1.4 there can be seen, as previously mentioned, that not only the economy grew at positive rates (almost) every year in the countries but these countries also experienced an improvement in social development. Again the development was higher compared to South Asia and Latin America. During 1966 to 1996, for almost 30 years, the region experienced an annual positive GDP growth rates. In this period the Per capita GDP was as follows: 4.7 % in Indonesia, 7.4 % in Korea, 4.4 % in Malaysia, and 5.2 % in Thailand - all per annum growth averages. Meanwhile poverty drastically decreased, real GDP growth was positive every year during this period for Indonesia and Thailand, with one falling rate for Korea (1980) and Malaysia (1985). Poverty rates decreased drastically in the region from 60 % in 1975 to 20 % in 1995 and in Indonesia even more drastically from 64 % in 1975 to 7 % in 1997 (Furman and Stiglitz, 1998). Export products consisted at the beginning of low-technology manufactured products and upgraded in the 1990's to high-technology products (some of the countries, like Malaysia, promote special areas for attracting the high-technology industry, the so-called 'high-technology parks').

TABLE 1.1 – Convergence and Growth Rates of Real GDP

Country	Real GDP Growth Rates (%)			GDP Per Capita Relative to USA	
	1971-1980	1981-1990	1991-1995	1965	1995
Hong Kong	9.3	7.2	5.6	0.30	0.98
Indonesia	7.7	5.5	7.6	0.05	0.13
Korea	9.0	8.8	7.2	0.09	0.49
Malaysia	7.8	5.2	8.7	0.14	0.37
Philippines	6.0	1.0	2.3	0.11	0.09
Singapore	7.9	6.3	8.7	0.15	0.85
Taiwan	9.3	8.5	6.5	0.14	0.56
Thailand	7.9	7.9	8.4	0.10	0.26
Middle-income countries	6.2	2.9	0.1	NA	NA
South Asia	3.7	5.1	4.6	0.08	0.09
Latin America	6.1	1.6	3.2	NA	NA

Sources: Growth Rates: World Development Report (various issues), Key indicators of Developing Asian and Pacific Countries (various issues). Convergence: ADB, 1997, Table 2.11.

TABLE 1.2 – Structural Change (percentage Share of Sectors in GDP)

Country	Agriculture			Industry			Services		
	1970	1980	1997	1970	1980	1997	1970	1980	1997
Hong Kong	NA	0.9	0.2	NA	32.0	15.5	NA	67.2	84.4
Indonesia	35.0	24.4	14.3	28.0	41.3	43.2	37.0	43.3	42.0
Korea	29.8	14.2	6.1	23.8	37.8	43.7	46.4	48.1	50.2
Malaysia	NA	22.9	11.7	NA	35.8	47.6	NA	41.3	40.8
Philippines	28.2	23.5	20.5	33.7	40.5	35.9	38.1	36.0	43.6
Singapore	2.2	1.1	0.1	36.4	38.8	34.3	61.4	60.0	65.5
Taiwan	NA	7.9	2.9	NA	46.0	35.3	NA	46.1	61.8
Thailand	30.2	20.2	10.8	25.7	30.1	42.2	44.1	49.7	47.0
Middle-income countries	NA	NA	11.0	NA	NA	35.0	NA	NA	52.0
South Asia	38.4	36.2	24.8	23.5	23.4	27.5	44.1	40.5	47.8
Latin America	NA	10.0	10.0	NA	37.0	33.0	NA	38.0	55.0

Sources: World Development Report (various issues), Key indicators of Developing Asian and Pacific Countries (various issues).

TABLE 1.3 – Share of Manufacturing Value Added in GDP (percentage)

Country	1965	1980	1995
Hong Kong	24	24	9
Indonesia	8	13	24
Korea	18	29	27
Malaysia	9	21	33
Philippines	20	26	29
Singapore	15	29	27
Taiwan	17	36	32
Thailand	14	22	29
Middle-income countries	20	NA	18
South Asia	15	15	17
Latin America	23	25	21

Sources: World Development Report (various issues), Key indicators of Developing Asian and Pacific Countries (various issues).

TABLE 1.4 – Social Development Indicators

Country	Infant Mortality ^a		Adult illiteracy ^b		Life expectancy in %		Inequality (Gini coefficient)	Poverty ^c	Human development - 1994	
	1965	1995	1960	1995	1960	1995		1995	Index	Rank
Hong Kong	38	5	29	8	63	79	0.41 (1991)	NA	0.668	22
Indonesia	132	51	53	16	40	64	0.34 (1994)	14.5	0.914	99
Korea	65	10	29	4	63	72	0.40 (1988)	NA	0.890	32
Malaysia	69	12	77	17	52	71	0.48 (1989)	17.0	0.832	60
Philippines	85	39	28	5	49	66	0.43 (1994)	27.5	0.672	98
Singapore	35	4	25 (1974)	9	63	76	0.49 (1989)	NA	0.900	26
Taiwan	31	4	36	10	64	72	0.31 (1990)	NA	NA	NA
Thailand	92	35	32	6	49	69	0.46 (1992)	0.1	0.833	59
Middle-income countries	97	39	61	18	49	68	NA	NA	0.576 ^d	
South Asia	153	75	72	51	44	61	NA	NA	0.911 ^e	
Latin America	165	92	34	13	51	69	NA	NA	0.764 ^f	

Sources: World Development Report (various issues), Key indicators of Developing Asian and Pacific Countries (various issues).

Notes: ^a per 1000 live births; ^b at birth; ^c % of people living on less than US\$1 a day (PPP); ^d all developing countries; ^e industrial countries; ^f world

1.2 The 'East-Asian Miracle'

There are different views about the reasons for the long economic growth in East Asia, which was unprecedented in history. This section will show some of the reasons scholars attribute to the excellent performance before the crisis. We will start with some neoclassical views (e.g. World Bank and ADB) moving then to different other views of scholars.

1.2.1 The View of the World Bank, ADB and Hali Hill

1.2.1.1 The World Bank Study

In 1993, the World Bank published 'The East-Asian Miracle: Economic Growth and Public Policy'. The study argues that the experience of East Asia is an example to follow for other developing countries in order to reach economic growth and development.

According to Yusuf (2001, pp. 5-7) the main elements of the miracle in the beginnings of the 1990s identified by the World Bank (1993) or Ohno (1998) could be reduced to four main strands:

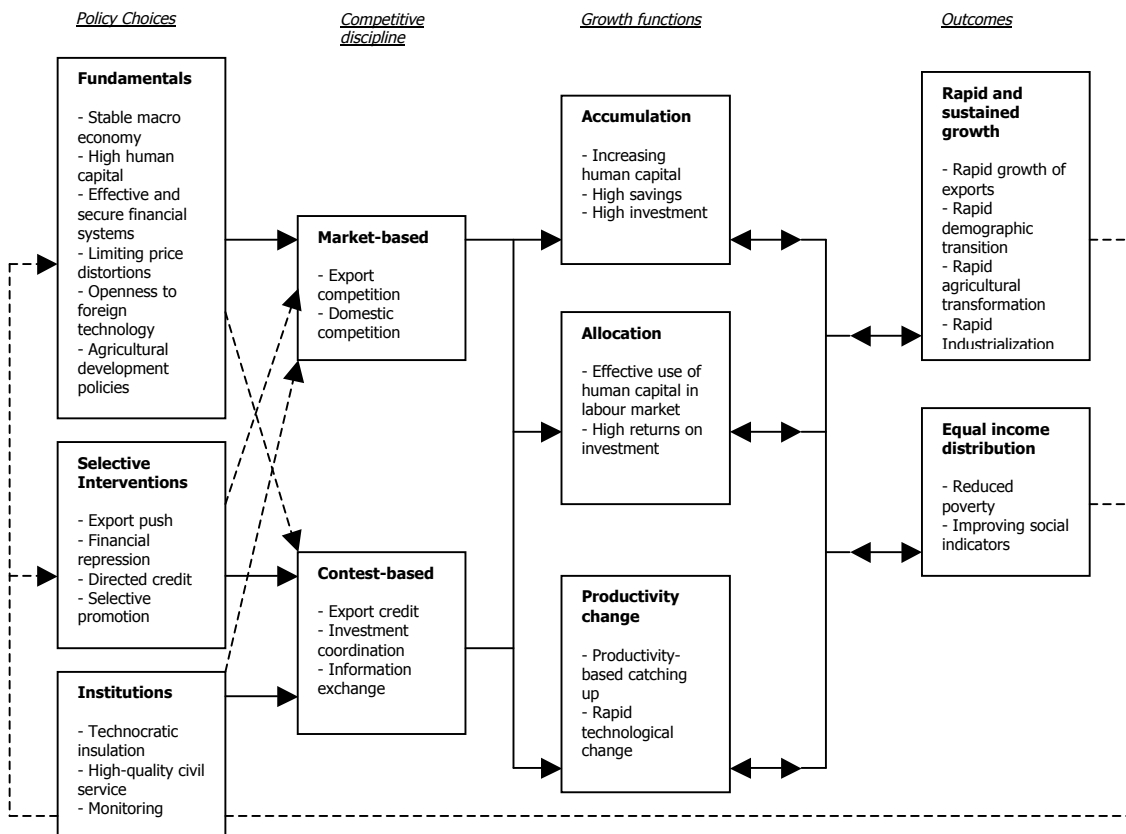
- 1) The adherence to the fundamentals of macroeconomic management, which called for
 - a. a stable business environment with relatively low inflation that encouraged investment in long-gestation, fixed assets;
 - b. prudent and sustainable fiscal policies to actively complement other measures aimed at equitably sharing the rewards from higher growth;
 - c. exchange rate policies to underpin export competitiveness;
 - d. financial development and the progressive liberalization of the sector so as to maximize domestic savings and promote efficient allocation and integration with the global financial system;
 - e. efforts to minimize price distortions;
 - f. actions to support the spread of primary and secondary schooling as well as the creation of a hierarchy of skills to buttress an outward-looking development push.
- 2) Need for a bureaucracy that is able to conceive and implement the designs of a 'strong-state' (meaning an authoritarian, centralized developmental state) and to make a credible commitment to long-run development. Therefore, administration needed to be well paid, insulated to a significant degree from politics and empowered. Insulation means here not that government is distant from businesses but that the bureaucrats do not look at short-run goals; instead, they are focused more on the long-run goals. Although meetings of businesspersons and

bureaucrats were common, it did not mean that competition was undermined. Domestic competition remained an important goal for the Asian economies.

- 3) Activist policies of the government in order to pace industrialization and to boost the export share of the industrial output. The outward-orientation paired with exchange rate policy was important in order to reach viable external balances and generating the demand needed to accelerate GDP growth, force producers to absorb technology and strive after competitiveness. Some of the policies used by the East-Asian economies like the selective use of tariff protection and export incentives (ranging from moral suasion to subsidies and mild repression) were applied sparingly and the World Bank report recommends its use by other countries very cautiously.
- 4) The policy approach during the phase of growth was pragmatic, and the measures were applied flexibly and abandoned if their purpose was not fulfilled.

Figure 1.1 summarizes the policies that according to the World Bank study were responsible for the long-term economic growth in East Asia. From this figure an intelligible style on how the policy choices identified by the World Bank study led to the growth experience of the East Asian economies, can be seen. The system identified by the World Bank is characterized by interactions and feedbacks within the system.

FIGURE 1.1 – A Functional Approach to Growth



The expressions used by the World Bank in this study had a positive meaning in 1993 like 'financial repression' or 'selective promotion'. During and after the crisis these same expressions were afflicted with a negative meaning.

Table 1.5 shows how the perception by the same experts changed. One example is the interpretation of the relations in business-government coordination before and after the crisis: before the crisis it was considered as positive and 'improved performance through superior handling of information' while after the crisis this changed into negative and means nowadays 'collusion and political cronyism' also known as 'crony capitalism'.

TABLE 1.5 – Contrasting Interpretation of Southeast-Asian’s Success Issues

Positive (Before)	Negative (After)
Business-government coordination: improved performance through superior handling of information.	Business-government relations: collusion and political cronyism ("crony capitalism")
Open to international markets.	Economies closed in important ways that must be addressed.
Macroeconomic stability, including low inflation and fiscal prudence.	Poor macroeconomic policy; institutional changes needed.
Government-promoted competition, especially in exports.	Lack of competition and presence of large conglomerates.
Strong financial markets: large quantities of savings mobilized and allocated efficiently to investment.	Weak financial markets.

Source: Furman and Stiglitz (1998)

1.2.1.2 The View of ADB

A similar approach to economic growth in East Asia is provided by the study of the ADB conducted in 1997 (ADB, 1997, chapters 1 and 2). This study notes that 'The lesson of history and international comparisons are that countries growth rates depend [...] primarily on [...] the performance of their institutions and policies' (ADB, 1997, p. 8). Their study includes as well an econometric analysis of cross-country growth where East Asia is the critical comparator. The second chapter of the study shows how different growth theories can explain the growth in East Asia. This is summarized in the following Table 1.6. Here it can be seen how different growth theories try to explain the experience of East Asia and the period of high growth. Furthermore, ADB tries to gain some insights into the future, which could be declared from pessimistic (i.e. neoclassical growth theory) to optimistic (endogenous growth theory).

TABLE 1.6 – Growth Theories and East Asia

Type of growth theory	Key sources of growth and implications for future evolution of East Asia
Classical theory (e.g. Adam Smith)	Outward orientation maintained through trade policy, relatively strong protection of property rights and effective enforcement of contracts. East Asia's geography, with its fine natural ports and easy access to major markets, is a bonus. Growth in East Asia can be sustained as long as these preconditions are sustained.
Neo-classical growth theory (e.g. Robert Solow)	Rapid capital accumulation reflected in high saving and high investment. While the gap between East Asia and poor nations will diminish (the "catch-up" factor), the rate of East Asian economic growth will slow because of diminishing returns to new investment as the ratio of capital to labour rises.
Endogenous growth theory, also known as "new" growth theory (e.g. Paul Romer)	New ideas and new products represent the engine of long-term growth. The superior institutions and human capital of East Asia have led to productivity-driven growth. Given that investments in knowledge are subject to constant, or even increasing, returns to scale the prediction is that East Asia may eventually overtake richer countries.

Source: Adapted from ADB, 1997, pp. 63-65

Furthermore the ADB-study uses an econometric model in order to show economic growth in the different countries, using the following variables: trade policy, government saving, quality of government institutions, structural factors entailing demographic, geographic, and natural resource endowments, and initial conditions pertaining to initial level of per capita income (as measured in 1965) and initial human capital endowments (as measured by schooling in 1965). The study concludes after analysing the period of 1960-1995 that:

'The evidence best supports a synthesis of the classical and neoclassical approaches, augmented by demographic considerations. East Asia has benefited from rapid capital accumulation [...] and (outward-orientation) [...] supported by good policies and institutions and a rapid demographic transition [...] The predictions of endogenous growth theory do not apply.' (ADB, 1997, p. 67)

The results found by this study are not entirely consistent with the World Bank Study (1993). The World Bank study bases growth in East Asia on all three growth theories (i.e. classical, neo-classical and endogenous growth theory) while the ADB study neglects any empirical relevance of the endogenous growth theory in this context (Islam and Chowdhury, 2000, p. 26).

1.2.1.3 The View of Hali Hill

A different explanation of the high growth in East Asia can be found in the analysis done by Hill (1997). Hill considers macroeconomic orthodoxy, openness and equity as the core factors for growth in Southeast Asia (including Singapore) (Hill, 1997, p. 103-104). He argues that important growth factors were a political leadership, which was committed on economic growth and supported by good technocrats, which were to some extent insulated from political pressure groups (Hill, 1997, p. 108). On the other side, he does not

believe that the activist industrial policy was important for growth in Southeast Asia (Hill, 1997, p. 138-139). This view of economic growth in Southeast Asia is close to the neoclassical view of the World Bank and the ADB study.

1.2.2 Different Views: Jomo, Krugman and Other Scholars

1.2.2.1 The View of Jomo

Jomo (2003, p. 3) highlights that the World Bank (1993) identifies at least six types of state interventions which were important in East Asia. The first four, functional interventions (which should compensate for market failures and are therefore necessary and less distortive of markets), were approved by the World Bank while it was more sceptical of the last two, strategic interventions (considered to be more market-distortive).

The two strategic interventions are in the area of finance:

- directed (i.e. subsidised) credit, and
- international trade.

The four functional interventions are:

- ensuring macroeconomic discipline and macroeconomic balances,
- providing physical and social infrastructure,
- providing good governance more generally, and
- raising savings and investment rates.

Not all of these factors highlighted by the World Bank actually happened, as for example one finding claimed that inflation was below 10 % (i.e. single digit) in the high-performing Asian economies (HPAEs) over the period but as Jomo (2003, p. 3) claims was generally kept below 20 %.

The growth patterns in East Asia and similarly in Southeast Asia were much more complicated than the single model claimed by the World Bank. For example it can be shown that there was a period of deregulation in the mid-1980s (as the World Bank Study suggested) but there were as well some new private sector-oriented regulations which were introduced in order to cope with new industrial policy priorities of the governments of Singapore, Malaysia, Thailand and Indonesia (Jomo, 2003, p.8).

Other examples are the role of FDI. Singapore and Malaysia are in some sense exceptions as there were not exclusively economic reasons behind encouragement for FDI but additionally some political motivations. One such example of this is the ethnic diversity and limiting Chinese ownership could be achieved by foreign investment in Malaysia or FDI as an important factor for getting access to the technology frontier as it was the case for Singapore). There are some other differences in the region such as the different orientations, emphases and instruments in industrial policy i.e., the role of trade policy has

been very important in almost all economies in the region except Hong Kong and Singapore. However, financial policy has been important in all the countries including Singapore but with exception of Hong Kong (Jomo, 2003, pp. 3-4). Furthermore Jomo (2003, p. 12-13) argues that the export-led growth strategy was not the main driver behind growth in Japan, South Korea and Taiwan, but could be an important factor for Singapore, Hong Kong, Malaysia, Thailand and Indonesia. The same is true for FDI.

1.2.2.2 The View of Paul Krugman

Another explanation to the so-called 'miracle' can be found in the article 'The Myth of Asia's Miracle' in Foreign Affairs (Nov.1994) written by Paul Krugman. He argues that the East Asian growth is not sustainable because it is based primarily on factor accumulation. He is sceptical about defining the East Asian experience as a miracle and argues that by having high savings and investment rates and people transferring from low-productivity agricultural work to manufacturing and service work, growth is inevitable and will end when the transfer is completed. As economic transformation can be explained by the growth of capacity not all other explanations of success such as efficient resource allocation and good strategies are relevant.

1.2.2.3 The View of Other Scholars

A different view of the causes of the miracle is shown by Raffer and Singer (2001, pp. 142-148). The authors identify six different factors by focusing on Taiwan and South Korea:

- Generous Aid Flows: Taiwan and South Korea were large recipient countries of the USA due to the threat of communists. Aid flows to Asia were large compared to other regions during the early period after WWII.
- Land Reform: The two countries experienced land reforms in the second half of the 20th century.
- Production Structures Inherited from Colonial Times: The two former Japanese colonies inherited good infrastructure and Japan paid compensation for the colonial past.
- Economic policy: Export promotion played an important role in the ascendance of the tiger countries.
- Transnational Firms: Both Taiwan and Korea were not very open to FDI and especially Korea encouraged the creation of Korean transnational corporations.
- Role of the State: The countries experienced interventionist governments, which intervened in the economy efficiently and effectively.

The view of Hill (1997) on economic growth in East Asia is close to the neoclassical view of the World Bank and the ADB study but contrasting to the view of Jomo described above (Jomo, 1997) and other scholars such as Mackie (1988), MacIntyre (1994) and Chowdhury and Islam (1996) (Islam and Chowdhury, 2000, p. 29). These scholars argue that in the economies of East Asia, there was a lack of bureaucratic competence and technocratic insulation of the core East Asian Newly Industrialized Economies, but there were additional factors. These factors include the perception of higher corruption in East Asia, higher ethnic diversity (which could create some problems in the build up of a reputable civil service) and more natural resources compared to the other 'miracle' economies (Islam and Chowdhury, 2000, pp. 29-30).

Table 1.7 shows some basic economic and monetary data from 1975 to the outbreak of the crisis for Japan, the 'Four Tigers' – Hong Kong SAR, the Republic of Korea, Singapore, and Taiwan, China – and Indonesia, Malaysia, and Thailand.

TABLE 1.7 – Basic Economic and Monetary Data

	1975-82	1983-89	1990	1991	1992	1993	1994	1995	1996
Hong Kong SAR									
Real Sector									
Real GDP growth ²	9.3	7.2	3.4	5.1	6.3	6.1	5.4	3.9	4.9
Inflation ^{2,3}	8.6	6.7	9.7	11.6	9.3	8.5	8.1	8.7	6.0
Domestic saving	29.7	33.6	35.8	33.8	33.8	34.6	33.1	30.4	30.6
Fixed capital formation	27.8	23.6	26.4	26.6	27.4	27.3	29.8	30.5	31.3
Public sector									
General government balance	1.5	1.6	0.7	3.2	2.5	2.3	1.3	-0.3	2.2
Public sector balance	...	...	...	...	...	...	...	...	...
Monetary sector									
<u>Growth rates</u>									
M2	...	...	...	...	8.5	14.5	11.7	10.6	12.5
Domestic credit	...	...	...	...	9.6	21.0	25.0	8.6	18.0
Credit to private sector	...	...	...	...	10.2	20.1	19.9	11.0	15.8
<u>Contribution to growth in M2¹</u>									
Domestic credit	...	...	...	...	6.9	15.4	19.4	7.5	15.3
Nonfinancial assets of banking system	...	...	...	...	4.3	5.6	-4.1	6.0	2.0
<i>Memorandum</i>									
Change in official reserves	...	...	...	...	4.1	4.6	3.2	2.8	3.5
Other items (net)	...	...	...	...	-2.8	-6.5	-3.6	-2.8	-4.9
<u>Foreign assets and liabilities of banking system</u>									
Commercial bank foreign liabilities ⁴	...	...	...	73.5	71.6	69.2	70.6	70.4	66.4
Commercial bank foreign assets ⁵	...	...	...	80.1	78.3	75.2	74.5	74.4	69.7
<u>Official reserves</u>									
Official reserves/imports (in months)	...	...	...	...	...	...	...	...	...
External sector									
Current account balance ⁵	1.9	8.3	8.9	7.1	5.7	7.4	1.6	-3.9	-1.3
External debt service	...	...	...	...	...	...	...	...	...
Indonesia									
Real Sector									
Real GDP growth ²	6.2	5.5	9.0	8.9	7.2	7.3	7.5	8.2	8.0
Inflation ^{2,3}	15.0	8.1	7.8	9.4	7.5	9.7	8.5	9.4	7.9
Domestic saving	19.3	23.2	27.9	28.7	27.3	31.4	29.2	29.0	28.8
Fixed capital formation	19.8	24.3	28.3	27.0	25.8	26.3	27.6	28.4	28.1
Public sector									
General government balance	...	-1.3	1.3	-	-1.2	-0.7	-	0.8	1.4
Public sector balance	...	...	...	...	...	...	...	...	...
Monetary sector									
<u>Growth rates</u>									
M2	29.3	27.0	44.6	17.5	19.8	20.2	20.0	27.2	27.2
Domestic credit	28.6	33.2	58.3	18.9	14.1	21.0	22.9	21.7	22.7
Credit to private sector	29.7	32.3	65.6	16.7	11.4	25.5	23.0	22.6	21.4
<u>Contribution to growth in M2¹</u>									
Domestic credit	26.3	26.1	60.4	21.4	16.1	23.0	25.2	24.4	24.5

Nonfinancial assets of banking system	14.1	8.6	-3.3	7.8	12.3	-0.9	-2.9	3.4	9.5
<i>Memorandum</i>									
Change in official reserves	3.5	1.8	6.1	3.9	2.3	1.4	1.3	2.0	4.7
Other items (net)	-11.1	-7.7	-12.5	-11.8	-8.7	-1.9	-2.3	-0.6	-6.7
<u>Foreign assets and liabilities of banking system</u>									
Commercial bank foreign liabilities ⁴	8.4	3.0	11.0	8.6	10.3	10.9	10.9	9.6	8.5
Commercial bank foreign assets ⁵	19.9	20.9	10.2	7.9	8.3	6.0	5.7	6.1	6.0
<u>Official reserves</u>									
Official reserves/imports (in months)	2.2	3.1	4.1	5.7	6.6	7.5	6.2	5.0	5.5
External sector									
Current account balance ⁵	-1.2	-3.5	-2.8	-3.4	-2.2	-1.5	-1.7	-3.3	-3.3
External debt service	3.5	6.8	8.3	8.4	8.7	8.4	8.6	8.5	9.0
Japan									
Real Sector									
Real GDP growth ²	3.9	4.1	5.1	3.8	1.0	0.3	0.6	1.5	3.9
Inflation ^{2,3}	6.6	1.4	3.1	3.3	1.7	1.2	0.7	-0.1	0.1
Domestic saving	31.9	31.9	33.5	34.2	33.8	32.8	31.4	30.7	31.3
Fixed capital formation	30.9	28.4	31.7	31.4	30.5	29.5	28.6	28.5	29.7
Public sector									
General government balance	-4.0	-0.4	2.9	2.9	1.5	-1.6	-2.3	-3.7	-4.1
Public sector balance	...	...	...	...	...	...	...	...	...
Monetary sector									
<u>Growth rates</u>									
M2	10.7	9.2	8.2	2.5	-0.1	2.2	3.1	2.8	2.3
Domestic credit	11.2	9.4	9.2	2.9	2.9	0.8	-0.4	1.8	1.4
Credit to private sector	9.6	10.3	9.2	5.3	2.3	-1.1	0.2	1.7	1.2
<u>Contribution to growth in M2¹</u>									
Domestic credit	13.3	11.5	11.2	3.5	3.6	1.0	-0.5	2.1	1.7
Nonfinancial assets of banking system	-0.3	-1.0	-1.0	2.6	2.0	1.3	6.9	2.1	-0.7
<i>Memorandum</i>									
Change in official reserves	0.3	0.5	-0.2	-0.2	-	0.7	0.6	1.1	0.6
Other items (net)	-2.3	-1.3	-2.0	-3.6	-5.8	-	-3.3	-1.5	1.4
<u>Foreign assets and liabilities of banking system</u>									
Commercial bank foreign liabilities ⁴	5.7	13.0	19.4	15.3	12.4	11.0	9.7	10.0	10.6
Commercial bank foreign assets ⁵	3.3	8.3	13.9	12.2	10.9	10.1	13.4	14.5	13.8
<u>Official reserves</u>									
Official reserves/imports (in months)	2.5	3.4	3.2	2.9	2.9	3.8	4.3	5.2	5.8
External sector									
Current account balance ⁵	0.4	3.0	1.5	2.0	3.0	3.1	2.8	2.2	1.4
External debt service	...	...	...	...	...	...	...	...	...
Korea									
Real Sector									
Real GDP growth ²	7.0	9.6	9.5	9.1	5.1	5.8	8.6	8.9	7.1
Inflation ^{2,3}	17.6	3.8	8.6	9.3	6.2	4.8	6.3	4.5	4.9
Domestic saving	25.7	32.7	36.1	35.9	35.1	35.2	34.6	35.1	33.3
Fixed capital formation	29.4	29.4	37.1	38.4	36.6	36.0	35.7	36.6	36.8
Public sector									
General government balance	-2.7	-0.3	-0.6	-1.6	-2.6	-1.0	1.0	-	-
Public sector balance	...	...	...	...	...	...	...	...	...
Monetary sector									
<u>Growth rates</u>									
M2	30.0	16.8	17.2	21.9	14.9	16.6	18.7	15.6	15.8
Domestic credit	32.1	16.0	24.8	22.4	11.7	12.7	18.4	14.7	19.4
Credit to private sector	31.6	18.1	26.2	20.1	11.5	13.3	19.5	15.6	19.8
<u>Contribution to growth in M2¹</u>									
Domestic credit	40.6	23.7	34.6	33.3	17.4	18.5	25.7	20.6	26.9
Nonfinancial assets of banking system	-0.8	4.1	2.1	-2.9	4.7	5.7	2.6	1.4	-1.5
<i>Memorandum</i>									
Change in official reserves	4.6	3.5	-0.5	-1.1	3.0	2.5	3.9	4.2	0.7
Other items (net)	-9.9	-11.0	-19.5	-8.5	-7.2	-7.6	-9.6	-6.4	-9.5
<u>Foreign assets and liabilities of banking system</u>									
Commercial bank foreign liabilities ⁴	18.4	19.5	6.5	7.7	7.6	6.9	8.0	10.1	12.8
Commercial bank foreign assets ⁵	13.2	9.2	6.0	6.0	6.7	7.5	8.0	8.9	10.1
<u>Official reserves</u>									
Official reserves/imports (in months)	1.8	1.5	2.3	1.8	2.2	2.5	2.6	2.5	2.3
External sector									
Current account balance ⁵	-4.6	2.5	-0.9	-3.0	-1.5	0.1	-1.2	-2.0	-4.9
External debt service	...	...	...	...	...	...	...	...	...
Malaysia									
Real Sector									
Real GDP growth ²	7.1	5.4	9.6	8.6	7.8	8.3	9.2	9.5	8.6
Inflation ^{2,3}	5.3	2.0	2.8	2.6	4.7	3.5	3.7	3.4	3.5
Domestic saving	21.6	29.4	29.1	28.4	31.3	33.0	32.7	33.5	36.7
Fixed capital formation	29.4	28.5	32.4	36.4	36.0	38.3	40.1	43.0	42.2
Public sector									
General government balance	...	-4.0	-2.2	0.1	-3.5	-2.6	2.5	3.8	4.2
Public sector balance	...	...	...	...	-3.5	-2.6	2.5	3.2	1.6
Monetary sector									
<u>Growth rates</u>									
M2	20.2	9.2	10.6	16.9	29.2	26.6	12.7	20.0	...
Domestic credit	25.6	11.2	18.0	18.5	16.6	12.3	14.8	29.5	...
Credit to private sector	24.0	13.2	21.2	20.6	11.2	11.6	15.3	30.5	...
<u>Contribution to growth in M2¹</u>									

Domestic credit	18.7	11.7	19.8	21.7	19.8	13.3	14.2	28.7	...
Nonfinancial assets of banking system	4.9	3.9	4.9	-1.8	10.7	18.7	4.3	-2.1	...
<i>Memorandum</i>									
Change in official reserves	5.5	2.8	7.7	4.0	19.5	22.1	-3.2	-2.6	4.1
Other items (net)	-3.4	-6.4	-14.1	-3.1	-1.3	-5.3	-5.7	-6.6	...
<u>Foreign assets and liabilities of banking system</u>									
Commercial bank foreign liabilities ⁴	9.6	8.8	7.3	9.0	13.0	19.5	8.8	6.5	...
Commercial bank foreign assets ⁵	6.9	6.7	6.0	4.2	3.6	6.5	5.4	4.2	...
<u>Official reserves</u>									
Official reserves/imports (in months)	4.5	3.9	3.7	3.3	4.7	6.2	4.5	3.3	...
External sector									
Current account balance ⁵	-2.0	-0.7	-2.1	-8.8	-3.8	-4.8	-7.8	-10.0	-4.9
External debt service	3.8	9.0	6.9	5.9	5.6	6.1	5.2	6.6	5.4
Singapore									
Real Sector									
Real GDP growth ²	8.0	6.9	9.0	7.3	6.2	10.4	10.5	8.8	7.0
Inflation ^{2,3}	4.2	1.0	3.5	3.4	2.3	2.3	3.1	1.7	1.4
Domestic saving	33.4	42.0	44.1	45.4	47.3	44.9	49.8	50.0	50.1
Fixed capital formation	38.2	38.1	31.8	33.3	35.6	35.0	33.6	33.3	36.5
Public sector									
General government balance	0.6	4.8	11.4	10.3	11.3	14.3	13.7	12.0	8.4
Public sector balance	...	...	11.4	10.3	11.3	14.3	13.7	12.0	8.4
Monetary sector									
<u>Growth rates</u>									
M2	16.2	12.5	20.0	12.4	8.9	8.5	14.4	8.5	9.8
Domestic credit	31.6	9.9	12.3	13.9	5.5	12.0	12.8	17.4	17.3
Credit to private sector	19.1	9.0	14.4	12.4	9.8	15.2	15.3	20.3	15.8
<u>Contribution to growth in M2¹</u>									
Domestic credit	16.9	9.0	8.8	9.3	3.7	7.9	8.7	11.6	12.5
Nonfinancial assets of banking system	10.0	11.9	13.3	14.5	15.4	10.3	6.9	4.6	4.0
<i>Memorandum</i>									
Change in official reserves	14.1	11.3	28.0	18.7	14.3	18.2	19.3	17.1	11.3
Other items (net)	-10.7	-8.4	-2.1	-11.3	-10.2	-9.7	-1.1	-7.7	-6.7
<u>Foreign assets and liabilities of banking system</u>									
Commercial bank foreign liabilities ⁴	32.8	41.5	39.0	33.6	35.3	34.8	35.6	35.2	36.4
Commercial bank foreign assets ⁵	25.8	36.0	39.3	35.3	37.6	34.0	33.9	29.4	28.3
<u>Official reserves</u>									
Official reserves/imports (in months)	3.8	4.7	5.1	5.8	6.1	6.3	6.3	6.1	6.5
External sector									
Current account balance ⁵	-8.8	1.8	8.3	11.2	11.3	7.4	17.1	16.9	15.0
External debt service	...	...	...	...	...	...	...	...	...
Taiwan Province of China									
Real Sector									
Real GDP growth ²	8.5	9.2	5.4	7.6	6.8	6.3	6.5	6.0	5.7
Inflation ^{2,3}	8.6	1.2	4.1	3.6	4.5	2.9	4.1	3.7	3.1
Domestic saving	30.2	35.0	29.3	29.5	27.8	27.7	27.1	28.0	28.0
Fixed capital formation	27.8	20.4	22.4	22.2	23.2	23.7	22.9	22.9	21.0
Public sector									
General government balance	-	1.3	0.8	0.5	0.3	0.6	0.2	0.4	0.2
Public sector balance	...	...	...	...	...	...	...	...	...
Monetary sector									
<u>Growth rates</u>									
M2	22.3	24.4	10.5	19.7	19.6	15.5	15.2	9.6	4.7
Domestic credit	23.8	16.5	17.0	26.3	28.5	19.8	16.5	10.6	10.1
Credit to private sector	21.1	20.1	16.1	21.2	28.7	19.0	16.5	9.5	6.6
<u>Contribution to growth in M2¹</u>									
Domestic credit	22.2	11.1	11.2	18.4	21.0	15.7	13.6	8.8	8.4
Nonfinancial assets of banking system	5.8	10.7	2.5	1.6	-0.9	1.3	1.8	0.7	0.2
<i>Memorandum</i>									
Change in official reserves	3.8	14.1	-0.4	4.2	-	0.3	2.2	-0.5	-0.5
Other items (net)	-5.7	2.7	-3.3	-0.3	-0.4	-1.5	-0.1	0.1	-3.9
<u>Foreign assets and liabilities of banking system</u>									
Commercial bank foreign liabilities ⁴	12.0	8.3	4.8	5.2	4.2	3.9	4.1	4.1	3.3
Commercial bank foreign assets ⁵	16.0	8.5	5.4	4.8	3.6	3.2	3.4	3.8	3.5
<u>Official reserves</u>									
Official reserves/imports (in months)	...	...	...	...	...	...	...	...	...
External sector									
Current account balance ⁵	1.6	12.9	6.7	6.7	3.8	3.0	2.6	1.9	5.2
External debt service	...	...	...	...	...	...	...	...	...
Thailand									
Real Sector									
Real GDP growth ²	7.0	8.1	11.6	8.1	8.2	8.5	8.9	8.7	6.4
Inflation ^{2,3}	9.0	3.1	6.0	5.7	4.1	3.4	5.1	5.8	5.9
Domestic saving	19.6	25.4	32.6	35.2	34.3	34.9	34.9	34.3	33.1
Fixed capital formation	23.6	27.7	40.2	41.6	39.2	39.4	39.9	41.8	40.8
Public sector									
General government balance	-5.8	-3.0	4.4	4.2	2.6	2.1	2.0	2.6	1.6
Public sector balance	...	...	...	4.0	1.6	0.9	1.8	2.5	2.2
Monetary sector									
<u>Growth rates</u>									
M2	19.3	18.8	26.7	19.8	15.6	18.4	12.9	17.0	12.6
Domestic credit	22.6	16.0	26.8	15.5	18.0	22.7	28.9	23.1	14.0
Credit to private sector	20.6	21.0	34.7	20.4	20.5	24.0	30.3	23.8	14.6

Contribution to growth in M2¹									
Domestic credit	25.0	18.2	26.8	15.5	17.4	22.4	29.5	27.0	17.2
Nonfinancial assets of banking system	-0.1	3.4	4.9	7.0	1.9	0.2	-12.2	-5.2	-2.5
<i>Memorandum</i>									
Change in official reserves	-0.2	3.8	8.1	7.0	4.0	4.9	4.9	5.9	1.3
Other items (net)	-5.6	-2.8	-5.1	-2.6	-3.7	-4.2	-4.5	-4.8	-2.2
Foreign assets and liabilities of banking system									
Commercial bank foreign liabilities ⁴	10.6	6.4	6.4	6.0	6.9	11.7	20.3	24.3	23.3
Commercial bank foreign assets ⁵	6.3	5.0	3.3	3.5	3.2	5.2	4.4	4.9	3.4
Official reserves									
Official reserves/imports (in months)	3.5	2.9	4.5	5.0	5.2	5.5	5.5	5.3	5.4
External sector									
Current account balance ²	-5.6	-3.2	-8.3	-7.7	-5.6	-5.0	-5.6	-8.0	-7.9
External debt service	3.8	5.8	3.8	4.0	4.3	4.4	4.8	5.0	5.4

Source: IMF, International Financial Statistics and the World Economic Outlook database (various issues)

¹ Changes in percent of M2 at end of preceding period.

² Annual percent change.

³ Consumer price index.

⁴ In percent of total liabilities of commercial banks.

⁵ In percent of total assets of commercial banks.

Table 1.7 demonstrates that all economies experienced before the outbreak of the crisis positive real GDP growth rates (Singapore for some years even two-digit growth rates), stable inflation, a relative and stable high domestic saving rate, and double-digit capital formation. This emphasizes again the strong growth before the outbreak of the crisis. Additionally, it can be seen that the public sector was balanced and the monetary sector showed that the economies had increased their official reserves over time (with the exception of Malaysia, which intervened in 1994, and 1995 on financial markets due to some problems in the banking sector). More important are the figures of foreign assets and liabilities of the banking system, which shows two different patterns. Firstly, the share of foreign assets of commercial banks (in % of total assets of commercial banks) compared to the share of commercial bank foreign liabilities (in % of total liabilities of commercial banks) is higher in the case of Hong Kong and Japan from 1994 to 1996. In addition, secondly, the opposite (higher foreign liabilities compared to foreign assets) is true for the other economies. The latter pattern can be considered as being more dangerous as it highlights a vulnerability to withdrawals of foreign investments. The biggest divergence of figures for the second pattern can be found for Thailand. For instance, pre-crisis levels on foreign assets remained stable and below 5 % , however, the share of foreign liabilities almost doubled from 1992 to 1993 and from 1993 to 1994 reaching a level of almost 24 % in 1996 which was almost eight times higher than the share of foreign assets in that year.

Lastly, there can be seen that current account balance and external debt service was at 'normal' levels indicating no problems in official debt servicing or similar.

During late 1980s until mid 1990s the so called 'Washington Consensus' (Williamson, 1990 and 1994) influenced policy choices in East Asian countries as well. The 'Washington Consensus' describes the shared ideas of US Treasury and the Washington-based, Bretton Woods institutions of the IMF and World Bank on appropriate universal economic policies. They emphasized free markets, free trade, free capital mobility and a limited government. The fears of the institutions for macroeconomic management were external shocks as the oil price shock (in 1973, 1979), the commodity price shock (1986), two deep recessions in OECD countries (1975, 1982) and the debt crises in developing countries (1982-1983). The World Bank began to implement this neo-classical orthodoxy by their 'structural adjustment lending' programs which could be seen as a variation of the IMF 'conditionality' (lending respectively financial assistance is conditional on fulfilling certain policy measures).

As proposed by the 'Washington Consensus' the countries opened not only their current accounts (i.e. they were relatively open compared to other developing countries) but also their capital account gradually starting in the late 1980s. From this time they experienced a sharp increase of capital flows where structure and time of capital flows changed over the period of late 1980s until 1997 from long-term to huge amounts of short-term capital flows (bank loans and portfolio flows). The issue of capital flows as well as the policies available for the resolution of the crisis will be discussed later as it is crucial in understanding the emergence and resolution of the crisis.

The following sections of this chapter will give an overview of the two economies of interest, Indonesia and Malaysia, and their development from independence to the onset of the East Asian Crisis. It would go beyond the scope of this dissertation dealing in detail with all East Asian Crisis economies and their development.

TABLE 1.8 - Indonesia and Malaysia – Basic Information

Geography	INDONESIA	MALAYSIA
Geographical Co-ordinates	5 00 S, 115 00 E	5 00 N, 110 00 E
Capital	Jakarta	Kuala Lumpur
Adjacent countries	Malaysia, Singapore, Philippines, Papua New Guinea, East Timor. Also shares maritime boundaries with India and Australia	Thailand, Singapore, Brunei, Indonesia, Philippines
Area (km ²)	1,919,440 (land: 1,826,440)	329,750
Coastline	54,416 km	4,675 km
Climate	Tropical, hot, humid	Tropical; south-west monsoon from April to October and north-east monsoon from October to February
Economic statistics		
Currency	Indonesian Rupiah (Rp)	Ringgit (RM)
Exchange Rate (home currency vs. US\$)	9,056 (2007 estimation)	3.46 (2007)
Gross Domestic Product (US\$, billions)	US\$ 432.9 (2007 estimation)	US\$ 186.5 (2007 estimation)
GDP per Capita (US\$ in PPP)	US\$ 3,700 (2007 estimation)	US\$ 13,300 (2007 estimation)
Real GDP growth (% change, year-over-year)	6.3% (2007 estimation)	6.3% (2007 estimation)
Inflation rate (% change, year-over-year)	6.4% (2007 estimation)	2.1% (2007 estimation)
Current account balance (US\$, billions)	US\$ 11.01 (2007 estimation)	US\$ 26.05 (2007 estimation)
Natural Resources	Petroleum, tin, natural gas, nickel, timber, bauxite, copper, coal, gold, silver	Tin, petroleum, timber, copper, iron ore, natural gas, bauxite
Industries	Petroleum and natural gas, textiles, mining, cement, chemical fertilizers, plywood, food, rubber, tourism	Electronics and electrical goods, petroleum, liquefied natural gas, chemicals, palm oil, rubber, textiles, wood and wood products
Major trading partners (exports)	Japan, United States, Singapore, South Korea, China	United States, Singapore, Japan, Hong Kong, Taiwan, Thailand
Major trading partners (imports)	Japan, Singapore, United States, China, South Korea	Japan, United States, Singapore, Taiwan, South Korea, Thailand, China
Government and political statistics		
Nature of government	Republic	Constitutional monarchy, parliamentary democracy, federalist system (de facto executive-centred limited democracy and unitary system)
Constitution	August 1945, abrogated by Federal Constitution of 1949 and Provisional Constitution of 1950, restored 5 July 1959	Adopted 1957
Head of state	President Susilo Bambang YUDHOYONO (since 20 October 2004)	Paramount Ruler Sultan MIZAN Zainal Abidin (since 13 December 2006)
Executive branch	President Susilo Bambang YUDHOYONO (since 20 October 2004)	Prime Minister ABDULLAH bin Ahmad Badawi (since 31 October 2003)
Social statistics		
Population size (millions)	237,512,355 (July 2008 estimation)	25,274,133 (July 2008 estimation)
Life expectancy	Men: 63.7; Woman: 67.5	Average: 71; Men: 68.22; Woman: 73.63
Ethnic composition	Javanese 45%, Sundanese 14%, Madurese 7.5%, coastal Malays 7.5%, others 26%	Malay 58%, Chinese 26%, Indian 7%, Other 9%
Religions	Islam 87%, Protestant 6%, Catholic 3%, Hindu 2%, Buddhist and other 1%	Islam 53%, Buddhism and other Chinese folk religions 30%, Hindu 7%, Christianity 6%
National languages spoken	Bahasa Indonesia (official, modified form of Malay), English, Dutch, local dialects, the most widely spoken of which is Javanese	Bhasa Melayu (official), Chinese (Mandarin and dialects), Tamil, English, East Malaysian languages and dialects

Source: Jarvis (2003); Lim (2004); CIA – The World Factbook (<https://www.cia.gov/library/publications/the-world-factbook/index.html>).

1. 3 A Deeper Look at Indonesia

1.3.1 A Brief Overview

The economic growth of Indonesia during the period of 1965 up until the East Asian Crisis in 1997/1998 was remarkably high, although the economy had trouble during this period (hyperinflation in 1965 and 1966, default of PERTAMINA in 1975, 'Dutch disease' during 1973-1978, fall of oil-prices after 1982).

Looking at real GDP per capita growth the country experienced an annual average growth rate of 4.3 %. During the 1970-1980 period the development in Indonesia was mainly driven by the evolvement of the oil-market and prices and earnings from exports of petroleum products and liquefied natural gas increased from 5 % in 1970 (US\$0.4 billion) to 14 % in 1975 (US\$5.3 billion) and 21 % in 1980 (US\$ 12.9 billion). The earnings went mainly into investments as can be seen by the Gross Domestic Investment rate (13.2 % of GDP in 1970, 20.00 % in 1975, 24.3 % in 1980). Although the oil-sector was important until the early 1980s the nonoil-sector gained in importance during the 1980s as the share of nonoil and non-liquefied natural gas manufacturing sector increased from 8.5 % of GDP in 1980 to 15.9 % in 1989 (Woo Ed., 1994, pp. 2-3).

One problem of Indonesia is the peculiarity of being an archipelago and being split up into islands and different regions of economic strength. While the west of the archipelago is very much involved with the economies of the region, for example, Singapore is geographically close and the importance of the Malacca Strait for western Indonesia should not be neglected. Therefore, western Indonesia comprising of Sumatra, Kalimantan and Java/Bali are well integrated in the regional context and people and goods move with high intensity between Java and Singapore and from Sumatra and Kalimantan to Java and Singapore. On the other side, the eastern part of the archipelago is in a far worse situation. The neighbouring countries and regions like Papua New Guinea, the Southern Philippines, Australia's northwestern and northern territories are shaken by political separation or have no economic weight. Therefore, there is no economic growth stimulus and no regional coherence. Therefore, the islands of Sulawesi, Maluku, Nusa Tenggara and Irian Jaya represent half of the nation's area of land and sea but only 8% of the economy. This is also reflected by the distribution of the income per capita, which substantially differs across the country with a relatively high income per capita in the west, which decreases as one moves east. These economic differences across the archipelago fuel ethnic problems and are putting more pressure on regional autonomy or separation efforts from Indonesia (Dick, 2002a, pp. 11-13).

Prior to a studying the political and economic eras of Indonesia some important features of the Indonesian economy will be given.

- Economic Planning and the Annual State Budget

Economic plans are published every five years (since 1969). These plans are essentially indicative as they give only detailed statements of aggregate and sectoral objectives. More important than economic plans are annual budget documents, especially the *Nota Keuangan* (Financial Note). Since 1968 all budgets were balanced budgets (balanced budgets were needed in the beginning of the Soeharto era in order to become rid of the hyperinflation) although off-balance items increased in the years before the crisis (Woo et al., 1994, p. 11).

- Foreign Debt Situation

The Indonesian government avoided borrowing in the domestic capital market (only a few Central Bank certificates were sold domestically). Outstanding disbursed external debt grew from 1976 to 1987 at an annual rate of 13 %. Indonesia did not experience a debt service crisis but external debt was a burden to the government (Woo et al., 1994, p. 11-15).

- The Banking System, the Jakarta Stock Market and Credit/Loans

After reaching independence all banks in Indonesia were nationalized and merged into one institution, Bank Negara Indonesia (BNI), in order to facilitate the financing of the deficits. Through the enactment of Banking Act No. 14 of 1967 and the Central Bank Act No. 13 of 1968 BNI was split into four parts: a Central Bank (Bank Indonesia), with no commercial banking functions; five state-owned commercial banks, where each bank was assigned to a sector for lending activities; a state-owned savings bank; and a state development bank. During the oil boom of 1974-1980 Bank Indonesia and the state-owned banks supplied 86 % to 90 % of all bank credits as not only the state-owned banks gave credits to companies but additionally they granted 'liquidity credits' to the banking system in order to promote targeted activities and direct credits to certain enterprises (Woo et al., 1994, p. 15). In 1977, the government reduced the required reserve ratio from 30 % to 15 % due to continuing inflows of foreign exchange. This in addition to credit ceilings resulted into foreign assets hold abroad by banks i.e. an increase in the foreign exchange reserves of the economy (Nasution, 1994, p. 134).

Since 1983, the banking system has been greatly deregulated and credit ceilings and regulations on deposit rates have been abolished. Since the late 1980s, private banks were allowed to open and compete with the state-owned banks. Since the

financial intermediation, market grew rapidly after the deregulation the Indonesian government neglected to introduce regulatory and supervisory bodies in order to promote basic prudential banking standards. Therefore, most banks were undercapitalized or allowed to violate other prudential regulations without penalty. Some major business groups owned their own banks. Hence, they were mainly used to promote group business internal projects and had significant exposure to affiliated companies. In early 1990s, the number of non-performing loans grew and rapidly reached high levels (Radelet and Woo, 2000, p. 171).

Although the Jakarta Stock Exchange was established in 1952, it was closed in 1958 (due to political and economic instability) and only reopened in August 1977. In the 1980s only a small proportion of corporations were listed on the Stock Exchange this changed dramatically during the 1990s as deregulation of the financial sector became effective (Woo et al., 1994, pp. 17-18).

Until early 1980s, bank lending was mainly driven by political interests of the government as can be seen by selective credit allocation practice during 1974-1983. As already mentioned each state-owned bank was assigned a specific sector and a specific credit quota. In the early 1990s, Indonesian corporations started to borrow heavily from foreign creditors (short maturity and foreign currency denominated). This short-term debt was not or only to a small degree hedged against exchange rate risk, since hedging would have added about 6 percentage points to the cost of borrowing (according to the World Bank). Most of short-term debt was borrowed by companies as the amount that banks could borrow was limited by the introduction of borrowing policies in 1991.

The reason for these huge short-term debts was manifold. Corporations were attracted by relatively lower interest rates and their implied assumption to roll over these credits in the future as the economy was expanding further. On the other hand foreign creditors were careless in lending as a part of the loans went to companies, which were closely associated with Soeharto, and therefore they believed that these companies could not fail (Radelet and Woo, 2000, pp. 171-172).

From Table 1.9, the structure of short-term outstanding debt can be seen and should be read in the following way: The first column 'Total' indicates total debt outstanding to foreign commercial banks; the second to the fourth column show how total debt outstanding was distributed among different sectors while the fifth column shows the fraction of short term debt on total outstanding debt. The last column shows foreign reserves excluding gold.

From Table 1.9 it can be seen that the fraction of the non-bank private sector to total debt outstanding reached its highest of almost 70 % in June 1998 while the share of banks to total debt outstanding was decreasing over the one-year period. Furthermore, more than half of total debt outstanding was short-term debt and that foreign reserves were decreasing by approximately 10 % over the same period.

To summarize, Table 1.9 clearly demonstrates how heavily the economy was exposed to the so-called 'hot money' i.e. short-term debt (maturity of one year or less) and that most of the outstanding debt ran to the non-bank private sector. This is an important finding and crucial for the understanding of the crisis and corresponding remedies. Later we will see how the interaction of the non-bank private sector during the crisis will be explained by different theoretical models.

TABLE 1.9 – Indonesia: Debt Outstanding to Foreign Commercial Banks (Billions of US\$)

	Total	Debt by sector			Short-term debt	Foreign reserves (excl. gold)
		Banks	Public	Non-bank private		
June 1997	58.7	12.4	6.5	39.7	34.7	20.3
December 1997	58.4	11.7	6.9	39.7	35.4	16.6
June 1998	50.3	7.1	7.6	35.5	27.7	17.9

Adapted from Radelet and Woo (2000) p. 172. Sources: Debt data – BIS; Reserves data – IMF.

The financial system - before beginning with capital account liberalisation in Indonesia - was characterized by effectively having control of capital inflows as it was using an administered credit ceiling programme in order to deal with its foreign exchange flows (especially from petroleum exports). These ceilings were therefore limiting the liquidity injections into the economy from the foreign exchange inflows and helped to keep the rupiah weak (vs. other currencies) by encouraging the outward investment of these same flows (as mentioned above, from 1977 onwards Indonesian banks were effectively encouraged to keep foreign exchange abroad and not inside the country). Although these policies were effectively controls on capital inflow, there did not exist at the same time any controls on capital outflow. Indonesia had opened its capital account by conventional wisdom by 1970, as Indonesians were free to purchase financial assets denominated in foreign currencies, to open bank accounts abroad and hold US dollar accounts in Indonesian banks. From 1982 onwards, the credit ceiling programme was abolished as the oil-boom finished and more liquidity in the

economy was needed. From this action capital flows to and from Indonesia were completely free. Having no form of control on capital flows, the financial system remained weak and showed potential downside risk, as there were only a limited number of financial instruments in the market and there existed only a limited secondary market for financial assets (Montes and Abdusalamov, 1998, pp. 163-164). Indonesia experienced in the period before the crisis relatively high interest rates as the authorities tried to maintain modest increases in money supply in the face of persistent capital inflow. This in turn attracted even more capital inflows but shifting more to short-term instruments. Having only few instruments in the markets and a shallow secondary market, corporations had to use bank loans for financing and the exchange rate that was effectively pegged to the US dollar. Thus, giving corporations an incentive to borrow abroad as the US dollar offered lower interest rates with relatively low exchange rate risk being presumed by corporations and therefore not hedging against an exchange rate risk. Investors from outside and borrowers in Indonesia perceived that foreign currency denominated loans (i.e. not rupiah denominated) a relatively secure (i.e. the rupiah was effectively pegged to the US dollar) and therefore hardly hedging against foreign exchange risk. The consequence of this resulted in big problems as soon as Indonesia's currency was attacked and slipped causing severe problems for corporations as loans were not rolled-over and the need to repay their loans at tripled or even higher rupiah amounts than underwritten. A summary of the deregulation in banking, deposit and loan markets, as discussed previously, can be seen in Table 1.10.

TABLE 1.10 - Indonesia: Summary of Deregulation in Banking, Deposit and Loan Markets

Date	Banking sector	Deposit market	Loan market
April 1974		Stabilisation package including continued regulation of state bank deposit interest rates	Stabilisation package including introduction of credit ceilings for all banks; continued regulation of state bank lending interest rates; extension of provision of liquidity credits to state banks and of direct credits to priority sectors
June 1983		Removal of interest rate ceilings on time deposits by state banks (but banks entered into an agreement of understanding to avoid undue competition)	Removal of interest rate ceilings on loans by state banks (and introduction of money market instruments); abolition of credit ceilings; reduction in liquidity credits to state banks and direct credits to priority shifts to non-oil exports

October 1988	Prudential system overhauled; foreign banks allowed access to Tabanas and Taska rupiah savings schemes; entry and branch establishment requirements eased for domestic and foreign banks; restrictions on ATMs and mobile cash units eased	Tax-free status of interest earned on time deposits removed	
January 1990			Substantial reduction in scale and scope of liquidity credits
February 1991	Bank supervision policy overhauled; domestic e banks permitted to establish branches overseas; restrictions on bank mergers eased		
1992	Foreigners allowed to buy up to 49% of publicly listed shares in banks		

Source: de Brower (1999, Appendix 5.1)

The next section will look at the economic development of Indonesia since independence in 1949 until the outbreak of the crisis in 1997. This part is split according to the political 'eras' in Indonesia.

1.3.2 Early Independence and the Sukarno Era: 1949-1965

On 27 December 1949, the Indonesian Government assumed effective control over main parts of the former Netherlands Indies. The newly established country faced some difficult problems, an impoverished population as a result of the Japanese occupation including a scarcity of food, clothing and medicines and an arbitrary requisition of forced labour which showed that the Japanese occupation was not a 'liberalization' from colonialism but rather the exchange of one colonial power with another one (Dick, 2002b, pp. 163-167). In addition, the ensuing armed struggle against the Dutch, and rebellions in some regions (Aceh, West Java, South Sulawesi, and Moluccas) which the government successfully suppressed created difficulties. The inheritances of the Dutch were weak economic and institutional structures.

The primary goals of this new government were to raise the standard of living of the population, lay the foundation for a sound national economy, increase production and stimulate commerce and industry (Sumitro 1952, p.5) but with limited government financial sources.

In the following years, with the exception of the 'Korea boom' (the US demanded strategic raw materials during the Korean war and therefore Indonesia experienced a short high increase in export revenues), the government ran budget deficits during the 1950s and

from mid-1952 to mid-1954 the Indonesian Government lost foreign exchange reserves at a faster rate than any other country in the world. Further problems arose, as the Government decided to protect their reserves by severe import restrictions, which led to a huge gap by the mid-1960s between the official exchange rate and the black market rate (Thee, 2003, p.5).

In the political sphere, there were some difficulties in taking over the political power from the former Dutch colonial ruler. The transfer of sovereignty from the Netherlands to Indonesia was the result of a negotiated settlement by the United Nations Commission for Indonesia (UNCI). The results were two political and two economic compromises (Thee, 2003, pp. 5-6):

1. The Netherlands transferred sovereignty not to the Indonesian Republic which had waged the war of independence, but to the United States of Indonesia (Republik Indonesia Serikat, RIS) which the Dutch had set up in order to weaken the Indonesian Republic;
2. The Dutch refused to hand over West New Guinea (called by Indonesian nationalists 'West Irian') as they argued that the Papua population was racially, culturally and linguistically different and therefore not a part of the Indonesian nation;
3. The newly installed Indonesian government had to take over the foreign debt of the Dutch administration in Indonesia;
4. Dutch enterprises were allowed to continue their business in Indonesia without interference (declared by the Financial-Economic Agreement – Finec); most of Indonesia's modern sectors were therefore owned and controlled by the Dutch until the early 1950s.

The result of this agreement was therefore political independence but not economic independence. The Governor and the Board of Directors of the Java Bank, which acted as the Central Bank during the colonial period, remained Dutch as well as the Director of the Foreign Exchange Control Board and most officials at the Ministry of Finance (Higgings, 1990, p. 40; Sumitro, 1986; Dick, 2002b, pp. 170-172).

The Indonesian Government pursued in these first years of political independence policies that were based on leftist ideas, as capitalism was associated with 'Colonialism' (Dutch and ethnic Chinese) while 'socialism' was seen as 'Indonesianization' or 'indigenism'. Whether this goal should be achieved by nationalisation or by promoting Indonesian business class was not clear (Mackie, 1971, p.44). As in Malaysia in the late 1960s, the dilemma was

growth and equity and how to combine these two in order to stabilize the economy (Dick, 2002b, p.172).

The bureaucratic and legal system was a heritage of the former colonial power and was slightly changed and adopted by the new government. As the slightly changed institutions did not work very well, the power vacuum in Indonesia grew creating opportunities for the military (Dick, 2002b, pp. 172-173). By the introduction of 'Guided Economy' and 'socialism á la Indonesia' of President Sukarno in the late 1950s the government directed the economy more to state owned enterprises and private enterprises were only allowed in sectors that did not include the supply of people's basic needs (Rice, 1983, p. 61).

Some economic institutions and enterprises were allowed to be nationalized by the Indonesian Government, which was quickly doing this for key institutions and enterprises like the Java Bank in 1951, renamed in Bank Indonesia, the Royal Netherlands Indies Airlines (KNLIM), renamed in Garuda Indonesian Airways, or the railroads on Java and main public utilities.

In April 1950 the Indonesian Government launched a first programme to develop a strong indigenous Indonesian business class – the *Benteng* (Fortress) Programme (Anspach, 1969, p. 168) one of its purpose was to try and set up a counterforce to Dutch economic interests (Sumitro, 1986).

One major goal of the *Benteng* Programme was to secure national control of the import trade: import licences for easy-to-sell goods were restricted to indigenous Indonesian citizens (Mackie, 1971, pp. 47-48). As the requirements were stringent for prospective indigenous Indonesian importers this programme led to some abuses by Chinese importers, which should have been countered by this programme. Chinese importers switched to the method of doing business through puppet indigenous Indonesian licence holders, who was referred to as 'briefcase importers' (Mackie, 1971, p. 48). The *Benteng* programme did not reach the goal of building up a strong indigenous Indonesian business class but instead a group of socially unproductive rent-seekers.

Until 1957 the prospects for growth of the economy were rather optimistic as inflation and money growth were relatively low both at around 10 % in 1955 and 1956 (Mackie, 1967, p.96; Paauw, 1963, p. 205) while the problems with the balance of payments were not resolved and foreign exchange reserves were at precarious levels (Paauw, 1960, pp. 119-120).

In November 1957, the political conflicts between Indonesia and the Netherlands culminated as the Indonesian Government failed to persuade the United Nations General Assembly to adopt a resolution calling on the Dutch Government to cede West Irian to Indonesia. Therefore, Indonesian militant workers took over the management of the Dutch

inter-island shipping company KPM and which was followed by similar take-overs of other Dutch enterprises (Thee, 2003, p.13). The Indonesian Government did not attempt to resist the 'take-over' movement (Glassburner, 1971, p.92) and in November 1959 the formal take-over of all Dutch companies were legalized and turned into state-owned enterprises (Dick, 2002b, p.184).

The Dutch business community was therefore eliminated in one foul swoop but the ethnic Chinese business community remained. This ethnic Chinese business community included Indonesian and foreign citizens. The Indonesian Government tried to impair the foreign Chinese citizens by introducing special measures. These measures however were soon stopped as they caused serious economic dislocation (Thee, 2003, p.14).

After the Japanese occupation and the armed struggle against the Dutch, the Indonesian Government had difficulties in reordering the production of export goods as many estates, mines and factories were in a bad condition and the cultivation of tobacco, rubber, coffee, tea, sugar and palm oil was changed into food crop cultivation during this period. Up to the early 1970s, rubber and oil generated the bulk of export revenues of Indonesia (Glassburner, 1971, p. 14). During this period the oil industry in Indonesia was performing well as in 1959 the Indonesian Government signed new oil exploration agreements with the three large foreign oil companies, Caltex, Stanvac and Shell, and some smaller foreign oil companies. This was important in order to keep the oil production at steady levels, as the oil fields are smaller and shallower than the large oil fields in Middle Eastern countries (Thee, 2003, pp. 14-15).

During the first period of independence only sugar factories and oil, refineries had been set up. Indonesia remained an agrarian economy in these first years although the movement towards import-substituting industrialization began. Estimates show that during the period of 1951-1959 manufacturing accounted for 8-10 % of net domestic product while agriculture accounted for 56 % during 1953-1958 (Paauw, 1963, pp. 176-177). The efforts to move in the direction of an industrializing country can be seen by the introduction of the Economic Urgency Plan in 1951 (sometimes referred to as Industrial Urgency Plan of which the *Bentang* Programme was part of) (Siahaan, 1996, p.190). The results were disappointing. Only a few industrial plants were built during the five-year period of the Plan. In 1956 a new development plan was introduced, Indonesia's First Five-Year Development Plan, as the former plan only led to disappointing results and the fear of the government about inflationary pressures grew (Anspach, 1969, p. 163).

However, this plan, which ran from 1956 to 1960, was no better than its predecessor was and became largely irrelevant (Mackie, 1971, p. 50).

In July 1959, President Sukarno restored the 1945 Constitution, under which he became the head of government as well as head of state and which ushered in the period of 'Guided Democracy' and 'Guided Economy'. This period of 'socialism á la Indonesia' was the end of pragmatic economic policies (Thee, 2003, p. 17).

President Sukarno appointed a new National Planning Council, which was given the task to draw a new 'Eight-Year Overall Development Plan', which was impossible to implement as there, were huge expenditures for military and perpetual political turmoil in this period (Thee, 2003, p. 17).

President Sukarno's policy was largely anti-Western and anti-capitalist but he did not clearly address to the economic problems of Indonesia. In early 1960s, therefore the rate of inflation began to accelerate in an alarming way and steadily rose from 19 % in 1960 to a peak of 636 % in 1966 (Greenville, 1981, p. 108). The main problem of this hyperinflation was that Indonesia's Government was printing money in order to deal with their growing budget deficit (Thee, 2003, p. 18). The last year of political power of President Sukarno was characterized by a deterioration of the economy. In 1963, the Indonesian economy experienced a 3 % contraction (World Bank, 1998, p. 21), hyperinflation, and a sharp decline in productive capacity due to problems with foreign exchange, which was needed to import spare parts and capital goods (Thee, 2003, p. 19). The Indonesian economy recovered soon after independence, but stagnated in the late 1950s and experienced a negative growth in the early to mid-1960s (van der Eng, 2001, p. 182).

1.3.3 The New Order and President Soeharto: 1966-1998

1.3.3.1 A Short Overview

In this era, the economy-developed form one of the worst performing economies in the region to an economy with good rates of sustained economic growth compared with other developing countries (MacIntyre, 2000, p. 252). The period until early 1990s has been analyzed by many scholars and there exists a large amount of literature regarding the development of Indonesia (e.g. Booth, 1992; Battacharya and Pangestu, 1993; Little et al., 1993; World Bank, 1993; Woo et al., 1994; Hill, 1996).

The experience of Indonesia during the Sukarno era and its huge fiscal spending, i.e. deficit, led the new government in power run the 'Balanced Budget rule' spending not more than it earned from taxes and foreign aid (including foreign loans). The government subordinated itself to fiscal discipline. As the revenue consisted of taxes, aid and foreign

loans Indonesia actually had moderate deficits. Indonesia's stick to fiscal prudence was especially important in the periods of oil-shock (i.e. during the 1970s) with the oil-driven inflation and the years thereafter with the collapse of oil prices (MacIntyre, 2000, p. 252). The period of the Soeharto era can be split into three phases of economic policies, challenges and performance (Thee, 2002a, p.203):

- 1966-1973: stabilisation, rehabilitation, partial liberalisation and economic recovery;
- 1974-1982: oil booms, rapid economic growth and increasing government intervention;
- 1983-1996: post-oil boom, deregulation, renewed liberalisation and rapid export-led growth.

1.3.3.2 A Deeper Look

In 1966, General Soeharto took over the political power from President Sukarno. The economy was nearly bankrupt and on the verge of a breakdown (Thee, 2003, p. 21). The country was on default on US\$2.4 billion foreign debt, hyperinflation was around 600 %, industrial output below 20 % of capacity, shipping, rail and road transport equipment were run down, and the system of government control of the economy experienced a high level of corruption (Panglaykim and Arndt, 1966, p.8).

In order to get rid of these problems General Soeharto turned to a group of five young economists from the Faculty of Economics, University of Indonesia (FEUI), for economic advice (they included: Widjojo, Ali Wardhana, Sdli, Subroto, and Emil Salim) in September 1966 and based them at *Bappenas*, the National Planning Board. This economic group is sometimes referred to as 'Berkeley Mafia', as many of them had studied at the University of California, Berkeley, or as 'Technocrats' (Thee, 2003, pp. 19-20). 'Technocrats' were according to Sadli (Sadli, 1997, p. 243) top government officials who by preparing economic policy were guided by rational considerations, having the national interest at heart, observing the major economic principles and preferring pragmatism. This economic team played an important role in stabilizing and rehabilitating the economy and which was achieved through the design of a stabilization and rehabilitation programme. In order to stop the high inflation rate this team proposed to keep a balanced budget (no more money printing to finance budget deficits) and they relied, in contrast to the former government, on foreign aid as a source of financial support. The 'inward-looking' policies of the old regime were changed to 'outward-looking' policies, which were characterized by a more liberal trade and foreign investment regime. The new government tried to rebuild good relations to the Western countries and Japan. In 1965, Indonesia rejoined the United

Nations and after the termination of the armed confrontation with Malaysia in May 1966, they rejoined as well the International Monetary Fund and the World Bank from which Sukarno had withdrawn in 1965 in order to cut links with the capitalist world. This new effort was positively recognized by the international aid community that helped to handle the debt repayments by rescheduling them and granting new foreign aid (Thee, 2002a, p. 195; Thee, 2003, p. 23). However, as will be shown below the balanced budget was reached through accounting tricks as they included foreign aid and loans as revenues and run as well an off-balance budget, which was increasing over time.

Another important way to give new impulses to the economy was to stop 'statism', where the state was the dominant player in the economy, and instead private capital, domestic and foreign, was encouraged to invest in different economic sectors (Thee, 1994, p. 6). The most important sectors for foreign investment were the oil sector, other mining projects and the manufacturing sector (Hill, 1988, p. 81). In the context of domestic investment promotion, the government adopted a 'whitewash policy' in order to encourage Chinese businesspersons (mostly Indonesian citizens) to repatriate capital. While this policy was rather risky due to political turmoil during the Sukarno era, it helped to stimulate the domestic economy and investment (Sadli, 1997, pp. 244-245). These policies were important for the stabilization programme, while the rehabilitation programme focused on the repair of infrastructure in agriculture (Sadli, 1997, p. 245).

This stabilization and rehabilitation programme resulted in an impressive recovery of the economy, where hyperinflation soon came under control of the government (from 636 % in 1966 to 9 % in 1970) (Greenville, 1981, p. 108). The economy grew over the next three decades with an average annual growth rate of 4.5 % (over the period 1967-1997) and grew stronger than the population growth rate (van der Eng, 2001, p. 182). Like the other countries of 'The East-Asian Miracle' (World Bank, 1993) Indonesia experienced high rates of domestic capital investment (World Bank, 1993, p. 8), and had by the mid-1990s one of the highest rates of gross domestic capital investment among developing countries which was financed by a high rate of domestic savings of approximately 33 % of GDP in 1996 (World Bank, 1997).

Absolute poverty declined from 40 % of population in 1976 to 11 % in 1996 (respectively from 54 million people in 1976 to 23 million in 1996) (BPS, 1999, p. 576). This occurred in rural and urban areas. During the 1970s, the Indonesian government tried to promote the development of rural areas, which was highly effective in reducing poverty (McCawley, 2002, p. 263). Other social indicators for this development are for example net primary enrolment ratios (for males and females close to 100), infant mortality rates (sharply

declining compared to 1970) and a rising percentage of population having access to safe water (World Bank, 1999, pp. 16-19). As such, Indonesia experienced not only increased economic development but also social development, this also applies to other countries in the region (Hill, 1996, p. 195). Another important transformation occurred during this period: Indonesia, which was a largely agrarian economy in the late 1960s, became a newly industrializing economy (NIE) by the early 1990s, where the manufacturing sector contributed more to export revenues than primary exports (including oil and gas exports) (Thee, 2003, p. 26). The following steps led to this outcome in the 1990s:

- From the 1970s to the early 1980s Indonesia had a highly inward-looking industry, with many non-tariff barriers (NTBs) and the highest rate of nominal and effective protection among the ASEAN countries (Ariff & Hill, 1985, p. 17; Naya, 1988, p. 87).
- During the late 1970s basic industries were heavily promoted and initiated by government with the help of oil revenues (Soehoed, 1988).
- After the oil-boom and its ending in 1982 the Government had to change its strategy again to an outward-looking, export-promoting industrial strategy, where deregulation efforts and a more open approach to foreign companies were introduced. The deregulation efforts included trade reforms to reduce the 'anti-export bias' of the protectionist trade regime and a liberalization of the restrictive foreign investment regime in order to promote more export-oriented investments by foreign investors (Thee, 1992, pp. 234-237).
- Industrial development from late 1980s onwards was driven by manufactured exports and the private sector (Hill, 1996, pp. 154-155).
- After the oil boom the reliance of the government on revenues oil and gas exports respectively was reduced. By the mid-1980s non-oil domestic revenues increased (as a share of total government revenues and relative to GDP). The non-oil domestic revenues amounted to 11 % of GDP in 1989-1990 while in 1984-1985 they were around 7 %. The main factor that drove non-oil domestic revenues up was due to tax reforms in the mid-1980s, and mostly the new value added tax and improvements in income tax collection played an important role (Booth, 1998, p. 198).

One shortcoming according to Thee is that like in most other East Asian countries the rapid economic growth in Indonesia was done in a 'highly centralized, authoritarian and increasingly repressive setting' (Thee, 2003, p. 28). The economic development in the early stage was mainly designed by the technocrats but their influence began to erode in

the 1990s. This was reflected by a rising in off-budget transactions, which included financial expenditures to the lower levels of government, quasi-government institutions, and state-owned enterprises (Nasution, 1995, p. 18). Most of the companies were managed by well-connected businesspersons and 'strategic industries' controlled by Habibie (Minister for Research and Technology) (Nasution, 1995, p. 19). The study of Claessens, Djankov and Lang (1999) shows how the concentration of wealth in different Asian countries was measured by influence of families in corporations in mid 1990s , i.e. corporate share) . Top ten families as of end December or end of accounting year 1996 (% of total market capitalization that families hold) in Indonesia and the Philippines were at the top of the list in Asia with 57.7 % and 52.5 % respectively while in other Asian countries the share was smaller (in Japan 2.4 %, in Malaysia 24.8 %, in South Korea 26.8 % and in Taiwan 18.4 %) (Claessens, Djankov and Lang, 1999). Not only was the Soeharto family was among these top ten families, but also the Salim group, an Indonesian conglomerate, under businessman Liem Sioe Long, which controlled about 16.6 % of market capitalization by the onset of the financial crisis in 1997/1998 (Smith, 2001, p. 3).

During this period of the New Order public discontent increased as the population experienced political oppression, gross violation of human rights, embezzlement of public funds, mutually profitable collusive relationships between political power holders and their business cronies, and the proliferation of policy-generated barriers to domestic competition (Thee, 2001, p. 178).

During the New Order political repression was common. Military officers and non-commissioned officers were placed in strategic positions in public administration in order to have a direct access to all levels of administration for the implementation of development plans, policies and political ideology from top to bottom (Dick, 2001, p. 212). Another important factor was the perception of the population that the economic gap between rich and poor was widening although the Gini ratios were relatively constant over time. The widely held view was of a 'widening economic gap' between rich and poor and between indigenous (pribumi) and non-indigenous (non-pribumi) Indonesians of which the most were Sino-Indonesians (Thee, 2001, pp. 178-179).

The success of Indonesia during this long period of economic growth and during the 32 years of the New Order was mainly based on the influence of the technocrats' team, the economic team that enjoyed the confidence of President Soeharto (Woo et al. 1994, pp. 148-149). A key factor in relations between the international financial community (IMF,

World Bank, Asian Development Bank) and Indonesia was the confidence in the ability in these technocrats (Bresnan, 1993, p. 282). They were important in many occasions, as for example by designing the Stabilization and Rehabilitation Programme in the late 1960s in order to deal with hyperinflation and economic problems inherited from the Sukarno era, or during the PERTAMINA crisis in February 1975, when the company was unable to roll over a short-term loan of US\$40 million from a small American bank (Woo et al., 1994, p. 57). The management of PERTAMINA was only responsible to President Soeharto and sometimes referred to a 'state within a state' (Prawiro, 1998, p. 105) and the economic team successfully, although with some costs for the state treasury, resolved this crisis (Thee, 2003, p. 32-33). Over time the influence of the technocrats was lowered and prudent macroeconomic government spending became less important as more off-budget expenditures arose by funding expensive prestige projects. This slowing down of the influence can partly be attributed to the retirement of the 'first generation of economic technocrats' as Widjojo, Ali Wardhana, Mohamad Sadli, Subroto and Emil Salim. While the newer generation experienced confidence of the international aid community, it did not enjoy the same degree of trust and rapport as the former technocrats had developed with President Soeharto (Thee, 2003, p. 35).

At the same time as the influence of the technocrats slowed down another group gained influence, the so-called 'technologists', like B.J. Habibie, which questioned the wisdom of pursuing the economic strategy of the economists. Under his leadership at the Ministry for Research and Technology new investments into large-scale, capital-intensive and high technology projects were done, like the investments in the state-owned aircraft assembling enterprise, PT Industri Pesawat Terbang Nusantara (IPTN) (McLeod, 1993, p. 5). Not only was Soeharto supporting this idea of Habibie to build advanced industrial plants utilizing advanced technologies but as well a wider part of the public (engineers, intellectuals, students and youth) combined with an emerging 'industrial nationalism' (Thee, 1994, p. 18).

Another problem the younger generation of technocrats had to deal with was the influence of the children of Soeharto in economic policymaking, which the older economists in the 1970s and early 1980s did not have this issue (Thee, 2003, p. 36).

Although during the New Order many macroeconomic steps and policies were applied and had a positive effect on the development of the economy, the technocrats mostly neglected the important role of microeconomic policy (Thee, 2003, p. 38).

One additional feature of the Indonesian balance of payments should be added: the off-budget fiscal activity. As can be seen in Table 1.7 the official government budget was rather balanced but many activities were financed by a so-called off-budget fiscal activity

as the example of PERTAMINA demonstrates. As Nasution (1995) states, there existed a system of informal financing which was established in the 1940s during the armed struggle for independence and which helped the civilian and military arms of the fledgling republic to fund their activities. This activity of informal fiscal activity continued during the period after independence and senior military and civilian officials cultivated their relationships with business people, having therefore a hidden revenue and managed through so-called social or charitable foundations (*yayasan*) and commercial joint ventures (for details see Crouch (1978) and Robison (1986)).

There existed different types of off-budget fiscal activity during the Soeharto era (MacIntyre, 2000, pp. 256-258):

1. Command Lending: The government was able to direct the managers of one or more of the state enterprises and official economic entities to make resources under their control available to support a government initiative. Institutions like the central bank, the state commercial banks, the state pension funds and other entities such as Bulog (the grain stockpile authority) were used heavily for this. This is the best-known option and best understood by outsiders. Examples: issuance of financial guarantees to public and private firms, underwriting of their activities, writing-off or rolling-over of repayments on loans that firms were unable or unwilling to make.
2. Private Contributions: The other possibility of the government was to informally induce the private sector to provide financing for a project, which the government wanted to pursue, but was unwilling or unable to finance through its budget. Examples: When Indonesia in 1983 cut its expenditure on planned investments, in one case one of the wealthiest businessperson in Indonesia, Liam Sioe Liong was persuaded by the government to invest in a massive new steel plant; he put into this project US\$100 million and helped to arrange funding from international banks.
3. Hidden Government Funds: The government could draw upon funds that were hidden in bank accounts and were not official treasury accounts, i.e. using off-budget revenue to fund off-budget expenditure. This option is not very well known and was sometimes used as a kind of recycling of foreign aid funds. Example: When the government got specific aid for a project, e.g. expansion of electricity production, the fund was distributed through the Development Budget in form of loans to the state power company and was therefore counted in the fiscal budget. When the loan was repaid it was not repaid to the Development Budget but instead to an off-budget account known as the Investment Fund Account (*Dana*

Rekening Investasi) managed by the Ministry of Finance. The government repaid instead the foreign aid from budget activities. In this way foreign aid was redirected to off-budget accounts and in the early 1990s these had become very large.

The experience of Indonesia in off-budget activities did not cause large problems for macroeconomics but on the microeconomic level there might have been some distortions due to efficiency implications of the rent-seeking surrounding (Macintyre, 2000, p.269).

To summarise the New Order era under President Soeharto experienced a long period of growth (around 32 years) and economic development, but the end was rather harsh and steep as the East-Asian crisis broke out in 1997-1998 and Indonesia's political leadership weakened.

The event of the crisis and the performance of the economy after the crisis will be analysed in the following chapters.

The following table will show some economic indicators for Indonesia before the outbreak of the crisis. Table 1.11 shows that most macroeconomic figures remained stable over the 1990s and show no fragilities in the balance of payments. Nevertheless, it can be seen some other facts such as the real exchange rate depreciation from 1995 to 1996 and then the sharp appreciation from 1996 to 1997. Additionally, foreign direct investment remained relatively stable in the last years preceding the crisis. Looking at international reserves and short term foreign debt there can be seen that both numbers increased over the period and that the value of short-term debt was almost double the value of international reserves minus gold. This can indicate some fragility in the eventual sudden huge outflows of short-term debt. Lastly there it should note that the ratio of non-performing loans was rather high – almost at a two-digit level over the period.

The summarize from the data seen in Table 1.11 it couldn't be deduced as potential first- or second-generation crisis (definitions of crisis generation models, please refer to chapter two), while third-generation crisis were not already defined and known.

TABLE 1.11 – Pre-Crisis Situation of Indonesia

	INDONESIA			
	1990-1994	1995	1996	1997
Growth rate of real GDP %	7.3	8.2	8.0	4.7
CPI growth rate (%)	8.6	9.4	8.0	6.2
Current account balance (% of GDP)	-2.2	-3.5	-3.4	-3.6
Foreign debt (as % of GDP)	63.4	64.6	59.7	n.a.
Debt service ratio for all external debt	14.4	13.2	16.6	n.a.
Exchange rate (vis-à-vis US\$)	2,053	2,308	2,383	4,650
Real exchange rate (1990=100, WPI based)	95.7	91.3	80.4	126.3
Current account balance (US\$ million)	-2,985	-6,431	-7,663	-4,890
Capital account balance (US\$ million)	5,158	10,259	10,847	-603
Foreign direct investment (US\$ million)	1,693	4,346	6,194	4,677
Export value (US\$ million)	33,132	45,417	49,814	53,443
Import value (US\$ million)	27,059	40,630	42,929	41,694
Volume of exports (index)	138.2	170.6	179.2	230.3
Volume of imports (index)	133.9	196.9	218.0	n.a.
International reserves minus gold (US\$ million)	10,112	13,708	18,251	16,586
Short-term foreign debt (US\$ billion)	16.2	26.0	32.2	32.9
DS Stock Market Index (\$)	48.7	63.5	75.4	20.6
Jakarta Composite Index (average)	399.6	513.9	637.4	401.7
Nominal lending rate (%)	21.7	18.9	19.2	21.8
Nominal deposit rate (%)	17.5	16.7	17.3	20.0
Non-performing loans	8.3	10.4	8.8	9.0
Direction of Trade (Exports, US\$ Millions)	Japan (10,910.4); USA (4,470.1); Singapore (3,029.4)	Japan (12,288.3); USA (6,321.7); Singapore (3,766.7)	Japan (12,885.2); USA (6,794.7); Singapore (4,564.6)	Japan (12,485.0); USA (7,154.5); Singapore (5,467.9)
Direction of Trade (Imports, US\$ Millions)	Japan (6,356.8); USA (3,316.2); Singapore (1,664.6)	Japan (9,216.8); USA (4,755.9); Singapore (2,367.5)	Japan (8,504.0); USA (5,059.8); Singapore (2,875.3)	Japan (8,252.3); USA (5,444.3); Singapore (3,410.9)

Source: Radelet and Woo (2000), p. 166-167.

1.4 A Deeper Look at Malaysia

1.4.1 A Short Overview

Like Indonesia economic growth in Malaysia was remarkable high during the period of its independence until the onset of the East-Asian crisis.

One fact of importance is related to the population, which can be split into three main ethnic communities in Malaysia: the indigenous (*bumiputra*) community, consisting of ethnic Malays (around 58 %), the Chinese community (around 26 %) and Indian community (around 6 %). During the British colonial period each community was assigned different status and occupational specialization. The Elite was arranged in the following way: the Malays were hereditary aristocrats, bureaucrats, and politicians on the top, and at the lower levels, schoolteachers and village headmen; the Chinese were traders, shopkeepers and businesspersons; the Indians were professionals and shopkeepers. At a working class level the Malays worked the fields, Chinese worked in the tin mines and the Indians tapped the rubber trees. This functional separation was often accompanied by a geographical separation of the three ethnic groups (Bowie and Unger, 1997, p. 69).

In 1957 at independence, Malaysia had the highest per capita income in the Asia-Pacific region, except Japan (Athukorala, 2001, p. 13). During the following two decades Malaysia experienced an economic expansion with an annual growth rate of real GDP (1965-1986) averaging at 5.5 %. After a short break, caused by a fall in commodity prices and increase in government expenditures, growth between 1987 and 1996 was again high with purchasing power parity (PPP) adjusted per capita income relative to the USA increasing from 22 % in 1987 to 37 % in 1996. During the early 1970s - 1980s growth in Malaysia was predominantly accounted for by the expansion of service industries, which were induced by public sector activities and growth in primary production. From the late 1980s onwards the biggest part of growth came from the expansion of the manufacturing industry through private sector initiatives (Athukorala, 2001, p. 14).

Gross domestic investment as a ratio of GDP increased from about 28 % in the second half of 1980s to over 40 % by the mid-1990s. In most years a high investment rate could be maintained without accumulating foreign debt as the national saving rate increased as well as net FDI inflows. This is highlighted by the external debt service ratio (debt repayments and interest payments as a percentage of total export earnings) which declined from over 12 % in mid-1980s to less than 7 % by the mid-1990s. The Malaysian government achieved a balanced budget in 1993 and subsequent years. The balance of payments was traditionally in surplus in the merchandise account but had persistent deficits in the services account. Unemployment rate in the 1960s was around 6 %, in early

1970s it increased to 8 %, dropped to around 5 % in the early 1980s, increased again until a peak in 1986 to 8.3 % and declined again by reaching in 1996 virtually full-employment with an unemployment rate of 2.8 %, the lowest in 30 years (Athukorala, 2001, pp. 17-20).

The following paragraphs outline some major features of the Malaysian economy:

- Malaysian Plans, New Economic Policy and National Development Policy

Since the late 1960s every five years Malaysian Plans are adopted (the Ninth Malaysian Plan was adopted in 2006). The New Economic Policy (NEP) was introduced in 1971 in order to promote the redistribution of wealth among the ethnic groups. It was active from 1971 to 1990 when the National Development Policy (NDP) was launched which is the adoption of NEP with some modifications.

Within this context it is possible to identify four stages of different strategies:

- 1958-1970: First round of import-substitution industrialisation
- 1970-1980: First round of export-oriented industrialisation
- 1980-1985: Second round of import-substitution industrialisation
- From 1986: Return to export-oriented industrialisation

A potential IMF intervention was usually associated with the fear that these plans would be abolished as they are considered a strong intervention into the economy and creating rent-seeking structures (Jomo, 2000, p.275).

- UMNO – United Malay National Organisation

Since 1955 the Bumiputera party United Malay National Organisation (UMNO) governs Malaysia. It has good connections to the entrepreneurs as during the privatization of early 1990s most stakes were sold to UMNO members (see below).

- Financial sector developments

In the 1980s Kuala Lumpur was heavily promoted as a global financial centre. On October 27th 1989 (with effect from January 2nd 1990) Kuala Lumpur Stock Exchange (KLSE) was given independent status and with it a delisting of Malaysian registered companies from the Stock Exchange of Singapore (SES) implemented. Furthermore other measures including liberalization of impediments to portfolio capital inflow were reintroduced. The main objective of these was to promote the trading on the Kuala Lumpur Stock Exchange with increased participation of institutional investors. Meanwhile, the Federal Territory of Labuan was declared as an international offshore financial centre (October 1st 1990). In this centre licensed offshore banks, offshore insurance entities and other offshore companies were declared as non-residents for exchange control purposes and therefore these

institutions could operate foreign currency accounts freely and moving funds without capital monitoring.

In 1992 a new Securities Commission (SC) was introduced which took over the share market monitoring and supervision (introduced by the Securities Act) (Athukorala, 2001, pp. 25-26).

Because of the increased liberalization of capital account, net flows to Malaysia increased until the early-mid 1990s. The most important factor of private capital flows was FDI, which was attracted by the favourable investment climate. From 1993 onwards there was a shift from a small share of FDI on total flows towards short-term capital inflows, mainly portfolio capital (Athukorala, 2001, pp. 27-29).

In contrast to other central banks in the region the Malaysian Central Bank continued to maintain prudential regulations on foreign borrowing by the corporate sector, which was attracted by the relative lower cost of borrowing abroad. Therefore Malaysia did not experience such large accumulations of foreign currency borrowings by the corporate sector as happened in Indonesia (see above) (Athukorala, 2001, p. 29).

The share market experienced from late 1980s onwards until the outbreak of the crisis a boom: market capitalization – total value of all stocks of all national companies listed on the stock exchange – of KLSE as a percentage of GDP increased from 8 % in 1985 to 324 % in 1996. The market capitalization to GDP ratio of Malaysia was in the mid-1990s the highest among countries in the Asia-Pacific Economic Cooperation (APEC) region, surpassing even Hong Kong and Singapore (Athukorala, 2001, p. 32); foreign investors accounted in this period for 30-40 % of share trading in KLSE (BNM, 1999, p. 309); most of share trading was concentrated in secondary shares, reflecting that most of the share market boom was driven by speculative share trading rather than new capital mobilization (Athukorala, 2001, p. 33).

During this period the banking sector accumulated a large amount of outstanding domestic credits with a heavy exposure to the property sectors (broadly defined to include share trading and the real estate sector) (Soros, 1998). Additionally the banking sector experienced a growing concentration of new lending in non-tradable sectors and the corporate sector became increasingly dependent on bank finance (Athukorala, 2001, p. 48 and p. 51). Bank Negara Malaysia (BNM) tried to calm credit markets by using direct credit controls, interest rates and moral suasion (Athukorala, 2001, p. 51).

Table 1.12 gives an overview of deregulation in banking, deposit and loan markets.

TABLE 1.12 – Malaysia: Summary of Deregulation in Banking, Deposit and Loan Markets

Date	Banking sector	Deposit market	Loan market
October 1978		Commercial banks allowed to set interest rates on deposits of one year or less	Commercial banks allowed to set base lending rates (BLR) under guidance of Bank Negara Malaysia
March 1983			Bank lending rates pegged to banks' declared BLR
October 1985		Pegged interest rate agreement whereby rates on deposits of one year or less are aligned to two lead banks' rates	
February 1987		Pegged interest rate agreement disbanded	Margin of lending rates over BLR restricted to four percentage points
February 1991			BLR freed from Bank Negara Malaysia's administrative control

Source: de Brouwer (1999, Appendix 5.1, p. 204)

As mentioned previously for Indonesia and as will be seen in Table 1.13 capital flows were important before the crisis in Malaysia. The pattern of total capital inflows in East-Asia and Indonesia from 1991 to 1996 was that it increased steadily (with exception of 1994 in East-Asia when it decreased slightly) while in Malaysia a sharp increase from 1991 to 1993 was followed by a drastic drop in 1994 and a return in 1995. Malaysia's drop in 1994 can be explained by impositions on capital inflows of BNM due to strong buying pressure on the ringgit.

More interesting is the composition of private capital inflows. It can be seen that the share of foreign direct investments in East Asia and Malaysia is a major source of private capital inflows while the importance of portfolio investment and bank and trade-related lending differs: Although in East Asia and Malaysia portfolio investment remains ahead of bank and trade-related lending the opposite is true in Indonesia. Nevertheless, outlining the facts mentioned previously there can be seen that private capital inflows were the major source of capital inflows in the region. Furthermore, the composition of private capital inflows shows that a large part were foreign direct investments (considered as being long term and stable capital flows). The other two types of private capital inflows are not considered as stable as FDI. More attention on the development of these inflows must be given. The pattern of the latter mentioned types of inflows has been unsteady, indicating their potential danger. The role of capital inflows during and after the crisis will be an important and constant topic throughout the following chapters.

TABLE 1.13 – Net Capital Flows to East Asia, Indonesia and Malaysia (Millions of US\$)

	1991	1992	1993	1994	1995	1996	1991-96	1991-96 Share in % of total capital inflows, i.e. private capital inflows
EAST-ASIA								
Total capital inflows	39530	21251	67157	65793	94179	94129	63673	100.0
Private capital inflows	33962	15531	61205	62931	90819	93217	59611	93.6
Foreign direct investment	14072	16529	42009	42181	46171	52540	35584	59.7
Portfolio investment	4260	12118	28190	10153	19077	4495	13049	21.9
Bank and trade-related lending	15630	-11030	-8930	10597	25659	36182	11351	19.0
INDONESIA								
Total capital inflows	6648	4609	6320	7076	12128	12734	8253	100.0
Private capital inflows	5365	3201	4898	6899	12532	14326	7870	95.4
Foreign direct investment	1399	1536	1896	2476	4649	6367	3054	38.8
Portfolio investment	-	-	1738	1061	1415	1819	1006	12.8
Bank and trade-related lending	3965	1664	1264	3361	6468	6140	3810	48.4
MALAYSIA								
Total capital inflows	5584	6607	10799	1235	7612	9416	6876	100.0
Private capital inflows	5391	6665	11185	1089	7699	9516	6924	100.7
Foreign direct investment	3995	5158	5014	4140	4200	5055	4594	66.3
Portfolio investment	-708	3027	9497	5485	2110	3468	3813	55.1
Bank and trade-related lending	2104	1520	-3326	-8536	1389	993	-976	-14.1

Adapted from: Athukorala, 2001, pp. 30-31. Net capital flows: comprise net direct foreign investment, net portfolio investment (equity and bond flows) and official and private bank borrowings. Changes in national foreign exchange reserves are not included. For each country, the difference between total and private flows represents net official flows. East Asia: consists of Indonesia, Korea, Malaysia, Philippines, Thailand, China (mainland), Singapore, Taiwan, Hong Kong. The period of "1991-1996" is annual average.

1.4.2 The Early Years of Independence

The British colonial power left Malaysia with a well-developed infrastructure (considered to be more developed than in most other British colonies), an efficient administrative mechanism and a prospering export sector. During colonial times Malaya, as Malaysia and close territories were called, was the most profitable colony of Britain. However, during colonialism, the mass of ethnic Malays remained at the border of society while emerging business opportunities were mainly taken by the mostly urbanized and commercially better-connected Chinese (Jomo, 2000, pp. 278-279; Navaratnam, 2003, pp. 7-10).

By 1957 the year of independence (*Merdeka*) economic conditions of Malaysia (Singapore was part of Malaysia at this stage) were good, in terms of per capita income, literacy and health care it was ahead of most of its neighbours (Athukorala, 2001, p. 8). The business-environment after independence was favourable and the post-colonial government continued to promote private enterprise, economic interests of the ex-colonial power were protected and greater foreign investment inflows encouraged. The government pursued a minimal state intervention strategy except to diversify the economy and ensure suitable conditions for rapid capital accumulation (Jomo, 2000, p. 284).

During the 1960s the Malaysian economy gained mostly from the Korean War commodities boom and from some internal changes, although there were some challenges to the

leadership in achieving higher development objectives and in the same time preserving communal harmony and political stability. During this early time of independence the government tried to develop rural regions and provide a better social and physical infrastructure in order to deal with the ethnic and regional economic imbalances (Athukorala, 2001, p. 9). Although the policies adopted in the 1950s provided a sound basis for growth in the 1960s, Malaysia was in this period a raw material-dependent, foreign-dominated, lacking in diversity, and dualistic (native vs. non-native born) country. Industry promotion gained importance in the 1960s as well as the attempt to increase the participation of Malay ethnic groups by assisting Malay entrepreneurs in areas such as transportation, construction, and the timber industry. The government founded a state-owned bank, Bank Bumiputera, to provide financing for Malay businesspersons. Policies in the 1960s were dominated by prevailing ideas of economists of the United States and multilateral institutions at that time, and to some extent the ethnical diversity of the country (Bowie and Unger, 1997, pp. 75-76). In 1965 Singapore, the wealthiest region in the domestic market was forced to withdraw from the federation. During the mid-1960s the import-substituting industrialization was slowing down as domestic market was limited with a low ability of creating employment possibilities as the industry was capital-intensive and not well linked to the rest of the national economy. The second half of the 1960s was characterized by a shift in government policies towards export-oriented industrialization accompanied by the establishment of the Federal Industrial Development Authority, now known as the Malaysian Industrial Development Authority (MIDA). In 1968 the government passed the Industrial Incentives Act and provided a set of incentives oriented to attracting more labour-intensive, export-oriented industries (Jomo, 2000, p. 285). Although economic growth increased during this early stage of independence, some problems remained which were not addressed properly. Malays were given a special position while non-Malays began to question how well their interests were represented in Malaysia. In the period of 1957 to 1970 income inequality increased among the ethnic groups with the greatest increase being among ethnic Malays (Jomo and Ishak, 1986). The growing discontent of the ethnic groups and the problems within society culminated in the bloody communal riots of 13th May 1969.

1.4.3 The Period After the Riots in 1969

After this bloody communal riots Malaysian leadership shifted their development strategy away from purely economic considerations to more ethnic considerations in policymaking (Athukorala, 2001, p. 9). After the restoration of the parliamentary government in

February 1971 the constitution was amended in order to prevent new riots due to discussion on ethnicity (e.g. language, citizenship, position of Malays and non-Malays).

Economic policy changed and the leadership moved away from pure economic considerations towards affirmative action's based on ethnicity. In 1971 an affirmative action policy package which was labelled 'New Economic Policy' (NEP) and was implemented for 20 years (Second to the Fifth Malaysia Plans, 1971-1990). The main objective of this NEP was to maintain national unity through the prosecution of two objectives (redistributive goals):

- 1) Eliminating poverty among the whole population: this objective should have been reached by focusing on export-oriented industrialization;
- 2) Eliminating the identification of race with economic functions within the society: this objective should have been reached by establishing long-term targets for the Malay ownership of share capital in limited companies as well as for the proportion of Malays employed in manufacturing and occupying managerial positions (Athukorala, 2001, p. 9).

Different policies introduced during the first years of NEP to reach these goals e.g., the Industrial Coordination Act (ICA) was introduced in 1975 and created a licensing system for most industries; licenses were granted if these companies complied with NEP guidelines (Bowie and Unger, 1997, p. 79). Although some efforts were made by the government to attract more direct foreign capital it was not reached as hoped as some laws in line with NEP were counterproductive for the attraction of foreign investors i.e., ICA or PDA – Petroleum Development (Amendment) Act which threatened foreign oil companies with nationalization of their oil exploration and production facilities. However, during this period Malay participation in the economy increased (Malay's in manufacturing jobs increased from 25 % in 1970 to 32 % in 1975; share of Malays in managerial positions increased from 11 % in 1971 to 17 % in 1975; share of institutional credit held by Malays increased from 14 % in 1971 to 30 % in 1975). It should be noted that the implementation of NEP was connected with a certain degree of frustration as some activities were limited to 'paper partnerships' (Bowie and Unger, 1997, p. 81). In the early 1970s domestic private investment and foreign direct investment targets projected by the Malaysian Government were not achieved. The response of the Government was to provide resources since during this period export revenues and official loans were easily accessible as there was a rise in oil price rise and therefore cheap international credits (Bowie and Unger, 1997, pp. 81-82).

The purpose of the introduction of public or state-owned enterprises was an ethnic affirmative action or positive discrimination starting in the early 1950s and growing modestly in the mid-1960s and with a higher rate in the 1970s until the mid-1980s when number almost ceased to grow. From the 1980s these state-owned enterprises were accused of having used an increasing amount of public debt and being inefficient; the accumulated losses did not only waste investment resources but also increased the financial burden and slowed down economic growth (Kamal and Zainal, 1989).

It is important to mention that during the second half of the 1970s Malaysia became an important non-OPEC oil and gas producer. As such it was possible for Malaysia to generate huge revenues from oil exports during the second oil shock (PETRONAS, the state-owned petroleum and gas company, controlled not only their extraction but also licensing and extraction of foreign companies). In 1974 Malaysia introduced the controversial Petroleum Development Act that gave the federal authorities jurisdiction over petroleum resources (and this was in contrast to other natural resources such as land, water, forests and minerals where the state government had prerogatives); the federal government shared royalties with state governments but the former controlled PETRONAS as well as other petroleum revenues (Jomo, 2000, p. 280).

1.4.4 The Dr Mahathir Mohamad Era Until the Early Crisis Period

During the early 1980s Malaysia experienced some changes. In 1981 Datuk Seri Dr Mahathir Mohamad became Prime Minister. In 1980 the state-owned Heavy Industries Corporation of Malaysia (HICOM) was founded and the first step of the new emphasis was the promotion of heavy industries through direct government involvement. As Dr Mahathir Mohamad announced in November 1980, in this period acting as Minister of Trade and Industry the government would:

'[...] reduce the [country's] dependence on foreign countries for the supply of machinery and intermediate inputs, exploit [...] forward and backward linkages in industrial development, create spin-off effects for the growth of small and medium-scale industries, and develop [...] the technological capability of the manufacturing sector.'

(Malaysia, Mid-Term Review of the Fourth Malaysia Plan, 1981-1985, Kuala Lumpur: Government Printer, 1994)

Dr Mahathir Mohamad wanted to follow the same path as South Korea and Japan had done in the previous year's, which experienced high economic growth and development (Bowie and Unger, 1997, p. 84).

HICOM entered into several partnerships with foreign companies in several industries such as iron and steel, petrochemicals, paper, machinery and equipment, automobiles, cement, general engineering, transport equipment and building materials. All these projects were

promoted by subsidized credits, government procurement provisions and heavy tariff protection (Athukorala, 2001, p. 10). One prominent example is Proton, the Malaysian automobile manufacturer.

This new policy approach caused public expenditure to surge by widening budget and current account deficits between 1981 and 1986. Although during the 1970s Malaysia experienced better terms of trade, this trend was now reversed as many prices of commodities such as rubber, tin and palm oil, which Malaysia produced in large quantities, dropped. Government revenues declined as well as GDP growth.

The new heavy industry experienced especially in mid 1980s a turbulent period as internal demand fell during this time (almost all HICOM units experienced operating losses) (Bowie and Unger, 1997, p. 86). Private investments dropped in the mid-1980s from RM13.3 billion in 1984 to RM10.1 billion in 1986 before increasing again up to RM10.5 billion in 1987; private investment as a percentage of GDP had been declining since the beginning of the 1980s: from 19 % during 1979-1984 to 14.4 % in 1987 (BNM, 1988, p. 2). Foreign corporate investment declined as well by 19 % from 1984 to RM1.7 billion in 1985 and to RM1.4 billion in 1986 and 1987 (BNM, 1988, p. 195).

As economic circumstances worsened, the living together of the different ethnic groups was tense (e.g. unemployment increased). It was doubtful if the NEP targets, i.e. a 30 % share of Bumiputera in companies, could be achieved by 1990 (Drabble, 2000, p. 202). This private and political uncertainty reduced domestic and foreign private investment. In 1986 the government amended the ICA to apply only to investments of roughly US\$ 1 million or more (previous US\$ 400,000 or less) or to plants employing 75 or more full-time workers (Bowie and Unger, 1997, p. 88). In the same year the 'Promotion of Investment Act' was introduced which created new incentives for foreign investors.

In 1987 the leadership of UMNO and its president Mahathir challenged internal problems during the 1987 party elections. Mahathir was able to maintain his positions within the party and the government, but faced some political vulnerability.

In late 1980s Malaysia was again attractive for investment especially for electrical and electronics industries, as Malaysia provided a relatively well-developed infrastructure, relatively educated workforce, and already established electronics plants, additionally Malaysia was considered to be of relative low political risk in the region (Bowie and Unger, 1997, p. 92).

By the early 1990s the policy shifts done in mid-end 1980s resulted in a gradual process of privatization and restructuring of state-owned enterprises. State-ownership was limited to car manufacturing, petrochemicals, iron and steel and cement industry, as these industries were considered politically sensitive (Athukorala, 2001, p. 10). Privatization in Malaysia

was not only driven by considerations of efficiency, it was important to continue UMNO's social redistribution policies. As most of the companies, which were sold, were already corporatized, share prices were already determined by market forces and therefore the selling price was not a major issue. Usually around 32 % or less of total shares was allocated as a higher block of shares would have required a general offer by law. These blocks of shares were mainly bumiputeras and members of UMNO. This increased the connection between the UMNO members i.e. entrepreneurs and the ministers (Perkins and Woo, 2000, p. 236).

During this period the government no longer protected existing labour unions and the rights of workers but moved towards a policy of labour creation. In 1990 the NEP was extended but with some modifications (especially the prescriptive, ethnic-based targets of NEP were abandoned) under the new name of National Development Policy (NDP). Corporate tax was lowered in 1989 from previously 40 % to 35 % and the commitment to open trade was emphasized. In a context tariffs were further reduced although Malaysia was already relatively open compared to other developing countries (Athukorala, 2001, pp. 11-12; Bowie and Unger, 1997, pp.93-94).

During the Fifth (1986-1990) and the Sixth (1991-1995) Malaysia Plans, government expenditures were reduced further and there was a shift away from promoting and subsidizing public sector enterprises towards infrastructure projects in order to increase private sector development (e.g. Cyberjaya – the multimedia city in the surrounding of Kuala Lumpur). Due to increased government revenues and a more prudent approach to expenditures external borrowing was reduced further and it was possible to repay some expensive external loans before due dates (Athukorala, 2001, p. 12).

From 1988 onwards BNM used tight monetary policy in order to accommodate fiscal prudence. During this time the exchange rate was a quasi-pegged exchange rate regime. Interest rate differentials widened and became more favourable for Malaysia but in the same time large capital inflows to the country put pressure on the exchange rate.

Since 1991 the Malay business elite had experienced some limits in their former privileges as lucrative business opportunities were offered to some Chinese and Indian businesspeople in order to reduce the dissent amount the non-Malay communities (Jomo, 2000, p. 294)

In the period 1990 to 1995 Malaysia experienced an increase in capital inflows, Table 1.13. The central bank adopted different measures (e.g. raising the statutory reserve requirement) in order to sterilize the impact of capital inflows. In 1993/1994 the ringgit came under strong buying pressure. Therefore BNM introduced some restrictions on capital inflows, which included ceilings on external liabilities of commercial banks, a ban on

sales of short-term debt instruments to foreigners, restricting ringgit deposits of foreign institutions in non-interest-bearing accounts, prohibiting non-trade-related currency swaps and a new maintenance charge on non-interest-bearing foreign deposits (World Bank, 1996, pp. 67-68; Bank Negara Malaysia, 1999, pp. 288-291). After a gradual removal of controls all restrictions were released by August 1994 (World Bank, 1996, pp. 67-68). Although the introduction of capital controls seemed drastic and led to widespread concern about a possible contraction in foreign investment flows (portfolio investment and FDI) to Malaysia this did not happen (Athukorala, 2001, p. 26). Capital inflows increased again during the years preceding the East-Asian crisis.

As a consequence of the banking crisis experienced in the early 1990s the Malaysian Central Bank authorities become more cautious and prudent with respect to financial liberalization, domestically and internationally, and tried to discourage short-term debt as opposed to the other crisis-hit countries. Prior to the East Asian crisis the Bank for International Settlements (BIS) and other banking regulations as well as other banking practices (e.g. Basel Standards) encouraged short-term debt in the exposure of the OECD countries-based banks, especially to emerging or developing countries due to measurement rules of risk exposure of balance sheet items of western financial corporations.

In Malaysia portfolio capital inflows were more significant than the exposure of short-term debt, as in the other crisis countries, due to the discouraging measures taken by monetary authorities in Malaysia. Portfolio capital inflows were promoted as Malaysian authorities promoted their stock market in Kuala Lumpur abroad and by splitting from the Stock Exchange of Singapore (SES) they ensured that these flows entered the Kuala Lumpur Stock Exchange (KLSE) directly. Therefore the vulnerability of Malaysia resulted from the volatility of international portfolio capital flows into its stock market (Jomo, 2005). Table 1.13 shows the role and weight of portfolio investment, along with its variability.

Table 1.14 shows the economic crisis in 1997/1998. There can be seen, as in the case of Indonesia, major macroeconomic figures were stable during the early/mid 1990s showing no sign for a potential first- or second-generation crisis. Instead, some indicators showed that the picture in Malaysia was changing: the real exchange rate depreciation in 1996 and sharp appreciation in 1997, the change of international reserves (increase until 1996, sharp decrease in 1997), the build up of short-term foreign debt and lastly, the sharp increase of non-performing loans in 1997.

Comparing these results to those of Indonesia above it can be seen that in both countries major macroeconomic figures showed no signs of a potential crisis but on the other hand

some signs related to the real exchange rate and the financial markets sector were changing indicating some fragilities (outflow of international reserves, increase of short term debt and non-performing loans).

TABLE 1.14 – Pre-Crisis Situation of Malaysia

	MALAYSIA			
	1990-1994	1995	1996	1997
Growth rate of real GDP %	8.7	9.4	8.6	7.7
CPI growth rate (%)	3.8	5.3	3.5	2.7
Current account balance (% of GDP)	-5.2	-8.6	-5.3	-5.9
Foreign debt (as % of GDP)	40.0	42.5	42.1	47.2
Debt service ratio for all external debt	21.0	17.5	19.2	n.a.
Exchange rate (vis-à-vis US\$)	2.7	2.5	2.5	3.9
Real exchange rate (1990=100, WPI based)	93.6	86.1	77.6	106.1
Current account balance (US\$ million)	-2,946	-8,469	-4,596	-4,791
Capital account balance (US\$ million)	5,587	7,464	9,227	2,503
Foreign direct investment (US\$ million)	4,172	4,178	5,078	5,105
Export value (US\$ million)	42,071	74,037	78,327	78,903
Import value (US\$ million)	42,214	77,751	78,417	79,045
Volume of exports (index)	119.3	165.5	172.4	190.8
Volume of imports (index)	118.0	186.0	195.3	218.9
International reserves minus gold (US\$ million)	18,107	23,774	27,009	20,788
Short-term foreign debt (US\$ billion)	4.2	7.3	11.1	14.9
DS Stock Market Index (\$)	377.1	510.3	635.5	197.4
Kuala Lumpur Composite Index (average)	790.5	995.2	1,238.0	594.4
Nominal lending rate (%)	8.3	7.6	8.9	9.5
Nominal deposit rate (%)	6.6	5.9	7.1	7.8
Non-performing loans	14.3	5.5	3.9	6.7
Direction of Trade (Exports, US\$ Millions)	USA (8,083.2); Singapore (9,311.8); Japan (5,697.6)	USA (15,313); Singapore (14,960); Japan (9,199)	USA (14,251); Singapore (16,018); Japan (10,498)	USA (14,553); Singapore (15,869); Japan (9,983)
Direction of Trade (Imports, US\$ Millions)	Japan (11,091.2); USA (6,905.2); Singapore (6,323.6)	Japan (21,179); USA (12,657); Singapore (9,613)	Japan (19,241); USA (12,133); Singapore (10,475)	Japan (17,368); USA (13,246); Singapore (10,434)

Source: Perkins and Woo (2000).

1.5 Conclusion

The period before the outbreak of the crisis, which has been described by the World Bank as the 'East Asian Miracle', has been an unprecedented period of high economic growth and stability. This period has been characterized by changes in the economic policies (e.g. from import-substitution to export-driven policies) and economic growth which was distributed over all classes of population.

This period has not only been characterized by similar economic policies and outcomes i.e. high growth rates, but additionally by some common political features: Indonesia and Malaysia were until 1950s/1960s colonies and were thereafter governed by a political elite which wanted to push the countries from less developed to highly developed economies. Furthermore, both countries experienced in the period before the outbreak of the crisis in 1997/98 a relatively long period of political stability indicating that in power was a very small group of politicians for some decades.

The East Asian Crisis, the outbreak and its causes will be discussed in the next chapters in detail.

2

The East Asian Crisis

The outbreak and severity of the East Asian Crisis was hardly predicted by economists and investors prior to the event as at the time macroeconomic data were not showing any signs of vulnerability although capital flows to the region increased as well as their composition changed.

This chapter will give an overview of the chronology of the crises, their causes and theoretical models explaining the crisis.

2.1 Chronology of the Crisis

The East Asian financial Crisis was almost unexpected as 'traditional' economic indicators showed no vulnerability: high GDP growth rate, relative low inflation and indebtedness of governments.

Nevertheless, in early 1997 the East Asian financial crisis began to spread from Thailand through the whole region within a few weeks. On July 2nd 1997 the Thai baht was devalued by the Bank of Thailand and in August 1997 its neighbours, Malaysia, Indonesia and the Philippines had substantially devalued their currencies (Sharma, 2003, p. 1). This can be seen from Table 2.1 below.

TABLE 2.1 – Currency Movement and Depreciation (in Local Currency per US Dollar)

	July 2 nd , 1997	End September 1997	Rate of depreciation (%) July 1997 – Sept. 1998
Philippine peso	26.38	43.80	66.10
Indonesian rupiah	2,341.92	10,638.30	354.30
Thai baht	24.40	38.99	59.80
Malaysian ringgit	2.57	3.80	47.80
Korean won	885.74	1369.86	54.70

Source: OECD, 1999, p. 249.

Next, the crisis spread to Taiwan and Singapore in September and October and as their currencies came under intensive pressure they let their currencies float. The Singapore dollar devalued by 15 % and its stock market fell by 13 %; the New Taiwan dollar depreciated 7 % on October 17th 1997. Both countries had sound and strong economic basis and after the depreciation of the New Taiwan dollar the speculation moved on to the Hong Kong SAR dollar. Hong Kong experienced as with the aforementioned countries strong economic basis and their currency was linked to the US dollar since 1983 by a currency board (around 7.80 Hong Kong SAR dollars were US\$ 1.00). Although the Hong

Kong currency was backed fully by foreign reserves it was attacked by speculators and therefore the interest rate HIBOR (Hong Kong Inter-Bank Offered Rate) was raised, on October 23rd 1997 even to a high of 280 %, while the three-month inter-bank rate increased to 37 % (Yam, 1998; Sharma, 2003, pp. 2-3). As speculators were engaged in foreign exchange and stocks short selling, it was not only the currency that came under pressure, but also the stock market index Hang Seng Index also fell from 15,447 points in July 1997 to 7,225 points in August 1998 (Tan, 2000, p. 131). The exchange rate peg in Hong Kong could be maintained while share prices and property prices dropped (Sharma, 2003, p. 3).

The depreciation of the New Taiwan Dollar resulted in a speculative attack of the Korean won in November 1997. The exchange rate with respect to the US dollar had risen from 870 (1st quarter 1997) to 1,100 (4th quarter 1997). As foreign banks demanded their claims on Korean banks and on their foreign branches back this resulted in an increase of the exchange rate in terms of US\$ and as the central bank directly sold them dollars, Korea's foreign reserves, net of deposits, slipped (from US\$ 30 billion to less than US\$ 15 billion in third week of November). The sharp depreciation of the won caused a huge loss of foreign reserves, a credit crunch problem in the international capital markets which in turn caused a currency crash and a liquidity crisis (Korea had many unhedged and short-term foreign liabilities). As the Korean won depreciated, this caused even more pressure on the other countries in East Asia. Although the Korean government tried to overcome this problem by widening the band on November 20th 1997, they called in the IMF and on December 4th 1997 an IMF-led support package of US\$57 billion were announced and two days later, the won was allowed to float (Sharma, 2003, p. 4).

The East Asian crisis had not only a fast and sharp outcome on the currencies but also on unemployment and inflation. Both rose in 1997 in the crisis countries and combined with increasing unemployment and inflation in the absence of a social safety-net system many displaced workers and their families were pushed into poverty (Sharma, 2003, p. 5).

The East Asian crisis put pressure on the Russian economy in late 1997 and led to default in 1998 after huge depreciations of the Russian ruble and a collapse of the banking sector. In early-mid 1998, the speculative attacks went further this time to South America, especially Brazil. Brazil although implementing IMF programs faced difficulties and on January 15th 1999 after huge losses in foreign exchange reserves and in the stock market, the Brazilian real was allowed to float (Sharma, 2003, pp. 6-7).

In Table 2.2 are listed all relevant facts regarding the East Asian crisis and the affecting countries.

TABLE 2.2 – Chronology of the Crisis

End of 1980s - Early 1990s	East Asian economies liberalize their capital account (free convertibility).
May to July 1997	Thailand: Thai Baht comes under attack (7 th May 1997); In May introduction of selective capital controls and extensive forward foreign exchange intervention; Thai baht floated on July 2 nd ; Thailand calls on technical assistance by IMF in July. The Philippines: Philippine Peso target of speculative attack; central bank decides to go to float in July; IMF approves US\$1 bn loan to replenish reserves. Indonesia: Rupiah trading band widened, devaluation. Malaysia: Malaysian Ringgit also under attack; central bank abandons support July 13 th .
August 1997	Thailand: agreement reached on US\$17.2bn IMF-led financial package; suspension of 48 finance firms. Indonesia: rupiah floated on August 14 th ; introduction of credit restrictions for the trading of the rupiah. Malaysia: restriction on short selling of the ringgit; Prime Minister Mohamad Mahathir blames US financier George Soros on attacking currencies in East Asia.
September 1997	Malaysia: First downgrading by rating agencies.
October 1997	Indonesia: call-in of the IMF; announcement of US\$18bn IMF-led package on October 31 st . Malaysia: announcement of austerity budget in order to prevent a recession of the economy. Hong Kong: Hong Kong Dollar comes under attack. Thailand: Financial restructuring package released; restrictions on foreign investment in financial sector relaxed. Taiwan: New Taiwan dollar devalued by 7%. Korea: Intervention to support the won.
November 1997	Korea: Won trading band widened on November 19 th ; Korea calls in the IMF; operations of 14 merchant banks suspended and two commercial banks nationalised by end-November. Indonesia: 16 banks closed (agreement of the Government and the IMF).
December 1997	Korea: trading of won abolished on December 16 th ; Kim Dae-Jung elected President on December 18 th ; rescue package by the IMF for Korea are adopted. Indonesia: First rumours of the health of Indonesia's Prime Minister Suharto sweep through the press; first worries of social unrest come up. IMF: revision of outlook for growth in 1998, announcement of a slowdown.
January 1998	Indonesia: downgrades by Rating Agencies of major Indonesian banks; plans to open the banking sector for foreign banks; January 6 th budget released; January 23 rd revised budget released; January 27 th announcement of bank deposit guarantees and restructuring agency. Malaysia: Plans of government to form a group of five or six "anchor" finance companies out of the existing 39 finance companies. IMF announces that Malaysia doesn't need an emergency aid package. Thailand: two-tier exchange rate system introduced in May 1997 abolished, allowing baht loans to non-residents. Korea: by end-January agreement to reschedule US\$24bn in short-term debt; 10 merchant banks closed (25% of assets) and flagged closure of a further 20 institutions.
January to August 1998	IMF packages are revised; rating agencies downgrade further the East Asian economies; first steps in financial restructuring are introduced.
February 1998	Korea: labour market reforms announced; two merchant banks closed (taking the number to 12, which 15 of 30 institutions assessed to be financially viable). Thailand: two banks taken over by the Financial Institutions Development Fund; on February 25 th IMF agreement revised. Malaysia: statutory reserve requirement reduced by 3.5 percentage points to 10%.
March 1998	Thailand: IMF loan instalment paid. Indonesia: early month speculation about presidential and vice-presidential nominations; by March 5 th announcement that IMF package to be delayed from mid-March to April; by March 9 th speculation that the government would renounce IMF-led package.
May 1998	On May, 21 st Indonesia's President Suharto gives away his power; he was Prime Minister for 32 years; at the same time, riots in Jakarta escalated. Vice-President B.J. Harbibie replaces him and announces elections for the following year.
August 1998	In Indonesia annual inflation is around 50 percent; a new bankruptcy law has been introduced. Russian crisis
September 1998	In Indonesia , rice prices (the primary source of food for people) have tripled since the year before (harvest reductions due to El Niño). Crisis of LTCM. Malaysia introduces capital controls on short-term capital outflows for one year and fixes the exchange rate at 3.8 RM/US\$ on September, 1 st ; Anwar Ibrahim, former finance minister is arrested; he was a proponent of the "orthodox" economic policy. Many leading indexes remove and rating agencies downgrade Malaysia (for example the Dow Jones Global Indexes and Morgan Stanley) thereafter.
October 1998	A program of economic stimulus (investments in infrastructure) is announced in Malaysia .
September to November 1998	The Fed cuts interest rates by 75 basis points.

February 1999	The National Action Committee in Malaysia adopts a program that offers stepwise exit of the capital control system, favouring the exit tax long-term investors (the tax is up to 30 percent on principal and profits); Investors can repatriate their investment if they pay a levy.
1999	Malaysia's central bank, Bank Negara, announces merging the 21 banks into six banks in order to increase competitiveness of the banking sector. In the last quarter, indexes reinstated Malaysia.
March 1999	Indonesia announces closure of 38 banks, taking seven and recapitalizing another nine.
June 1999	Elections in Indonesia ; the Rupiah appreciates.
August 1999	Indonesia : East Timor votes for independence in a referendum.
October 1999	Indonesia's new President Abdurrahman Wahid and vice-president Megawati Sukarnoputri sworn in.
2000	IMF delays payments of tranches in Indonesia , further downgrades by rating agencies in the first half of the year, upgrading as government and IMF sign letter of intent with banking sector reform, corporate restructuring, governance, and law enforcement. Rumours in the province of Aceh propagating separatism. In Malaysia mergers among major industrial companies occur because of efforts of the government restructure and strengthen sectors through consolidation; strengthening the banking sector is of special interest to the government.
2001	S&P lowers outlook of Indonesia and cuts rating; new president is Megawati Sukarnoputri, the Rupiah appreciates. In Malaysia , the economy experiences a slowdown as their major trading partners, the economies of the US, Japan and Korea slow down; the government therefore tries to boost the economy through higher government spending. On May, 2 nd the exit levy system was formally abolished.
2002	Malaysia's economy recovers, led by strong consumption demand and a recovery in exports, but still performing under capacity. Expansionary fiscal policies are used by government, too. Banking sector is relatively strong and NPLs are not of great concern. Indonesia's economy stabilizes; improvements were made in macroeconomic stability and fiscal sustainability, but investment is already declining and investor confidence is not fully restored. Structural reforms began and efforts of a more transparent banking and capital markets supervision are done. Some policy uncertainties remain, especially the terrorist attacks in October 2002 in Bali are of great concern to the government.
2003	Indonesia : In July, there are terrorist attacks in Jakarta; in August the first terrorist of the Bali attack was sentenced; announcement that it doesn't need the help of the IMF and their programs anymore – exit from IMF programmes. GDP growth rate recovers further. Both countries Indonesia and Malaysia suffer from a lowering in tourism because of the global epidemic SARS and the conflict in Iraq. Malaysia: Office as prime minister overtaken by Abdullah Ahmad Badawi, sworn in March 2004.
2004	Indonesia : Election held in September where Susilo Bambang Yudhoyono is elected as new president. Tsunami in late December, about 100,000 people die in Aceh. GDP growth rate recovers further. Malaysia hit by the Tsunami as well but not as hard as other countries in the region.
2005	Indonesia : President Yudhoyono reshuffles the cabinet in December and technocrats are appointed to become Economic Coordination Minister and Finance Minister. GDP growth rate recovers further Malaysia ends the fixing of the currency rate and sticks in July to an exchange rate basket of currencies. Fear of overheating of economy in 2006.

Source: Homepage of Roubini Global Economics (RGE) Monitor, <http://www.rgemonitor.com> and G. Bekaert and R. Campbell, http://www.duke.edu/~charvey/Country_risk/couindex.htm; Asian Development Bank (2002); de Brouwer (1999, p. 9).

2.1.1 A Chronology of the Crisis in Indonesia

After the move to a floating exchange rate of the Thai baht on July 2nd 1997 Bank Indonesia soon widened the intervention bands on July 11th 1997 of the Indonesian Rupiah from 8 % to 12 % respectively from 192 RP/US\$ to 304 RP/US\$. During the weeks until mid-August, Bank Indonesia spent US\$1.5 billion on market intervention. On August 14th 1997, the Indonesian government decided after the hard speculative attacks to let the rupiah float which helped to prevent a further decline of foreign exchange reserves. By the end of October 1997, the Indonesian government called-in the IMF.

2.1.2 A Chronology of the Crisis in Malaysia

After the collapse of the Thai baht, perception of foreign investors changed about the whole region and therefore Malaysia was involved in the crisis from the beginning from July 14th 1997. The currency fell rapidly from RM/US\$ (Malaysian ringgit per US dollar) 2.48 in March 1997 to 2.57 RM/US\$ in July and 3.77 RM/US\$ at year-end of 1997. In order to defend the ringgit in mid-1997 BNM increased short-term interest rates where the overnight and seven-day interbank rates peaked at 50 % and 35 % in July 1997. However, since this intervention did not help to stabilize the currency Bank Negara Malaysia abandoned the defence and therefore the flow off foreign reserves was halted. The rally against the currencies went on and in early January 1998 the ringgit fell to a all-time low of 4.88 RM/US\$, recovering thereafter in April 1998 to 3.73 RM/US\$ and falling again to 4.20 RM/US\$ in August 1998. The stock market tumbled as well and investors began selling stocks on KLSE as concerns about the economy and the exchange rate grew. In January 1997, the Composite Index of KLSE comprised of 1,216.7 points and fell to 594.4 points in December 1997, i.e. it halved in about one year. In August 1998, the Composite Index was even lower, at 302.9 points and market capitalisation was only RM200 billion compared to RM826 billion in January 1997. On September 2nd 1998 the exchange rate was fixed at 3.8RM/US\$ and capital controls on short-term capital outflows were introduced.

A more detailed description of policies and interventions in the economy will be given for both countries, Indonesia and Malaysia, in Chapter 4.

2.2 Causes and Theoretical Models

The debate on the causes of the East Asian crisis is both wide and varied and there are many opinions about the reasons.

Section 2.2.1 will give an overview of the literature and the different views of the academic literature, while Section 2.2.2 will show theoretical models and ideas that try to explain the crisis.

2.2.1 Causes

Different views on the causes of the crisis can be found in academic literature. This section will give an overview regarding this literature.

Tirole (2002, pp. 1-7) groups the views of economists about the causes of the crisis in the following way (the names in brackets are those economists that argue that this specific factor contributed to the outbreak of the crisis):

- 1) *Size and nature of capital inflows*: Sharp increases in short term capital inflows (Furman and Stiglitz (1998); Corsetti, Pesenti and Roubini (1998); Radelet and Sachs (1998); Goldstein (1998));
- 2) *Banking fragility*: Supervision was inadequate according to its liberalization, problems with nonperforming loans in the banking sector (Furman and Stiglitz (1998); Corsetti, Pesenti and Roubini (1998); Radelet and Sachs (1998); Goldstein (1998));
- 3) *Currency and maturity mismatches*: Debt was largely denominated in foreign currencies while lending was in national currency; maturity mismatch occurred as borrowing by banks was mainly short term (one year or less) (Furman and Stiglitz (1998); Corsetti, Pesenti and Roubini (1998); Radelet and Sachs (1998); Goldstein (1998));
- 4) *Macroeconomic evolution*: Aggregate demand and asset prices grew and real estate prices increased substantially (Corsetti, Pesenti and Roubini (1998); Radelet and Sachs (1998); Goldstein (1998));
- 5) *Poor institutional infrastructure*: Inadequate bankruptcy laws, lack of transparency etc. (Furman and Stiglitz (1998); Corsetti, Pesenti and Roubini (1998); Goldstein (1998));
- 6) *Currency regime*: Fixed or crawling pegs seem to increase the probability of a crisis (Corsetti, Pesenti and Roubini (1998); Radelet and Sachs (1998); Goldstein (1998)); the East Asian currencies were pegged effectively to the US Dollar).

The six factors identified by Tirole above show how most economists judged the causes of the crisis. These causes will be explained now in more detail:

1) *Size and nature of capital inflows:*

During the early/mid-1990s, capital flows to East Asia changed. This can be seen from Table 2.3, which shows that during this period East Asia experienced an increase in capital inflows (from US\$ 39,530 million in 1991 to US\$94,129 millions in 1996 with an average annual inflow over the period of US\$63,673). As can be seen from this table the largest part of total capital inflows consisted of private capital inflows.

The structure of private capital inflows changed over time: from 1991 to 1996, the relative importance of foreign direct investment relative to total private capital inflows decreased, while portfolio investment and bank and trade-related lending increased. Economic theory suggests that foreign direct investment is desirable as it is usually long term and boosts growth especially portfolio investment which can change sharply their direction. Both portfolio investment and bank and trade-related lending capital inflows could become harmful if they reverse suddenly or bank loans could not be rolled over. During 1991 to 1996, most countries experienced an increase in bank and trade-related lending relatively to overall private capital inflows, while foreign direct investment remained rather stable or slowed down marginally. The exception in bank and trade-related lending is Malaysia, where this kind of capital inflow was lower as in 1994 Malaysia introduced controls on capital inflows (due to the pressure on ringgit as discussed before) which were soon abolished again but together with other policies helped to maintain a relatively low level of this type of capital inflows.

TABLE 2.3 – Net Capital Flows to East Asia (Millions of US\$)

	1991	1992	1993	1994	1995	1996	1991-96
EAST ASIA							
Total capital inflows	39530	21251	67157	65793	94179	94129	63673
Private capital inflows	33962	15531	61205	62931	90819	93217	59611
Foreign direct investment	14072	16529	42009	42181	46171	52540	35584
Portfolio investment	4260	12118	28190	10153	19077	4495	13049
Bank and trade-related lending	15630	-11030	-8930	10597	25659	36182	11351
INDONESIA							
Total capital inflows	6648	4609	6320	7076	12128	12734	8253
Private capital inflows	5365	3201	4898	6899	12532	14326	7870
Foreign direct investment	1399	1536	1896	2476	4649	6367	3054
Portfolio investment	-	-	1738	1061	1415	1819	1006
Bank and trade-related lending	3965	1664	1264	3361	6468	6140	3810
KOREA							
Total capital inflows	6766	6775	3328	8425	17342	23269	10984
Private capital inflows	6472	7391	5325	8705	17798	23754	11574
Foreign direct investment	-294	-616	-666	-842	-1825	-1939	-1030
Portfolio investment	3236	5851	10650	5055	8671	11150	7346
Bank and trade-related lending	3530	2156	-4660	4493	10953	14543	5169
MALAYSIA							
Total capital inflows	5584	6607	10799	1235	7612	9416	6876
Private capital inflows	5391	6665	11185	1089	7699	9516	6924

Foreign direct investment	3995	5158	5014	4140	4200	5055	4594
Portfolio investment	-708	3027	9497	5485	2110	3468	3813
Bank and trade-related lending	2104	1520	-3326	-8536	1389	993	-976
PHILIPPINES							
Total capital inflows	2225	2066	2664	3716	4449	8378	3916
Private capital inflows	727	1060	1414	3204	3411	8210	3004
Foreign direct investment	545	689	870	1282	1335	1340	1010
Portfolio investment	136	53	-54	256	222	-168	74
Bank and trade-related lending	45	318	598	1854	1854	7037	1920
THAILAND							
Total capital inflows	10511	9808	10768	12560	22529	18144	14233
Private capital inflows	10511	9696	10518	12415	21352	16874	13561
Foreign direct investment	1473	1560	1377	1011	1177	1633	1372
Portfolio investment	-	557	4007	1299	3194	1089	1691
Bank and trade-related lending	9037	7579	5134	10106	16981	14153	10498

Source: Athukorala, 2001, pp. 30-31. Net capital flows: comprise net direct foreign investment, net portfolio investment (equity and bond flows) and official and private bank borrowings. Changes in national foreign exchange reserves are not included. For each country, the difference between total and private flows represents net official flows. East Asia: consists of Indonesia, Korea, Malaysia, Philippines, Thailand, China (mainland), Singapore, Taiwan, and Hong Kong. The period of "1990-1996" is annual average.

Table 2.4 shows the origin of loans (by country of origin). Here it can be seen that Japan was the largest single creditor for the five crisis countries – Japanese financial industry had an incentive to invest in the region as in Japan profitable investment opportunities became scarce while investments in Indonesia, Korea, Malaysia, the Philippines and Thailand were more profitable and 'refurbished' the Japanese balance sheets due to international regulations and practices (e.g. Basel Standards).

TABLE 2.4 – Distribution of Loans by Country of Origin (Major Creditor's Country of Provenience) – End of June 1997 (Millions of US\$)

	Total	France	Germany	Japan	UK	US
Indonesia	58,726 (100.00%)	4,787 (8.15%)	5,610 (9.55%)	23,153 (39.42%)	4,332 (7.38%)	4,591 (7.82%)
South Korea	103,432 (100.00%)	10,070 (9.74%)	10,794 (10.44%)	23,732 (22.94%)	6,064 (5.86%)	9,964 (9.63%)
Malaysia	28,820 (100.00%)	2,934 (10.18%)	5,716 (19.83%)	10,489 (36.39%)	2,011 (6.98%)	2,400 (8.33%)
Philippines	14,115 (100.00%)	1,678 (11.89%)	1,991 (14.11%)	2,109 (14.94%)	1,076 (7.62%)	2,816 (19.95%)
Thailand	69,382 (100.00%)	5,089 (7.33%)	7,557 (10.89%)	37,749 (54.41%)	2,818 (4.06%)	4,008 (5.78%)

Adapted from: Bank of International Settlements (BIS), 1998.

2) Banking fragility:

The countries affected by the crisis gradually liberalized the banking sector during the late 1980s and early 1990s in line with the so-called 'Washington consensus'. In some countries former state-owned banks were privatized or entrance of new banks into the market was eased (e.g. Indonesia). As most countries had experienced in the past a relatively closed banking sector with only a few regulations and some ties between political leadership and management this opening should have been accompanied with a reform of the financial sector

introducing more stringent regulations for banks and bank lending. Usually, this was not done properly as the long-term reliance of politics in guiding of funds by banks to the economy was not broken up; moral hazard was common (e.g. investing too much into risky projects). Financial sector liberalization and supervision was not balanced giving more weight to liberalization and less to supervision. In the period of the crisis this caused difficulties as non-performing loans suddenly increased on bank's balance sheet.

Table 2.5 shows the structure of loan maturity shortly before the crisis. Again, the picture is the same for Indonesia, Korea, Malaysia, Philippines and Thailand. The biggest shares of all loans were short term (maturity under one year) and the volume of total loans was increasing before the outbreak of the crisis. These numbers can be explained again by the international banking regulations and standards effective at that time which encouraged short-term loans (maturity below one year) directed from OECD countries to emerging economies.

TABLE 2.5 – Loan Maturity: Maturity Distribution of Lending of BIS Reporting Banks – Until June 1997 (Millions of US\$)

	Total			Under 1 Year		
	June 1996	December 1996	June 1997	June 1996	December 1996	June 1997
Indonesia	49,306	55,523	58,726	29,587	34,248	34,661
South Korea	88,027	99,953	103,432	62,332	67,506	70,182
Malaysia	20,100	22,234	28,820	9,991	11,178	16,268
Philippines	10,795	13,289	14,115	5,948	7,737	8,293
Thailand	69,409	70,147	69,382	47,834	45,702	45,567
	1-2 Years			Over 2 Years		
	June 1996	December 1996	June 1997	June 1996	December 1996	June 1997
Indonesia	3,473	3,589	3,541	14,177	15,331	17,008
South Korea	3,438	4,107	4,139	13,434	15,884	16,366
Malaysia	834	721	615	7,425	7,326	8,248
Philippines	531	565	326	3,710	4,111	4,001
Thailand	4,083	4,829	4,592	14,931	16,344	16,491

Source: Bank of International Settlements (BIS)

Note: Consolidated cross-border claims in all currencies and local claims in non-local currencies.

3) *Currency and maturity mismatches:*

Most companies and financial institutions borrowed in foreign currency as there was an incentive to do this: their home currency was usually effectively pegged to the US dollar and therefore there was a strong belief that no currency risk would be incurred. Therefore they did not properly hedge against currency risk.

Maturity mismatches occurred in financial institutions as they usually borrowed short term (one year or less – as can be seen above; there was an incentive of Japanese banks to lend short term capital to Asian countries as interest rates in Asia were higher than in Japan) while lending was mid to long term. This

fundamental maturity mismatch does not cause any problems if it is only a small share of total loans or if the investor sentiment is positive and they are willing to roll over existing loans. If investor sentiment change i.e., no willingness to roll over existing loans then banks soon could become illiquid (which is not to be confused with insolvent) which could lead to credit crunch in domestic sectors as banks call back their loans and are no longer willing to lend even for profitable projects.

Table 2.6 shows that the highest indebted sector was by end of June 1997 the private sector, where the non-bank sector was indebted more than the banking sector. This is an important fact as it shows the exposure of the private sector to foreign debt. This indicates that East Asia could not have faced a sovereign debt crisis (i.e. a first-generation crisis) nor problems and non-linearities in government behaviour (second-generation crisis). The figures in Table 2.6 and those discussed before indicate that the underlying problems could be found in the private sector.

TABLE 2.6 – Lending by BIS Reporting Banks – End of June 1997 (Millions of US\$)

	Total	Banks	Public Sector	Non-Bank Private Sector
Indonesia	58,726	12,393	6,506	39,742
South Korea	103,432	67,290	4,390	31,680
Malaysia	28,820	10,486	1,851	16,460
Philippines	14,115	5,485	1,855	6,772
Thailand	69,382	26,069	1,968	41,262

Source: Bank of International Settlements (BIS).

Note: Consolidated cross-border claims in all currencies and local claims in non-local currencies.

4) *Macroeconomic evolution:*

During the period before the outbreak of the crisis aggregate demand and assets prices grew and real estate prices increased substantially.

5) *Poor institutional infrastructure:*

The supporters of this cause of the crisis argue that the institutional infrastructure was very poor as there were inadequate bankruptcy laws, lack of transparency, close ties with political leadership or parties etc..

6) *Currency regime:*

Scholars supporting this view argue that fixed or crawling pegs seem to increase the probability of a crisis. These two currency regimes are usually attacked more often by speculators as they need to be backed up by international reserves; speculators expect that central banks will defend their level of exchange rate in order to maintain internal economic stability respectively trade competitiveness.

The currencies of the countries that were affected by the East Asian crisis were pegged to a basket of currencies, but effectively pegged to the US dollar as it was the major share. The competitiveness in external trade was therefore not only determined by internal factors such as the level of wages or qualification of labour but additionally by the movement of the US dollar against major other currencies. In the case of the crisis countries the movement of the US dollar against the Japanese yen was very important as Japan was investing in late 1980s (due to their lower external trade competitiveness) in Asia and their major trading partner. Table 2.7 summarizes key economic variables in East Asian economies before the crisis and which were discussed above.

TABLE 2.7 – Key Economic Variables of East Asian Economies Before the Crisis

	Indonesia	Korea	Thailand	Philippines	Malaysia	Taiwan
Exchange rate	Crawling peg	Managed float	Peg	Managed float	Managed float	Managed float
Significant accumulation of short-term foreign debt in relation to exchange reserves	Yes	Yes	Yes	No	No	No
Significant real exchange rate appreciation 1996	Partial	No	Yes	Yes	Yes	No
Capital account liberalisation	Yes	Partial	Yes	Yes	Yes	Partial
Inadequate prudential regulation	Yes	Yes	Yes	Partial	Partial	Partial
Current account deficit 1996	Moderate	Moderate	Large	Moderate	Moderate	No

Source: Noble, Gregory W. and John Ravenhill ed. (2000), p. 7

According to Tirole (2000, pp. 37-46) there are two major views regarding the reasons why the crisis spread so quickly to other economies, even though they were not connected directly. One is the 'fundamental' view while the second is the 'panic' or 'multiple equilibria' view.

Major supporters of the 'fundamental' view are for example Corsetti, Pesenti and Roubini (1998) who argue that investors became aware of inconsistencies of macroeconomic fundamentals (low financial sector capitalization and poor risk management implicitly deteriorated macroeconomic fundamentals of the economy exposing them to higher liabilities than officially recorded; the Japanese banking sector problems and influence as an economic stimulator all over the region) and quickly withdrew capital from the countries which resulted in the sharp reversals of capital flows.

On the other hand, there are supporters of the 'panic' or 'multiple equilibria' view (for example Radelet and Sachs (1998), Feldstein (1998)) who claim that this kind of crisis

could start as creditors may refuse to roll over short-term claims, which could be rational for a single investor but socially not desirable. In this sense, the term 'self-fulfilling crisis' is also used, which describes the situation when expectations about development of economies shift, crises become self-fulfilling even though the countries have good macroeconomic fundamentals.

Another overview of some different views is given by Sharma (2003, pp. 10-26) who identifies three perspectives in the literature and argues that 'the Asian financial crisis was caused by many factors and the conjunctural interactions among them' (Sharma, 2003, p. 10). The three perspectives identified by Sharma are:

1. Investor panic and the instability of international capital markets:

There exist two points of view: an asymmetric information view and an irrational movement of investors out of the markets.

The asymmetric information view defines a financial crisis as being a non-linear disruption of financial markets where asymmetric information problems (i.e. adverse selection and moral hazard) become serious in the way that these markets are unable to channel funds efficiently to the most productive investment opportunities. This view is supported by Frederic Mishkin (1999) who argues that there are financial market imperfections that are endemic problems of asymmetric information in international lending and that reduce the efficiency of financial markets, often contributing to overshooting and instability as well. In emerging markets, information about market participants is less available and the resulting adverse selection, resulting from over-lending to poorly managed and unsound local banks and companies, as well as from panic withdrawals at first signs of trouble, could lead to credit rationing where some borrowers will not receive loans although they are willing to pay a higher interest rate.

As investors widely believe that in most emerging markets there exists an implicit guarantee of the government in maintaining fixed exchange rates and bail out local borrowers, this will not only boost the process of lending but also of borrowing as borrowers will bear more risk as they otherwise would. These market failures increase not only the risks of international lending but also additionally the vulnerability of markets for crises where individual lenders are willing to follow the herd when signs of a crisis emerge. As Mishkin (1999) argues the case of East Asia shows how this herding phenomenon generated a self-fulfilling panic leading to market overreactions that were not completely in line with economic fundamentals (Sharma, 2003, pp. 10-11).

A different perspective can be found in Furman and Stiglitz (1998) and to a similar extent in Radelet and Sachs (1998; 1998a). Furman and Stiglitz (1998) argue that the depth and the extent of the crisis cannot be explained by the deterioration in fundamentals (there could be observed a deterioration of some fundamentals but they were not huge) but instead by a panic reaction of foreign and domestic investors. Radelet and Sachs (1998; 1998a) argue that the main problem in East Asia was liquidity rather than insolvency as financial institutions were not insolvent but they had undertaken a huge amount of short-term liquid external liabilities without backing them with liquid assets (mismatching of maturities), and banks and companies did not hedge properly or at all against exchange rate risk. Therefore in mid-1997 the East Asian countries experienced problems of liquidity as investors refused to rollover short-term loans. Furthermore, Radelet and Sachs argue that this was due to a shift in investor expectation and therefore the crisis became self-fulfilling (Sharma, 2003, pp. 11-12). As the financial world gets closer and closer due to technology only small bad news can lead to a major speculative attack (Sharma, 2003, p. 13).

Furthermore, Calvo (1996) argues that in emerging markets it is too costly for investors to survey each economy and therefore it could be optimal to get out of a group of similar markets once there are signs of problems in any of them. As a result, emerging markets are more vulnerable to herd mentality among investors. The argument of Masson (1998) is that just small triggers can initialize a loss of confidence in a group of economies of investors that hold investments in these economies and the herd behaviour of them can lead to financial distress of these economies. Furthermore, a crisis in one country could even affect another or a group of countries with which this country has close trade and financial links (Sharma, 2003, pp. 13-15).

The study of Goldfajn and Baig (1998) shows that there was a high correlation between sovereign spreads across the five crisis countries (Indonesia, Malaysia, the Philippines, Thailand and South Korea) from July 1997 to May 1998 and that therefore investors asked higher risk premiums for all countries as they feared about private debt default. Another main driver in the speed of the crisis was the downgrading of sovereign ratings by international rating agencies. However, the external shock was not the only cause of the crisis: the combination of the external shock with the inefficiencies and weak financial systems in domestic markets lead to a kind of domino effect across the region (Goldfajn and Baig, 1998).

2. *Unfavourable external economic developments:*

Sharma (2003, p. 15) identifies three events: the devaluation of China's currency, the Yuan, in 1994, Japan's prolonged recession and the appreciation of the US dollar.

The devaluation of the Chinese currency in 1994: China changed from a relatively closed economy to a more open economy in late 1980s. In early 1990s foreign trade accounted for US\$200 billion or roughly 40 % of GNP (Cerra and Dayal-Gulati, 1999). On January 1st 1994 China unified its exchange rate (bringing into line the official rate with the prevailing swap-market rate) and which resulted into a 50 % depreciation of the official rate (which was in effect a devaluation of the Yuan by 50 %). This movement created a better position for China on international markets, and exports increased rapidly while competitiveness of the other Southeast Asian countries was lowered as they experienced a real appreciation with respect to the Yuan (their currencies were effectively pegged to the US dollar). The depreciation was accompanied as well with other trade promoting policies. However, the shift to higher competitiveness of China was not as strong as the real depreciation was smaller as China experienced higher inflation since 1995 than those of its trading partners. Additionally, Indonesia's and Malaysia's competitiveness gradually eroded as domestic costs in production (e.g. wage costs) increased and their movement from labour-intensive industries to higher levels was not very effective (Sharma, 2003, p. 16). Therefore it should be concluded that the Chinese devaluation was 'at best a contributing factor to the Asian financial crisis, not the primary cause' (Liu et al., 1998, p. 1).

The Japanese recession: Japan entered into economic problems in late 1980s and with the burst of the asset-price bubble economic growth stagnated. The financial system weakened in these years as not only the sharp decrease in asset prices caused problems but also the increase of bad loans (real estate loans became problem loans) (Sharma, 2003, p. 17).

In late 1980s and in 1990s many Japanese manufacturers transferred their production to lower-labour-cost countries in Asia and elsewhere. Therefore, Japanese banks could increase their global presence and were lending heavily to Japanese manufacturers, which were increasing their foreign direct investment (FDI) share in Asia. Additionally a stimulus for increased lending resulted from the low discount rate of 1 % since April 1995; this resulted in a more aggressive lending of Japanese financial institutions especially for loans directed to East and Southeast Asian economies. This can be seen from Table 2.4, which shows loans

by country of origin directed to selected Asian economies where it can be seen that the largest share of loans originated from Japan. As the economic situation in Japan further worsened by the end of 1997 Japanese financial institutions experienced a further decrease of profitability and had to write off bad loans. Again as the crisis in Japan deepened, Japanese banks suffered large capital losses and therefore they needed to rebalance their loan portfolios in order to meet capital adequacy standards. Many banks reclaimed the foreign loans as there were higher capital adequacy requirements for international banks than for national banks while at the same time East- and Southeast Asian financial institutions that had borrowed from Japanese banks, suffered from the outbreak of the crisis in East Asia. Japanese banks not only refused to roll over existing loans, they also refused to extend new ones and also closed foreign branches and sold off parts of their overseas operations. During the second half of the 1980s Japan added US\$ 69 billion in net liquidity (i.e. consisting of aggregate trade, foreign direct investment, portfolio investment and bank credit flows) to East and Southeast Asia while the net liquidity inflow reversed to a net outflow of US\$ 126 billion during 1991-1995 and to a net outflow of US\$374 billion during 1996-2000 (Monetary Authority of Singapore, 2001). These actions contributed to the illiquidity problems in East and Southeast Asia and the resultant insolvency and regional credit crunches (Sharma, 2003, p. 16-21).

The US dollar appreciation: The economies of Thailand, Indonesia, Malaysia, Singapore, South Korea and the Philippines adopted a currency basket system where the US dollar had a high weight and which resulted in a de-facto pegged nominal exchange rate to the US dollar. This de-facto peg helped to maintain macroeconomic stability until mid-1995, generated higher inflows of direct and portfolio investments, sustained export-led growth and attracted Japanese FDI as the yen gradually appreciated against the US dollar after the 1985 Plaza Accord and the following interventions on international currency markets.

After the Plaza Accord in 1985 the US dollar was depreciating against the yen; between 1985 and 1988 the yen doubled almost against the US dollar and other Asian currencies tied to the US dollar. The appreciation of the yen against the US dollar forced, as mentioned above, the Japanese companies to move outside Japan as their competitiveness declined. The high-performing countries in East and Southeast Asia (especially Indonesia and Malaysia) were the main destinations of Japanese foreign investment (Sharma, 2003, p. 21). Japanese foreign investment in ASEAN countries doubled in the period from 1985 to 1990 from US\$11 billion to

US\$21 billion; most flows were going to textiles and electronics component manufacturers (Tan, 2000, p. 28).

In the mid-1990s the situation changed as the strong yen era reversed into a period of sharp appreciation of the US dollar especially against the yen; this began in 1995. Therefore, Asian countries, which maintained a de facto or quasi peg against the dollar, experienced a loss of export competitiveness especially in relation to Japan. This external shock also contributed to the East Asian financial crisis as these countries became less competitive with respect to Japan and as their currency appreciation against the yen increased short-term flows to these countries from Japan i.e. investments in these countries became more attractive for Japan as the yen depreciated against the countries' currencies; most flows were directed to high-yielding risky foreign bonds, real estate and consumer loan services (Sharma, 2003, pp. 21-23).

According to Sharma (2003, p. 23), these three factors did not by themselves cause the crisis but they contributed to severity and duration.

3. Domestic structural weakness and mismanagement:

During the period of 1965 to 1990 the economies of East and Southeast Asia, which were sometimes, called 'tiger economies' or 'miracle economies' were considered as a model to follow and to copy. The economies of Japan, the four 'original' tigers (Hong Kong, Korea, Singapore and Taiwan) and the three emerging tigers or newly-industrializing economies (NIEs) of Southeast Asia (Indonesia, Malaysia and Thailand) experienced high growth rates, higher than any other group of economies in the world (since mid-1970s at an annual average of 7 % in real terms and over 9 % annually since the late 1980s). These economies were doubling their real GDP approximately every 7 years during the 1960s and 1970s and every 7 to 10 years during the 1980s (World Bank, 1993). Real per capita income grew as well: Over the period of 1965 to 1995 in South Korea and Singapore by more than 700 %, in Taiwan and Hong Kong by 400 %, Malaysia, Thailand and Indonesia by 300 % (Crafts, 1999).

Numerous books published which praised the 'Asian model' like Jim Rohwer's (1995) 'Asia Rising: Why America will Prosper as Asia's Economies Boom' and John Naisbitt's (1995) bestseller 'Megatrends Asia' as well as a large volume of academic work like the study of the World Bank (1993) 'The East-Asian Miracle: Economic Growth and Public Policy'. The latter argued that Asia's economic development was in line with the so-called 'Washington Consensus', i.e. by adopting a higher degree

of openness of capital accounts, open trade and foreign investment policies, a single competitive exchange rate and a commitment to the principles of comparative advantage, economic integration and export-led growth. The economies' growth was therefore based on the accumulation of factors of production and increases in total factor productivity. Many economists agreed upon these factors and the Asian experience as a pattern to follow (e.g. Jagdish Bhagwati, 1996).

During this period of enthusiasm the arguments of Paul Krugman (1994) were not in line with the findings of the study of the World Bank. He argued that growth was achieved as a result of increased inputs and not as a result of greater factor productivity by just working harder but not smarter and called these economies therefore as 'paper tigers'. Paul Krugman did not predict a sudden crisis but a gradual slow down of economic growth.

After the crisis many economists referred that there were indeed problems before the outbreak of the crisis and one of the most important factor for the crisis was 'crony capitalism', which means that there was a widespread political interference with market process causing a lack of transparency, nepotism and close ties between political and business institutions therefore causing moral hazard problems like misallocation of investment (Sharma, 2003, pp. 23-26).

A different view of the causes of crisis is given by J. Lim (2004, p. 40-44) identifying three different simplified opinions on the crisis:

1. The IMF View:

The view of the IMF on the causes of the crisis was that happenings in East Asia were mainly driven by overspending and over borrowing accompanied with a lack of transparency, appropriate financial supervision and regulation. Additionally, the IMF pointed out that there were some underlying macroeconomic weaknesses, such as high or growing current account deficits, some overvaluations of the currency and relative price distortions against exportable and traceable.

After the outbreak of the crisis the East Asian countries were criticised as being corrupted, experiencing cronyism, lack of transparency, over-protection of domestic firms, as well as harmful government guarantees of private loans and automatic bailouts of distressed financial institutions leading to over lending and over borrowing by domestic banks and financial institutions. This is an orthodox approach to the crisis.

2. *'Liquidity Crisis':*

The view of Radelet and Sachs (1998, 1999) is that the East Asian crisis is a kind of 'liquidity crisis' and 'co-ordination failure'. This view is applicable to countries with strong external positions where speculative attacks were carried out, as in Hong Kong and Singapore. This view is more controversial if applied to the five hardest hit economies as they experienced some speculative financial bubbles (over-exposed short-run debts and capital flows; large or growing current account deficits).

The two authors, Radelet and Sachs (1998) accepted the view of moral hazard that was increased by guarantees and automatic bailouts of governments by the IMF and others (e.g. McKinnon and Pill, 1998, 1999). Radelet and Sachs (1998) also thought of the crisis as being a multiple equilibria problem: a 'good' equilibrium occurred in times of high confidence and if the economies were performing well, while a 'bad' equilibrium would occur during times of low or deteriorating confidence succeeded by panic-induced bank runs and self-fulfilling crises. In this context the two authors recognized that the IMF failed to undertake specific measures in order to prevent liquidity problems, which could in turn become insolvency problems leading to financial collapse.

3. *'Systemic Financial Failure':*

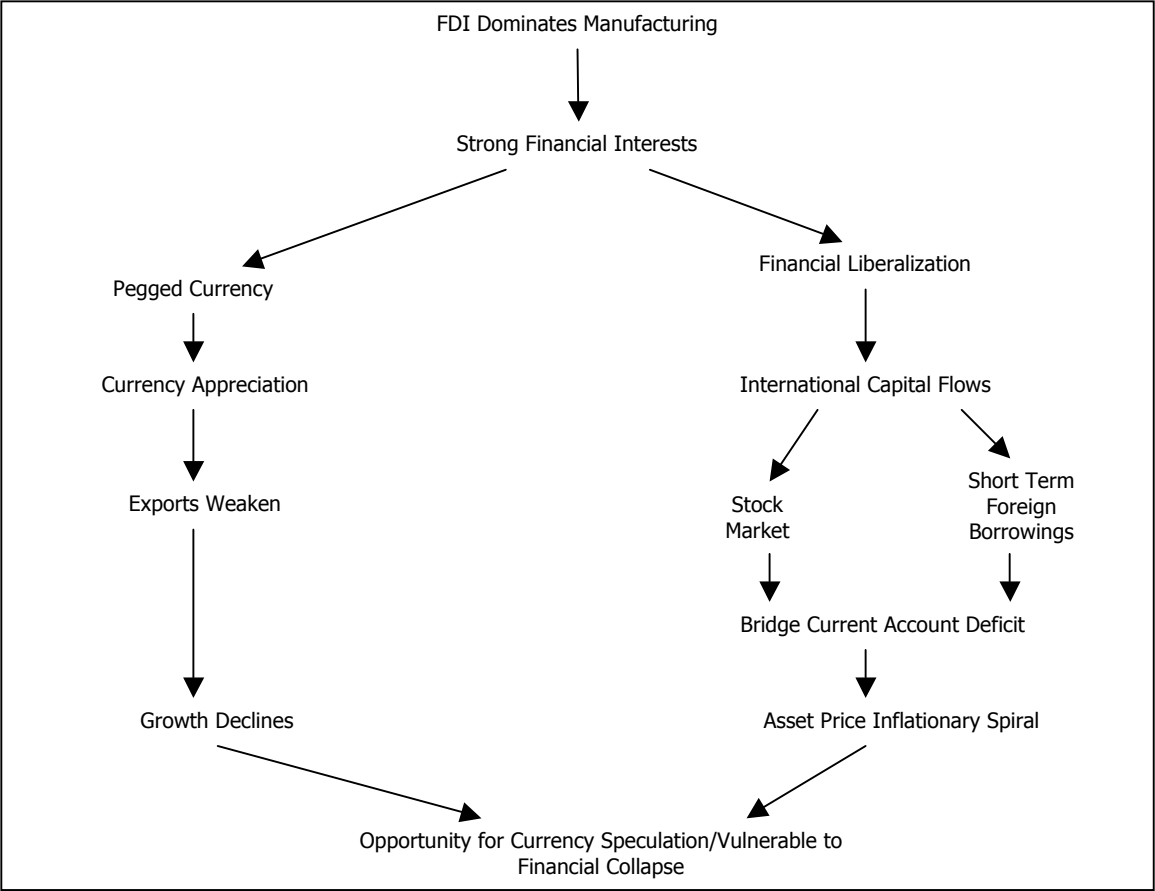
This last view identifies crisis causes systemic failures in the financial system, which was induced by moral hazard, over exuberance and panic, and capital account liberalization without providing proper regulation. This view is rather critical against the steps taken by the IMF and the approach taken in resolving the crisis contributing to the deepening of the crisis. Variations of this view can be found by Stiglitz (1998a, 1998b), Bhagwati (1998), Rodrik (1998) and Krugman (1998a, 1998b) and for a criticism of the policies taken by the IMF, Martin Feldstein (1998). Supporters of this third view share as well some ideas of the second view including the view that macroeconomic fundamentals were strong before the crisis. The supporters believed that the opening of the capital account to short-term capital created large difficulties and questioned about the appropriateness of liberalizing and making convertible the capital account in order to get similar efficiency and productivity as liberalization in the trade of goods and services. Their central argument was related to 'market failures' (i.e. moral hazard, asymmetric information, adverse selection and adverse incentives) that can always be found in financial markets which involve forward contracts and that a removal of government guarantees for loans, an automatic ending of bailouts or increasing

transparency would not automatically stop market failures. Therefore capital or exchange controls might be one of the key long-term measures in order to prevent a replication of the crisis, which should be accompanied by strong prudential regulation and monitoring.

Kaminsky, Reinhart and Vegh (2003) argue that financial contagion which has been intense in the past years has been characterized by a so-called 'unholy trinity': Firstly, a large surge of capital inflows in the economies; secondly, contagion comes as a surprise; thirdly and lastly, there is a leveraged common creditor. Furthermore they argue that the large surge of capital inflows in the economies is often reversed abruptly by a so-called 'sudden stop'; contagion comes as a shock as it seems that announcements which create chain reactions come as a surprise to financial markets; in order to spread the contagion inside the domestic market usually a common creditor, i.e. commercial banks, hedge funds, mutual funds or individual bondholders, was involved. They conclude that the three patterns could be seen in many financial crises over the past years and therefore governments could direct their attention to deal with these three identified characteristics.

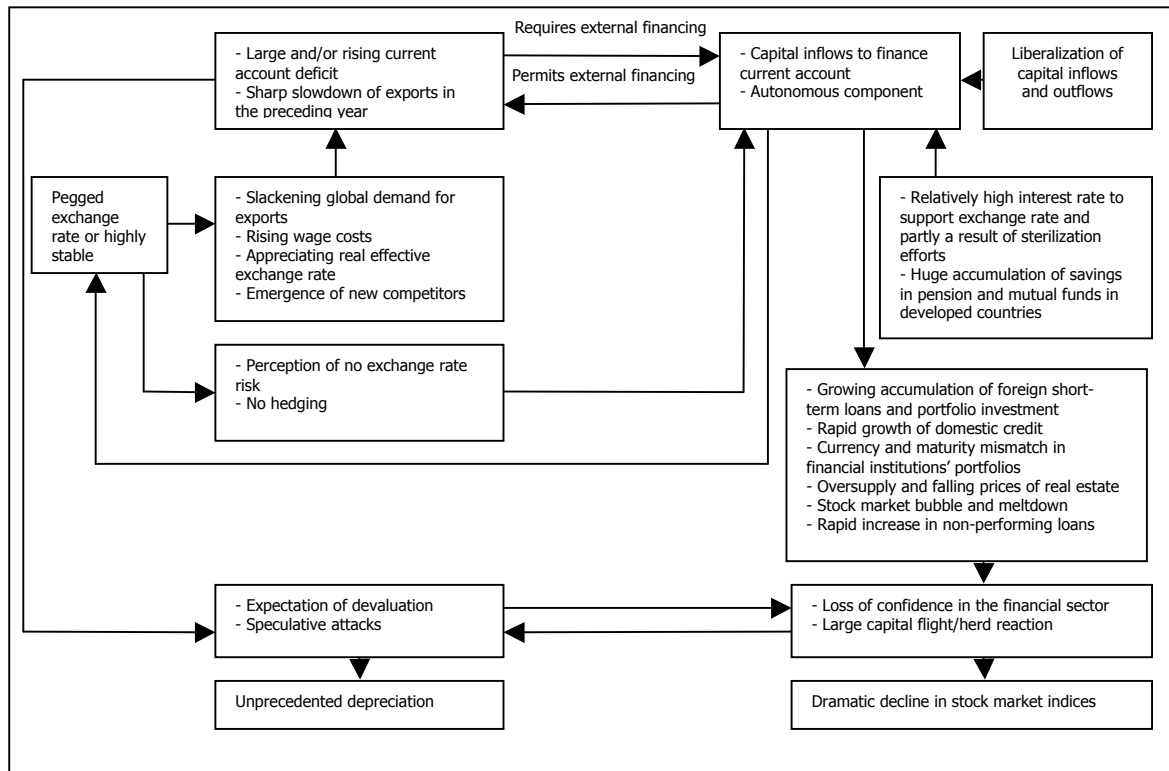
From the above explanations it can be seen that there are many competing views upon the causes of the crisis. The following two figures can be taken as examples on the disagreement of the underlying factors that caused the crisis, as they show how one event could lead to different opinions and views of the matter.

FIGURE 2.1 – Vulnerability in Southeast Asia



Source: Jomo (1998, xiii)

FIGURE 2.2 – The Process Leading to the Crisis



Source: Islam (2000, p. 14)

Figure 2.1 shows a simple picture by Jomo (1998, xiii) who shows how opportunities for speculative currency attacks or vulnerabilities in the financial sector could be created. The path of the East Asian Crisis economies has been the one of financial liberalization promoting international capital flows leading to an inflationary asset price spiral. This figure shows no feedbacks, it is very simple and gives a rough and clear view. The second figure – Figure 2.2 – shows a more complex picture, a system of feedback.

In summary, both Figure 2.1 and 2.2 illustrate the causes of the crises, and demonstrate how broad and varied the reasons for the crises are and support the reasons as explained in the above. Furthermore, the starting point for explanations also varies. Therefore it is not surprising that the analytical models explaining the East Asian Crisis (grouped as 'third-generation crisis models') differ in their construction. An explanation of the analytical models will follow soon.

In the first stage during and after the crisis there was a disagreement among economists about the causes of the crisis, especially between those claiming that there were problems in macroeconomic fundamentals, following therefore the opinion of the IMF and other Bretton Woods institutions, and those claiming that the crisis was mainly due to speculation, herding and a credit crunch in the economies. The third-generation models

presented later in this chapter show that macroeconomic fundamentals were not the main cause of the crisis in East Asia. Nowadays most economists agree that the crisis was not caused by 'bad' macroeconomic fundamentals and it is recognized that the East Asian Crisis was a kind of 'liquidity' crisis as it affected the liquidity of the private sector although there is some disagreement about the details. What can be seen from the discussion above is that there might not be one single factor but a set of different factors leading to the crisis: inflows of capital increased the fragility of the corporate and banking crisis to changes of expectations, problems within the institutional sector in the different countries like weaker regulations on banking supervision or incentives of foreign banks to invest in emerging market countries (like the Basel core standards), currency and maturity mismatches i.e. low incentives of corporations to hedge against their currency risk and the liberalization of capital flows in the late 1980s and 1990s. Finally, a currency system, which neglected the standard textbook description of the 'trilemma' in open economies and seemed to work well.

2.2.2 Theoretical Models

Until the outbreak of the East Asian Crisis the academic world evolved two different crisis models: the so-called 'first-generation' and 'second-generation' crisis models. However, the unprecedented development of the crisis in East Asia required the development of a new model, the so-called 'third-generation' crisis model. History shows that there is a tendency that only after the outbreak of a crisis new theoretical explanation will be developed and therefore lags behind reality.

The following section will show the most important patterns of the first- and second-generation crisis models while the third-generation crisis model will be explained in more detail as this theoretical model tries to explain the East Asian Crisis.

A different view to crisis and their occurrence will be given by the 'Financial Instability Hypothesis' of Hyman Minsky. This very general theory, that follows financial Keynesianism, claims that capitalist systems are moving from more stable to unstable periods and that therefore not an exogenous shock is causing a crisis. This theory will be explained in the second part of this section.

The last part of the section will summarize the theories.

2.2.2.1 The Three Generations of Crisis Models

Since the breakdown of the Bretton Woods System, different types of crises occurred. After those different economists tried to understand why these events happened and created some crisis models. The different crisis models evolved over time in order to match the specific features of the crisis. According to the convention introduced by Eichengreen, Rose and Wyplosz (1995) they were grouped into 'first-generation' and 'second-generation' and with the rise of the East Asian Crisis the 'third-generation' has been added.

One shortcoming of these models is that they failed to predict upcoming crisis i.e. the first-generation crisis models help to explain the crisis in the 1970s and early 1980s while not giving insights to speculative attacks on currencies of the European Monetary System in 1992/1993. For the latter, academics developed the second-generation crisis models which again did not predict the rise of crisis in East Asia. The theoretical models trying to explain the East Asian Crisis are the so-called third-generation crisis models.

There will be a short overview of the first-generation and second-generation crisis models and their key argumentation. A more detailed overview of the crisis literature of the first- and second-generation can be found in the paper by Flood and Marion (1998). Instead a detailed look will be given at the third-generation crisis models, which are of more interest as they try to formulate a theoretical model for understanding the East Asian Crisis.

2.2.2.1.A First-Generation Crisis Model

The first-generation crisis models were developed in order to understand the mechanisms of currency crisis in developing countries like Mexico (1973-1982) and Argentina (1978-1981).

Main contributions to this type of model can be found in Krugman (1979) and Flood and Garber (1984).

The first-generation crisis models have the following patterns:

A small country fixes the price of its currency with respect to a currency of a large foreign partner i.e. the central bank of the small country is pegging the exchange rate. In order to maintain the exchange rate the central bank backs domestic money supply by two central bank assets: domestic credit and international reserves. Additionally, domestic interest rates are equal to the foreign-currency interest rate and international reserves are used to balance the money market quantities. In order to understand the time of the attack a 'shadow exchange rate' is introduced which is defined as the floating exchange rate that would prevail if speculators purchase the remaining stock of foreign resources or foreign exchange were all to be sold; this shadow exchange rate is important to assess the profits

available to speculators in a crisis because it is the price at which speculators sell the international reserves bought from the government. In this sense the shadow exchange rate balances the money market following an attack at which foreign exchange reserves are exhausted. Therefore, a key point of the first-generation models is that at the time of a foreseen speculative attack the 'domestic-currency interest rate' has to jump upward in order to reflect prospective currency depreciation. Firstly, at the time of the attack the high-powered money supply drops by the size of the attack and secondly, the demand for domestic currency drops as the domestic-currency interest rate increases reflecting prospective currency depreciation. The attack time is influenced by the initial stock of reserves and the rate of credit expansion, i.e. a high rate of initial stock of reserves or a low rate of credit expansion will lead to a later time of collapse of the fixed exchange rate regime (Flood and Marion, 1998).

As Krugman (2001) states there are three main features at the bottom of the discussion of this model:

1. Krugmann (2001) argues that the crisis is formed based on poor government policy and the source of the upward trend of the shadow exchange rate is seignorage of the government. Therefore the remedy would be to solve the fiscal problems. The speculative attack is fuelled by inconsistent policies, which the government is pursuing i.e. persistent deficits combined with an exchange rate peg.

'So the models basically imply that governments get the crisis they deserve.'
(Krugman, 2001, p.4)

2. Although the crisis is sudden, it is deterministic and inevitable given the policies. The timing of the attack (i.e. when the shadow exchange rate is equal or greater than the real exchange rate) can be predicted in theory although in practice, as the models admit, it might be very difficult.
3. The first-generation crisis models lead to the result that there will be no recession, i.e. a worsening of the real economy in the post-crisis era is by construction of the first-crisis models not predictable as they only reveal that there is an economic problem that was there before (the crises in the 1970s seemed inevitable while the Latin American Crisis in 1982 was followed by a recession but the runs on the currency were combined with sovereign debt crisis).

Flood and Marion (1998) add that any sterilization effort of the central bank cannot stave off the speculative attack if the plans of intervention are understood by the speculators.

This is true for any level of fixed exchange rate and any quantity of international reserves if there is free mobility of capital. Furthermore, if uncertainty is added to the models then the fixed exchange rate system provides speculators a free call option, where the fixed exchange rate is the strike price of the option and the international reserves backing the fixed exchange rate are the quantity optioned.

2.2.2.1.B Second-Generation Crisis Model

In the early 1990s new crises evolved: economies in Europe and in Mexico had to deal with speculative attacks against their currencies. This time at the bottom of the crisis were in contrast to first-generation crisis models not the seignorage of governments (governments maintained access to capital markets and monetary policy was determined by the macroeconomic policies and not by budget needs; most of the countries involved in the attacks maintained stable macroeconomic policies), the long-run upward trend of the shadow exchange rate and the link between capital flight and abandonment of the exchange rate peg. If first-generation crisis models are characterized by linearities of the behaviour of the private sector (money demand function) and the government (domestic credit growth) then second-generation crisis models have to be characterized by nonlinearities in behaviour leading to multiple solutions, i.e. the focus of second-generation crisis models is on nonlinearities in government behaviour, how the government behaviour is influenced by changes in private behaviour or the reaction of government to changes in the trade-off between the fixed exchange-rate policy and other objectives. Furthermore, newer second-generation crisis models show that 'even when policies are consistent with the fixed exchange rate, attack-conditional policy changes can *pull* the economy into an attack. In contrast, first-generation models generate an attack by having inconsistent policies before the attack [and] *push* the economy into a crisis.' (Flood and Marion, 1998) Good examples of the characteristic of this kind of models are shown by Obstfeld (1994a, b) or in Flood and Marion (1998).

Krugman (2001) shows two differences and one common point of the first- and second-generation crisis models:

1. Difference: Crises are not the result of irresponsible policies. The countries affected by the second-generation crisis were not pursuing unsustainable policies like exploiting seignorage.
2. Difference: A crisis is not anymore deterministic. The crisis occurs suddenly and in a situation where no crisis seems inevitable.
3. Commonality: If the peg will be abandoned due to a speculative attack this does not necessarily imply that there will be a negative shock on employment and

output, at least not in the short-run; in the first-generation crisis models a similar result can be found by construction they do not suggest a recession after the speculative attack. Empirically this could be seen in Britain after the EMS crisis when Britain did quite well after leaving the Exchange Rate Mechanism.

According to Krugman (2001) the biggest change moving from first-generation to second-generation crisis models has been the role of government policies leading to a crisis. While the first-generation crisis models describe a currency crisis that is predictable and not harmful for the economy, i.e. showing that government's policies were unsustainable and making economic fundamentals visible, the second-generation crisis models cannot show clearly that the government triggered a crisis. The second-generation crises are less predictable but remained relatively harmless.

Even a bigger change can be observed by moving from the second-generation to the third-generation crisis models: crises are no longer harmless to real economy (e.g. output, employment) and not anymore exclusively focusing on monetary policies as the interactions between a company's balance sheets and the nominal exchange rate are becoming the main drivers of the crisis.

Ahghion, Bacchetta and Banerjee (2001) argue that first-generation and second-generation crisis models share the view that the government mismanagement of the economy and/or the lack of credibility of government actions form the basis of the crisis.

2.2.2.1C Third-Generation Crisis Model

The East Asian Crisis was in contrast to the preceding crises not driven by a mismanagement of the economy by the government and by a lack of credibility of government actions. As Ahghion, Bacchetta and Banerjee (2001) argue most of the affected countries enjoyed government surpluses and increasing foreign exchange reserves, low unemployment and a booming export sector. Nevertheless, there seems to be evidence of a lack of regulation of the financial sector in these countries. Furthermore, the authors argue that a lack of transparency in the financial sector was known among market participants and most of the countries recovered very fast, not experiencing interest rates significantly higher than in the period before the crisis and without a significant overhaul of the financial sector.

According to Ahghion, Bacchetta and Banerjee (2001) the third-generation models, developed after the East Asian Crisis, have in common the idea that a shock can be amplified by the so-called 'financial accelerator mechanism' (Bernanke et al., 1999). Some models (e.g. Ahghion et al., 1999a, and b) introduce a real shock that is amplified while

other models introduce multiple equilibria where the crisis is caused by a pure shift in expectations (e.g. Krugman, 1999a; Chang and Velasco, 1999). As Aghion, Bacchetta and Banerjee (2001) point out the common feature of the models is that 'a real currency depreciation can have a large effect on output if it affects the credit access of some subset of agents; moreover this effect on output may in turn affect the exchange rate, further amplifying the shock and causing it to persist.'

The three contributions to the third-generation crisis models by Aghion, Bacchetta and Banerjee (2000; 2001; 2004), Chang and Velasco (1998a,b) respectively Céspedes, Chang and Velasco (2000) and Krugman (1999a,b; 2001) will be discussed next, giving an overview of the models and showing their major results. It is worth mentioning, that all the papers demonstrate that there are multiple equilibria (in Aghion, Bacchetta and Banerjee (2000; 2001) but only one equilibrium is analyzed with the exception of the paper of Céspedes, Chang and Velasco (2000) where the model has a unique equilibrium to an interest rate shock under flexible wages.

2.2.2.1C.a Aghion, Bacchetta and Banerjee (2000; 2001; 2004)

Aghion, Bacchetta and Banerjee constructed over time two slightly different third-generation crisis models: The first papers (Aghion, Bacchetta and Banerjee, 2000 and 2001) analyze unique equilibria on condition that monetary policies have only real effects through changes in the real exchange rate while the last paper (Aghion, Bacchetta and Banerjee, 2004) discusses a model where multiple equilibria are possible and monetary policies have real effects on the cost of lending. Both types of the third-generation crisis models will be discussed here.

2.2.1.C.a1 Aghion, Bacchetta and Banerjee (2000; 2001)

The first type of third-generation crisis model discussed in this paragraph is an infinite-horizon monetary model of a small open economy with the following characteristics:

- Goods prices are determined at the beginning of each period; they remain fixed for the entire period.
- A single good is produced and purchasing power parity (PPP) holds ex ante.
- A shock occurs in period one after the price of that period has been set: the shock may be real (e.g. change in productivity or competitiveness or risk perceptions of bondholders) or it may be a pure shift in expectations; PPP will deviate after the shock, i.e. prices will not move during period one, therefore the nominal exchange rate will move and absorb the shock.

- Credit markets are imperfect: The authors assume identical entrepreneurs in the economy that face a credit limit that is a fixed multiple of their current real wealth (Bernanke and Gertler, 1989) and the wealth of the entrepreneurs determines investment and output.
- Other things are standard: Output is produced by using capital; the production function has standard concave shape; there is full capital mobility and uncovered interest parity holds; there can be a floating or fixed exchange rate; consumers need money for their transactions; the central bank can change the interest rate or the exchange rate by using money supply.
- The timing of the events in the model is following: The price level will be preset in the first period and firms will invest. Then an unanticipated shock occurs and the monetary sector adjusts by changing nominal interest rates which have to be paid in period two (interest rates are set for one period ahead in this model) and the nominal exchange rate changes (if the exchange rate is not fixed). Thereafter, output and profit of period one are generated and the debt of the firms repaid. A fraction of net retained earnings after debt repayment are saved for the investment in period two. The periods following period one are identical to the first period with the exception that after period two no further shock occurs and the economy converges to steady state.

Next, basic equations of the model presented in the paper of Aghion, Bacchetta and Banerjee (2001; the model in the paper presented in 2000 is a simple precursor of the model presented here) will be shown:

- The interest parity condition:

$$1 + i_t = (1 + i^*) \frac{E_{t+1}^e}{E_t}$$

Where i_t is the domestic short term nominal interest rate, i^* is the foreign rate (assumed constant over time) and E_t^e is the expected nominal exchange rate at the beginning of period t .

- The money market equilibrium expressed by the LM-equation:

$$M_t^s = P_t \cdot m^d(y_t, i_t)$$

where M_t^s is the nominal money supply at time t , P_t is the domestic price and $m^d(y_t, i_t)$ is the standard real money demand function that consumers face

(properties and assumptions of the function m^d are: it is increasing in y_t , decreasing in i_t and $m^d(0, i_t) > 0$)

- The equation determining the inflation rate:

$$1 + \pi_t = (1 + z_t) \frac{m_{t-1}^d}{m_t^d}$$

Where π_t denotes the inflation rate, z_t denotes the rate of nominal money supply growth between periods $t-1$ and t such that $M_t^s = (1 + z_t)M_{t-1}^s$.

- The interest rate in period one which adjusts to equilibrate the money market is determined in the following way:

$$i_1 = \phi(M_1^s, y_1)$$

Where ϕ is the inverse of the m^d function with respect to i and the relationship between i_1 and M_1^s is negative due to the standard liquidity effect. Therefore both variables can be used for a discussion of the effect of monetary policy in period one.

- Output functions:

Current output is a function of the current wealth of the entrepreneurs whenever the credit constraint allows this, i.e. at date t entrepreneurs can borrow up to the amount d_t which is proportional to their cash flow w_t : $d_t \leq \mu_t w_t$, where w_t denotes current real wealth and μ_t denotes the credit multiplier which is assumed to be constant - $\mu_t = \mu$; furthermore the entrepreneurs can borrow in domestic currency at interest rate i_{t-1} or in foreign currency at i^* , and can be written as $y_t = f((1 + \mu)w_t)$. Additionally, the domestic investors face a choice between domestic and foreign currency debt, where the former is assumed to be d_t^c in period t .

The aggregate nominal profits net of debt repayment at the end of any period t can then be expressed as $\Pi_t = P_t y_t - (1 + i_{t-1})P_{t-1}d_t^c - (1 + i^*)\frac{E_t}{E_{t-1}}P_{t-1}(d_t - d_t^c)$. For

any positive profits the entrepreneurs retain a proportion $(1 - \alpha)$ of profits and use this share to finance future investments. Therefore, total net wealth available for the next production period $t+1$ is equal zero (i.e. net profits in period t are negative) or $w_{t+1} = (1 - \alpha)\frac{\Pi_t}{P_t}$.

From above second period output y_2 follows to be

$$y_2 = f\left((1 + \mu)(1 - \alpha)\left\{y_1 - (1 + r_0)d_t^c - (1 + i^*)\frac{E_t}{P_t}(d_t - d_t^c)\right\}\right)$$

Where r_0 is the real interest rate defined as $1 + r_0 = (1 + i_1)\frac{P_t}{P_{t+1}}$ and $0 < y_2 < \tilde{y}$.

There can be seen that output reacts negatively on an increase in the debt burden induced by a currency depreciation (i.e. by an increase of E_1) while changes in the nominal interest rate i_1 do not affect the debt burden in period 1 and output in period 2 because the interest rate i_1 is only applying to the second period and will affect the cost of domestic currency debt and therefore the debt burden in period 2 positively and output in period 3 negatively.

Third period output can be written as

$$y_3 = f\left((1 + \mu)(1 - \alpha)\left\{y_2 - (1 + r_1)\frac{P_1}{P_2}d_2^c - (1 + i^*)\frac{E_2}{E_1}\frac{P_1}{P_2}(d_2 - d_2^c)\right\}\right)$$

In addition, for any $t \geq 3$ output y_{t+1} can be written as

$$y_{t+1} = f\left\{(1 + \mu)(1 - \alpha)\left\{y_t - (1 + i^*)d_t\right\}\right\}$$

Where the PPP condition continues to hold but the discrepancy between E_1 and P_1 no longer affects the total debt burden of entrepreneurs (i.e. domestic and foreign currency debt become equivalent).

- Equilibrium of this model is therefore a sequence of prices, exchange rates and output levels, which for a given monetary policy in period one satisfy the above equations for all t .
- Next, the authors show that the relationship of the current exchange rate E_1 and period-2 output y_2 is negative, i.e.

$$E_1 = \frac{1 + i^*}{1 + i_1} \frac{M_2^s}{m^d(y_2, i_2)} \quad (\text{IPLM - 'Interest-Parity-LM' - curve})$$

In addition, there can be seen that an increase in (expected) future output y_2 increases the demand for money (i.e. for domestic currency) in period two, which in turn will generate a nominal currency appreciation in that period, i.e. a reduction in $E_2 = P_2$. Moreover, the anticipation of a currency appreciation in the next period will increase the demand for holding domestic currency in this period and induces a

reduction in E_1 i.e. a currency appreciation. Changes in monetary policies in period $t = 1, 2$ can shift the IPLM-curve.

The second curve for equilibrium is given by the second period output equation shown before which can be written as

$$y_2 = f\left(\left(1 + \mu\right)\left(1 - \alpha\right)\left\{y_1 - \left(1 + r_0\right)d_1^c - \left(1 + i^*\right)\frac{E_1}{P_1}\left(d_1 - d_1^c\right)\right\}\right) \text{ (W-curve)}$$

The intersection of the aforementioned curves defines the short-run equilibrium.

- The authors define that a sufficient condition for multiple equilibria, which includes a 'currency crisis' equilibrium, is that $\left(E_1 / P_1\right)_{y_2=0,W} < \left(E_1 / P_1\right)_{y_2=0,IPLM}$ or

$$\frac{y_1 - \left(1 + r_0\right)d_1^c}{\left(1 + i^*\right)\left(d_1 - d_1^c\right)} < \frac{1 + i^*}{1 + i_1} \frac{M_2^s}{P_1} \frac{1}{m^d\left(0, i_2\right)}. \text{ Therefore, in the case of multiple equilibria,}$$

the crisis could be activated by a pure expectational shift, i.e. if everyone believes that a crisis will occur then a crisis will occur.

- Looking at the slope of the W-curve it can be seen that in an intermediate situation, where μ is neither 0 nor very large, a substantial amount of borrowing is outstanding but credit constraint still holds, and the W-curve can be downward-sloping and relatively flat which happens in currency crises. Therefore currency crises can be associated with countries where development of financial markets is on an intermediate level.

Additionally, as the authors show in their paper, an expansionary policy can only be justified in situations where the W-curve is upward sloping i.e., in a situation where no currency crisis occurs and therefore in a currency crisis the only possible monetary policy is tight one.

Aghion, Bacchetta and Banerjee conclude with five main findings:

1. A currency crisis associated with large recessions and currency devaluations is more likely to occur in an economy where a large proportion of foreign currency debt can be found.
2. Because the main contributor to a currency crisis analyzed in the paper presented are deteriorating balance sheets it can be deduced that a currency crisis can occur under a fixed or flexible exchange rate regime.
3. Public sector imbalances can destabilize domestic currencies through crowding-out effects of public debt on balance sheets and credit access of private firms.

4. If credit supply does not strongly react to changes in nominal interest rate then it is desirable to increase nominal interest rates as a primary remedy against currency crisis.
5. Tight monetary policy produces a 'debt-burden effect' on economic activity on the medium term.

The follow section will demonstrate the second type of the third-generation crisis model constructed by Aghion, Bacchetta and Banerjee (2004).

2.2.1.C.a2 Aghion Bacchetta and Banerjee (2004)

As mentioned above, this model is different from the one considered previously as in this paper the authors assume a monetary policy that affects the real cost of lending on the basis of optimal choice of cash holdings by banks that are lending; furthermore, the authors analyze in this paper exclusively the situation of multiple equilibrium.

The setting of the model is following:

- There is an infinite-horizon monetary model of a small open economy analyzed.
- There are four types of agents in the economy (entrepreneurs producing manufacturing goods; non-entrepreneurs working in the manufacturing sector at a preset wage or working on their own and producing commodities according to a linear one-for-one technology; commercial banks lending to entrepreneurs and holding reserves; central bank deciding about the monetary policy by using open market operations or short term lending facilities).
- The manufacturing sector is characterized by the production of differentiated goods but by using the same production function and inverse demand function; by presetting prices for each period before the actual exchange rate is known and maintaining the price fixed until the end of each period; by the borrowing from banks whereas a credit contract is only enforceable partially creating a credit constraint for the companies. Furthermore the companies prefer to borrow in foreign currency due to moral hazard and the domestic demand for manufacturing goods is always larger than their domestic production (international producers sell in the domestic market at a constant price equal to one unit of the foreign currency).
- If unexpected currency depreciation occurs then it has a negative aggregate impact on the output as it increases the foreign currency debt burden in this model.

- The existence of a multiple expectation equilibria, i.e. a 'sunspot' equilibrium is realized which causes a shift of expectations during the period. A currency crisis in this model occurs if the exchange rate takes the high value of S_1'' (S_1 defines the equilibrium exchange rate in period 1 which is randomly distributed and equal to a low value S_1' with probability $1 - q$ and to a high value S_1'' with probability q) and the manufacturing output is low and firms are unable to meet their debt obligations.
- Purchasing power parity (PPP) holds ex ante at the beginning of every period. The only deviation from PPP will be in period 1 in the manufacturing sector when the expectational shock cannot be accommodated at once by the domestic price setting in the manufacturing sector.
- The timing of the events in the model is as follows: The price level in the manufacturing sector will be preset at the beginning of each period t for the entire period; the other variables are determined at the end of the period.

As soon as the expectational shock occurs a nominal exchange rate S_t is realized. Subsequently the monetary policy set by the central bank will change influencing the demand for reserves h_t from commercial banks and the lending rate i_t' charged by banks to firms in period $t + 1$. Then, entrepreneurs decide if they should repay their debts from the previous period and choose the fraction β of their net earnings that they will save. Having decided about the savings w_t the entrepreneurs will decide how much to borrow for the subsequent period (l_{t+1}) and how much to invest ($w_{t+1} + l_{t+1}$). The authors concentrate on expectational shocks on the nominal exchange rate S_t that occur in the first period with a unique equilibrium exchange rate in all subsequent periods.

- The production of manufacturing goods is achieved according to the same Cobb-Douglas technology for all manufacturing firms. Furthermore, in this paper the attention is restricted to parameter values such that in equilibrium entrepreneurs do indeed prefer to invest their savings in their own projects rather than in government bonds or in bank deposits. Additionally, it is assumed that manufacturing prices are fixed but the domestic currency price of commodities is assumed to be flexible in any period t and simply equal to $S_t \omega$ (ω denotes the foreign currency commodity price).

- Full capital mobility is assumed such that uncovered interest parity (IP) holds perfectly $(1 + i_t = (1 + i^*) \frac{S_{t+1}^e}{S_t} - \text{IP})$. Furthermore, the model relies heavily on a balance-sheet effect of Bernanke-Gertler (1989) which is shown in this model by a positive relation between l_t and w_t . Credit contracts are considered as being only partially enforceable, the borrower has the option of voluntarily defaulting on any specific loan even if he has the money to repay (i.e. the borrower can refuse to repay the loan). Loan contracts are short term and there is perfect competition among lenders (entrepreneurs have therefore full bargaining power upon contracting their loans). And last of all, as mentioned previously, companies prefer to borrow in foreign currency due to moral hazard (i.e. foreign currency debt implies a lower interest rate in the good state of the world but a much larger repayment in the bad state where firms default and only partially repay their debt).

The basic equations of this model can be summarized in the following way:

- The monetary sector can be described by some equations:

Optimal demand for reserves by commercial banks

$$h_t = \gamma l_{t+1} \left(1 - \frac{i_t}{2\lambda\theta_t} \right) = y_{t+1} \frac{\gamma\mu}{\sigma_t(1+\mu)} \left(1 - \frac{i_t}{2\lambda\theta_t} \right)$$

where h_t is the quantity of reserve deposits of banks held at the central bank and i_t is the opportunity cost of holding these reserve deposits; γl_t is the liquidity need of the firm which is proportional to the amount borrowed by the firm (l_t); λ is the probability that a manufacturing firm faces an aggregate liquidity shock (and therefore this is the probability at which the bank needs to provide the liquidity need γl_t to the firm), and θ_t is the penalty rate at which banks can borrow at the discount window.

The LM relationship is then

$$\frac{H_t^S}{P_t} = h_t$$

Where H_t^S is the nominal quantity of reserves supplied by the central bank and P_t is the consumer price index for domestic manufactured goods.

Assuming that changes in monetary policy are unanticipated in period one, the price level is fixed and from the equations above the interest rate in period one can be rewritten as

$$i_1 = 2\lambda\theta_1 \left(1 - \frac{H_1^S}{\gamma P_1 l_2} \right)$$

Here it can be seen that the central bank can increase the nominal risk-free interest rate i_1 by decreasing the monetary base H_1^S or by increasing the discount window rate θ_1 .

The cost of the loan under perfect competition is equal to net expected nominal earnings in domestic currency units (banks lend to manufacturing firms at a nominal interest rate i_t^{*l} in foreign currency units)

$$(1 - q_t)(1 + i_t^{*l}) \frac{S_{t+1}'}{S_t} = (1 + i_t) - q_t(1 - \varphi)(1 + \pi_{t+1}) \frac{y_{t+1}}{l_{t+1}} + i_t \frac{h_t}{l_{t+1}} + \lambda \left(\gamma - \frac{h_t}{l_{t+1}} \right) \tilde{\theta}_t$$

where $(1 - q_t)$ is the probability that banks retrieve the full loan plus interest, q_t is the probability that the firm defaults and in that case the bank gets the proportion of the profits net of wage payments of the firm of $(1 - \varphi)$, and π_t and r_t are the inflation respectively real interest rate at date t . Using the interest parity and the above equations the nominal interest rate can be reformulated in the following way

$$(1 + i_t^{*l}) = \frac{1 + i^*}{1 - q_t} \left[1 - q_t(1 - \varphi) \frac{\sigma(1 + \mu)}{(1 + r_t)\mu} + \gamma \frac{i_t}{1 + i_t} \left(1 - \frac{i_t}{4\lambda\theta_t} \right) \right]$$

Where μ denotes the credit multiplier. From this equation it can be seen that i_t^{*l} is depending on the risk-free rate i_t and indirectly on the supply of reserves H_t^S and directly on the discount window θ_t .

Lastly, the IPLM-curve is

$$S_1 = \frac{1 + i^*}{1 + i_1} \frac{H_2^S}{y_3 \frac{\gamma\mu}{\sigma(1 + \mu)} \left(1 - \frac{i_2}{2\lambda\theta_2} \right)}$$

Assuming that $P_2 = S_2^e$, it can be seen from the IPLM-curve that S_1 is a decreasing function in y_3 .

- The real sector can be described by the W-curve which is a combination of the entrepreneurs' wealth in period two and three and the fact that $y_3 = \sigma(1 + \mu)w_3$ and therefore

$$y_3 = \beta^2 \sigma(1 + \mu) \left(\alpha \sigma(1 + \mu) - \left(1 + i_1^{*'}\right) \frac{P_1}{S_1} \mu \right) \times \max \left\{ \alpha \sigma_1(1 + \mu) - \left(1 + i_0^{*'}\right) \frac{S_1}{P_1} \mu, \varphi \alpha \sigma_1(1 + \mu) \right\} w_1$$

This curve has three different segments (an upward sloping, downward sloping and again an upward sloping segment with different impacts on output and real interest rate).

- One interesting result of the equilibrium analysis from the three authors is that they conclude that countries with very low levels of financial development (i.e. a very low μ and a high φ) are unlikely to experience expectational shocks and currency crises while countries at an intermediate level of financial development (i.e. μ is not too small or φ is not too large but where firms are still credit-constrained) may experience currency crises.
- Finally, the authors look at the policy analysis in the equilibrium, i.e. looking at two intersections of the IPLM- and W-curve which are stable (one is a crisis equilibrium and the other a non-crisis equilibrium). They conclude that in the non-crisis equilibrium a fixed exchange rate is sustained while in the crisis-equilibrium it is not. This is a very interesting and important result, however the model is simplified and therefore the results have to be used with caution.

Summarizing, it can be said that the above models lend support to the policies used by the IMF during the East Asian Crisis (e.g. shift from a fixed exchange rate to a floating exchange rate or tight monetary policy as happened in Indonesia in 1997/98).

The next paragraphs will show two other types of third-generation crisis models.

2.2.2.1C.b Chang and Velasco (1998a, b) and Céspedes, Chang and Velasco (2000)

The two papers by Chang and Velasco (1998a, 1998b) are a simple attempt to explain the causes of the East Asian Crisis by focusing on the liquidity problems of the domestic financial system and the financial system (i.e. exchange rates, banking system and role of central banks). The paper by Céspedes, Chang and Velasco (2000) differs from the two mentioned before as it analyzes explicitly the relation between balance sheets, exchange rates and macroeconomic outcomes in small open economies. Furthermore, the authors incorporate one effect, the Bernanke-Gertler effect, which is a common and crucial point in

all papers discussed in this section. This section will focus on the model proposed by Cèspeles, Chang and Velasco (2000).

The model can be characterized as follows:

- The object of investigation is an infinite-horizon, small and open economy, where one single good is produced by competitive firms, which use labour and capital and sell or export the good to agents. There are two different agents, workers and capitalists, who supply labour and capital; the agents consume and in the case of capitalists they invest (both at home and in the single imported good). The capitalists borrow from foreigners the difference of their own net worth and the amount needed to invest. Therefore, as mentioned before, one crucial point in this paper is the Bernanke-Gertler effect (Bernanke and Gertler, 1989) which states that the cost of borrowing depends inversely on net worth relative to the amount borrowed.
- Domestic production is characterized by a Cobb-Douglas function $Y_t = AK_t^\alpha L_t^{1-\alpha}$, $0 < \alpha < 1$, where Y_t denotes home output in period t , K_t denotes capital input, L_t denotes labour input and A is a positive constant. The price is taken as given and workers are heterogeneous. Therefore, L_t is an aggregate of the services of the different workers in the economy and

can be written as $L_t = \left[\int_0^1 L_{it}^{\frac{\sigma-1}{\sigma}} di \right]^{\frac{\sigma}{\sigma-1}}$, $\sigma > 1$ and where i denotes the index

for workers, L_{it} denotes the services purchased from worker i and σ denotes the elasticity of demand for worker i 's services.

Firms face a problem of maximization of their profits and therefore

minimum cost of a unit of L_t (i.e. aggregate wage) is $W_t = \left[\int_0^1 W_{it}^{1-\sigma} di \right]^{\frac{1}{1-\sigma}}$

and where W_{it} is the worker i 's wage rate.

In equilibrium, factor prices are equal to the marginal productivities which is

$\frac{R_t}{P_t} = \alpha \frac{Y_t}{K_t}$ and $\frac{W_t}{P_t} = (1-\alpha) \frac{Y_t}{L_t}$ and where P_t is the price of the good

produced domestically and R_t the rate of return of capital.

Furthermore, cost minimization leads to the demand of labour of worker i

of $L_{it} = \left(\frac{W_{it}}{W_t} \right)^{-\alpha} L_t$; profits are zero in equilibrium.

- The Workers: The model assumes a market for labour which is characterized by monopolistic competition and allows therefore for nominal wage rigidities and some monetary policies; this assumption will be relaxed first (i.e. flexible wages) and then strengthened (i.e. fixed wages). The

preferences of worker i are characterized by $0 \left[\sum_{t=0}^{\infty} \left\{ \log C_{it} - \left(\frac{\sigma-1}{\sigma v} \right) L_{it}^v \right\} \beta^t \right]$

where the elasticity of labour is characterized by $v > 0$ and $\frac{\sigma-1}{\sigma}$ is a constant.

Consumption quantity C_{it} is an aggregate of goods imported and produced domestically and is $C_{it} = \kappa (C_{it}^H)^{\gamma} (C_{it}^F)^{1-\gamma}$ where C_{it}^H denotes the purchases of the good produced domestically, C_{it}^F is the consumption of the imported good and κ is an irrelevant constant.

The imported good is assumed to have a fixed price and normalized to one in terms of foreign currency. Moreover imports are assumed to be traded freely and the Law of One Price holds, i.e. the price of imports in domestic currency is equal to the nominal exchange rate S_t .

Additionally, the budget constraint of worker i is $W_{it}L_{it} = P_t C_{it}^H + S_t C_{it}^F$ and the real exchange rate E_t can be defined as $\left(\frac{1-\gamma}{\gamma} \right) \frac{C_t^H}{C_t^F} = \frac{S_t}{P_t} \equiv E_t$.

Therefore, the minimum cost of one unit of consumption is $Q_t = P_t^\gamma S_t^{1-\gamma}$ and it can be shown that for flexible wages $L_t = 1$ and for sticky wages ${}_t L_{t+1}^v = 1$ (where the notation ${}_t z_{t+j}$ denotes the expectation of variable z_{t+j} conditional on information available at time t - this notation is used for the whole model)

- The Capitalists: The authors define the capitalists as key players in their model because they finance the investments in part by foreign loans and foreign borrowing is subject to frictions (frictions can be due to informational or enforcement problems). The net worth of capitalists in

period t is $P_t N_t$ (expressed in local currency) and they have access to the world capital market where the safe interest rate of the foreign currency borrowed from t to $t+1$ is given by ρ_{t+1} (which is random but known in t).

The budget constraint of capitalists is given by $P_t N_t + S_t D_{t+1} = Q_t K_{t+1}$ where D_{t+1} denotes the amount borrowed abroad and K_{t+1} is the investment of capital in $t+1$.

More important is the fact, that capitalists are not borrowing at the safe world interest rate ρ_t but borrow at the gross interest rate $(1 + \rho_{t+1})(1 + \eta_{t+1})$ where η_{t+1} is a risk premium. Therefore, following Bernanke and Gertler (1989), the risk premium is given by

$$1 + \eta_{t+1} = F\left(\frac{Q_t K_{t+1}}{P_t N_t}\right), F(1) = 1, F'(\cdot) > 0.$$

This equation shows that the risk premium is an increasing function of the value of investment relative to net worth and F has the form $F(g) = g^\mu, \mu > 0$.

Moreover, capitalists are risk neutral and they choose D_{t+1} and K_{t+1} in order to equate the return on investment to the cost of foreign borrowing (assumption: in production capital depreciates completely).

The expected return on investment is equal to the cost of foreign borrowing and is $\frac{\alpha_t (P_{t+1} Y_{t+1} / S_{t+1})}{Q_t K_{t+1} / S_t} = (1 + \rho_{t+1})(1 + \eta_{t+1})$.

The capitalists collect the income from capital and repay foreign debt at the beginning of the period. Furthermore, they consume a portion $1 - \delta$ of the rest and consume only imported goods. Therefore their net worth is defined as

$$P_t N_t = \delta \{R_t K_t - (1 + \rho_t)(1 + \eta_t) S_t D_t\} \quad \text{or}$$

$$P_t N_t = \delta \{\alpha P_t Y_t - (1 + \rho_t)(1 + \eta_t) S_t D_t\}.$$

The authors note, that by holding real income constant, a real devaluation will be defined as an increase in $E_t = S_t / P_t$ and will have a negative impact on net worth and increase the risk premium. Furthermore if $\gamma = 0$ i.e., all capital is composed of foreign goods then the risk premium would be independent of the real exchange rate. The reason for this is that the productive assets and liabilities of the capitalists in the domestic economy consist of different goods, changes in relative prices affect their creditworthiness.

- Equilibrium: The domestic output must be equal to domestic demand where the domestic supply, i.e., market for domestically produced goods is characterized by the equation $P_t Y_t = \gamma Q_t (K_{t+1} + C_t) + S_t X_t$ and the demand i.e., the clearing of consumption is $Q_t C_t = W_t L_t = (1 - \alpha) P_t Y_t$ where X_t is some random process of the value of home exports in foreign currency which is also exogenous.

The monetary side of the model is not explicitly defined in the paper of Cèspedes, Chang and Velasco (2000).

Next, the equations of the steady state, the interaction of interest rate shocks and flexible wages, and exchange rate policy under sticky wages will be demonstrated:

- In steady state $L = 1$ and prices are normalized to $P = 1$; therefore the nominal exchange rate S coincides with the real exchange rate E and the cost of investment Q is measured by the price of the domestic output. The steady state can be characterized by the following equations:

$$Y = AK^\alpha, Q = S^{1-\gamma}, \frac{\alpha Y}{QK} = (1 + \rho)(1 + \eta), 1 + \eta = \left(\frac{QK}{N}\right)^\mu, N + SD = QK,$$

$$N = \delta[\alpha Y - (1 + \rho)(1 + \eta)SD] \text{ and } Y = \gamma[(1 - \alpha)Y + QK] + SX.$$

Here it can be shown that an unique, nontrivial steady state exists by rearranging some equations which leads to $[1 - \delta(1 + \rho)(1 + \eta)][QK - SD] = 0$ and as QK cannot be equal to SD if net worth is positive, $\delta(1 + \rho)(1 + \eta)$ must be equal to 1 or $1 + \eta = [\delta(1 + \rho)]^{-1}$. If $\eta > 0$ then a value for $\delta(1 + \rho) < 1$ is required i.e., δ must be small enough.

Furthermore, the value of investment in steady state is equal to the fraction of capital income that is not consumed and therefore $\delta\alpha Y = QK$.

Now, a kind of 'IS-Curve' in the steady state can be constructed and has the form of $[1 - \gamma(1 - \alpha - \alpha\delta)]Y = SX$.

In steady state $\alpha\delta Y = S^{1-\gamma} \left(\frac{Y}{A}\right)^{\frac{1}{\alpha}}$, i.e. income invested is equal to the value

of capital bought and can be rewritten as $\alpha\delta A^{\frac{1}{\alpha}} = S^{1-\gamma} Y^{\frac{(1-\alpha)}{\alpha}}$ which is a hyperbola in (Y, S) space and it can be seen that a unique positive solution exists.

The ratio of the value of investment to the value of foreign debt in steady state is crucial and depends only on the risk premium and the parameter μ , which is illustrated by the following equation

$$\frac{QK}{SD} = \left[1 - \left(1 + \eta^{-1/\mu} \right) \right]^{-1} = \left\{ -[\delta(1 + \rho)]^{1/\mu} \right\}^1.$$

Lastly, the equations characterizing the equilibrium around the steady state can be expressed in a log-linearized manner (independently of sticky or flexible wages) and are as follows:

- $y_t = \alpha k_t + (1 - \alpha) y_t$ - the production function,
- $q_t - p_t = (1 - \gamma)(s_t - p_t)$ - the definition of the price index,
- $y_t = \lambda(k_{t+1} + q_t - p_t) + (1 - \lambda)(s_t - p_t + x_t)$ - the market equilibrium for domestic goods,
- $y_{t+1} - (q_t - p_t) - k_{t+1} = \rho'_{t+1} + \eta'_{t+1} + (s_{t+1} - p_{t+1}) - (s_t - p_t)$ - the interest arbitrage equation,
- $\eta'_{t+1} - \eta'_t = \mu \left\{ (q_t - p_t + k_{t+1} - y_t) + \psi \left[(s_t - p_t -_{t-1}(s_t - p_t)) - (y_t -_{t-1}y_t) \right] \right\}$ - the equation of the evolution of the risk premium,

Where $\lambda = \alpha\gamma\delta / (1 - \gamma + \alpha\gamma)$, $\psi = [(QK/SD) - 1]^1$ and lower case letters denote the percentage deviation from steady state values and ρ'_t and η'_t denote deviations from their steady state levels.

The last equation can be re written in the following way

$$\eta'_{t+1} - \eta'_t = -\mu \left(\frac{1 - \lambda}{\lambda} \right) x_t + \mu \left(\frac{1 - \lambda}{\lambda} \right) (y_t - e_t) + \mu\psi \left[(e_t -_{t-1}e_t) - (y_t -_{t-1}y_t) \right]$$

Where $e_t = s_t - p_t$. From this equation it can be seen that the change in the risk premium can be decomposed into three effects (right-hand side): First, the exogenous shocks to export demands; the second is a similar effect and reflects increases of outputs measured in foreign currency; the third and last effect reflects the unexpected changes in net worth.

It should be noted, that by holding constant the previous expectations, a fall in output in foreign currency due to a real devaluation (an increase in e_t) or a reduction in domestic output (a fall in y_t) may be associated with either an increase or a decrease of the risk premium η'_{t+1} .

- Interest rate shocks with flexible wages: If wages are assumed to be flexible, and hence $l_t = 0$, and all shocks are independently and identically

distributed it can be demonstrated that investment in period 0 and output in period one must fall with a real devaluation (an increase in e_0), i.e. the interest arbitrage reduces in period 0 to $e_1 = -y_1 \left(\frac{1-\alpha}{\alpha} \right) + \gamma e_0 - \eta'_1 - \rho'_1$ and the output function to $y_1 = \alpha k_1 = -\left(\frac{\alpha}{\lambda} \right) (1 - \gamma \lambda) e_0$.

The risk premium in period 0 is then $\eta'_1 = \mu \left(\psi - \frac{1-\lambda}{\lambda} \right) e_0 \equiv \varepsilon_{\eta e} e_0$ where

$\varepsilon_{\eta e} \equiv \mu \left(\psi - \frac{1-\lambda}{\lambda} \right)$ is the elasticity of the risk premium with respect to a change in the real exchange rate. Furthermore, it is essential to distinguish between financial robust (i.e. those with $\varepsilon_{\eta e} < 0$) and financial vulnerable economies (i.e. $\varepsilon_{\eta e} > 0$). Intuitively, balance sheet effects are not strong in robust economies while being large in vulnerable economies. Additionally, the definition of financial robustness by using $\varepsilon_{\eta e}$ depends on the size of ψ with respect to $(1-\lambda)/\lambda$ and in particular, when the steady state ratio of debt to investment (i.e. SD/QK) is large, then ψ is also large and the economy is more likely to be financial vulnerable.

Next, the authors introduce a so-called 'EE-curve' which is an important relation between the real exchange rates in period 0 and 1 and can be written as $e_1 = \left(\frac{1-\alpha}{\lambda} + \alpha\gamma - \varepsilon_{\eta e} \right) e_0 - \rho'_1$, where the slope of this EE-curve in the (e_0, e_1) space may be positive or negative depending on the sign and magnitude of $\varepsilon_{\eta e}$.

The next relation between e_0 and e_1 is the so-called 'FF-curve' which is derived from the fact that from period 1 onwards, the economy must be on a saddle path and converging to the steady state; the relation can be written as $e_1 = -\left[\alpha \left(\frac{1-\lambda\gamma}{\lambda} \right) + \beta \varepsilon_{\eta e} \right] e_0$. As before, the slope may be positive or negative depending on the elasticity $\varepsilon_{\eta e}$.

Looking at the response of the real exchange rates e_0 and e_1 to an interest rate shock ρ'_1 is the intersection of the EE- and FF-curves and the solutions

can be written as $e_0 = \lambda\theta\rho'_1$ and $e_1 = -\theta[\alpha(1 - \lambda\gamma) + \beta\lambda\varepsilon_{\eta_e}]p'_1$, where $\theta^{-1} = 1 - (1 - \beta)\lambda\varepsilon_{\eta_e}$.

In financial robust economies a real devaluation in period 0 lowers the risk premium. Therefore, an unanticipated increase of world interest rates causes a real depreciation, which is reversed in the next period. The domestic output will then fall in period one, as well as the output in foreign currency value. The latter is only temporary as it is already above steady state levels in period one and will return to steady state levels while η rises. To summarize, the response of financial robust economies is rather conventional and balance sheet effects are rather small.

In financial vulnerable economies a real devaluation in period 0 increases the risk premium. However, the response of the economy depends on the parameter of the economy and two possible situations can emerge: Firstly, the real devaluation might have an impact on the sensitivity of the initial real exchange rate to movements in world interest rates but the qualitative behaviour of the domestic output is the same as in the robust economy. The debt ratio ψ and risk premium η'_1 increase with initial depreciation and therefore the output in foreign currency must fall in period one while converging thereafter to the saddle path. In period one the real exchange rate may be below or above the steady state level. Consequently, convergence starts and the output in foreign currency increase while the risk premium falls. Secondly, it could be possible that $\theta < 0$ and therefore large values of ε_{η_e} would be possible. This would imply that an increase in interest rates would cause an initial appreciation of the home currency. Although it is counterintuitive it is logically possible if there are large enough balance sheet effects. Furthermore, the risk premium η'_1 has to fall while the investment in period 0, output in period one and output in foreign currency in periods 0 and one all have to increase in response to the shock. Empirically this last case is questionable although logically possible.

To summarize, the balance sheet effects exist in financial robust economies but are mild and therefore the response of an economy to an interest rate shock is similar to the conventional view. In contrast, large balance sheet effects cause an increase of the risk premium and a devaluation, such that the vulnerable economy depends on parameter effects – with the exception

of empirically implausible situations the response of a vulnerable economy to interest rate shocks are more persistent contractions of domestic output and output in foreign currency.

- Sticky wages and exchange rate policy: The assumption is that nominal wages are predetermined for one period, and allowed to move to market-clearing levels thereafter. This assumption ensures that monetary policies have real effects. The pre-set wage in period t must be ${}_{t-1}l_t = 0$ and the demand for labour is $y_t - l_t = w_t - p_t$. Starting from steady state in period 0 a kind of simple expectational Phillips-curve can be constructed which has the form $l_0 - y_0 = \alpha l_0 = p_0 - {}_{-1}p_0 = p_0$. Further assumptions include that shocks are independently and identically distributed and that after period one all variables are free to adjust, from $t = 1$ onwards the equilibrium of the model is identical to the one described just before, where the economy settles on the saddle path and converges to the steady state.

Looking at flexible exchange rates, it can be seen that the real exchange rate conditional to the price targeting rule for keeping the price level constant in response to shocks (i.e. $p_t = {}_{t-1}p_t = 0$ for all t) is $e_t = s_t$ for all t , i.e. all movements in the nominal exchange rate are fully translated into movements in the real exchange rate. Additionally, there can be shown, that nominal and real wages are always at their steady state level and labour supply is constant and equal to its steady state level of one. Therefore, the economy behaves in this case just as in the flexible wages case and hence, all results of the previous section apply here.

Looking at fixed exchange rates, which means that $s_t = 0$ for all t and $e_t = -p_t$, i.e. real depreciations (appreciations) can only be accomplished by deflation (inflation). Assuming an unexpected increase of the world real interest rate at time 0 the initial output will be $y_0 = (1 - \alpha)y_0$ and using the equilibrium labour the equation can be rewritten as $y_0 = \left(\frac{1 - \alpha}{\alpha}\right)p_0 = -\left(\frac{1 - \alpha}{\alpha}\right)e_0$, i.e. because of fixed wages in nominal terms, the real wage will fall and output will increase if there is unexpected inflation. The level of investment in period 0 is then

$k_1 = -\left(\frac{1 - \lambda\gamma}{\lambda}\right)e_0 + \left(\frac{1 - \alpha}{\alpha\lambda}\right)p_0$ and solving for $e_0 = -p_0$ the equation

becomes $k_1 = -\left(\frac{1-\lambda\gamma\alpha}{\lambda\alpha}\right)p_0 = \left(\frac{1-\lambda\gamma\alpha}{\lambda\alpha}\right)e_0$ such that unexpected inflation must increase investment. Intuitively, with fixed exchange rates inflation means appreciation and therefore the domestic goods value of exports decrease, leaving more room for investment. Additionally, unexpected inflation increases output and investment, too.

Next, the risk premium can be derived:

$$\eta'_1 = -\mu\alpha^{-1}\left(\psi - \frac{1-\lambda}{\lambda}\right)p_0 = \mu\alpha^{-1}\left(\psi - \frac{1-\lambda}{\lambda}\right)e_0 = \alpha^{-1}\varepsilon_{\eta e}e_0;$$

the response of the risk premium on a real devaluation depends on the relative size of ψ and λ , the elasticity of the risk premium with respect to the initial real exchange rate is the same with flexible wages, scaled up by α^{-1} . Intuitively this can be explained by the following: an increase of real exchange rates reduces net worth and this pushes the risk premium (i.e. the burden of foreign debt increases and the output and capital income reduces). These effects have the same sign due to the fixed exchange rates i.e. a real depreciation is accompanied by deflation, which reduces output.

In a financially robust economy, a real devaluation in period 0 reduces the risk premium. An increase in the world interest rate causes an initial real depreciation, which is reversed in the next period via an unexpected price deflation in period 0. The deflation decreases in period 0 the domestic output, investment and therefore in period one output falls. The output in foreign currency falls because of real depreciation and the fall of domestic output; this fall is temporary and is already above its steady state level in period one. Next η rises and output in foreign currency falls until reaching steady state.

In a financially vulnerable economy the shock could have positive or negative implications, depending on θ , i.e. if θ is positive, then the interest rate shock causes a real devaluation on impact which is accompanied by an unexpected deflation and output contracts; if θ is negative then the reverse occurs.

Hence, it can be seen that in the case of sticky wages it is not the degree of financial stability of the economy, which is important, but rather the adjustment process to the adverse interest rate shock requires a real appreciation or devaluation. It can be shown that an expected real

depreciation and the fall of output are larger under fixed exchange rates when compared with flexible exchange rates. If the interest rate shock is followed by a real appreciation than a larger expansion of domestic output would be in the case of fixed exchange rates.

- Finally, it should be mentioned, that this model shows that financial fragility alone does not imply a shift to fixed exchange rates and that the model has some limitations (e.g. households cannot access capital markets) which should be considered in the analysis.

This model has shown a different approach to explain the events leading to the East Asian Crisis in 1997/1998. The last third-generation model discussed here will be the one proposed by Krugman (1999a, b; 2001).

2.2.2.1C.c Krugman (1999a, b; 2001)

In this section the so-called 'cartoon version' of Krugman's proposed third-generation crisis model will be shown. The more detailed version of this model can be found in Krugman (1999a). The model in the paper of 2001 is nearly the same as Krugman 1999b.

According to Krugman (1999b) the Mundell-Fleming model could be used to describe the crisis; the basic model consists of the following three equations:

- (1) $y = D(y, i) + NX(eP^* / P, y)$; Aggregate demand equation relating domestic spending to real income and interest rate and net exports that depend on the real exchange rate;
- (2) $M / P = L(y, i)$; Money-demand equation
- (3) $i = i^*$; Interest-arbitrage equation (with risk-neutral investors and static expectations about the exchange rate).

As this model is too simple to describe the situation in East Asia in a satisfactory way, the first equation could be modified into the following, adding a strong open-economy Bernanke-Gertler effect,

$$(1') y = D(y, i, eP^* / P) + NX(eP^* / P, y),$$

Where firms are highly leveraged, a substantial part of their debt is denominated in foreign currency, and their investment will be constrained by their balance sheets. In this modified equation the domestic demand depends directly on the real exchange rate.

The modified model implies that at favourable real exchange rates only few firms have constrained balance sheets and the direct effect on aggregate demand would be small. However, at unfavourable real exchange rates companies would be unable to invest and

the direct effect on aggregate demand would be substantial. The consequence of this is a corporate sector which is bankrupt, unable to invest and where only small firms and farmers would be benefiting from a weak currency. The middle course would outweigh the direct effect of the competitive position on exports and as such the depreciation would lead to a contraction rather than an expansion of the economy (Krugman (1999b)).

These results lead to no clear policy prescription and suggest difficulties in choosing the right policies, which was true in the real world as there are many discussions upon the adequacy of the policies imposed by the IMF.

One common feature of the models just presented is the economic theory they are adopting. In this sense they represent monetarist views about the crisis. The last part of this chapter will show a completely different view which argues that financial crisis are intrinsic in capitalist economies as explained by the theories of Hyman Minsky.

2.2.2.2 The 'Financial Instability Hypothesis' by Hyman P. Minsky

Hyman P. Minsky (1919-1996) could be defined as a fellow of 'financial Keynesianism' (Papadimitriou and Wray, 1997) as he interpreted the main thoughts of Keynes 'General Theory' in such a way to incorporate it in financial systems and institutions. In contrast to the views given by Smith and Walras which assume that the economy is constantly an equilibrium seeking and sustaining system, he argues that the economy is moving over time from a robust structure to a fragile structure in other words from stability to instability.

One of the most important theoretical developments of Hyman P. Minsky is the 'financial instability hypothesis' which is applicable to capitalist economies with complex financing of long-lived capital assets. Minsky (1992) claims that 'from time to time, capitalist economies exhibit inflations and debt deflations, which seem to have the potential to spin out of control'. He characterizes the economy as a capitalist economy where expensive capital assets and a complex and sophisticated financial system prevail. The development of capital in the economy is characterized by the exchange of present money for future money and therefore the balance sheets of companies reflect the development of capital and the future expectations about their flows of money. Minsky (1992) claims further that 'in a capitalist economy the past, the present, and the future are linked not only by capital assets and labour force characteristics but also by financial relations'; furthermore, he argues that 'the much greater participation of national governments in assuring that finance does not degenerate as in the 1929-1933 period means that the down side vulnerability of aggregate profit flows has been much diminished' (Minsky, 1992, p. 5).

The focus of the theory from Minsky deals with financial interactions in an economy, included in the analysis are banks and financial intermediaries. According to Minsky (1992, p. 6) '[T]he financial instability hypothesis [...] is a theory of the impact of debt on system behaviour and incorporates the manner in which debt is validated'. Minsky distinguishes in his paper three different finance forms:

1. 'Hedge financing units': The subjects using these finance instruments can fulfil all contractual payment obligations by their cash flows. A large weight of equity with respect to liabilities in the balance sheet is an indicator for hedge financing units.
2. 'Speculative financing units': These subjects can meet usually the payment of interests but not the principal and they need to 'rollover' their liabilities.
3. 'Ponzi units': These subjects can pay neither the interest nor the principal of their outstanding liabilities. In order to fulfil their obligations they can sell assets or borrow further liabilities. By borrowing additional funds or selling assets in order to fulfil contractual obligations these subjects decrease the margin of safety of the debt holders.

The outcome of the classification of the financial funds into these three groups, according to Minsky, shows how vulnerable an economy is.

'It can be shown that if hedge financing dominates, then the economy may well be an equilibrium seeking and containing system. In contrast, the greater the weight of speculative and Ponzi finance, the greater the likelihood that the economy is a deviation amplifying system.' (Minsky, 1992, p. 7)

This leads Minsky to formulate two theorems:

'The first theorem of the financial instability hypothesis is that the economy has financing regimes under which it is stable, and financing regimes in which it is unstable. The second theorem of the financial instability hypothesis is that over periods of prolonged prosperity, the economy transits from financial relations that make for a stable system to financial relations that make for an unstable system.' (Minsky, 1992, pp. 7-8)

He concludes that over time a capitalist system moves into different stages of stability, this means that from a time of stability i.e. where hedge finance dominates they move to a period of more instability where speculative and Ponzi finance dominate.

One important point made in this paper is worth mentioning as it shows some similarities to the policies applied by some East Asian governments during the crisis (e.g. Indonesia under the IMF).

'[...] if an economy with a sizeable body of speculative financial units is in an inflationary state, and the authorities attempt to exorcise inflation by monetary constraint, then speculative units will become Ponzi units and the net worth of previously Ponzi units will quickly evaporate. Consequently, units with cash flow shortfalls will be forced to try to make position by selling out position. This is likely to lead to a collapse of asset values.' (Minsky, 1992, p. 8)

As Minsky stresses the financial instability hypothesis is not based on exogenous shocks but on changes that are due to the 'internal dynamics of capitalist economies' and due to 'the system of interventions and regulations that are designed to keep the economy operating within reasonable bounds' (Minsky, 1992, p. 8).

Although not being very formal this 'Financial Instability Hypothesis' can give a wider explanation on the events in East Asia. The two theorems quoted above try to explain the causes of 'instable' periods happen. Minsky focuses more on the grouping and the respective characteristics. As a result he concludes that specific policies should not be applied (see last quote) in order to prevent a deterioration of an instable position.

The theories of Hyman P. Minsky are an interesting starting point for a different explanation of the East Asian crisis as they show how a changing weight of the three financial forms can lead to instable economic periods. However, it is not very accurate and must be integrated (as in the case of East Asia) by interactions of financial markets and its behaviour as well as international financial transactions (e.g. exchange rate movements).

2.3 Conclusion

Chapter two deals with a controversial topic: the causes of the crisis. During and after the East Asian Crisis there were debates about the causes of the crisis and as can be seen from the above discussion there are different views. Nowadays it is widely agreed that the crisis was not due to decline of macroeconomic fundamentals but instead it was like a 'liquidity' crisis (opposing therefore the view held by the IMF that fundamentals were wrong in the economies). This can be seen by theoretical explanations of the crisis models: most of them incorporate a Bernanke-Gertler effect which shows that the private sector played an important role in the crisis; first- and second-generation crisis models which were mainly based on governments and their role in causing a crisis do not explain the East Asian Crisis. Searching and identifying the underlying causes, it is difficult to find one single factor that caused the crisis, instead a set of factors increased vulnerability and exposure: currency and maturity mismatches, as corporations and banks had no incentives of hedging against currency risk due to the exchange rate policy; the currency system, which seemed to overcome the predicted standard-textbook problems of the 'trilemma' in open economies; inflows of capital, which was encouraged as well by a set of factors as the exchange rate system (i.e. the peg to the US dollar); capital account liberalization and the opening of local stock markets to foreign investors (and in Malaysia, the creation of an offshore ringgit market). The role of institutions before and during the crisis is not very clear but there were in effect some factors like regulations i.e. Basel Core Standards that implicitly encouraged investments in emerging economies by international investors (e.g. hedge funds, commercial banks) and the balancing of supervision and liberalization of the capital account.

As previously mentioned, most third-generation crisis models incorporate a Bernanke-Gertler effect and show that there were liquidity problems in the economy during the crisis. As opposed to the view of the IMF, where the main problem of the East Asian Crisis has been declared as being based on macroeconomic fundamentals and institutional problems as well as 'corruption, cronyism and nepotism', the third-generation crisis models show that the private sector has been the key driver. Liquidity problems of corporations, which spread rapidly across the entire region occurred as banks were not willing to rollover short-term credits. The currency downturns worsened the situation of troubled companies and increased the pressure in domestic corporate sectors as viable corporations became unviable. The result was in most countries a credit crunch, which led to a sharp slowdown of investment and to a slowdown of the economies.

On the other hand, the thesis of Hyman P. Minsky is interesting, in addition, as it tries to explain the intrinsic instability of capitalist systems but it fails to give a more detailed picture about the factors that caused the crisis, i.e. it is very broad. As discussed before the 'Financial Instability Hypothesis' is a very interesting starting point with some shortcomings.

Therefore the author will consider only the implications of the third-generation models as being relevant for an analytical explanation of the East Asian Crisis.

3

Remedies at Disposal for Countries

This chapter will show the policy responses that countries in crisis situations like the East Asian liquidity crisis have at disposal. The responses will be split up in policies that countries can implement on their own (i.e. sticking to economic theory) and what the international community can do in order to manage such a situation of distress.

The first section will be dedicated to domestic policies, while the second will discuss the type of aid the countries could expect from the outside.

One precondition of this chapter is to ascertain which type of crisis happened in East Asia in 1997/1998. Since, as was discussed previously, the policy responses differ from one crisis-generation to the next. Chapter 2, gave various theoretical explanations into the causes of the crisis. Among economists it is now widely agreed that the East Asian Crisis was a crisis which could not be explained by first- or second-generation models. For this reason we will follow the general view that the crisis in East Asia in 1997/1998 was a 'liquidity' crisis, as explained in the last chapter, and that it can be characterized by the third-generation crisis model.

3.1 Domestic Policies: Countries and their Instruments at Disposal

The following paragraphs will discuss the policies that domestic governments can choose without relying on international aid or the international community.

The initial point for the analysis of domestic policies will be the so-called 'trilemma' in open economies which includes the tradeoffs in exchange rate, monetary policies and capital mobility. The resulting discussions that arise from trilemma is very controversial (see for example the ongoing discussion on the 'bipolar view' i.e. the choice between fixed and flexible exchange rates) as it does not give a common solution that holds for every economy. A good example of this is in the case of developed countries like the US or the European Monetary Union it might be feasible to follow a flexible exchange rate but the choice that developing and emerging countries should make is much more difficult as advantages and disadvantages have to be weighed against each other.

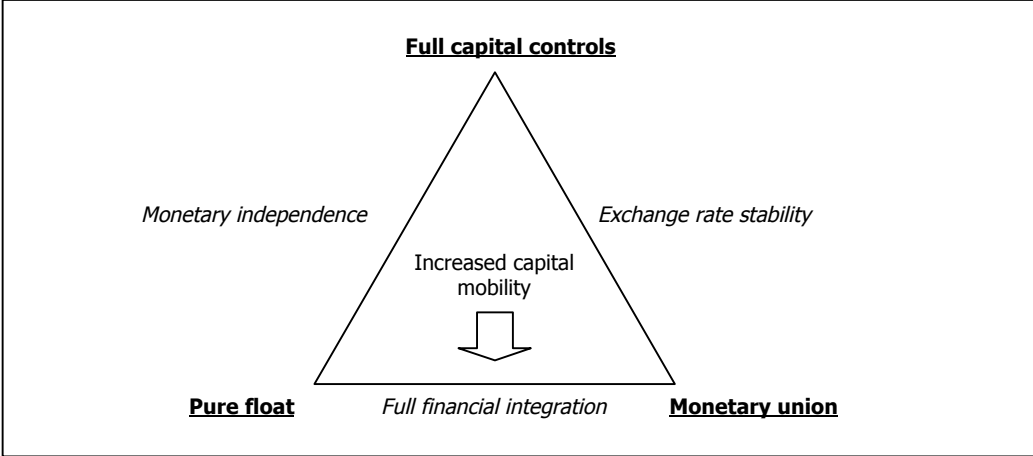
The trilemma in open economies shows that of the three goals that most countries share, i.e. independence in monetary policy, stability of the exchange rate and free movement of

capital, only two can be reached simultaneously; therefore policymakers face a trilemma as they have to decide which one to give up. Obstfeld, Shambaugh and Taylor (2004) show in their empirical study that the constraints imposed by the trilemma (i.e. that the choice of exchange rate and its tradeoff with monetary policy) are tight and that policymakers should be aware of it.

A graphical representation of the choices of the trilemma and its consequences for choosing an appropriate exchange rate system can be found in the Figure 3.1 below. This figure shows on the three corners of the triangle the three policy instruments in an open economy (full capital controls, pure float and monetary union) while on the three sides of the triangle the three goals are listed: monetary independence, exchange rate stability and full financial integration. Capital mobility increases by moving from the top to bottom of the triangle. Policymakers can only choose to pursue two policies contemporaneously i.e. monetary independence and exchange rate stability which leads to full capital controls or monetary independence and full financial integration leading to a pure float and lastly, exchange rate stability and full financial integration which lead to a monetary union.

From Figure 2, it can be clearly seen that any combination of all three policies can not be reached at the same time and will create instability in the system.

FIGURE 3.1 – Impossible Trinity



Source: Frankel (1999)

As Obstfeld (NBER Reporter, Fall 2000) argues, the trilemma is often associated with Robert A. Mundell but goes back to earlier writers such as J.M. Keynes. By starting from the Mundell-Fleming model for open economies one has to consider its drawbacks, e.g. assuming perfect capital mobility or neglecting intertemporal constraints, and therefore over the years the model was adjusted and extended.

The main focus of this chapter is not to give a detailed explanation of the Mundell-Fleming model but instead to focus on more fundamental question regarding the choice of the exchange rate and its consequences for policymakers; a detailed discussion of the Mundell-Fleming model and its extensions would be beyond the scope of this text. In East Asia this trilemma played an important role before and during the outbreak of the crisis as will be shown subsequently.

As discussed in Chapter 1 and 2, the economies in East Asia which were subsequently harmed by the crisis, began to liberalize their capital account by the late 1980s. Their exchange rate remained fixed, effectively pegging (officially only in Thailand, in the other countries they were effectively pegged) their currency to the US dollar. The different official exchange rate systems in the crisis countries were the following:

TABLE 3.1 – Exchange Rate Regimes in the Crisis Countries before the East Asian Crisis

	Indonesia	Korea	Thailand	Philippines	Malaysia	Taiwan
Exchange rate	Crawling peg	Managed float	Peg	Managed float	Managed float	Managed float

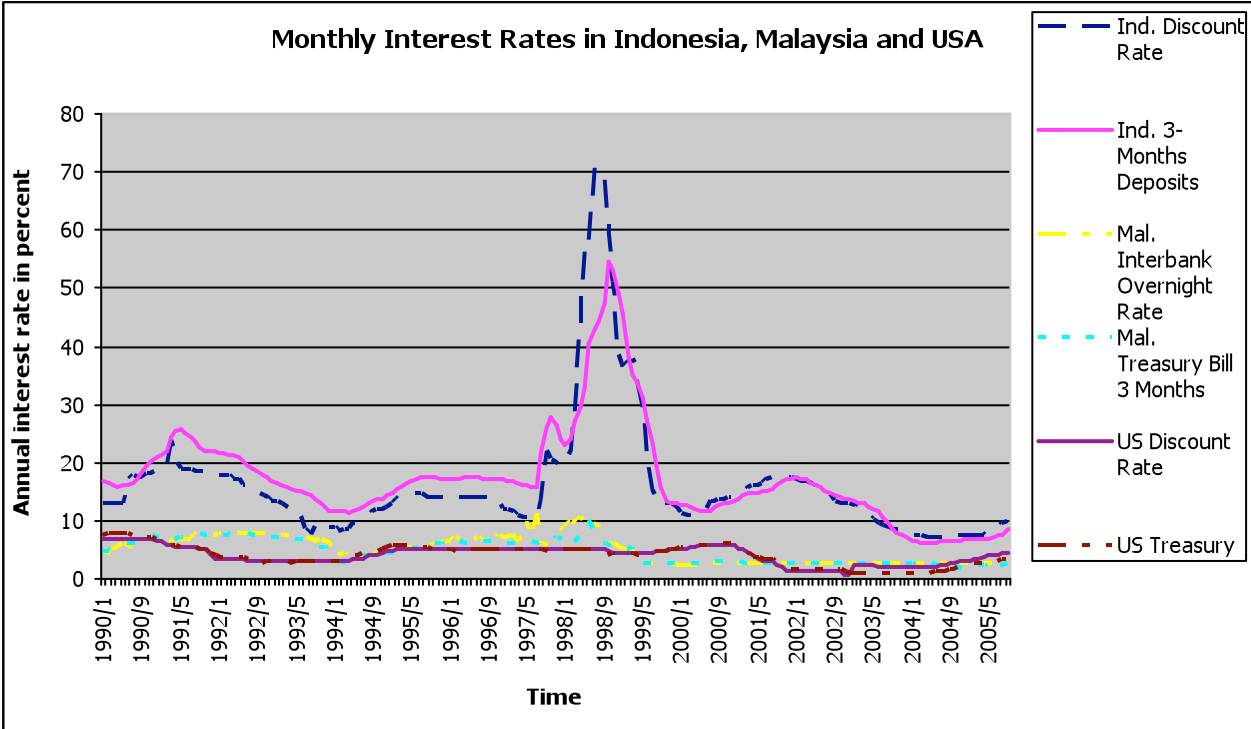
Source: Noble and Ravenhill ed. (2000), p. 7

By allowing capital to move freely, the policymakers should have moved away from intervention with monetary policy instruments in the market which should have resulted, by applying textbook specifications, in a monetary union or a currency board. During the 1990s a discussion was going on about establishing a monetary union in Asia but while it did not result in a practical outcome it left much room for discussion. In 2000 the 'Chiang Mai Initiative' was launched by the finance ministers of the region. This was an attempt to improve financial cooperation and assistance in the region (Akyüz and Flassbeck, 2002, pp. 110-111), but still details are to be agreed.

Moving on to the interest rates it can be seen from Appendix Table A.3.1 and Figure 3.2 below that the interest rate in Indonesia was higher compared to the interest rate in the USA, while in Malaysia it was only slightly higher for some periods. This is especially true before the introduction of capital controls on inflows in 1994 and the period between the relaxation of these controls and the introduction of the capital controls on outflows in September 1998. This encouraged the inflow of capital, due to the effectively pegged exchange rate and their good economic performance over the past, especially after their opening of the capital accounts. International investors and local borrowers were not aware of the risk associated with the increased capital inflows which lacked hedging. According to theory, after liberalizing capital flows and maintaining a stable exchange rate

the spread between the different interest rates should have become narrower but in fact it did not as the governments relied on monetary instruments even after this change of exchange rate policy. The East Asian countries in fact neglected the tight impact of the impossible trinity and some economists (e.g. Rose (1996)) argued that the impact of the impossible trinity was not that tight as expected in the past. Nevertheless history showed that the impossible trinity still has importance and that their choices for policymakers should be respected (as in the example of the East Asian Crisis).

FIGURE 3.2 – Monthly Interest Rates in Indonesia, Malaysia and the USA



Source: IMF, International Financial Statistics Database.

Pegged exchange rates are vulnerable for speculative attacks compared to the two extreme cases of fixed and flexible exchange rates. The stabilization of the pegged exchange rate is usually provided by the intervention of authorities in the foreign exchange market; for speculators this type of exchange rate commitment gives an incentive for betting against a currency if the exchange rate that prevails in the case of a flexible exchange rate regime will be equal or greater than the pegged exchange rate. Therefore a pegged exchange rate could be easily attacked and the commitment of authorities to intervene in periods of attacks comes at a high cost (e.g. the slump of reserves of central banks in East-Asia during the early stage of the crisis). In most cases the authorities have to abandon the commitment and the exchange rate arrangement

after a short period of time. For example, in Thailand, Indonesia, and Korea the authorities floated the currencies after the speculative attack.

In the case of the East Asian Crisis countries the policymakers had different policies at their disposal which they could have adopted by themselves. These policies are derived from the trilemma that policymakers face in an open economy, and include the following possibilities which have to be weighted against its costs for the economy:

1. *Move to a floating exchange rate*: The government could maintain their monetary policy autonomy and free capital movements. According to theory (i.e. simple Mundell-Fleming model) monetary policy is very effective in a floating exchange rate system. Regarding monetary policy it has been argued that emerging countries do not have the institutional requirements in order to implement effective monetary policies (Summers, 2000). According to this opinion, countries with floating exchange rates would not be able to implement an effective and complex feedback rule in order to have an effective inflation targeting system (Eichengreen and Masson, 1998, pp. 18-19). Additionally a different objection against floating exchange rates in emerging countries has been raised, i.e. the 'fear of floating' (Calvo and Reinhart, 2000) arguing that in a world of high capital mobility, incomplete information, fads, rumours and dollar-denominated liabilities, the authorities fear to float their currency as the exchange rate will move significantly, and large depreciations will have a negative impact on inflation and on corporate debt. But as Edwards (2003, p. 75) argues this criticism seems to be based on a small number of historical episodes or that they have underestimated the difficulties with super-fixed systems. Furthermore, studies of Mexico after its collapse of 1994 and its floating exchange rate show that emerging countries could have a floating exchange rate but that the monetary authorities need to communicate their policies (Edwards and Savastano, 1999).

The remaining question is therefore not on the monetary policy and its commitments but rather whether free capital mobility should be maintained and if its costs could outweigh the benefits of a free floating exchange rate (i.e. monetary independency). The advantage of this policy would be that capital movements remain free, which is regarded as a positive sign in the international financial community, and that the government could use monetary policies for intervention in the economy. The costs of free capital movements could lead to a large outflow of funds which could hurt (as in the case of East Asia) the private sector leading to

a credit crunch and to bankruptcies in the economy which would lead to a further drop in aggregate demand and to a recession in the economy.

Other advantages of a flexible exchange rate are that governments retain seignorage and that the float allows smooth adjustment to real shocks even in the presence of price frictions (Frankel, 1999). Another cost that might come with a floating exchange rate is the exchange rate risk, but this could be limited by introduction and implementation of hedge instruments.

2. Establishing a monetary union or a currency board: The establishment of a monetary union or a currency board implies that the authorities keep stable exchange rates and free capital movements. The main advantages of a fixed exchange rate are the reduction of transaction costs and exchange rate risk, and providing a credible nominal anchor for monetary policy (by pegging to a hard currency and therefore exhibiting to strong monetary policy), and to a minor degree that competitive depreciations or appreciations are not possible (Frankel, 1999). Monetary policy under a fixed exchange rate system with free capital movements is in some sense not beneficial as domestic interest rates will be tied to foreign interest rates and for example an expansion of money supply would have no impact on the economy as the new money will flow out of the economy through a balance of payments deficit. Therefore the drawback of this exchange rate system is that the authorities loose in the case of an emergency an important tool of intervention in the economy: monetary policy. Instead they must resort to a fiscal policy in order to intervene effectively in the economy with the disadvantage to build up government indebtedness.

Another disadvantage connected with this exchange rate system could be that corporations etc. will not hedge against currency risks. Instead they would leave their balance sheets with foreign currency debts and end in a period of a speculative attack, bubble or something similar involving the abandonment of the fixed exchange rate, in a bad state consequently driving the economy towards a bad equilibrium (Frankel, 1999).

As mentioned earlier the debate regarding free capital movement is very controversial leading to opposing views about the pertinence of free capital movements for the countries.

One result of the discussion is about optimal currency areas. There is an attempt in Asia, as mentioned above, to work more closely together (i.e. Chiang Mai Initiative) which should lead to a monetary union in the future.

3. *Imposition of capital controls*: The discussion on capital controls is controversial. By imposing capital controls governments can enjoy the benefits of monetary policy autonomy and stable exchange rates. The benefits of monetary policy autonomy were discussed in Chapter 2 and they include the benefit of a possible rapid and effective response to sudden shocks in the economy.

A more controversial discussion is about capital controls. Isard (2005, p. 246) argues that the main arguments against capital controls are derived from economic theory and historical experience. Theory suggests that markets have a better allocation of resources i.e., profit incentives for firms, income allocation of households. While experience suggests that such systems are relatively efficient in encouraging technological innovation and economic growth over time, leaving the government to allocate capital could result in corruption and the financing of unproductive activities. Additionally, capital controls provide an incentive to delay or to try to avoid fiscal or monetary policy actions in order to deal with macroeconomic imbalances.

Furthermore, Isard (2005, pp. 246-248) argues that these arguments against capital controls have to be weighed against arguments in favour of it. These arguments include the theory of the second best, i.e. if the market allocates the resources with distortions, the imposition of capital controls, and therefore imposing another distortion, will lead to a welfare improvement. Distortions in the market could arise in financial markets due to informational frictions i.e. costs of screening borrowers and monitoring their behaviour. The consequence of such frictions are an incomplete and asymmetric information for lenders and to adverse selection of borrowers which could ultimately result in excessive volatility in financial markets i.e., herding behaviour. Additionally, Isard argues that capital controls might be beneficial if the government wants to provide macroeconomic stability resulting in an accumulation of foreign exchange reserves – smoothing national consumption – and providing an explicit or implicit insurance to the domestic financial system. Furthermore, an argument in favour of capital controls is that governments care about national welfare while financial markets do not ('greed and fear' motivation) and therefore the imposition of capital controls could give authorities in times of panic or pressure from financial markets some breathing space. A different point of view is that longterm capital flows are beneficial for the growth of an economy and in order to maintain this growth economies should open themselves at their own speed to free capital movement.

Overall one problem with capital controls is the implementation and enforcement which has to be ensured. Capital controls are not effective for highly developed countries but empirical evidence suggests that capital controls have effectiveness in countries without highly developed financial sectors (Isard, 2005, p.249). The relationship between opening the capital account and growth is rather mixed. However, there is a trend that growth and liberalization are not strongly positively correlated (Jomo, 2005).

There are different types of capital controls and dealing with them can be problematic as investors might try to evade capital controls and authorities might not give incentives for the promotion of long-term capital investments which usually are excluded from controls. It is widely agreed that market-based capital controls, such as interest rate ceilings or reserve requirements are preferred over quotas, licenses, or other controls which require administration (Isard, 2005, p. 255). The distinction on controls over inflows and outflows is usually much more controversial. While there is a broader agreement that controls on inflows are effective (Edwards, 2003, p. 49; Isard, 2005, p. 255), effectiveness of controls on outflows is much more controversial (against effectiveness: Eichengreen, Mussa et al., 1998; suggesting effectiveness: Kaplan and Rodrik, 2001). A theoretical approach which should discourage short term capital flows was the proposal of Tobin in 1978: The imposition of a Tobin tax should limit short-term flows in theory but in practice it would only work if all countries agreed to adopt this measure. A more detailed discussion about capital controls can be found in Chapter 4, as an excursus on the Malaysian experience.

From the above paragraph it is evident the topic of on the imposition of capital controls is very controversial in academic debates. As opposite to the other two possibilities this option was usually not regarded as being an option by countries; the international community, and especially the Bretton Woods institutions, did not like impositions of capital controls although the combination of monetary policy autonomy and a stable exchange rate might be preferable to the other two choices in certain cases (e.g. if the business sector has non-hedged foreign currency denominated liabilities combined with the fear of a large currency depreciation).

Following the discussion above the East Asian Crisis countries had options to use in order to deal with the sudden crisis: anticipating the results there is no single solution that fits the need of every economy in trouble.

In Malaysia the huge build-up of short-term foreign portfolio investment and in Indonesia the business sector that accumulated huge amounts of non-hedged foreign currency denominated liabilities introduced a high degree of vulnerability into the domestic economic system. The first choice of the economies was to maintain free capital movement and let the exchange rate float. Consequently, Indonesia and Malaysia suffered from large capital outflows, a worsening of the health of the business sector due to a huge depreciation of their currency and a worsening of aggregate demand in the economies followed.

Indonesia called-in the IMF and the IMF maintained the combination of free capital movement and float of the exchange rate. The IMF had been a promoter of capital account liberalization during the 1980s and 1990s and used monetary policies: the first response was to increase interest rates in order to regain confidence of investors and to close several banks. This monetary policy did not help to relieve the economies from pressure but put even more pressure on the economy which suffered already from huge capital outflows and led therefore to a worsening of the situation, see Chapter 4 for a chronology after the crisis. Within a few months the IMF changed its policy and permitted a relax in the monetary policy and to run small fiscal deficits. Nevertheless the economy experienced a credit crunch and distress in the private sector. The first response policy solution and the large list of different structural policies to be implemented by Indonesia seem not to be suited for a fast resolution of a sudden 'liquidity' crisis but were more suitable in the case of distress in public expenditure.

Unlike Indonesia, Malaysia was not going to call-in the IMF and followed its own policy strategy which was to impose capital controls on short-term outflows. After a period of political standstill the leadership agreed to impose capital controls on outflows and changed at the same time the political landscape as well (i.e. the imprisonment of Anwar). Their choice was to use monetary policy autonomy and stable exchange rates in order to restore tranquillity in the economy. The monetary policy was expansionary as the economy had suffered from a contraction and the exchange rate was fixed with respect to the US dollar (see Chapter 4).

The impossible trinity suggests that there are different choices, but each option comes with costs and benefits. In the case of the East Asian Crisis, the float of the exchange rate came at a high cost for the business sector which was exposed to unhedged foreign currency exposure. The benefit was that the authorities were given the possibility to rely on monetary policy and address the problem with these instruments. The other option, i.e., to return to a fixed exchange rate (like a currency board), would not have given any

possibility of recurring to a monetary policy also as it would have required reserves from the central banks that were already depleted a few weeks after the outbreak of the crisis. The adjustment of interest rate and expansionary monetary policy in a time of contraction was preferred in order to restore the output of the economy. The third option, i.e. imposing capital controls, was not acceptable for the IMF and Bretton Woods institutions as they were promoting capital account liberalization in the years before the East Asian Crisis. The advantage of this option is that the combination of capital controls and fixed exchange rate could relieve the private sector from further distress and stop in a relative short time the sudden reversal of capital flows. Additionally, authorities could intervene in the economy by using monetary policies. The cost of this policy is that it could hurt long-term investments in the economy and lead to other distortionary policies. The case of Malaysia shows that a clear and transparent concept and time structure of capital controls does not necessarily lead to a reversal in FDI, as the share of FDI remained relatively stable over the period.

In the case of East Asia the third option, i.e. imposing capital controls, benefits might have out weighed costs in the economies; the first option came at a high cost with a relatively small benefit (high exchange rates that put more pressure on business sector vs. monetary policy autonomy) while the second option of fixing the exchange rate by maintaining free capital mobility was not desirable and achievable.

A different look at policies and their implications is given by Stiglitz and Greenwald (2003) which argue that the IMF was applying an 'old' monetary model in resolving the crisis: they neglected the fact of institutions and therefore the problem with possible bankruptcies in the crisis countries. Furthermore they argue that the IMF was concerned too much in restoring confidence. Stiglitz and Greenwald conclude that by considering the institutional side of the economic systems and therefore following 'newer' monetary models (like the one proposed in their book) would have helped choosing more appropriate policies not only in East-Asia but also in Latin America.

3.2 Aid from Outside: International Financial Community, International Organizations and Closely Connected Countries

The following section is concerned with the type of aid or assistance which was possible to get from outside for the crisis countries. There are different possibilities for the countries to get aid from outside, but one crucial question is at which cost.

3.2.1 International Financial Community

As international financial community there will be defined the community of private financial institutions and transnational corporations that are acting in different regions in the world. Since the 1970s the private players increased their importance as official authorities began to decrease their intervention in markets. Both private financial institutions and transnational corporations play an important role as they provide funds for projects in different countries. These funds can be long- or short-term. Long-term funds are usually defined as FDI in East Asia Japanese transnational corporations played an important role, as the production costs abroad were lower than those at home in Japan (see Chapter 1). FDI almost always comes with a cost: conditionality of transnational corporations with respect to domestic authorities e.g., providing cheaper land for transnational corporations. Therefore, although FDI is considered to be a growth promoter as usually a transfer of intangible goods (e.g. technical and managerial expertise) is involved, the drawback is that the government loses its autonomy with respect to social and economic policy as the transnational corporations connect investments to a clear policy set-up in order to protect their interests such as a wage policy or tax incentives.

The other type of investment is short-term and usually financial institutions like investment banks, hedge funds or insurances are related to it. Short-term capital flows to emerging markets are usually more volatile than to developed economies. Benefits of short-term capital flows are not easy to determine. Opening a country for portfolio investments should lead to a better accession to funds at better conditions and diversifying their exposure. however, in an emerging market where institutions which should provide supervision are not usually well developed and this could bring in some risks as in the case of a sudden stop like in the East Asian Crisis. Getting rid of the negative aspects which such a sudden stop in an emerging country could cause, informational imperfections as well as specific practices like receiving large underwriting fees from being lead managers of bond sales for countries or maintaining overly portfolios in the countries (i.e. the performance of hedge funds is usually measured by a benchmark) should be re-examined (Isard, 2005, p. 304).

What kind of aid could the East Asian Crisis countries expect from the international financial community?

There are different ways for reaction and help:

1. Transnational corporations should continue to invest in the countries and not withdraw their investments. This happened in East Asia as FDI remained relatively stable over the period, even in Malaysia where capital controls were imposed.
2. Bank loans should be rescheduled. The rescheduling of bank loans in East Asia would have been a preferable solution, as the sudden stop of rolling over short-term loans in the crisis countries increased the number of bad loans. As explained theoretically, one major problem in the East Asian crisis was herding behaviour and therefore not rolling over loans was preferable to the single investor. However, the costs were higher compared to rescheduling the loans as the resulting credit crunch increased pressure not only on non-viable companies and banks but also on viable ones.

Regarding the first point, FDI in Malaysia and Indonesia remained stable and therefore the investment by transnational corporations was not stopped. In the case of Malaysia the IMF and other institutions were pointing out that the capital controls would have a negative impact on the long-term investment which did not realize.

Referring to the second point, private financial institutions should have rolled over debt instead of recalling the bank loans of single investors. The practice of the IMF in bailing out distressed corporations is by socializing their debt and repaying debts of foreign investors. This socialization of debt does not give the private financial institutions and corporations the necessary incentive to stop the practice of taking on financial risk without properly hedging at the lenders side or screening of borrowers. Any attempt to control the behaviour of financial institutions in short-term lending needs the establishment of a framework that stops overlending or overborrowing to and within countries and regions. One such example of this is the Basel Core Standards which were changed in order to diminish incentives of financial institutions for overlending in emerging markets. Also, the change in the common practice of the IMF by socializing debts (i.e. private debts are taken over by the government through the creation of 'debt restructuring' institutions which are financed by injections of capital from government or other official authorities) in order to meet obligations of investors is an example.

To summarize, the status of the international financial community has increased over time which can be seen from the past experiences (e.g. Argentina in the late 1990s, East Asian

Crisis) where the behaviour of the community played an important role in resolving situations of distress.

3.2.2 International Organizations

The definition of international organizations includes intergovernmental organizations like the United Nations, the Bretton Wood institutions (e.g. IMF, WB), WTO and the different G-groups (G-7, G-10 etc.). These organizations emerged from historical events and their mission also changed over time, for example the IMF was established after WWII at Bretton Woods in order to coordinate exchange rate arrangements among nations and in the first period of its existence the mission was to avoid competitive devaluations of the 1930s and encourage the liberalization of the trading system; nowadays, this mission is no longer valid . The IMF changed its purpose by itself not formally but practically and provides today assistance during crisis situations which are in most cases beyond its statutory assistance of balance of payments problems. The use of stabilization or structural adjustment programs is still in use.

There is an ongoing discussion about the role and the tasks that these institutions have or should have and how they should be changed in a changing world. In the following sentences a brief overview of the different international organizations will be given along with how they could provide help to the East-Asian crisis countries.

- *The United Nations:*

'The purposes of the United Nations, as set forth in the Charter, are to maintain international peace and security; to develop friendly relations among nations; to cooperate in solving international economic, social, cultural and humanitarian problems and in promoting respect for human rights and fundamental freedoms; and to be a centre for harmonizing the actions of nations in attaining these ends.' (www.un.org)

The UN consists of six principal organs and the 'UN family', which consists of more than 15 agencies, programmes and bodies.

With regard to the East Asian Crisis the UN were not directly involved as the East Asian countries experienced an economic crisis and not a political crisis or instability within the region. But as Nayyar (2002, p. 360) points out the UN could empower the Economic Security Council and getting more involved in how to govern globalization and providing an institutional mechanism for consultations on global economic policies and if necessary being an international regulatory authority.

- Bretton Woods Institutions:

As the Bretton Woods institutions are defined the IMF and the World Bank Group (consisting of two institutions: the International Bank for Reconstruction – IBRD – and the International Development Association – IDA). The Bretton Woods institutions were established in Bretton Woods after WWII in order to manage the international payments system and to assist in the reconstruction of Europe.

The IMF was established to manage the international payments system which was based on a fixed exchange rate and capital controls; at the beginning no conditionality was applied, this was added later to practice. After the abandonment of the fixed exchange rate system and the shift to a floating exchange rate system the IMF had to redefine its role and shifted from capital controls to the promotion of liberalization of capital accounts which even should have been included in the statutes and which attempt was stopped by the outbreak of the East Asian Crisis in 1997. The goal of the IMF is to manage and stabilize the international financial system and to provide crisis management as well as crisis prevention which was not always achieved (e.g. Latin America, East Asia). For countries in distress, there are different facilities available (all designed principally for balance of payments problems):

- a. Facilities at concessional interest rates: Poverty Reduction and Growth Facility (PRGF) and the Exogenous Shocks Facility (ESF) for low income countries.
- b. Facilities not at concessional rates: They include Stand-By Arrangements (SBA), the Extended Fund Facility (EFF), the Supplemental Reserve Facility (SRF), and the Compensatory Financing Facility (CFF). SBA and EFF as well as SRF usually oblige the countries to commit themselves to tight conditionality and structural adjustment programs.

As mentioned above these instruments were designed for balance of payments problems of sovereign countries. After the Tequila crisis in Mexico in the early 1990s, and as a consequence of the criticism the IMF increased its transparency arising from the handling of the crisis. Additionally, some facilities were introduced which countries could access faster in order to limit the time between the outbreak of the crisis and the disbursement of the needed funds.

For the East Asian countries the facilities at concessional interest rates were no longer applicable as they were not considered low income countries. The IMF could have helped by giving the countries fast loans which the governments could have

used in order to overcome the credit crunch; the practice during the East Asian Crisis was instead to use conditionality and insist on the commitment to structural programs although the economic policies and the economies were regarded as being healthy just a few weeks before the outbreak of the crisis. The following quotations will show the altered view of the IMF within few months.

'Among the developing countries in Asia, those that have had to deal with risks of overheating have generally been successful in dampening the growth of domestic demand. The slowdown in the region's export growth in 1996 helped to contain inflationary pressures, although it has exacerbated external imbalances in some cases. *Thailand* saw a significant slowdown in growth in 1996, largely as a result of a disappointing export performance; concerns about the large current account deficit as well as fragilities in the financial system have given rise to exchange market pressures in recent months. *Malaysia* appears to have weathered the slowdown in foreign demand relatively well; the possibility of a rebound in demand pressures in 1997, as well as concerns about asset price inflation, warrant a cautious policy stance. In *Indonesia*, inflation has begun to diminish and growth has slowed moderately; the reliance on foreign saving will need to be contained through a stronger fiscal position. The *Philippines* saw a further strengthening of economic performance in 1996 and is expected to continue to reap the fruits of its intensified stabilization and reform efforts. [...] The economic success of all of these economies [emerging economies, e.g. Indonesia, Malaysia, China, Thailand, Chile] reflects the mutually reinforcing effects of sustained progress in many areas of economic policy.' (IMF, May 1997, pp. 12-13)

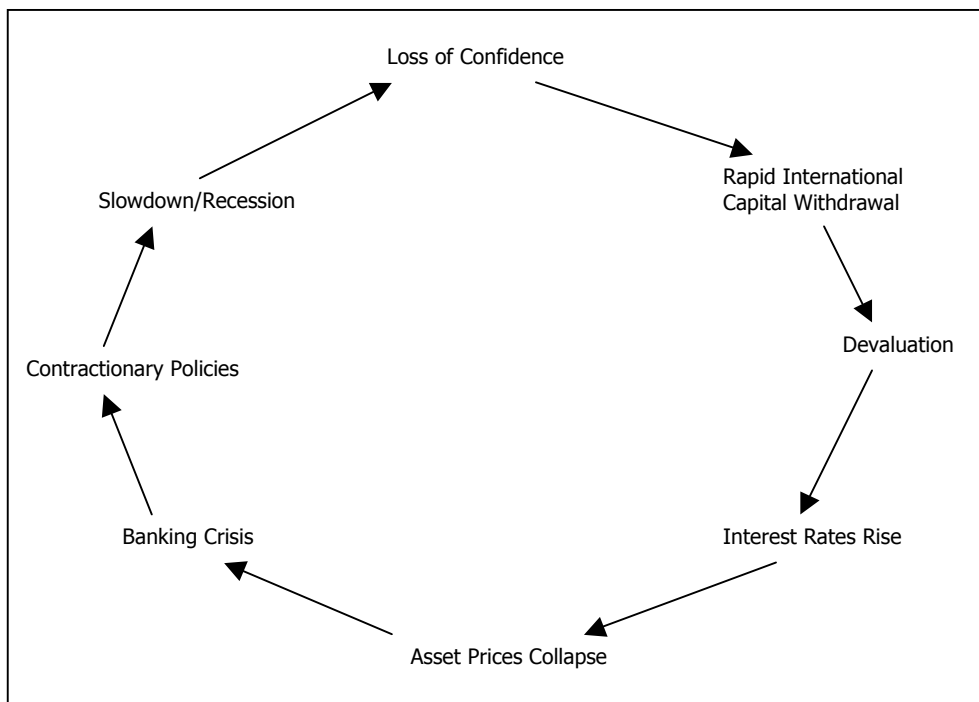
'In Asia, despite the region's impressive growth performance in recent years, several countries have recently experienced financial market pressures linked to concerns about large external deficits; in many cases, currencies linked to the appreciating U.S. dollar have aggravated the tensions. The pressures have been most acute in *Thailand*, where fragilities in the banking system contributed to market concerns. After a series of attacks on the baht, a more flexible exchange rate regime was introduced in early July and there has since been a depreciation of over 30 percent vis-à-vis the U.S. dollar. Provided adequate measures are adopted to strengthen the financial sector and the balance of payments, confidence should be restored relatively quickly. Growth in Thailand is likely to slow significantly in the short run but should subsequently return to its quite strong longer-term trend. Spillovers from the crisis in Thailand were felt by several countries in the region, especially the *Philippines*, *Indonesia*, and *Malaysia*. In these countries, which are also likely to experience an economic slowdown in the near term, the authorities will need to contain external deficits and reduce the reliance on foreign borrowing in order to restore investor confidence. Following a fairly widespread slowdown in foreign demand in 1995-96, most of these economies have experienced a pickup in exports in the first half of 1997, in line with the general strengthening of world industrial activity and trade that began in the middle of 1996. [...] But while there are some parallels between Thailand and other East Asian countries, there are also some important differences. In particular, the economic fundamentals in Indonesia, Malaysia, and the Philippines were generally stronger than those in Thailand at the time of the crisis. [...] Overall, there are reasons to believe that the currency turbulence will eventually wane without greatly damaging the region's long-term prospects.' (IMF, October 1997, pp. 14-16)

'What went wrong? Part of the answer seems to be that these countries [East Asia] became victims of their own success. This success had led domestic and foreign investors to underestimate the countries' economic weaknesses. It had also, partly because of the large-scale financial inflows that it encouraged, increased the demands on policies and institutions, especially but not only in the financial sector; and policies and institutions had not kept pace. The fundamental policy shortcomings and their ramifications were fully revealed only as the crisis deepened. Past success may also have contributed to a tendency by policymakers to deny the need for action when problems first became apparent. Several factors – mainly domestic but also external, operating to different degrees in different countries, and exacerbated

by contagion and spillovers among the countries involved – seem to have contributed to the dramatic deterioration in sentiment by foreign and domestic investors.’ (IMF, May 1998, p. 3)

Figure 3.3 gives a graphical representation of the problems with IMF loans in East Asia and its impact on the economies. There can be seen from this figure how contractionary policy prescriptions of the IMF result in a vicious circle and lead to further problems in different parts of the economy.

FIGURE 3.3 - IMF Prescription/East Asia Dilemma



Source: Jomo (1998, p. xiv)

The World Bank Group usually does not provide countries with funds that suffer from exchange rate or balance of payment loan problems. Instead they are more focused on granting loans for projects in order to promote specific sectors, industries or policies, i.e. in the case of the East Asian Crisis:

'The Bank has played an important role in the past year's positive developments. New lending operations numbered 55 in FY99, up from 37 in FY97; commitments over the same period more than doubled. A key element of Bank support was the decentralization of Bank staff to come closer to the needs and wishes of its borrowers [...]. Strategically, assistance focused on helping put East Asia back on the road to recovery [...]. Four areas emerged as critical: restructuring the microeconomy and strengthening institutions in the region's corporate and financial sectors; minimizing corruption; protecting social sectors; and safeguarding the environment. These areas are relevant to the five market-economy

countries most affected by the crisis (Korea, Thailand, Indonesia, Philippines, and Malaysia), but also apply to transition countries that were spared the full brunt (China, Mongolia, and Vietnam) and to the region's small economies (Cambodia, Lao PDR, the Pacific Islands, and Papua New Guinea). [...]Bank support for strengthening the corporate and financial sectors is being provided under large adjustment loans accompanied by policy advice and technical assistance [...].' (WB, 1999)

Therefore, the help of the WB could not be based on the problems in the short-term capital outflow but for other projects in the countries. Nevertheless, the crisis countries received funds from the World Bank Group and 16 billion US dollars have been committed in addition to the regular spending of which only US\$5.65 were disbursed by end of the fiscal year 1998 by supporting in the countries efforts of restructure of the financial sectors, reforms in corporate governance, and social safety nets (WB, 1998a, p. 22). In fiscal year 1999 the region of East-Asia – Pacific received one third of total lending (total lending was US\$ 29 billion); Indonesia (US\$ 2.7 billion) and Korea (US\$ 2.0 billion) were among the top 5 largest borrowers in fiscal year 1999, while Thailand was among the top 10 borrowers (WB, 1999a, p. ii-iii).

The discussion of the Bretton Woods lending policy is still ongoing; a more detailed discussion would be beyond this text.

- Others:

The other institutions comprise the WTO, G-7, G-10 etc. and the Asian Development Bank. The task of the WTO is not to provide any financial assistance, while the G-7, G-10 etc. are meetings of political leadership where bilateral or multilateral assistance could be discussed and granted. On the other hand, the Asian Development Bank committed approximately US\$ 9 billion during the crisis, giving emergency assistance to Thailand, Korea and Indonesia and working in these cases close with the Bretton Woods institutions, while the Philippines received in late 1998 precautionary assistance (Tadao Chino, 1999).

The institutions discussed above played an important role for some countries as they provided some funds and especially in economic policy they played a key role as the Bretton Woods institutions connected their funding to specific commitments of economic policies. The major donor to the region was none of these international organizations but Japan which reacted with its own initiative and which will be discussed below.

As can be seen from above, the East Asian Crisis countries could get financial assistance from the IMF and some smaller help from other institutions. Although the countries knew the high costs (see for example Djiwandono, 2005) of calling in the IMF they had no

better choice as their external position was worsening in a very short period. The cost of the implementation of the structural programs came for some countries at a higher (e.g. Indonesia) for others at a lower cost (e.g. Korea).

3.2.3 Closely Connected Countries

Official players consist not only of International Financial Institutions (IFIs) but also of countries. The importance in aid and/or assistance differs largely among the countries. For example Japan plays a more important role in Asia, while Europe is more actively involved in Africa, which is mainly due to historical reasons like compensations for former colonies or wars (Kawai and Takagi, 2004). The importance of bilateral aid should not be neglected although this aid is often used as an instrument of foreign policy (e.g. aid assistance of the USA during the cold war in order to prevent further communist countries). In Asia the bilateral as well as the multilateral efforts after the East-Asian crisis involved the build-up of a stronger regional cooperation, where one country, i.e. Japan, played and still plays an important role.

As Das (2005) points out in his paper, there were different attempts to resolve the crisis in the region and as mentioned before, Japan played an important role during and after the East Asian Crisis in the region. The following initiatives were taken shortly during and after the crisis (Das, 2005):

1. Manila Framework Group

In November 1997 the Manila Framework Group (MFG) was founded by 14 Asia-Pacific countries (Australia, Brunei Darussalam, Canada, China, Hong Kong SAR, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Singapore, Thailand and the United States). The purpose of MFG was to create an in-depth dialogue on regional economic surveillance and crisis management. The basic objective was a little bit changed due to the prolonged crisis focusing later on the enhancement of the prospects of financial stability.

Finance ministers and central bankers of all participating countries met with representatives of IFIs like the IMF and the World Bank semi-annually to create a new framework for regional cooperation. By early 2000 the importance of the meetings of the MFG has decreased becoming merely a panel for the exchange of ideas.

2. ASEAN Surveillance Process

The ASEAN Surveillance Process (ASP) was created in October 1998. The objective of ASP was to coordinate and strengthen the policy making process in the ASEAN economies and improve macroeconomic and financial surveillance by peer

reviewing broad regional policy coordination. The supreme objective of the ASP was to strengthen national policy-making apparatuses for the ASEAN economies and regional policy coordination leading to institution building. The peer review and surveillance process was also extended to sectoral and social policies. The economies exchanged information on recent developments in the sub-region during ASP and could in this way take note of individual and collective responses to economic and financial events that could have a destabilizing impact. The ASP evolved over time to the ASEAN-Plus-Three Surveillance Process (APTSP), consisting of 13 members (ten ASEAN members: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam; three additional members: China, Japan and Korea).

In order to be effective the APTSP should work closely together with the IMF in this way limiting inconsistent and incompatible assessments of the sub-regional scenario.

3. New Miyazawa Initiative

The New Miyazawa Initiative (NMI) was launched in October 1998 by the Ministry of Finance (MoF) of Japan. The NMI was the major bilateral support mechanism during the East-Asian crisis and its goal was to directly assist the crisis-affected economies and contribute indirectly to the stability of the regional and international financial markets. During the first phase US\$30 billion were granted, one half was made available to the five crisis countries for medium and long-term financial assistance while the other half was used for short-term financial needs during the implementation of macroeconomic and financial reforms. The implementation of NMI was carried out by the Japan Bank of International Cooperation (JBIC). By early 2000 another US\$21 billion were committed under the first phase to the five crisis countries as the first assistance turned out to be successful.

The financial resources under NMI were to be used for the purpose of corporate debt restructuring and to strengthen the social safety net and were in the form of loans and not grants. The second phase was announced in May 1999, and committed another US\$17 billion. These funds were used through the JBIC to partially guarantee government bonds issued by the crisis countries and which was to be provided outside the framework of the first phase of the NMI. One objective of the second phase was the development of domestic currency corporate bond markets.

4. Asian Growth and Recovery Initiative

In November 1998 the joint Japan-US Asian Growth and Recovery Initiative (AGRI) was launched and IFI's were important participants and instrumental in its implementation. The objective of AGRI was to introduce an integrated and comprehensive approach to financial restructuring of problem banks and corporations which was supported by adequate financing for bank recapitalization and incentive for creditors and debtors to actively help in the debt workouts. An important project was the Asian Growth and Recovery Program (AGRP) which was financed partly by the World Bank, the Asian Development Bank and bilateral supports. The AGRP used for the mobilization of substantial additional private capital in order to assist Asian governments to finance bank recapitalization, innovative and cost effective financing methods. Under AGRP, Japan, the US, the World Bank and the ADB provided together US\$5 billion in bilateral and multilateral support.

To overcome company's lack of working capital and trade finance – needed for the maintenance of production, employment and exports – the Export-Import Bank of the United States (US ExIm), the Japan Export-Import Bank (JEXIM) and Japan Export Credit and Investment Insurance Agency substantially increased the size of their trade finance programs for the crisis countries.

5. Asian Monetary Fund

In September 1997 Japan proposed the creation of an Asian Monetary Fund (AMF). The objective of the proposed AMF was to promote financial and monetary co-operation and policy coordination in Asia. The proposal was to create a fund with US\$100 billion where Japan suggested having a large financial stake in it (half of the funds should be provided by Japan, the rest should be provided by China, Hong Kong SAR and Taiwan). One goal was to give rapid disbursement and that future speculative attacks on the Asian currencies could be limited. Most Asian economies were in favour of this proposal.

One driving factor behind the proposal was the discontentment of the Asian governments with the response of the IMF in the East Asian Crisis. Furthermore, in this way the large foreign exchange reserves of ASEAN-plus-three (APT) economies (which amounted to US\$1,900 billion in early 2004) could be used in a beneficial way.

Against this proposal were the European Union (EU), the USA and the IMF as there was feared that the AMF would become a duplicate of the IMF and challenge its global leadership. Additionally the IMF feared that the creation of the AMF could

encourage countries to postpone restructuring measures. At the beginning China was not in favour of the AMF due to the historical rivalry between China and Japan in Asia. One concern of academics was that this institution would not have a comparative advantage in identifying Asian problems but comprehend them better than the IMF and prescribing indigenous solutions.

The proposal was until now not turned into reality.

6. Other Smaller Proposals and Initiatives

Other proposals and initiatives in Asia and outside Asia include:

- the proposal by the Institute for International Monetary Affairs (IIMA) of a regional stability forum with the following objectives: promoting a regional policy dialogue, creating a regional framework for emergency financial support, and ensuring that future crises are prevented by active regional economic surveillance;
- the proposal by the Asia Policy Forum where the regional institution should: take on the role of the lender of the last resort, engage in regional economic surveillance, and assist in regional financial and corporate restructuring, if the need arises;
- the proposal of Heiner Flassbeck, former Vice Minister of Finance in Germany, to rethink the Asian currency regimes and proposing a kind of Asian Euro;
- the proposal of Bernie Fraser, Governor of the Reserve Bank of Australia in 1995, to create a small-scale BIS for Asia; this proposal lost its attractiveness when the BIS opened its first overseas office in Hong Kong SAR in 1998;
- the establishment of the Asian Consultative Council (ACC) by the BIS in 2001 which provides a vehicle for communications between the central banks in Asia and the Board of Directors and Management of the BIS.

As can be seen from the discussion above there were numerous initiatives, proposals and programmes introduced during and after the crisis. Different initiatives resulted in different outcomes: while the NMI was in overall successful and the largest bilateral initiative during the East Asian Crisis, some other programmes, like the IMF facilities, resulted in a mixed outcome (e.g. the recovery of Korea was relatively fast while Indonesia was the slowest of the crisis countries to recover).

3.3 Conclusion

As can be seen there were different possibilities for the countries during the East Asian Crisis. According to the discussion above it is evident that there does not appear a single solution for every economy and crisis as each economy and crisis has its own characteristic. Furthermore, many different proposals, programmes and initiatives have been developed accessible to the countries in East Asia. Nevertheless, costs and benefits have to be balanced for each country separately.

4

Country Specific Remedies: Differences of Policies Applied to Indonesia and Malaysia

This chapter will look in more detail at the policies that Indonesia and Malaysia adopted during and after the East Asian Crisis. Two different approaches for solving the crisis will be discussed: an 'orthodox' path prescribed by the IMF and followed by Indonesia, and an 'unorthodox' path followed by Malaysia.

After the float of the Thai baht in July 1997 the regional turmoil came only more than a year later to an end as in the last quarter of 1998 the East Asian currencies began to strengthen and to stabilize after the US Federal Reserve lowered its interest rate. But while Indonesia, the Republic of Korea and Thailand recorded their first period of positive growth in the first quarter of 1999, Malaysia added a fifth quarter of economic contraction. Only at the end of 1999 Malaysia's recovery was turned out to be the second highest in the region, falling behind the Republic of Korea (Jomo, 2005, p. 11).

To understand the performance of the two countries a detailed discussion of the choices made by these countries and the outcome on the economy will be discussed, including the changes in the political landscape. Hence, this chapter is a descriptive analysis of the different policies adopted by and the outcomes of the policies in the countries.

4.1 Country Presentation: Commonalities and Differences

The financial systems in East Asia share a history of financial repression including limits on interest rates and entry in the banking system, and obligatory lending to policy-preferred sectors and projects. Most markets experienced financial repression as it was a required instrument during the import-substitution era following independence. The 'model' country of financial repression in East Asia was Japan. Financial repression led to a kind of informal finance where small and medium-sized companies which had not enough access to bank finance tended to rely on this kind of finance (Masuyama, 1999, pp. 3-4).

Economies relied on indirect finance or intermediation by the banking system and financing through capital markets gained on importance only since the 1990s. One problem was that there was not a fully developed Asian Bond market although nowadays there are some attempts to establish a more integrated bond market in this region, for example the initiatives of the ADB that can be seen by consulting the ARIC/ADB website.

Therefore the possibility of companies to lend on a long-term basis on capital markets in Asia was very limited since independence of the countries. Barry Eichengreen (2004, p. 7) argues that East Asia relies less on bonds and more on banks than other emerging markets. This difference is even more dramatic with respect to developed countries. Table 4.1 shows the development of the Asian bond market from December 1997 to March 2005. From this table it can be seen that the amount outstanding increased sharply during this period. With the exception of Korea, in all countries and in the region governments are the prevalent debtor of bonds. This pattern is a consequence of the assumption that government bonds could be used by corporations as a source of hedge. To summarize, the different initiatives of building up an Asian bond market were fruitful but to date a fully developed bond market in Asia does not exist. However, a step towards an Asian bond market gives some alternative financial instruments to local corporations and investors.

TABLE 4.1 - Outstanding Local Currency Bonds in East Asian Crisis and East Asian Emerging Countries

	Amount Outstanding (US dollar billion)			% Share		
	December 1997	December 2003	March 2005	December 1997	December 2003	March 2005
Indonesia						
Government	0.90	60.10	46.00	20.0	91.5	87.1
Financial Institutions	1.58	2.50	2.90	35.0	3.8	5.5
Corporate Issuers	2.03	3.10	3.90	45.0	4.7	7.4
Total	4.51	65.70	52.80	100.0	100.0	100.0
South Korea						
Government	21.60	113.90	185.30	16.6	25.6	30.6
Financial Institutions	51.70	164.10	263.80	39.7	36.8	43.6
Corporate Issuers	57.00	167.78	156.11	43.7	37.6	25.8
Total	130.30	445.79	605.21	100.0	100.0	100.0
Malaysia						
Government	19.40	40.40	49.20	34.0	40.9	42.9
Financial Institutions	16.80	13.48	20.28	29.5	13.6	17.7
Corporate Issuers	20.80	44.94	45.20	36.5	45.5	39.4
Total	57.00	98.82	114.68	100.0	100.0	100.0
Thailand						
Government	0.30	30.70	36.60	2.8	50.9	51.2
Financial Institutions	1.32	8.35	12.47	12.4	13.8	17.5
Corporate Issuers	9.04	21.30	22.40	84.8	35.3	31.3
Total	10.66	60.35	71.47	100.0	100.0	100.0
Total Emerging Asia ¹						
Government	141.05	596.48	723.98	39.1	49.5	48.9
Financial Institutions	114.10	329.33	483.35	31.6	27.3	32.6
Corporate Issuers	105.99	279.48	274.50	29.3	23.2	18.5
Total	361.13	1,205.29	1,481.83	100.0	100.0	100.0

Notes: ¹ Total Emerging Asia comprises People's Republic of China, Indonesia, South Korea, Malaysia, the Philippines, Singapore, Thailand, Viet Nam.

Sources: ADB, Asia Bond Monitor (2005, p. 5)

An interesting fact from the numbers above is the distribution of Bonds in Indonesia. While in December 1997 the government of Indonesia only accounted of 20 % of total bonds outstanding, in December 2003 this number soared to 91.5 % which can partially

be explained by the socialization of corporate loans by the government. The restructuring of the corporate sector was promoted in Indonesia through different institutions which effectively swapped bad loans or non-performing loans. In all countries it can be seen that there was some change in distribution i.e. there was a change from December 1997 to December 2003 and March 2005 as the government increased its share over total bonds outstanding, but nowhere more dramatic than in Indonesia. Such data could support the argument that the crisis countries effectively took over private sector debt and swapped it into government debt in addition to issuing new bonds e.g. through public institutions and funds that issued then new bonds and sold it to the market as in the case of Malaysia – see below.

Table 4.2 and 4.3 will aid in the understanding of how the different policies applied by the two countries were affecting the economies i.e., net private capital flows to the crisis countries of the period 1990 to 2001 and short and total debt shares in Indonesia and Malaysia from 1991 to 2001. As can be seen from these tables foreign bank borrowings and especially short-term loans increased dramatically in the early 1990s in Indonesia, Korea and Thailand, while it remained relatively stable in Malaysia. Contrary to the other countries, Malaysia attracted more portfolio capital flows.

Table 4.2 shows how the landscape with regard to net private capital flows in Indonesia, Malaysia, Korea and Thailand changed. Here it can be seen that Indonesia experienced a sharp increase of net private capital flows in 1995 and 1996 more than doubling the average amount of the period 1990 to 1994. While the reversal in 1997 has been relatively low, it increased dramatic in the subsequent periods leading to a huge outflow. What is very interesting is the fact that the largest share of outflows in 1998 to 2001 were not in the form of equity investments, which accounted for the largest part of increase of net private flows until 1997, but private creditors including flows from commercial banks and nonbanks. This also shows some problems in the interpretation of these numbers: according to the numbers from 1990 to 1996 it could not be assumed that Indonesia would be under heavy pressure by net outflows of private creditors.

The picture for Malaysia is slightly different compared to Indonesia as illustrated in Table 4.2. Malaysia experienced in two periods a surge of net private capital flows: from 1990 to 1993 and in 1995 and 1996. The slump in 1994 was due to some problems in the banking sector, explained in the previous chapters. While Indonesia experienced apart from the sharp outflow of private creditor capital and to some extent of equity investments, Malaysia experienced only a marginal reversal of flows in portfolio investments, inflows in

direct investment but outflows of private creditor capital. Overall, Malaysia experienced not such a sharp decrease of capital flows or even a huge reversal as Indonesia.

Table 4.2 demonstrates that the largest outflows for all four countries in capital flows of private creditors which shows the importance of specific rules and regulations and policies for sudden reversals of this kind of capital flows.

A closer look at Table 4.3 shows that Indonesia has built up a higher share of short-term external debt in relative and absolute values highlighting the higher degree of vulnerability to speculative attacks.

TABLE 4.2 – Net Private Capital Flows to Indonesia, Malaysia, the Republic of Korea and Thailand (1990-2001) (Billions of US\$)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Indonesia												
Private flows, net	4.02	4.40	5.27	5.08	3.70	10.25	11.51	-0.34	-13.85	-9.92	-9.99	-8.25
Equity investments, net	1.00	1.47	1.69	3.45	5.38	7.84	10.60	1.87	-2.23	-4.54	-6.46	-3.52
Direct investment, net	1.09	1.48	1.78	1.65	1.50	3.74	5.59	4.50	-0.36	-2.75	-4.55	-3.28
Portfolio investment, net	-0.09	-0.01	-0.09	1.81	3.88	4.10	5.01	-2.63	-1.88	-1.79	-1.91	-0.24
Private creditors, net	3.02	2.93	3.58	1.63	-1.68	2.41	0.91	-2.21	-11.61	-5.38	-3.53	-4.73
Commercial banks, net	0.00	0.00	0.00	1.36	0.53	1.95	-0.76	-0.28	-2.27	0.13	-1.42	-1.87
Nonbank, net	3.02	2.93	3.58	0.27	-2.20	0.46	1.67	-1.93	-9.34	-5.51	-2.11	-2.86
Malaysia												
Private flows, net	1.82	5.77	8.91	11.37	1.51	7.85	10.04	2.56	-2.72	1.45	-0.77	-0.12
Equity investments, net	2.08	4.17	4.06	4.30	2.69	3.74	4.81	4.89	2.45	1.45	-0.77	-0.12
Direct investment, net	2.33	4.00	5.18	5.01	4.34	4.18	5.08	5.14	2.16	2.47	1.76	0.29
Portfolio investment, net	-0.25	0.17	-1.12	-0.71	-1.65	-0.44	-0.27	-0.25	0.28	-1.02	-2.53	-0.41
Private creditors, net	-0.26	1.60	4.85	7.07	-1.19	4.11	5.23	-2.33	-5.17	n.a.	n.a.	n.a.
Commercial banks, net	0.85	1.31	3.63	4.22	-5.07	0.03	3.34	-0.98	-2.68	n.a.	n.a.	n.a.
Nonbank, net	-1.11	0.29	1.22	2.85	3.88	4.08	1.89	-1.35	-2.49	n.a.	n.a.	n.a.
Republic of Korea												
Private flows, net	3.75	7.87	8.07	5.80	11.55	18.19	24.91	-13.56	-12.30	10.10	12.96	3.53
Equity investments, net	-0.10	2.79	5.52	9.35	4.58	9.94	12.76	12.78	-0.55	14.33	16.46	6.96
Direct investment, net	-0.26	-0.31	-0.43	-0.75	-1.65	-1.78	-2.34	-1.61	0.67	5.14	4.28	0.60
Portfolio investment, net	0.16	3.10	5.95	10.10	6.23	11.71	15.10	14.38	-1.22	9.19	12.18	6.36
Private creditors, net	3.85	5.07	2.55	-3.55	6.97	8.25	12.15	-26.34	-11.75	-4.23	-3.50	-3.43
Commercial banks, net	-0.30	2.44	-1.47	-3.27	2.31	2.19	1.78	-18.12	0.74	1.22	-5.76	3.73
Nonbank, net	4.15	2.64	4.03	-0.28	4.66	6.06	10.37	-8.22	-12.48	-5.44	2.26	-7.16
Thailand												
Private flows, net	10.32	11.50	10.09	10.96	12.87	21.86	19.54	-7.53	-14.87	-13.73	-10.57	-5.04
Equity investments, net	2.27	1.77	2.89	7.03	3.35	5.26	4.95	7.84	7.54	5.94	2.68	2.44
Direct investment, net	2.30	1.85	1.97	1.57	0.87	1.18	1.40	3.31	7.18	5.87	3.39	3.66
Portfolio investment, net	-0.04	-0.08	0.92	5.46	2.48	4.08	3.54	4.53	0.36	0.07	-0.71	-1.22
Private creditors, net	8.05	9.74	7.19	3.94	9.52	16.60	14.59	-15.37	-22.41	-19.68	-13.25	-7.48
Commercial banks, net	1.03	0.21	1.86	3.32	13.27	10.48	5.65	-5.65	-15.24	-13.27	-6.99	-1.85
Nonbank, net	7.03	9.52	5.33	0.61	-3.75	6.12	8.94	-9.72	-7.17	-6.40	-6.26	-5.63

Source: Jomo (2005, p. 5)

TABLE 4.3 – Short and Total Debt in Indonesia and Malaysia (1991-2004)

	Indonesia					Malaysia				
	Short-Term External Debt as % of GIR	Short-Term External Debt as % of Total External Debt	Short-Term External Debt, end of period (in Millions US\$)	Total External Debt as % of GDP	Total External Debt, end of period (in Millions US\$)	Short-Term External Debt as % of GIR	Short-Term External Debt as % of Total External Debt	Short-Term External Debt, end of period (in Millions US\$)	Total External Debt as % of GDP	Total External Debt, end of period (in Millions of US\$)
1991	n.a.	n.a.	n.a.	n.a.	n.a.	24.0	14.1	n.a.	37.8	n.a.
1992	n.a.	n.a.	n.a.	n.a.	n.a.	30.2	23.5	n.a.	37.3	n.a.
1993	n.a.	n.a.	21,306	n.a.	n.a.	24.8	25.0	10,170	40.4	n.a.
1994	n.a.	n.a.	24,178	n.a.	n.a.	21.9	19.3	7,529	38.5	n.a.
1995	201.2	n.a.	30,157	n.a.	n.a.	26.9	19.1	9,665	37.8	n.a.
1996	234.0	38.8	37,576	n.a.	110,171	37.0	25.7	13,334	38.5	37,099
1997	218.2	26.6	38,335	n.a.	136,087	59.8	25.3	16,773	48.5	41,934
1998	110.5	16.6	27,044	n.a.	150,886	36.9	21.1	10,923	61.9	36,031
1999	67.3	12.0	21,302	n.a.	148,098	19.3	13.8	8,781	53.9	35,580
2000	70.5	14.2	22,800	85.4	141,694	15.7	10.9	8,801	46.9	35,665
2001	92.3	18.9	19,051	80.8	133,071	20.8	13.9	9,602	51.9	33,598
2002	43.1	10.2	n.a.	65.4	131,343	24.9	17.5	n.a.	51.3	n.a.
2003	38.1	9.8	n.a.	56.7	135,400	19.8	17.9	n.a.	47.3	n.a.
2004	46.1	11.7	n.a.	53.2	137,024	17.4	21.8	n.a.	44.6	n.a.

Note: *Total External Debt* includes outstanding debt by public and private sector

GIR = Gross International Reserves

Short-Term External Debt includes liabilities includes outstanding foreign liabilities of the public and private sector due in one year or less.

Source: Asian Development Bank, ARIC Indicators.

In Malaysia portfolio investments flowing out of the economy ranged from RM30 billion during the last three quarters of 1997. This was much more than the total net inflows from 1995 and equal to almost one fifth of annual GNP. Looking at the quarter July to September 1997 RM16 billion of net portfolio investments flew out of the country (Jomo, 2005, p. 6). This might be due to the offshore market in ringgit, which was perhaps the only case of an offshore market in an emerging country and Rajaraman (2003) argues that this was developed mainly in Singapore due to the absence of a domestic market in Malaysia for hedging instruments. This offshore market seems to have facilitated exchange rate turbulence in 1997 – 98 by allowing for speculative offshore borrowing of ringgit to finance dollar purchases in anticipation of a crash in the ringgit's value and putting therefore more pressure on the ringgit interest rates from the second half of 1997 (Jomo, 2005, pp. 11-12).

Jomo (2005, p. 7) argues that the experience of Malaysia was in four points different from those of the other crisis-hit economies:

1. Malaysia was more cautious than the other countries with respect to international financial liberalization as they experienced in the late 1980s a banking crisis and had changed their policies.
2. Capital market flows, especially into the stock market, were more significant than foreign bank loans in Malaysia. Nevertheless, the Malaysian banking system had

contributed to asset price inflation but was not as heavily exposed to international borrowing as banks in the other crisis-hit economies.

3. Due to its lower exposure of foreign bank borrowing, Malaysia did not have to call in the IMF or others in order to get emergency international credit facilities.
4. In the second half of 1997 and, after a short break where more 'orthodox' policies were adopted, from September 1998 onwards the Malaysian authorities pursued more unconventional and 'unorthodox' policies.

Another difference between the two countries is the experience of inflation, which was worsening in Indonesia and Malaysia at the outbreak of the crisis but with very different evolution. Due to their open economy both countries experienced a worsening of inflation in the second half of 1997 to 1998. But Malaysia returned faster to low inflation as it introduced their capital controls and fixed the exchange rates and, hence, regained the autonomy on monetary policy. In Indonesia annual inflation rate not only increased but it exploded from 1997 to 1998 from 6.2 % to 58.5 % and returned to a single digit inflation rate only in 1999 while the other crisis-hit countries (Malaysia, Republic of Korea and Thailand) returned to even lower inflation rates in 1999 than in the pre-crisis period (Table 4.4, below).

TABLE 4.4 – Inflation in Indonesia, Malaysia, the Republic of Korea and Thailand (1991-2005) (percentage Change of Consumer Price Index Over Previous Year)

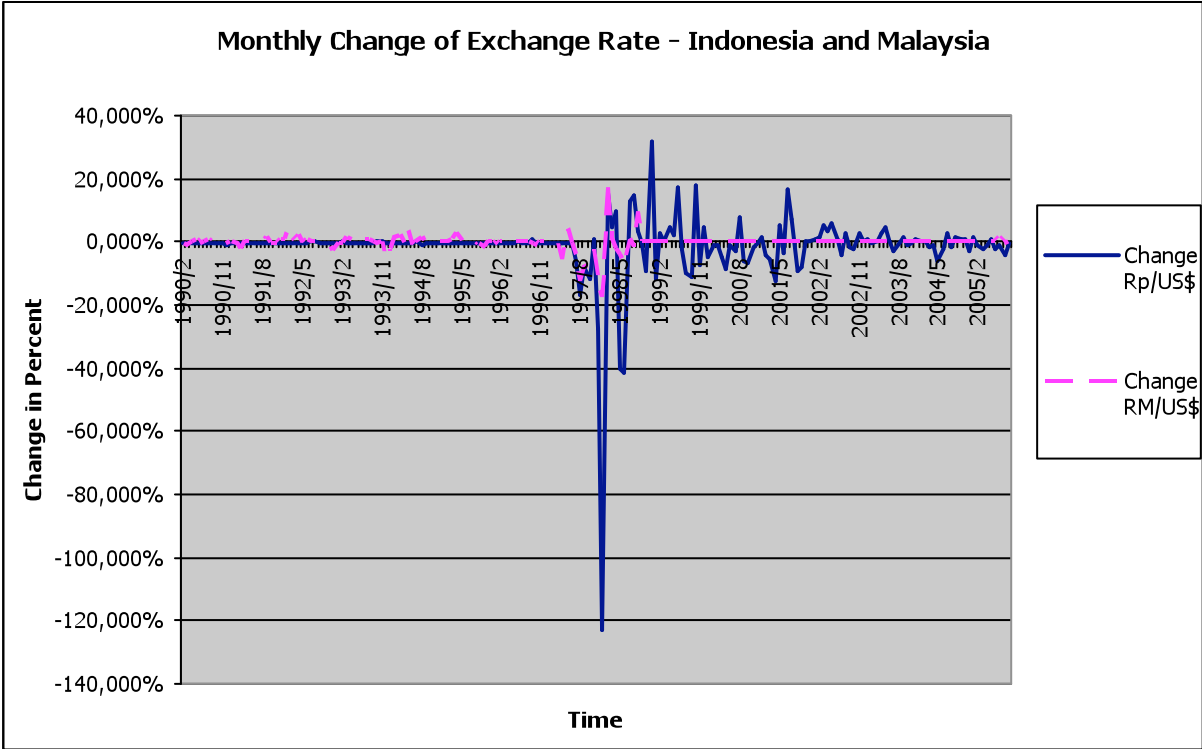
	Indonesia	Malaysia	Republic of Korea	Thailand
1991	9.4	4.4	9.4	5.7
1992	7.5	4.8	6.2	4.1
1993	9.7	3.6	4.8	3.3
1994	8.5	4.9	6.3	5.1
1995	9.4	4.1	4.4	5.8
1996	8.0	3.5	4.9	5.8
1997	6.2	2.7	4.4	5.6
1998	58.5	5.3	7.5	8.1
1999	20.5	2.7	0.8	0.3
2000	3.7	1.4	2.3	1.5
2001	11.5	1.4	4.1	1.7
2002	11.9	1.8	2.8	0.6
2003	6.7	1.1	3.5	1.8
2004	6.1	1.4	3.6	2.8
2005	10.5	n.a.	2.7	4.5

Source: Asian Development Bank, ARIC Indicators.

Looking at the monthly changes of the exchange rates of rupiah and ringgit it can be seen, that the movement of the two currencies was similar with respect to the US dollar was before the crisis (close to 0 %) while there was a huge difference during and after the crisis, with the exchange rate of the Indonesian rupiah fluctuating immensely while the Malaysian ringgit was stabilized with its peg to the US dollar in September 1998 (negative percentage rates represent depreciations).

From Figure 4.1 it can be seen that the exchange rate of Indonesia remained volatile for a long period. A higher volatility in exchange rates with respect to the US dollar has a strong impact for local corporations with a high exposure on foreign markets and currencies. It increases the risk on foreign exchange for local companies. Furthermore, foreign denominated debt becomes difficult to be rated in local currency and therefore uncertainty and costs increase for local corporations. This was true for Indonesia, where the large volatility and depreciation of the Indonesian rupiah vs. the US dollar increased uncertainty for local corporations and the costs of repayments of foreign denominated debt. Furthermore from Figure 4.1 it is obvious that Malaysia experienced less volatility during the first phase of the crisis and eliminated volatility by fixing the exchange rate to the US dollar. The effect of such a policy is mainly to eliminate uncertainty in the markets and corporations.

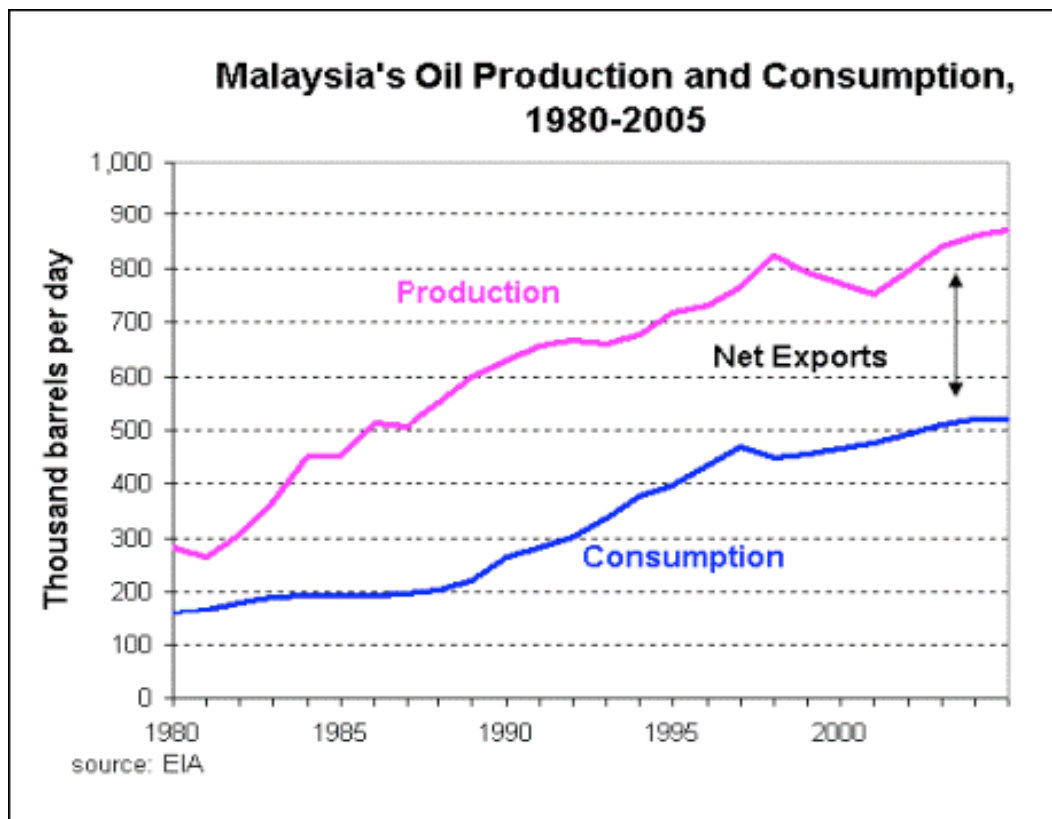
FIGURE 4.1 – Monthly Change of Exchange Rates (vs. the US Dollar) of Indonesian Rupiah and Malaysian Ringgit



Source: Author’s own calculation based on data of IMF, International Financial Statistics Database.

One other commonality and at the same time a difference is petroleum production in the two countries. Indonesia and Malaysia are oil and natural gas producer but while Indonesia, an OPEC founding member, has become a marginal net importer in 2004 and oil production has declined, Malaysia still not an OPEC member but an oil exporting

FIGURE 4.3 – Malaysia’s Oil Production and Consumption



Source: EIA, 2006.

Indonesia’s oil production continued to decline over the years due to the natural fall off of aging oil fields, a lack of new investment in exploration and development and some regulatory problems. Indonesia is producing below its OPEC quota and has been considering leaving OPEC. The major oil fields of Indonesia are onshore mainly in West Indonesia (Central Sumatra) with some smaller oil fields offshore in Java, East Kalimantan and the Natuna Sea. In September 2005 a contract between PERTAMINA, the national oil organization, and ExxonMobil for the development of reserves in Central/East Java was signed. Another large offshore oil producer in Indonesia is China National Offshore Oil Corporation (CNOOC). The monopoly of PERTAMINA was limited in 2003 by the introduction of the Oil and Gas Law 22/2001 in October 2001. In July 2004 there were given the first licences for retail petroleum products to BP and PETRONAS (Malaysia) and PERTAMINA was changed into a limited liability company by presidential decree in 2003 and it was planned to become a fully privatized corporation in 2006. The consumption subsidies for domestic retail fuel consumers were cut in September 2005 which doubled the retail price of gasoline and diesel (EIA, 2005).

Indonesia was the world’s leading liquefied natural gas (LNG) exporter but is facing a declining share of global LNG markets. About 68 % of its exports go to Japan, 19 % to

South Korea and the remainder to Taiwan. The major natural gas reserves are located near the Arun field in Aceh, around the Badak field in East Kalimantan and some other fields in Java, Irian Jaya and in the Natuna D-Alpha field. The natural gas distribution infrastructure is inadequate and Indonesia still relies on oil to supply about half of its own energy needs. The natural gas sector faced some restructuring under the terms of the World Bank and the IMF lending agreements (EIA, 2005).

Malaysia's oil reserves are declining but the oil production has been rising since 2002 due to new offshore development. The oil demand in Malaysia has been growing at a lower rate than its supply due to the conversion of oil-fired to natural gas power plants. PETRONAS, the national oil and gas company, is investing in overseas oil exploration and production projects (e.g. Syria, Turkmenistan, Iran). Oil exports go mainly to Japan, Thailand, South Korea and Singapore. The oil production in Malaysia is mainly offshore; primarily in Peninsular Malaysia with most of the oil being of high quality and low in sulphur content (EIA, 2006). Retail petroleum products are subsidized, but in late February 2006 the government decided to increase the retail fuel prices up to 23 % still relatively cheap compared to most other ASEAN countries (except Brunei).

The natural gas production in Malaysia has been increased over the last years. An active gas exploration and development area can be found in the lower part of the Gulf of Thailand in the Malaysia-Thailand Joint Development Area (JDA) and administered by the Malaysia-Thailand Joint Authority (MTJA). Malaysia was exporting approximately 16 % of total world liquefied natural gas exports in 2004 (EIA, 2006).

From the discussion above it can be seen that for both countries oil and gas production is important. There are some differences between Indonesia and Malaysia: Firstly, Indonesia's supply of oil has not kept pace with internal demand in 2004 it became for the first time a net importer while Malaysia is still a net exporter. Secondly, Malaysia uses more gas for its energy production while Indonesia is still relying on oil. Thirdly, Indonesia's oil and gas infrastructure is relatively old while Malaysia has newer and a more efficient infrastructure. And finally, Indonesia is an OPEC member while Malaysia is non-OPEC oil exporting country. One commonality is that both countries rely on subsidies for retail petroleum products and both countries cut their subsidies in the past years. Indonesia was forced by the IMF lending agreement to cut subsidies, while Malaysia decided to cut them due to the higher costs caused by the increase in world market prices.

4.2 Policies Applied by Indonesia

In July 1997 the East Asian crisis broke out in Thailand and Indonesia was believed to escape the economic crisis. Indonesia was long praised as a model of successful economic development as its neighbours Malaysia and Thailand, which were soon pulled into the maelstrom of the crisis. Between June and August 1997 Indonesia remained relatively stable while Thailand fell into deep crisis (Sharma, 2003, p. 123) and even the World Bank (1997a) maintained its positive short-term outlook for Indonesia and believed that its widening of the intervention band from 8 to 12 % would be sufficient to stave off the contagion. The Indonesian government received much praise from outside for its quick and decisive response. But the East Asian Crisis did not omit Indonesia. The country experienced the largest slowdown and economic contraction of the affected crisis countries with a slump of 15 % in output in 1998 which was the most severe economic collapse recorded for any country in a single year since the Great Depression of the 1930s (Sharma, 2003, p. 123). For this reason in late 1997 the Indonesian government decided to call-in the IMF after almost 30 years without assistance.

The period from 1998 onwards is often referred to as *reformasi* – a period of political change and reform. This period is characterized by changes in the political climate, the break with the Soeharto regime and free, democratic elections, as well as in the economic sphere i.e. the recession and the implementation of policies prescribed by the IMF. After the break down in late 1997 and 1998 the banking crisis was tackled and macroeconomic stability was regained by reaching a stabilized exchange rate, inflation, interest rates and an increase in export growth although not reaching pre-crisis growth rates and not bouncing back like the other crisis hit countries (van der Eng, 2004, p.1).

One major point of interest worth mentioning is that the Indonesian economy was considered to be sound by observing macroeconomic data. There was an annual GDP growth rates in the preceding two years before the outbreak of the crisis of nearly 8 % and a current account deficit at 4 % with only one ratio that seemed of being an outlier: short-term debt to total debt jumped up from 17.7 % in 1994, to 20.9 % in 1995 and to 24.8 % in 1996 (Montes and Abdusalamov, 1998, p.175).

On July 2nd 1997 the peg of the Thai baht was abandoned and it depreciated sharply against the US dollar. Subsequently the pressure spread to the Malaysian ringgit and Philippine peso. On July 8th 1997 the Indonesian Rupiah also came under pressure but as the economy had stronger fundamentals i.e., lower current account deficit which averaged in the 1990s only about 2.6 % of GDP and low compared to those in Thailand and Malaysia, the exchange rate was not truly misaligned as in the case of Thailand. As

Indonesia relaxed gradually its exchange rate through a widening of the intervention band and therefore competitiveness in the region was maintained, especially with respect to China.

The Indonesian government decided not to deplete the central banks foreign exchange reserves, which were growing during the preceding years, see Table 4.5 below, and were relatively high compared to other countries in the region, Thailand's reserves were reported in August 1997 at US\$28.6 billion, Korea's were in December 1997 at US\$9.1 billion. Instead Bank Indonesia widened the intervention band from Rp192, 8 % of the central rate, to Rp304, 12 % of the central rate. Additionally non-resident transactions in the forward market were limited, sales were limited to a maximum of US\$5 million – transactions for financing investments, exports and imports were excluded from the limit – and tight monetary policies accompanied with administrative measures to limit external borrowing of commercial banks.

TABLE 4.5 – Indonesia's Official Reserves

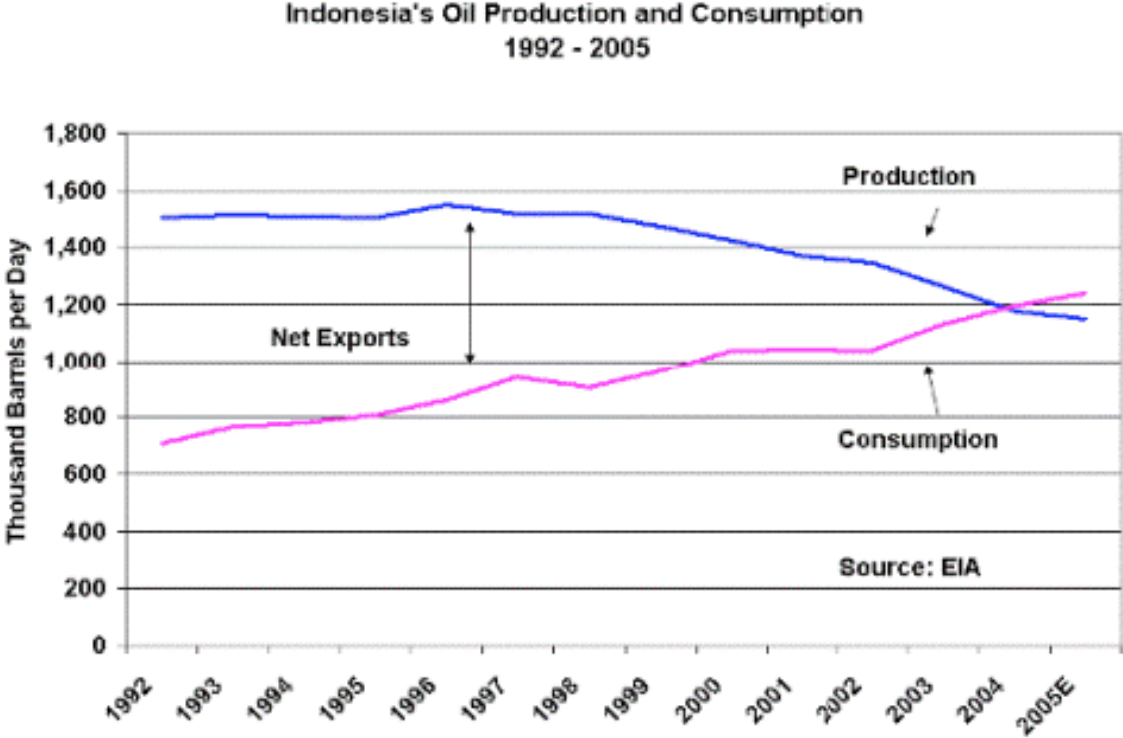
Date	Official Reserves (US\$ billion)
January 1993	11,77
March 1993	11,98
January 1994	12,42
January 1995	12,97
January 1996	14,79
January 1997	19,83
July 1997	21,10
August 1997	20,40
September 1997	20,05
October 1997	19,10
November 1997	18,95
December 1997	17,42
January 1998	14,03*
February 1998	12,46*
March 1998	13,18*

Note: * - Net International Reserves (NIR)
Source: Dijwandono (2005, p. 50)

While Indonesia was not in these early months suffering like the other countries, it experienced a different situation than previous years i.e., every time Bank Indonesia had widened its intervention band during 1994 to 1997, a total of five times, the currency appreciated, while in July 1997 the currency for the first time depreciated rapidly. This could be attributed to the reduction of exposure of foreign creditors and large domestic conglomerates bought in US dollars to hedge, at least in part, their foreign currency denominated debts (Sharma, 2003, pp. 140-141). The Indonesian rupiah depreciated

country. Figure 4.2 and 4.3 below show the countries oil production and consumption over time.

FIGURE 4.2 – Indonesia’s Oil Production and Consumption



Source: EIA, 2005.

towards its lower band although the central bank was intervening in order to stabilize the currency and by raising interest rates from 12 % to 13 %. These interventions could not give the rupiah an upswing and therefore on August 13th 1997 the decision to float was taken at a meeting at the residence of President Soeharto. The decision that the Indonesian rupiah would float was announced on the morning of August 14th 1997 (Djiwandono, 2005, pp. 46-47).

The currency depreciated further after the introduction of the free float and as a result not only the foreign currency denominated debt surged in terms of rupiah but also Indonesian banks could not attract any more funds from outside. The exchange rate float did not bring the effect of stabilizing the rupiah, instead, people wanted to get out of the currency as fast as possible (McLeod, 1997, pp. 43-44). Therefore the Indonesian government increased the rupiah interest rates: the overnight Jakarta interbank rupiah rate (JIBOR) on August 11th 1997 was 15.8 %, increased to 51.4 % on August 18th 1997 and even to 87.7 % on August 22nd 1997. As the exchange rate worsened the raise of interest rates did not lead to the proposed outcome and therefore the Ministry of Finance responded by cutting government spending (rescheduling projects of around US\$16 billion) and limiting routine expenditures on non-priority items (Pincus and Ramli, 1998, p. 725). Furthermore, the public sector was instructed to shift their deposits from commercial banks to Bank Indonesia. Nevertheless the rupiah did not recover. For this reason and in order to reduce currency speculation Bank Indonesia introduced limitations on forward sales of dollars for non-residents to US\$5 million (Sharma, 2003, p. 141).

In the banking sector additional problems arose: the banks were using their funds held by Bank Indonesia to cover their liquidity mismatches and most banks no longer met the 5 % required depository fund at Bank Indonesia. The situation became even worse and some banks did not only not comply or even violate banking rules, but started to experience negative balances with Bank Indonesia, resulting in very high rates of interest (the penalty rate for holding a negative balance with Bank Indonesia in mid-August 1997 was at 52 %) (Djiwandono, 2005, pp. 60-61).

The Jakarta composite equity index slipped from 612 points in mid-August 1997 to 475 in early September 1997 (29 % in two weeks). The pressure on the banks went further and so the real sector was also affected, and confidence in the economy and the government went down. To deal with these problems the government announced a ten-point policy on September 3rd 1997, which not only tried to address policies to the monetary and fiscal area but as well to the real sector, which included a cut of spending of large government projects as mentioned above. Bank Indonesia was advised by this policy to take three steps:

1. Healthy banks that faced liquidity problems should be given temporarily assistance;
2. Unsound banks should be consolidated by merger or acquisition by sound banks;
3. Should these rescue operations of the unsound banks fail, they should be liquidated by applying current regulation and try to save the funds of depositors (Djiwandono, 2005, p. 62).

In September 1997 the interest rates were lowered upon request of the business sector which suffered from high interest rates and the resulting pressure. Other steps followed in order to ease the monetary stand (e.g. rediscount facility). In the following weeks the rupiah weakened further and banks faced more pressure and distress (see Figure 4.1 a).

By late September 1997 the Minister of Finance and the Governor of Bank Indonesia initiated the discussion of calling in the IMF. This was followed by a letter of intent to ask for a stand-by arrangement of the IMF by the Minister of Finance. The IMF immediately responded and agreed upon sending two missions and to supply Indonesia with funds. As the rupiah further depreciated by the end-September/beginning of October 1997 the IMF sent their missions earlier than scheduled and during this rescheduling the IMF facility was changed from 'precautionary' to 'stand-by' facility (Djiwandono, 2005, p. 66).

On October 31st 1997 the 'Memorandum of Economic and Financial Policies' (MEFP), including a letter of intent of the government, was signed and sent to the Managing Director, Michael Camdessus, for approval and on November 5th 1997 the proposal was approved by the Executive board. Indonesia got additionally standby loans from the World Bank, the ADB and contingency loans from individual countries such as Japan and Singapore (Thee, 2002, p. 231).

The stand-by arrangement consisted of a loan amounting SDR 7.3 billion for three years. This stand-by loan was under an emergency procedure (Emergency Finance Mechanism – EFM), which implied faster negotiations and board decisions. The stand-by loan in 1997 was the first after more than 20 years (the last one was in 1970) although Indonesia had used in 1975, 1983 and 1987 the Compensatory Financing Facility (CEF) which allows the users to buy foreign currencies in exchange for their own currencies and had called on technical assistance. Since the mid-1980s Indonesia received stand-by loans from international commercial banks of around US\$2 billion (Djiwandono, 2005, pp. 67-69).

The programme was designed around three pillars:

'First, a strong macroeconomic framework designed to achieve an orderly adjustment as well as a tight monetary stance; second, a comprehensive strategy to restructure the financial sector, including early closing of

insolvent institutions; and third, a broad range of structural measures which also improve governance' (IMF, 1997, III.7.).

This programme included the following policies (IMF, 1997):

Macroeconomic Policies:

- Fiscal Policies: Cutting spending and introducing revenue measures which together should amount to budget savings of approximately 1 % of GDP in 1997/98; Cutting of spending on infrastructure projects (e.g. roads, transmigration, irrigation, energy projects); Removal of VAT exemptions and raise of price for tobacco and alcohol; Adjustment of prices of petroleum products and electricity; Improvements of tax administration and structure of tax system; Introduction of more transparency in the disclosure of public sector statistics. These policies should lead to a surplus of the budget.
- Monetary and Exchange Rate Policy: A tightened monetary policy in order to support the exchange rate; If necessary foreign exchange intervention supported by restrictive monetary policy.
- External Position and Financing: Providing confidence for international investors and creditors in order that short-term debts would be rolled over.

Financial Sector Restructuring:

- The first element consisted of the restructuring of troubled financial institutions as the ratio for nonperforming loans to total loans was 8 %, and an even higher ratio for state-owned banks. The isolation and closing of unsound financial institutions was important. On November 1st 1997, 16 banks were closed but Bank Indonesia was only preparing thereafter plans for effective asset recovery. Only small depositors were compensated promptly for up to Rp20 million per depositor per bank. Other foreign or domestic liabilities were not guaranteed.
- The second element introduced procedures and policies to deal with weak but viable financial institutions in order to help for recovery. Ten banks were under close monitoring of Bank Indonesia and should have been reviewed by April 1998 and if necessary be closed.
- The third element tried to resolve problems of state and regional development banks, encouraging mergers and other strategic tools with the ultimate goal of accelerating privatization of the state banks. Weak regional development banks should be rehabilitated and capital adequacy and provisioning standards raised to those applicable to commercial banks. The domestic bond market should have

been strengthened with the help of the ADB. Costs associated with bank closure and state bank rehabilitation were to be fully covered by government budget.

- The fourth element was focusing on the institutional, legal, and regulatory framework for banking operations in order to ensure the emergence of a sound and efficient financial system. This included the enforcement of the Basle Committee's Core Principles of Banking Supervision, relaxing on restrictions on bank lending and to modernization of the role of Bank Indonesia as a lender of last resort.

Structural Reforms:

- The government wanted to promote greater transparency in policymaking and competition by accelerating the structural reform program through further trade and investment reform, deregulation and privatization.
- Foreign trade and investment: The reduction of tariffs was to be further implemented and the list of activities open to foreign investors was supposed to be simplified and expanded.
- Deregulation and privatization: Increase in domestic competition was to be promoted, as well as privatization and the expanding of the role of the private sector in the provision of infrastructure. For privatization purposes the assets of the government were to be analyzed; enterprises were categorized into those that should be closed, restructured or fully privatized and the privatization process should be a transparent sales process maximizing the return to government from sales treating all bidders equally.
- Environment: The government was supposed to realign key resource prices and usage charges especially for forestry and water use.
- Social Safety Net: Measures that were necessary to achieve fiscal targets were not supposed to touch expenditures on health and education and efforts to target assistance to the poor should have been intensified.

Program Monitoring and Data Issues:

- The quarterly quantitative performance criteria were the following:
 - o Ceiling on base money;
 - o Floor on the net international reserves of Bank Indonesia;
 - o Floor on the overall government surplus;
 - o Ceiling on the contracting of external public and publicly-guaranteed loans with maturity of more than one year;
 - o Ceiling on the stock of public and public guaranteed short-term external debt.

The government was not allowed to accumulate any new external payments arrears during the period of the arrangement. The assessment, the publication and dissemination of key economic data was meant to be improved substantially.

In Annex E of the Memorandum of Economic and Financial Policies (IMF, 1997) the Structural Measures were summarized as follows:

Performance criteria/Benchmarks for end-December 1997:

1. Closure of banks placed under intensified supervision or conservatorship that do not submit rehabilitation plans or whose plans are not approved by Bank Indonesia.
2. Establishment of quantitative performance targets for state-owned banks together with monitoring mechanisms. These are to be agreed by Ministry of Finance, Bank Indonesia and state-owned banks.
3. Issuance of implementation regulations on procurement and contracting procedures.

Performance Criteria/Benchmarks for end-March/April 1998

- Introduction of full tax deductibility of loan loss provisions (by end-March 1998).
- Audits of state-owned banks by internationally recognized accounting firms (by end-March 1998).
- Completion of public expenditure review (by end-March 1998).
- Increase in prices of petroleum products to eliminate subsidies (by end-March 1998).
- Increase in electricity prices by 30 % (by end-March 1998).’ (IMF, 1997, ANNEX E).

As can be seen above the agreement of the IMF and the Indonesian government focused mainly on the banking sector and included 50 banks, representing 34.3 % of the banking system (Sharma, 2003, p.145). The 16 banks, which counted only 2.5 % of the total banking assets, were closed on November 1st 1997, within 24 hours after the agreement was reached. The action did not create confidence but instead created panic among investors and population.

Looking at the causes of this panic reaction Sharma (2003, pp. 145-147) argues that the sudden closure did not harm the financial system, however the way in which the banks were closed was more harmful and adds that:

4. There were only closed 16 banks (identified as insolvent) while the agreement mentioned 50 banks; the other 34 banks were not identified and therefore the mood of the general public was fuelled with uncertainty to all other banks. Additionally there were not listed some well politically connected banks and the IMF agreement mentioned nothing about provisions for a deposit insurance.
5. The closure happened in a time of volatile capital withdrawals and there were no comprehensive and prepared financial restructuring plans. This increased the panic.
6. There were no guidelines on how to deal with liabilities and assets of the closed and of the remaining banks. There was a lack of disclosure not only about the

closed banks but also especially for the banks which remained open and created uncertainty about the health of the banking sector.

7. The 16 banks accounted only of less than 2.5 % of total bank assets in Indonesia and the public was aware that this closure would not affect the health of the banking sector and wanted even more closures. The deposit guarantee was not generating confidence and domestic investors transferred deposits from private to state banks (flight from quality to safety) and many transferred their funds to foreign banks or exchanged their rupiah for dollars and repatriated their funds.
8. The lawsuit of Bambang Trihatmodjo on November 5th 1997 against the Governor of Bank Indonesia and the Minister of Finance over the closure of his Bank Andromeda and the fact that this bank went back to business soon thereafter under a new name (Bank Alfa) and that several cancelled 'development' projects of Suharto's family and cronies were suddenly back in operation was causing even more rumour. Additionally, large deposit withdrawals from private banks prompted the central bank to issue emergency credits in increasing amounts to prevent these banks from failing. Some of these funds were channelled to banks of politically connected people. Such developments further increased panic as the general public perceived it as a sign that the regime was not serious about implementing the strict regulations of the agreement and reforms.

The situation in Indonesia did not improve as hoped but rather it worsened. The sudden closures of these small banks under IMF guidance did not induce more confidence into the economy, instead uncertainty grew further. The prescription of the fiscal surplus was not in line with the underlying problem: Indonesia was neither facing high inflation nor a high government debt; instead, the public sector burdened only a small part of foreign debt while most of it was incurred by the private sector (the figures were stated in the programme as: total foreign debt US\$140 billion, where government foreign debt was US\$60 billion and the private sector US\$80 billion). The arranged memorandum was very detailed and strict and the structural changes could not be completed within a few months as suggested by the IMF-arrangement but within a longer period of time (e.g. institutional change). As Hill (1999, pp. 52-53) attacks the IMF's 'scutter-gun' approach which 'overloaded the reform agenda, forcing bureaucratically stretched governments to quickly tackle a vast array of highly complex and sensitive policy issues' and when 'it attempted to resolve banking sector distress too quickly, aggravated the general loss of confidence'. The social safety net programme was only addressed very briefly and the biggest challenge was to spend funds for this purpose while the Indonesian government had to

run a surplus. As Djwandono (2005, pp. 104-105) states the IMF did not include two important problems in the first programme. Firstly, the social implications of the crisis and what measures to be taken and secondly, the corporate debt and its consequences on the evolution of the economy.

During the first week of November the rupiah gained against the US dollar again (from 3,640 rupiah in October 31st 1997 to 3,295 rupiah in November 7th or an appreciation of 10 % (Djwandono, 2005, p.97)) by intervention into the market (Bank Indonesia, Monetary Authority of Singapore, Bank of Japan). But in late November the rupiah went back to its end-October level. As for the interbank money market, this market worked only for banks that knew each other very well. The JIBOR, which consisted of records of interest rates of 24 large banks, was relatively low as they did not experience heavy liquidity problems. But for the other banks the interest rates were much higher and these banks experienced a liquidity squeeze (e.g. the JIBOR was around 30 % in late November while the rate for other banks was more than 100 %). The IMF was only looking at JIBOR and therefore did not worry about the interest rate (Djwandono, 2005, p.100).

In late November the economic situation worsened again and the private sector faced huge liquidity problems and international financial markets refused to roll over short term debts and to accept letters of credit. More and more banks faced liquidity problems and default by corporate borrowers increased. The increase of liquidity support by Bank Indonesia (in the form of *Bantuan Likuiditas Bank Indonesia* or BLBI) was needed in order to induce money for the lost of capital flight from banks, which reduced in this way the dollar deposits and resulted in higher pressure on the exchange rate. The rupiah fluctuated in late December 1997 around Rp 5,000 to 6,000 per US dollar (Sharma, 2003, p. 147-148).

On the political side new uncertainties arose: firstly, in early December 1997 President Soeharto cancelled for two weeks almost all meetings which fuelled rumours about the status of his health and secondly, on December 19th 1997 the President dismissed four of the seven managing directors of Bank Indonesia (Djwandono, 2005, p.148).

On January 6th 1998 President Suharto presented to the parliament a draft of the budget for FY 1998/1999 which showed an increase of 32.1 % of the budget compared to the year before (from Rp101 trillion to Rp133 trillion). This was not in line with the IMF agreement, which stated that the government should run a 1 % surplus. The markets reacted negatively to this proposal (Sharma, 2003, p. 148).

The review of the first programme was issued on January 7th 1998 and stated that 'performance under the programme so far has been decidedly been disappointing' and

that 'although some progress has been made, there have also been policy slippages in every area of the programme' (IMF, 1998a).

The rupiah fell from Rp 5,450 per US\$1 on January 1st to more than Rp 10,000 per US\$1 on January 8th 1998. A campaign in favour of the rupiah was initiated by the president's daughter, Siti Hardijanti Rukama (Tutut), and when the prominent non-pribumi i.e. Chinese-Indonesian businessman Sofyan Wanandi refused to join the campaign some racial touched attacks on this business group started. On January 11th 1998 the rupiah reached RP 10,200 per US\$1. On January 13th 1998 Peregrine Investment Holdings (a Hong Kong based finance company) collapsed as they had undertaken too big loans in Indonesia. In Indonesia the general public became aware about future developments and many citizens were panic buying of food as rumours grew that the government would ban food imports and setting large-scale rationing in order to prevent a further plunge of the currency (Sharma, 2003, pp. 148-149).

On January 15th 1998 President Soeharto himself, as opposed to the first letter of intent when the Minister of Finance and the Governor of Bank Indonesia, signed the second letter of intent, where the picture of the IMF managing director Michel Camdessus watching the signing of the documents with his arms crossed standing behind Soeharto, became very well known in Indonesia and many Indonesians considered this as an arrogance in confront to their President (Djiwandono, 2005, p. 162). The second letter of intent was even more packed with structural reforms than the first one and as the IMF managing director Michel Camdessus stated

'[...] the government of Indonesia and the IMF have reached agreement on a much strengthened and reinforced economic program. Many of the measures in this program are new, others have been there from the beginning but are now being accelerated, but all have one common purpose: they aim to restore confidence in the currency and in the economy, by demonstrating that the government recognizes the problems confronting the country and is prepared to take the necessary measures to overcome them, even if they are difficult and painful.' (IMF, 1998b)

The new programme consisted of 50 points and included different provisions, this time also including provisions for restructuring corporate debt and safety social net. The most important were (IMF, 1998b):

- Macroeconomic framework: Limiting the inflation at 20 % for 1998 but targeting a single digit inflation rate for the year thereafter and the expectation that the external current account would move from a deficit into a surplus and thereby generating additional foreign exchange.
- Fiscal policy: The revision of the budget for FY 1998/1999; the IMF allowed running a 1 % GDP deficit (making a 180° turn from pressuring to run a surplus to

allow a deficit). The deficit was not allowed to be run through incurring new debts but instead by reducing fuel and energy subsidies.

- Fiscal transparency measures: The Indonesian government was obliged to include non-budget expenditures into the central government budget as the Reforestation and Investment Fund.
- Public sector projects: The 12 projects that were postponed or placed under review were to be cancelled and support for IPTN's airplane projects should have been stopped immediately.
- Monetary policy: Bank Indonesia would be given full autonomy and had to maintain a tight monetary policy.
- Bank and corporate sector restructuring: The prime goal was to restore confidence in the banking sector and specific plans were to be announced only a few days after the publication of the programme.
- Structural reforms: All restrictions were to be abolished as the BULOG's monopoly which would be limited only to rice and the market for agricultural products had to be fully deregulated in order to promote more competition. Additionally, marketing agreements had to be abolished, especially for the cartels in the cement, paper and plywood sector.
- Foreign investment: All barriers to foreign investment, as for example in the palm oil plantation, had to be removed by February 1st 1998.
- Drought: In order to overcome the difficulties in rural regions due to the drought there should be introduced 'community-based work programmes' for lifting the purchasing power of poor people. Additionally, all tariffs on food were to be cut to a maximum of 5 % while non-food tariffs had to be lowered by 5 percentage points.

One interesting fact should be added: This letter of intent was signed by the President and he also executed negotiations with the IMF on his own. All the other letter of intents were signed by the Minister of Finance and the Governor of Bank Indonesia, and since April 1998 also signed by the Minister coordinator for Economy and Finance. In this sense the letter of intent of January was very special. But the President did not really want this programme and instead went on as before (Sharma, 2003, p.150; Djiwandono, 2005, p. 163).

As Radelet (1999) notes the second IMF programme was in essence the same as the first one with the exception that fiscal policy was slightly eased and introduced capital adequacy ratios for banks and that it was misguided. The economy was contracting and not experiencing excess demand which meant that the initial fiscal tightening added to the

contraction, undermining investor confidence and fuelling capital flight. While the programme included specific structural reforms in the long run it did not provide concrete solutions for the problems of the banking sector and the currency crisis, failing to provide a clear strategy for getting out of large depreciations and how to deal with the banking crisis and short term debt. The downward pressure of the currency further increased and on January 22nd the rupiah fell to an all-time low of Rp 17,000 per US\$1 (Sharma, 2003, p. 151).

On January 27th 1998 the IMF and the Indonesian government had to introduce a three point emergency plan in order to get rid of the troubles in the banking sector (Sharma, 2003, pp. 151-152; Djiwandono, 2005, pp. 159-160):

1. The imposition of a blanket guarantee by the government. Bank Indonesia announced that it would use a blanket guarantee of the rupiah and foreign currency denominated debts of all domestically incorporated banks for two years therefore effectively accepting banking sector risk. This blanket guarantee was designed to prevent further bank runs and stabilize the banking system. Additionally Bank Indonesia imposed restrictions on credit growth and announced an issue of weekly ceilings on the maximum interest rates that banks could pay on deposits.
2. Establishment of the Indonesian Bank Restructuring Agency (IBRA). The task of IBRA was to take over and rehabilitate weak banks and administer the governments guarantee program for bank debts. Additionally IBRA was allowed to establish a separate asset-management entity (Asset Management Unit – AMU) which should take over non-performing assets from banks that were to be liquidated or merged into stronger institutions. Furthermore, all banks were required to submit their loan portfolios to audit firms by the end of 1998. Lastly, IBRA was given the power to enforce collection of funds from shareholders of private banks that owed funds to Bank Indonesia.
3. The proposal of a framework for handling corporate restructuring. This plan recommended a temporary voluntary suspension of corporate external debt payment. In this context the government stated clearly that there would be no use of public financing, guarantee or subsidy to bail out the debt and reimburse unguaranteed creditors.

IBRA was not truly an autonomous agency as it 'had to operate subject to intense political oversight, its effectiveness was compromised by a weak legal and regulatory framework and its need to obtain political authority, even form technical operations' (Enoch et al.,

2001, 15). The agency divided banks after the revision of the financial position of banks which had received more than 500 % of their total equity from Bank Indonesia into categories A and B, where category A banks had to be liquidated (they had received liquidity support equal to or in excess of 75 % of their total assets) and category B banks (banks that had received less than 75 %) were to have the rights of their shareholders suspended and their existing managers replaced by IBRA (Republic of Indonesia Presidential Decree No. 27/1998). This and the announcement of IBRA that the former majority shareholders of suspended banks should pay the outstanding negative balance with their bank which had accumulated with Bank Indonesia and the amount by which their bank's intra-group lending exceeded the affiliated lending limits before September 21st 1998 (Witcher and Solomon, 1998). IBRA closed by February 14th 1998, 54 distressed banks (4 state banks, 39 private national banks and 11 regional development banks, comprising 36.7 % of the banking sector). The four state banks accounted for 24.7 % of the liabilities of the banking sector (Lindgren et al., 1999, p. 59). The exchange rate recovered during January and February 1998 (from Rp 12,500 per US dollar on January 28th 1998 to Rp 9,950 per US dollar on February 16th 1998) (Sharma, 2003, p. 153).

But the political interference remained strong and on January 27th 1998 President Soeharto fired the Governor of Bank Indonesia, Sudradjad Djiwandono, only two weeks before the official end of his tenure, while in late February 1998 he fired the senior Finance Minister official, Dr Bambang Subianto, being only one month in charge of his job at the top of IBRA and accused to 'reportedly for being too diligent in pursuing his responsibilities' (Enoch et al., 2001, p. 15).

During late January a rumour in markets spread that President Soeharto wanted to set up a currency board. Djiwandono (2005, pp. 187-191) argues that this movement was a serious step of President Soeharto as the president was thinking of the crisis as being a purely monetary or financial problem. In other words that the currency depreciation would last only a few weeks, that the institutions dealing with the crisis should find a solution very rapid, that the trust in monetary authorities was deteriorating especially after the bank closures. It is evident that he was aware of the huge depreciation of the rupiah and wanted to settle the problem before his re-election in the General Assembly of the People Consultative Assembly in March 1st 1998, and that he instructed many high officials at Bank Indonesia and the Ministry of Finance to draft a bill on the adoption of a currency board. As a possible motivation of the adoption of a currency board could be that the so-called 'cronies' and Soeharto's children were pushing him to create a fixed exchange rate as the corporate sector was facing problems since the floating of the rupiah (Soesastro, 2000, p. 133; Djiwandono, 2005, pp. 189-190). On February 17th 1998 the new governor

of Bank Indonesia Sjahril Sabrin was appointed. On the same day, following a formal invitation of the newly established Council for Enhancing the Resiliency of Economics and Finance (henceforth the Economic Resiliency Council, DPK-EKU), Prof. Steven Hanke of John Hopkins University, Baltimore, a strong-currency advocate, was introduced as an advisor for the council. The proposal to appreciate the exchange rate at Rp 5,000 per US dollar at this stage when it was actually moving around Rp 10,000 to Rp 8,000 was considered as being not credible for markets (Sharma, 2003, p. 155). This appreciation could also result in an immense capital flight as there was the fear that President Soeharto's children and cronies could change large amounts of rupiah into US dollars and moving them into offshore accounts and some estimates indicated that if a sustained capital flight emerged after pegging the exchange rate at Rp 5,000 per US dollar than the country would have only reserves for the defence of their peg for less than one week (Enoch et al., 2001, p. 86).

The IMF in addition to the G-7 countries was strongly against the adoption of a currency board. The IMF argued that an appreciation of the exchange rate could only be reached by following reasonable macroeconomic and financial policies and a currency board was at this stage out of question as the banking system was not supposed to be in the position of dealing with significant movements in domestic interest rates (Sharma, 2003, p. 155). The G7 was putting some political pressure on President Soeharto e.g. issuing statements, making telephone calls and visits to Indonesia (Djiwandono, 2005, p. 192). These were external pressures but some internal pressures also arose as well. For instance the Monetary Board submitted a memorandum to the President which stated that first various requirements should be met and only then could a switch to a currency board commence, i.e. the memorandum was not stating directly to avoid the adoption of a currency board but the message was that there should be no currency board at this point of time (Dijwandono, 2005, p.192).

The following weeks were characterized by tensions between the IMF and President Soeharto, by a continuing economic downturn and by the erosion of public confidence of the health of the banking sector. On March 6th 1998 the IMF announced the suspension of the second instalment of Indonesia's bailout package (a tranche of US\$3 billion) which was also based on the choice of Soeharto new cabinet (Johnson, 1998, pp. 27-28). On March 10th 1998, the People's Consultative Assembly voted by acclamation Soeharto as President and B.J. Habibie as vice-president. The dispute between President Soeharto and the IMF and other donor countries such as the US was not settled with this 'election', on contrary, the president did not choose reformers for being part of the government but instead chose

close family and business associates (e.g. Tutut, his eldest daughter, Bob Hasan who became the Minister of Trade and Industry) (Sharma, 2003, pp. 156-157).

As unemployment raised and the prices of basic commodities increased drastically, the latter merely the result of reductions of government subsidies, rumours and demonstrations took place asking for the dismissal of the president. As the USA were afraid about the increasing social unrest in Indonesia it encouraged the IMF to keep on talking with Indonesia and on March 17th 1998 the third round of negotiations between the IMF and Indonesia began. On April 9th 1998 the IMF and the Indonesian government reached an agreement by making concessions on both sides (the IMF allowed BULOG to continue retaining the subsidies on basic commodities while the president dropped his idea of the currency board) (Sharma, 2003, p. 157). The agreement consisted of 117 points repeating the points agreed in two former memorandums and adding new ones including more specific targets and a timetable for implementation. The tranche of US\$3 billion was disbursed not in a single total disbursement but instead in three disbursements, i.e. US\$1 billion per month (IMF, 1998c).

Markets did not react to the signature of the agreement as they predicted that the president would not stick to the agreement which in fact happened. During this period the opposition in the population against Soeharto grew and after weeks of peaceful student demonstrations at many universities in Indonesia they became violent caused by a harsh crackdown by the security forces. On May 4th 1998 the situation grew even worse: on this day the IMF released its first US\$1 billion monthly tranche, the Soeharto government increased fuel prices heavily (71 % for gasoline and 25 % for kerosene) claiming that this price increase was mandated by the IMF in order to redirect discontent of the population to the IMF. But this did not work; on the contrary the discontent even grew further and in desperation, regime supporters claimed that the price rise was to be driven by non-pribumi ethnic Chinese (the Minister of Interior Syarwan Hamid called them 'rats disloyal to Indonesia', for more details see Eklof, 1999, 134-143) (Sharma, 2003, p.157).

Only a few days later the situation in Indonesia exploded (between May 12th and May 17th 1998). On May 12th around 20,000 students protested at Gajah Mada University in Yogyakarta for the resignation of Soeharto while at Trisakti University in Jakarta six student protesters were killed by soldiers. On May 13th 1998 simultaneously student protests erupted in violence in many cities and towns throughout the country and in Jakarta over a thousand people were killed (mostly ethnic Chinese) by mobs (Suryadinata, 2001, p. 506). In Jakarta some '5,000 buildings were damaged or burned and close to 2,000 vehicles were torched' (Azis, 1999, p. 86). Due to the uncertain and chaotic situation many expatriates, businesses, capital and even the staff of the IMF and the WB

moved out of the country. On May 18th 1998 thousands of students occupied the parliament grounds and asked for an immediate special session of the People's Consultative Assembly and Soeharto's resignation. The students were supported by prominent opposition leaders as Dr Amien Rais and Professor Emil Salim (Sharma, 2003, p. 158).

President Soeharto announced soon thereafter that he would not step down immediately but promised to revise the political laws through a reform committee at which some students should join. Additionally, he announced to reshuffle the cabinet which would deal with the growing economic and political crisis and promised to hold new elections as soon as possible. But instead of calming the mass of student protestors, the opposite occurred and on May, 20th 1998 parliament was occupied by 30,000 people. On May 21st 1998 the Speaker of the parliament announced that all members parliament, including the military, agreed that President Soeharto should immediately step down. He did this the same day after thirty-two years as president, since there was no possibility to move on without the support of the military (Sharma, 2003, p. 158).

After the step down of Soeharto, Vice-president B. J. Habibie became interim president. During that period the nation was in crisis and the economy suffered even more than in early 1998: the destruction of property and infrastructure undermined the ongoing of the economy as the service sector, including financial and business services, trade, hotels and restaurants, suffered huge losses and some foreign buyers even temporarily stopped placing orders for Indonesian exports. But even worse, there were massive bank runs during and immediately after the riots, in particular Bank Central Asia (the largest private bank accounting for 12 % of the total banking sector liabilities; furthermore it was owned by two of Soeharto's children and his crony Liem Sioe Liong). After weeks of deposits withdrawal, Bank Central Asia was brought under the governance of IBRA. The rupiah fell by the end of May below Rp12,000 per US dollar and continued to fall reaching a low of Rp16,500 per US dollar on June 17th 1998 (a cumulative depreciation of 85 % since June 1997) (Sharma, 2003, p. 159).

As the country did not calm down President Habibie changed political direction declaring that the New Order regime was undemocratic and promised rapid implementation of the *keterbukaan* (political openness) and the establishment of the *Orde Reformasi* (Reformation Order). In order to convince people of his intentions he abolished reporting restrictions and dismissed Prabowo, Soeharto's son-in-law, from the Indonesian armed forces (Mietzner, 1999, pp. 88-89); the government revoked the law that limited the number of parties to two, released political prisoners and supported the view for legal reforms (particularly the protection of human rights) (Anwar, 1999, pp. 39-43).

Furthermore President Habibie announced that parliamentary elections would be held in June 1999 and followed by an approach of political and economical decentralization and began to repair the distribution system of food and other necessities all over the country (Sharma, 2003, p. 159).

As Kenward (1999, p. 124) states 'President Habibie and most of the new cabinet showed a greatly increased commitment to implementing the IMF program. Specifically, immediate pressure was off Bank Indonesia to do anything more than restore financial stability. There was significant easing of political pressures to bail out banks and no apparent pressure on Bank Indonesia to reduce interest rates prematurely again'. Furthermore, President Habibie announced that one of the most trusted persons by the IMF, Coordinating Minister for the Economy, Ginandjar Kartasasmita, would remain in office and that Widjojo Nitisastro, Professor of economics at University of Indonesia, would become advisor of the Indonesian government. On June 24th 1998 the IMF and the Indonesian government signed the 'Second Supplementary Memorandum of Economic and Financial Policies' (IMF, 1998d) which was a revised version of the economic program signed on April 10th 1998 (IMF, 1998c). According to the IMF the outlook for GDP was a real GDP decline by more than 10 % in 1998 (IMF, 1998d) (Sharma, 2003, p. 160).

Bad news did not stop – apart from the country experiencing a deep economic recession there was also problems in agriculture for the first time in a decade they had to import huge amounts of rice. In 1998 the economy contracted by around 13.2 %, which is one of the most abrupt one-year downturns in recent world history, and nominal per capita income declined by 65 % between 1997 and 1998 (from US\$1079 to US\$380) (Tan, 2000, p. 118). The problem of the economy was the increasing unemployment rate, the bankruptcies of companies and the huge increases of inflation caused by price increases of basic commodities such as rice and fuel. The result was that many Indonesian households living just above the poverty line dropped below it. After consultation with the IMF the Indonesian government introduced a special market program (OPK) under which BULOG was allowed to sell rice to 7.5 million low-income families at a low subsidized price (at Rp 1,000 per kg rice instead of the valid market price ranging between Rp 2,000 - 5,000 per kg rice), where each family was entitled to get ten kilograms per month at this subsidized price (Sharma, 2003, p. 160).

The results of the audit of banks conducted during spring and summer of 1998 by international auditors showed that the banks were used for direct lending to non-productive ventures. The level of overall non-performing loans ranged from 55 % to more than 90 % of the portfolio of banks (Enoch, 2000, p. 16). Even the reviews of 16 large banks were bad and showed that the banks were very weak and given that these banks

were considered to be among the strongest in the economy this confirmed the deep insolvency of the banking system as a whole. Thereafter authorities recognized that banking reforms were needed (Sharma, 2003, p. 161).

In September 1998 Bank Indonesia with support of the IMF outlined a multi-billion-dollar bank recapitalization plan and in October 1998 the Indonesian parliament passed amendments to the banking law that modified previous requirements regarding the banking sector (bank secrecy and allowance of foreign ownership in banks) and strengthening the legal powers of IBRA and AMU. In mid-September the government announced that IBRA would play a significant role in reducing the number of small, poorly capitalized banks in the country which was effectively done by bank mergers. The four state-owned banks, Bank Dagang Negara, Bank Ekspor-Impor/EXIM Bank, Bank Bumi Daya and Bapindo were merged and the corporate business of a fifth state bank (Bank Rakyat Indonesia) was incorporated into a new institution, Bank Manidris, which was established on September 30th 1998 and was the holder of 100 % of the shares of the component banks, whereby this large capital infliction was done to build up a financially strong institution. By the end of 2001 there were 5 state-owned banks, 26 regional banks and the 160 private banks were consolidated into 85. This restructuring accounted for about 90 % of total commercial banking assets of the country (Sharma, 2003, p. 162).

The government reviewed and strengthened the regulatory framework of the banking system by improving the quality of the banking supervision and getting it closer to international standards. In late December 1998 three new regulations in the area of loan classification, provisioning and debt-restructuring operations came into effect. Since early 1999 banks are required to submit a liquidity report twice a month for their global consolidated operations. Additionally, financial institutions have to publish unaudited quarterly financial statements within two months of a quarter's end, respectively audited financial statements within four months of the end of the reporting year and the legal lending limit amounts have been significantly tightened as lending to individual debtors or group of debtors had been a major problem before. The capital adequacy requirement was tightened as well, imposing a compliance with the minimum capital adequacy of 8 % by end of 2000 and from January 2002 onwards IBRA was allowed to control and to take over action if they failed to meet the standards. Furthermore, the communication between banks and Bank Indonesia improved as the banks have to report on a weekly basis for the consolidated domestic operations and consolidated domestic and foreign operations. Minimum paid-up capital requirements for new banks were increased as well (Sharma, 2003, pp. 162-163).

Bank recapitalization, an important but difficult task, began in Indonesia in early 1999 after the government completed an audit in December 1998 in order to distinguish between sound banks, salvageable banks and bad banks. Non-performing loans were estimated at 60-85 % of all loans and bank recapitalization costs are estimated at Rp643 trillion or 60 % of GDP (Lindgren et al., 1999, p. 65). In March 1999 the government announced, after having given the owners of banks with a capital adequacy ratio of less than 25 % the possibility to inject new equity and to avoid liquidation, that 38 banks, all insolvent, were to be closed and 'their owners will be required to repay their connected lending' (Government of Indonesia (GoI), 1999). The government not only published a list with the 200 largest defaulting borrowers but also began to collect funds from the 20 largest defaulters (Enoch et al., 2001, p. 19). Banks with a ratio of 25 % to less than 4 % were eligible to participate in the recapitalization program provided that their owners injected 20 % of the new capital required to attain a capital adequacy ratio of 4 %; 9 banks were deemed eligible for recapitalization while 7 banks were taken over by IBRA (Sharma, 2003, p. 163). The remaining 74 banks that had a capital adequacy ratio of 4 % or higher were allowed to continue business after being subjected to 'fit and proper' tests (GoI, 1999).

The recapitalization of the banks included two conditions because of funds provided by taxpayers: a) all banks had to hand in business plans for a three-year period and the management had to attend a test and pass it in order to show their technical competence of running a bank; b) some of the banks were owned by some major Indonesian conglomerates and therefore the existing shareholders had to provide at least 20 % in cash of the total funds necessary to restore the bank's capital adequacy ratio to 4 % before IBRA would put in any funds. This meant that the government agreed to take on 80 % of the cost of bank recapitalization, but the bank owners had the option to repurchase the government's share within three years and to swap some of their non-performing loans for government bonds (Sharma, 2003, p.164).

The recapitalization of the banks at favourable terms was attractive to many banks and by the end of 2000 the Indonesian-banking sector has been significantly consolidated because the number of private domestic banks has been nearly halved through closures and state takeovers since mid-1997. Compared to 40 % of liabilities under state control before the crisis, by end of 1999 they held around 70 % (Lindgren et al., 1999, p. 65).

The public contribution to financial sector restructuring has been equal to 51 % of GDP by mid-1999 and the largest share has been used to recapitalize banks and provide liquidity support (Sharma, 2003, p. 164).

In May 1999 a new central bank law increased the power and authority of Indonesia's central bank. The new law regulates periodic presentations by the bank governor to parliament (increasing accountability) and one major goal which is to achieve and maintain the stability of the value of the rupiah. Furthermore, Bank Indonesia was established as a state institution outside the administration of the Executive, increasing therefore its independence (Sharma, 2003, p. 161).

The political landscape changed as well during the following period. On June 7th 1999 Indonesia elected for the first time since 1955 in a democratic way not only on the national level (i.e. parliament) but as well on provincial and municipal level. Over 90 % of registered voters went to the polls. On October 20th 1999, the 700 member of the Majelis Permusyawaratan Rakyat or People's Consultative Assembly elected a new president and vice-president for the next five years. The election showed a shift away from the former political leadership i.e. the party of former President Habibie, Golkar, performed poorly and therefore Habibie resigned from candidacy for president. Although the party of the president candidate Megawati Sukarnoputri gained the highest share in the elections the People's Consultative Assembly elected Abdurrahman Wahid (also known as Gus Dur and leader of the largest Islamic group) as president because the Muslim parties and Golkar cooperated. After large protests in Jakarta and all over the country, on October 21st 1999 Megawati was elected as vice-president (Sharma, 2003, pp. 168-169). In 1999 the growth rate of the economy showed a first sign of recovery and grew at 0.8 % while in 2000 at 4.8 %. Inflation which rose in 1998 to 58.5 % dropped in 1999 back to 20.7 % and in 2000 to 3.8 % (ADB, 2001, p. 21).

In 2000 President Wahid began to implement his policies and committed his government to the rapid implementation of economic reform measures and after the election in October 1999 there was a new letter of intent with the IMF signed. The implementation of the policies was difficult as within the government decision-making was delayed by its fragmentation. In late March the IMF support of US\$400 million was suspended as the implementation of economic reforms were delayed due to this problematic situation inside the political leadership. However this issue was resolved as the government tried to implement and push forward economic development (Sharma, 2003, pp. 169-170).

In October 1999 IBRA received extraordinary powers (the so-called PP17 powers) due to the problems associated with the Bank Bali scandal and to seize the assets of uncooperative debtors. Although IBRA was founded in February 1998 it did not begin its operations until one year later and in the meantime the government provided cash injections for the troubled banking sector (van der Eng, 2004, p. 7). In December 1999

IBRA used for the first time its new powers seizing two properties from a firm owned by a Suharto family member. A similar attempt of empowering JITF (Jakarta Initiative Task Force, see below) was done (Sharma, 2003, p. 170) but did not lead to the same result.

IBRA was financed by a mix of medium- and long-term government-guaranteed bonds. In 2004 IBRA was closed and replaced by the state-owned asset management company PT Perusahaan Pengelola Aset ('PT PPA'). For the restructuring of the banking sector IBRA played a key role, as it took over the control of troubled banks and in this way staved off bank runs. The amount of assets it took over was around US\$60 billion from ailing banks or former bank owners and it assumed control of outstanding, non-performing loans to more than 4,000 private firms becoming therefore the largest creditor in Indonesia (van der Eng, 2004, p. 7). IBRA liquidated 68, nationalised 12 and forced 14 banks to merge into two larger entities of the former 240 pre-crisis banks and more than US\$75 billion were paid out of taxpayer's pocket for the recapitalisation and restructuring of the Indonesian banking system (Jakarta Post, October 30th 2003). IBRA sold gradually 95 % of the assets, which comprised of non-performing loans, shares in the banks and fixed assets, to the private sector and the revenues were intended for helping to finance the state budget. JITF carried out the same task on a voluntary basis in cases where IBRA was not a major creditor (van der Eng, 2004, p. 7). IBRA could collect 28 % of nominal value of the assets it took over (IBRA, 2003). The assets that were not sold after closing IBRA in February 2004 (minority shares in banks, Rp4.5 trillion; bad loans, Rp43 trillion; many small properties, Rp24 trillion (Jakarta Post, December 22nd 2003 and March 4th 2004)) were first transferred to the Ministry of State Enterprises and thereafter to the newly established state-owned asset management company PT PPA under Government Regulation No. 10/2004. The goal of this agency is to

'support and participate in implementing government policies and programs for the economy and national development in general, with particular focus on management of state assets formerly managed as assets of IBRA, through the application of principles governing State Owned Companies of Limited Liability. The scope of this work is as follows:

1. Asset restructuring
2. Cooperation with third parties for enhancing asset value
3. Collection of receivables
4. Asset disposal' (Bank Indonesia, 2005)

Domestic private corporations had borrowed US\$53.6 billion from foreign banks by year-end 1997 (leaving the corporate sector highly vulnerable to sudden depreciation) while by late 1998 of the estimated US\$118 billion corporate debt nearly 60 % was owed to foreign creditors and about 40 % was denominated in foreign currency which left the corporate

sector vulnerable to depreciations of the rupiah. The result was that almost half of Indonesian corporations became insolvent and many of them had difficulties in meeting their debt-servicing obligations (Sharma, 2003, p. 166). Not only the lack of confidence in the banking system caused a stop of negotiations between institutions and debtors but as well the political instability caused an unwillingness to enter into negotiations (Root et al., 2000, p. 202; Sharma, 2003, pp. 166-167).

Under the surveillance of the IMF the Indonesian government reached in June 1998 an agreement (the Frankfurt agreement) with a group of private creditors on restructuring three categories of debt:

- a. Trade credits: Indonesian commercial banks would repay all trade credits that were in arrears, and in return foreign banks would maintain trade credits at the April 1998 level. Additionally Bank Indonesia agreed to guarantee for new trade credits.
- b. Interbank debt: Foreign banks agreed to exchange new loans of maturities between one and four years for obligations owed by Indonesian commercial banks maturing by March 31st 1999. New loans were guaranteed by Bank Indonesia.
- c. Corporate debt: There were three elements: Firstly, the establishment of the Indonesian Debt Restructuring Agency (INDRA, mandate run until 2006) in order to provide foreign-exchange cover for Indonesian corporations with foreign currency-denominated debt. INDRA was a voluntarily step and its private sector offshore debt would be restructured in such a way that it could be repaid over an eight-year period. INDRA is effectively an institution that provides protection for debtors against the risk of further real depreciation of the rupiah and gives assurance of foreign-exchange availability for debt repayments. INDRA has not been as successful as IBRA and corporate debt restructuring has been extremely slow.

Secondly, the introduction of the Jakarta Initiative and thirdly, the introduction of the JITF in September 1998 were promoted in order to facilitate voluntary negotiations between debtors and creditors for corporate restructuring and to provide a regulatory complete framework for administrative procedures pertaining to debt resolution. While the Jakarta Initiative introduced a set of principles based on the London Approach to guide voluntary out-of-court corporate restructuring the JITF was intended to facilitate negotiations between debtors and creditors and to obtain necessary regulatory approvals for deals (Sharma, 2003, pp. 167-168).

In August 2000 a new bankruptcy law has been introduced by the Indonesian government (Company Bankruptcy and Debt Restructuring and/or Rehabilitation Act) similar to US Chapter 11.

Decentralization efforts began in May 1999 as two laws, which came into effect on January 1st 2000 and were designed to change intergovernmental political and fiscal relations in Indonesia; these two laws (Law No. 22/1999 on Regional Government – UU PD – and Law No. 25/1999 on the Fiscal Balance between the Central Government and the Regions – UU PKPD) empowered local districts and not provincial governments. The most important characteristics of these two laws are (Sharma, 2003, pp. 170-171):

- Law No. 22/1999 eliminates the hierarchical structure of the provincial and the district governments; *kota* (municipality) and *kabupaten* (district) became fully autonomous, district heads became fully responsible to the locally elected assembly, the *Dewan Perwakilan Rakyat Daerah*, while the provinces retained the hierarchical relationship with the central government.
- Law No. 25/1999 changes the structure of transfers received by the local governments from the central government. Revenue sharing for provincial and district governments was introduced, i.e. each level of government was assigned its share of revenues from taxes on land and buildings, forestry, mining, fisheries, oil and gas.

The Ministry of Finance and Bank Indonesia introduced after the crisis new supervisory regulations for the financial sector, including the Capital Adequacy Ratio (CAR) and forcing banks to write off some of their non-performing loans. The CAR of banks increased over the period 1997 to late 2003 from -16 % to approximately 23 %. But this was not a grant for a complete rehabilitation of the banking sector as the 2002-2003 Lippo Bank scandal or fraudulent actions of the state-owned banks BRI and BNI show (van der Eng, 2004, p.8).

One remaining problem in all East Asian crisis countries is their low reliance in bonds and limited access to formal finance although there are some initiatives undergoing as the project of the ADB to develop a bond market in Asia.

Decentralisation became an important factor in Indonesia after the crisis as well. Law No. 22/1999 provides the basis for political and administrative decentralisation and Law No. 25/1999 the basis for fiscal decentralisation. One characteristic of the Indonesian decentralisation is the devolution of power and authority from the central government to the second tier of local government, the districts (*kabupaten*) and municipalities (*kota*). Although the idea is to bring the government closer to people there is lack of skilled officials at local level. The power of the central government has been limited by

introducing decentralization: defence and security, foreign policy, monetary and fiscal policy, judicial affairs and religious affairs are still under the control of the central level while all the other affairs were conferred to the provincial or local level. Regarding the fiscal decentralization the most significant changes occurred in the distribution of revenues from natural resources with regional governments (Brodjonegoro, 2004, pp. 126-127). Table 4.6 shows the changes in the distribution of natural resource revenues since decentralisation.

TABLE 4.6 – Changes in the Distribution of Natural Revenue since Decentralization in Indonesia

Revenue Source	Old Sharing Arrangement	Major Change	New Sharing Arrangement
Oil revenue (penerimaan Negara dari pertambangan minyak bumi)	100% center	Assignment of share of revenue after tax deduction to regional governments	85% centre; 3% province of origin; 6% district of origin; 6% other districts in province of origin
Gas revenue (penerimaan Negara dari pertambangan gas)	100% center	Assignment of share of revenue after tax deduction to regional governments	70% centre; 6% province of origin; 12% district of origin; 12% other districts in province of origin
Reforestation fee (dana reboisasi)	100% center	Regional government component integrated into specific grants	60% centre; 40% regional governments of origin
Forestry enterprise licence fee (iuran hak penugsaahan hutan)	55% center; 30% provinces; 15% districts	Continued with new sharing arrangement	20% centre; 16% provinces; 64% districts
Forestry production royalties (provinsi sumber daya hutan formerly iuran hasil hutan)	30% center; 70% regional governments	Continued, with new sharing arrangement favouring districts in province of origin	20% centre; 16% provinces; 32% district of origin; 32% other districts in province of origin
Mining and land rent (iuran tetap sector pertambangan)	65% center; 19% provinces; 16% districts	Continued, with new sharing arrangement	20% centre; 16% provinces; 64% districts
Minang royalties (iuran eksplotasi)	30% center; 56% provinces; 14% districts	Continued, with new sharing arrangement favouring districts in province of origin	20% centre; 16% provinces; 3% district of origin; 32% other districts in province of origin
Fishery enterprise fee (pungutan pengusaha perikanan)	-	Newly introduced	20% centre; 80% distributed equally among districts
Fee on fishery income (pungutan hasil perikanan)	-	Newly introduced	20% centre; 80% distributed equally among districts

Source: Ford and Brodjonegoro (2004).

Although the new decentralisation approach is a step towards better intergovernmental relations there remains an unpleasant aftertaste as Brodjonegoro (2004, p. 129) states that 'the current reforms were born out of crisis and were hastily conceived; the legislation was written without clearly established objectives and with little consultation with, or involvement of, the public. The new fiscal law continues the reluctance to give local governments any meaningful ability to raise local revenue. This omission jeopardises a key benefit of decentralisation: to enforce the accountability of local governments to their constituencies.' Decentralisation also focuses on giving regions and provinces the

possibility to promote business and attract companies in their region. Which impact the decentralisation attempts in Indonesia will have for future growth and development as well as on attractiveness for investment will have is still open because the process is undergoing. Decentralisation has created some uncertainty of doing business at the local level due to the fear of companies that additional fees and charges levied distorting ways will raise their production costs; this can be seen from surveys on the local business climate (Brodjonegoro, 2004, p. 139).

Another topic of *reformasi* is the privatisation of the poorly performing state-owned enterprises (SOEs) which began in 1994 (Hill, 2000, pp. 105-109). Profitability of most SOEs was until 2001 very low some of them even incurred losses (103 out of 162, or 63 %). 124 SOEs (77 % of the total 162) were involved in competitive industries while 12 (7 %) enjoyed a monopoly and 26 (16 %) were engaged in sectors with a mixed competitive, monopolistic and public service-oriented market structure. Examples of privatisations are Semen Gresik listed after an initial public offering (IPO) on the Jakarta Stock Exchange (JSE) in July 1991, Indosat and Telkom in 1995 and Bank BNI and Timah in 1996 (Prasetiantono, 2004, pp. 141-142). The IMF put more pressure on privatization as it was considered to be an important part of reducing the budget deficit and increasing efficiency of SOEs (see for example IMF, 1998b).

As mentioned in Chapter 1 the business concentration in Indonesia was very high, where top ten families as of end December or end of accounting year 1996 (% of total market capitalization that families hold) in Indonesia and the Philippines were at the top of the list in Asia with 57.7 % and 52.5 % compared to other Asian countries where the share was smaller (in Japan 2.4 %, in Malaysia 24.8 %, in South Korea 26.8 % and in Taiwan 18.4 %) (Claessens, Djankov and Lang, 1999). Not only the Soeharto family was among these top ten families; another example is the Salim group, an Indonesian conglomerate, under businessman Liem Sioe Long, which controlled about 16.6 % of market capitalization by the onset of the financial crisis (Smith, 2001, p. 3). Most of the conglomerates were often webs of cross-shareholdings with a pyramidal structure and with poor minority shareholder protection (van der Eng, 2004, p. 16).

In the aftermath of the East Asian crisis the companies refocused their business encouraging decentralizing of company ownership in two ways (van der Eng, 2004, p. 16):

1. Through the persuasion of IBRA or voluntarily many companies sold their non-core and often loss-making branches.
2. Some of the companies sold equity in order to pay back debt, attract funds and trying to stop the fall in credit ratings or acquired ventures at relatively low prices.

The assumption that the opaque, relationship-based business culture in Indonesia was a sign of poor company performance might not be true at all in Indonesia. This point is highlighted by the national study of Sato (2004), which shows that while the ownership was still highly concentrated and ownership and management were still entwined in 2000 albeit less than in 1996 - this does not necessarily lead to the conclusion that companies perform poorly. The best examples of this are, firms associated with established business groups such as Salim, Astra and Sinar Mas (all under ethnic Chinese control) showing better performance than firms associated with groups which have grown rapidly since the 1980s (e.g. Bimantara and Humpuss, both controlled by former President Soeharto's son) and firms not affiliated with groups.

The attempts of corporate governance and its evolution in Indonesia will be discussed in more detail later (see Chapter 5). The official party established a national committee on corporate governance policy, and in the year 2000 introduced the code for good corporate governance. In 2002 the Minister for State Enterprises revised the Company Law and Capital Market Law and established a national code of corporate governance for SOEs, while the private party established a forum for corporate governance (business and professional associations) which conducts self-assessment surveys among firms in Indonesia. The goal that these initiatives pursue is to promote a business environment that is based on rules, transparency, financial health and minority shareholder protection and less on relationships (van der Eng, 2004, p. 17).

4.2.1 Political Events in Indonesia

During his legislature President Abdurrahman Wahid encountered different scandals and on July 23rd 2001 he was removed from his office by the People's Consultative Assembly. Megawati Sukarnoputri succeeded him and improved relations with the IMF. One problem during the following period was the terrorist attacks in Indonesia, in the tourism regions of Bali and in Jakarta, which wounded the Indonesian economy. Another issue are the ongoing separatist movements on different islands. East Timor (Timor Leste) became independent in May 2002 after reaching an agreement with Indonesia. The 29-year lasting armed conflicts in Aceh calmed down after the Tsunami in late December 2004 where more than 100,000 people died (Economist, *The Aceh peace process*, October 27th 2005). The ongoing conflict in Papua is not resolved yet and the risk that new conflicts will arise is given for the future as decentralisation increases the fragmentation of administrative districts (Jones, 2004, p. 31-33).

In July 2003 new election laws were introduced in order to guarantee a framework for the 2004 elections resulting in a success of the Golkar party of former President Soeharto and

with Megawati Sukarnoputri's party PDI-P coming second. In September 2004 Susilo Bambang Yudhoyono was elected president. The Yudhoyono government concentrates on economic growth and investment and wants to limit corruption. The political climate further improved as well as the macroeconomic environment. In December 2005 President Yudhoyono reshuffled the cabinet where respected technocrats were appointed to become Economic Coordination Minister and Finance Minister and which should lead to a more constructive policy environment (Standard and Poors, February 9th 2006).

4.2.2 Economic Developments

In July 2003 the government declared its exit from the IMF program that was due to expire in December 2003 following the pressures of the parliament; the government decided to adopt the post-program monitoring (PPM) by the IMF as exit strategy (Basri, 2004, p. 50). In July 2003 the rupiah strengthened to Rp 8,600 per US dollar and the debt/GDP ratio declined from 90 % in 2001 to 72 % in 2002 although at this stage the economy had not yet recovered fully from the crisis. Other problems like the outbreak of SARS and the threat of terrorism did have some impact on the Indonesian economy in 2003 positive prospects remained for the future (Basri, 2004, p.39). The same holds for the years 2004 and 2005 with recovering GDP growth rates.

After five years of IMF programmes the government regained the possibility to establish its own economic policy with the downside that the government would be responsible for the implementation and the outcome of their policies. This resulted in a timidity of implementation of economic and political reforms. Nonetheless the newly elected government under Susilo Bambang Yudhoyono improved macroeconomics by reducing debt and debt-servicing burden and improving external liquidity position. Furthermore, unpopular measures such as cutting the fuel price subsidies were already settled or are expected to be settled during the term of office of President Yudhoyono. A sensible issue remains microeconomic policies and external vulnerability (Standard and Poors, February 9th 2006).

4.3 Policies Applied by Malaysia

Before the onset of the crisis the exchange rate fluctuated from 2.36 to 2.51 ringgit per US dollar. After the Thai baht was floated on July 2nd 1997 the ringgit came under strong pressure as well. Although Bank Negara Malaysia intervened into the market in order to sustain the exchange rate, the ringgit floated on July 14th 1997 (Athukorala, 2001, p. 61). Until the fixing of the ringgit to the US dollar became effective on September 2nd 1998 at 3.8 RM/US\$, it fluctuated widely.

The exchange rate was strongly affected and from July 1997 to January 7th 1998, when the exchange rate reached its lowest level at 4.88 RM/US\$, the ringgit depreciated against the US dollar by almost 50 % (see figure A.4.2). In contrast to experiences in Thailand and Korea, where the exchange rates began to stabilize in March, the exchange rate continued to deteriorate in the following months until it was fixed. During the period between the outbreak of the crisis and the introduction of controls on capital outflows the stream of capital reversed sharply: from inflows to outflows, as portfolio capital, which is highly mobile, was the main source of capital flight. This increased not only the pressure on exchange rates but as well on the stock market exchange which plunged around 50 % of its pre-crisis level to end of 1997 (Athukorala, 2001, pp. 61-62). The Malaysian stock market plunged from almost 1,300 in February 1997 to a low of 262 in early September 1998 and until end of 2005 the Kuala Lumpur Composite Index (KLCI) did not return to its pre-crisis level.

As the problems in Malaysia were mainly due to capital flows from portfolio investment, the economy was not exposed to large foreign debt of its banking system as it was in the case of Thailand, Indonesia and Korea. Therefore Athukorala argues that Malaysia was 'able to 'muddle through' without an IMF-sponsored rescue package' (2001, p. 63).

4.3.1 The First Stage of Policy Response

Soon after the outbreak of the crisis, Prime Minister Mahathir stated that the crisis was due to currency speculators and blamed especially Georg Soros (calling him a 'moron') for putting Malaysia into the crisis. Prime Minister Mahathir continued the complaints about currency speculators during the IMF and World Bank annual meetings in Hong Kong in late September 1997 at a seminar before the Joint World Bank-IMF annual meeting. In his speech he stated that 'currency trading is unnecessary, unproductive and immoral' and that it should be 'stopped' and 'made illegal' and continued at the Annual Asia-Pacific Economic Cooperation (APEC) summit on November 18th 1997 in Vancouver and the Commonwealth Heads of Government Meeting in Birmingham in the same month (Athukorala, 2001, pp. 63-64; Jomo, 2005, p. 7). During this early stage until the

imposition of capital controls and with it the fixing of the exchange rate, the downward pressure of the ringgit was external, and inappropriate political rhetoric (of Prime Minister Mahathir) and policy measures put even more pressure on the exchange rate. Therefore the foreign exchange reserves of Malaysia depleted rapidly and improved significantly only after the imposition of capital controls (Jomo, 2005, pp. 4-5).

At this early stage there were incentives for sponsored share purchases by the government which decreased confidence into the Malaysian government and economy. The project of share purchases started on August 28th 1997 at which Kuala Lumpur Stock Exchange (KLSE) banned the short selling of 100 blue-chip stocks and in order to discourage sale of stocks were introduced, like the requirement to deliver physical share certificates to their brokers before selling. This ban of short selling, which was lifted after a few weeks in early September 1997, adversely affected liquidity and caused the stock market to fall further (Jomo, 2005, p. 9). On September 3rd 1997 the prime minister announced that funds from the Empleyees Provident Fund (EPF) would be used to prop up share prices by buying stocks from Malaysian shareholders and not from foreigners at a premium above prevailing prices. The result of these actions was that local and foreign investors regarded it as a possibility of getting rid of Malaysian shares (Athukorala, 2001, pp. 64-65). This announcement was seen as a bail-out facility designed to save 'cronies' from disaster and although the fund was never properly institutionalised as announced, and government officials later denied its existence, government-controlled public funds, mainly pension funds, the Employees Provident Fund (EPF), PETRONAS and Khazanah, have been deployed to bail out some of the most politically well-connected and influential corporations. Especially the protracted UEM-Renong saga from mid-November 1997 was damaging as the nature of the 'bail-out' (around RM2.34 billion) undermined public confidence in the Malaysian investment environment as stock market rules were suspended at the expense of minority shareholders' interests, with the KLSE losing RM70 billion in market capitalization over the next three days (Jomo, 2005, p. 9).

The Finance Minister Anwar announced on December 5th 1997 a policy package, the so-called *White Paper* (NEAC, 1999, box 1, pp. 25-26), which included the following elements:

- Cutting government spending by 18 %,
- postponing indefinitely all public sector investment projects which were still in the pipeline, stopping new overseas investment by Malaysian firms,
- freezing new share issues and company restructuring, and cutting salaries of government ministers by 10 %

- and Bank Negara Malaysia increased its three-month intervention rate from 7.55 % to 8.7 %, reduced the default period for classifying a loan as a non-performing loan by banking institutions from six months to three months and increased the inter-bank lending rate from the pre-crisis level of 7.6 % to 8.7 % in December 1997 and to 10 % in January and 11 % in February 1998 (Athukorala, 2001, p. 65; Jomo, 2005, pp. 9-10).

This repressive package was considered to please mainly foreign financial interest and did not recognize the gravity of the crisis and its possible causes (Jomo, 2005, p. 9).

In the news media the new package was labelled as 'IMF policy without IMF' (FEER, 1997b). The following period was characterized by the underlying conflict between the Prime Minister Mahathir and the Finance Minister Anwar how to manage the crisis. Therefore this period was a state of policy paralysis although policies were announced. The austerity package in 1997 was announced by Anwar Ibrahim himself while the attacks against international currency speculators were announced by Dr Mahathir himself. Therefore international news media speculated about a split between them (Athukorala, 2001, pp. 65-66). Until the illness of Soeharto in December 1997 and the beginning conflicts between Soeharto and IMF in 1998, Mahathir was considered as the 'bad boy' of the region, while the other countries had little choice in not calling in the IMF in order to restore confidence and secure funds to service their fast-growing non-performing loans although they were privately held (Jomo, 2005, pp. 8-9).

On January 7th 1998 a National Economic Action Council (NEAC) was set up in order to act as a consultative body for the government and 'to chart its own course of action, instead of following IMF's prescription' (Government of Malaysia, 1999, p. 9). The chair of the NEAC was Prime Minister Mahathir and as executive director Daim Zainuddin, a confidant of him and former finance minister, was called in. The exchange rate reached its historic intra-day low of 4.88 RM/US\$ on that day and the media interpreted the step of Dr Mahathir and the call in of Daim Zainuddin as a 'calculated plan to sideline Anwar Ibrahim from the policy scene' (Athukorala, 2001, p. 66).

During the following months the contractionary monetary and fiscal policies announced and introduced in late 1997 were reversed in an ad hoc manner. Therefore, Bank Negara Malaysia reduced the statutory reserve requirement (SRR) from 13.5 % to 10 % in February 1998 and to 8 % in July 1998 arguing that it was necessary to 'avoid a recession-deflation spiral' (BNM, 1999a, p.4). Furthermore the three-month inter-bank intervention rate was reduced in three steps from 11 % to 9.5 % in August and

government expenditure was restored and some large, halted projects were reactivated (Athukorala, 2001, p. 66).

On July 23rd 1998 the National Economic Recovery Plan (NERP) prepared by the National Economic Action Council was launched and the aim was to take the form of a policy blueprint. The NERP failed to include concrete policy measures (Athukorala, 2001, p. 66).

In May 1998 the Malaysian authorities introduced an institutional framework for recapitalizing the troubled banks and resolving mounting corporate distress by setting up an asset management company, *Pengurusan Danaharta Nasional Berhad* or in short *Danaharta* in order to acquire and manage NPLs from banks and in July 1998 a banking and corporate recapitalization company, *Danamodal Nasional Berhad* or in short *Danamodal*, was established in order to recapitalize the financial institutions whose capital adequacy ratio had fallen below 9 %. In August 1998, the Corporate Debt Restructuring Committee (CDRC, a joint public and private sector steering committee) was established in order to facilitate the restructuring of corporate debts through out-of-court settlements between debtors and creditors. These three institutions were introduced in order to deal with the rising problem of bad debt of the financial system and corporate distress. Although the political framework for these three institutions was set up they had difficulties to get the required funds in order to act properly and therefore Bank Negara Malaysia had to continue to intervene in the banking and corporate sector preventing an increasing liquidity squeeze caused by the share market crash and capital outflow (Athukorala, 2001, p. 67).

In August 1998, the economy already had been entered into recession and in contrast to the other crisis affected countries there seemed not to be any signs of achieving currency and share price stability. Output as well as employment declined, while the inflation rate peaked at 6.2 % in June 1998. The impact of the collapse of output and the crash of the property market increased non-performing loans in the banking system which aggravated the situation as it resulted by a 'flight to quality' of deposits from smaller to large well-managed banks from the fourth quarter of 1997 onwards (Athukorala, 2001, p. 68).

In addition, the banks changed their strategy from issuing new loans to loan recovery creating a credit crunch which had an impact on domestic consumption and investment. Growth of net outstanding bank loans (in nominal terms) decreased from about 26 % per annum during the five years preceding the crisis to 9 % during the year ending July 1998 and the annual rate of growth of money supply (M3) declined from 18.5 % at the end of 1997 to 4.4 % by August 1998 (Athukorala, 2001, p. 68).

Additionally, asset prices declined even more, the recovery in the export market did not show up and the investor confidence weakened. External reserves of the country decreased to very low levels despite the massive import contraction in the depressed economy (Athukorala, 2001, pp. 68-69). The large capital outflows did not improve the foreign reserve position of the current account that was in surplus due to the recession and which was in contrast to the experience of the four IMF-programme countries (Thailand, Indonesia, the Philippines and Korea) where widening current account surpluses boosted international reserves, preventing further exchange rate collapse (World Bank, 1998b).

One characteristic of the capital flights from Malaysia since early 1998 was that they were ringgits flowing to Singapore and about 25 to 35 billion ringgit flew to Singapore at the height of the crisis in mid-1998 (Ariff, 1999; Tripathi et al., 1998; IMF, 1999b). The cause of this outflow was mainly due to attractive money market rates of 20 to 40 % in Singapore (compared to 11 % in the domestic market) combined with a weakening exchange rate of the ringgit. This arbitrage position put pressure on domestic interest rates in Malaysia and therefore politicians became concerned about the 'internationalization' of the national currency which was considered as a new threat to economic stability and monetary policy autonomy (Athukorala, 2001, p. 71). The demand for offshore ringgits and the consequent build-up of offshore ringgit deposits increased the vulnerability of the Malaysian currency and undermined the effectiveness of the monetary policy (BNM, 1999b, ch. 14).

Another important property of the crisis was that in early and mid 1990s massive portfolio capital inflows had transformed the capital market in Malaysia. Foreign investors held an estimated one third of the stock of the largest 100 companies of the KLCI and were involved into short-term transactions and speculation, while local institutions were generally too small in comparison and took generally more long-term stock positions. Malaysia was very attractive for foreign fund managers and therefore they probably played a key role in the phenomenon of 'contagion' which involves cross-border investment trends (Jomo, 2005, pp. 5-6). Herd behaviour was especially dangerous for Malaysia being exposed more on portfolio flows than to private creditors.

4.3.2 Turning Around Policies – The Introduction of Capital Controls

During the second half of 1998 the policy choices available for the Malaysian government were very limited. The government followed a strategy of monetary and fiscal expansion in order to fight recession and in the mean time let the exchange rate fluctuate. Therefore, in theory, the exchange rate could have gradually stabilized as the economy recovered

from the recession by introducing expansionary macroeconomic policies and corporate and banking restructuring. But the ringgit remained under attack and market sentiments were not restored to confidence as the policies were not those advocated by the IMF being 'unorthodox' and considered to rescue some politically connected corporations and banks (Athukorala, 2001, p. 73).

Furthermore, the downgrading of Malaysia's credit rating by international credit rating agencies was decreasing market confidence even more and the planned sovereign bond issue in August 1998 in the USA and Europe which should have raised US\$2 billion for the implementation of the banking sector restructuring programme had to be postponed (Athukorala, 2001, p. 73).

Malaysia's government had at this stage two possibilities:

1. Calling in the IMF and adopting similar policies like those applied in Thailand, Indonesia or Korea and trying to stabilize the exchange rate in this way;
2. Introducing capital controls in order to increase the influence of the policies and to speed up recovery.

Although in the region the IMF at the beginning had adopted a contractionary policy strategy it had changed the strategy by the second half of 1998 to a more expansionary macroeconomic policy. Market sentiment was not very favourable as there was less constraint for Malaysia to undergo structural reforms when not calling in the IMF (BNM, 1999a, p. 5). Some authors argue that Malaysia was not eligible for IMF support even if it wanted to seek such support because of its relatively strong balance of payments position and its relatively lower foreign debt (BNM, 1999a, p. 5; NEAC, 1999, p. 1), although the actual practice of the IMF is to give assistance to member countries in the event of an economic crisis and not necessarily of a balance-of-payments crisis.

The key point against the call in of the IMF was that the Malaysian leadership did not want to change the Malaysian policy practice of having distortionary policies like NEP (subsequently renamed into NDP) that had established intimate links between business and government giving the economy stabilization and therefore any new policy was weighted against the potential negative effect on socio-political stability of the country (Crouch, 1998). The following statement of Prime Minister Mahathir at his presidential address to the UMNO General Assembly on June 19th 1998 shows this:

'[I]f we have to resort to the International Monetary Fund assistance [...] the conditions imposed by the IMF will require us to open up our economy to foreigners. There will not be any Bumiputra quota as the New Economic Policy (NEP) is an injustice, and unacceptable to their liberal democracy' (Mahathir, 1998, pp. 60-61).

Therefore, according to Athukorala, the Malaysian leadership opted for the second alternative (2001, p. 75). As seen in Chapter 3 this policy shift could be explained by the 'impossible trinity' (also called 'three-cornered dilemma' or 'dilemma') of open economies. The social equilibrium and its stability in Malaysia played an important role of choosing capital controls (i.e. Malaysia is socio-politically more fragile than more socially homogenous countries like Thailand and Korea) although political scientists are debating about the relative importance of pure political motives compared to genuine economic policy considerations behind the policy shift (Athukorala, 2001, p. 81).

In Malaysia capital controls were already used before September 1998, i.e. in the period of 1993-1994 when BNM successfully used capital controls on inflow without experiencing adverse effects on Malaysia's long-term prospects for attracting foreign investment. On July 30th 1997, just two weeks after the speculative attack on the ringgit, the prime minister gave a hint that the government might use capital controls as a possible policy alternative (Far Eastern Economic Review, 1997a).

The introduction of the capital controls began with the ban of offshore trading of shares of Malaysian companies since August 31st 1998 and therefore the over-the-counter share trading in the central limit order book (CLOB) market in Singapore was effectively frozen. On September 1st 1998, comprehensive controls over short-term capital flows were introduced and on September 2nd 1998 the exchange rate was fixed at 3.80 RM/US\$. The exchange rate was fixed with a mild appreciation of the ringgit from the average level for the previous three months (around 4.18 RM/US\$) but it represented a 35 % depreciation against the pre-crisis level of about 2.5 RM/US\$. BNM stated that the exchange rate could have been changed if underlying economic fundamentals changed (Athukorala, 2001, p.76).

The capital controls on outflows banned trading in ringgit instruments among offshore banks operating in Malaysia and stopped Malaysian financial institutions offering domestic credit facilities to non-resident banks and stockbrokers. The ringgit was banned as an invoicing currency in foreign trade and legal tender on all ringgit deposits outside the country with effect from September 30th 1998, too. Furthermore, a 12-month withholding period was introduced on repatriation proceeds (principal and profit) from foreign portfolio investment and restrictions on overseas investment by residents exceeding RM 10,000 and a limit of RM 1,000 on Malaysian overseas travellers were imposed (for more details on specific policies refer to Table A.4.1, Appendix).

The aim of the capital controls was to limit short-term capital flows; selling of shares of portfolio investors became more difficult and this should result in an alleviated pressure on the exchange rate. Long-term capital flows were not under control as well as import and export trade which was exempted from controls. Profit remittances and repatriation of capital by foreign investors continued to remain free of control.

TABLE 4.7 – Overview of Key-Points of Policy Package in September 1998 in Indonesia

Transactions subject to control	Transactions not subject to control
Ringgit-denominated transactions with non residents	Current account transactions ❖ trade transactions denominated in foreign currency
Outflow of short-term capital ❖ One-year withholding period until August 30 th 1998, ❖ A three-tier tax (10%, 20%, 30%) on profit remittance between September 1998 and February 1999, ❖ A 10% tax on profit remittance since February 1999	Repatriation of profits, interests, dividends, capital gains and rental income from FDI and similar forms of ringgit assets owned by non-residents.
Import and export of ringgit (carriage on person)	
Export of foreign currency by citizen (carriage on person)	General payments by residents including those for education abroad
Outflow of Malaysian investment abroad	FDI inflows and outflows

Source: Athukorala (2001, p. 77)

Additionally, policies were introduced in order to encourage FDI flows to the country, which included the admission of 100 % foreign ownership of new investment made before December 31st 2000 in domestic manufacturing, regardless of the degree of export orientation, pushing the foreign ownership share in the telecommunication project from 30 % to 69 % under the condition that the ownership share would be lowered to 49 % after five years, and in stockbroking companies and the insurance sector the share was increased from previously 30 % to 49 % and 51 %, respectively, and restrictions on foreign investment in landed property were relaxed such that foreigners were allowed to purchase all types of properties above RM250,000 in new projects or projects which were less than 50 % completed (Abidin, 2000, p. 188).

Summarizing, the policies were aimed to (Rajamaraman, 2003):

- Kill the offshore ringgit market: This was done by forbidding the transfer of funds into the country from externally held ringgit accounts, except for investment in Malaysia or for the purchase of goods in Malaysia.
- Close off access by non-residents to domestic ringgit sources: This was reached by banning ringgit credit facilities.
- Shut down the offshore market in Malaysian shares: The CLOB in Singapore was closed.

- Obstruct speculative outward capital flows: Malaysian residents needed prior approval to invest abroad in any form and exports of foreign currency by residents for other than valid current account purposes, were limited.
- Protect the ringgit's value and raise foreign exchange reserves: The export proceeds had to be repatriated within six months.
- Insulate monetary policy from the foreign exchange market: The authorities imposed a 12-month ban on outflow of external portfolio capital on the principal while interest and dividend payments could be freely repatriated.

In the following period capital control policies were changed and relaxed:

1. In early February 1999 the original 12-month holding restriction on portfolio investment was replaced by a system of repatriation levy. This repatriation levy identified two sets of repatriation levy: Funds which entered the country before February 15th 1999 a three-tier levy to the principal was to be applied (the capital value) on the retaining period of the funds in the country. Funds which entered the country after February 15th 1999 a two-tier levy was imposed on the repatriation of profits and not applicable on the principal: 30 % on profit made and repatriated within one year, and 10 % on profit repatriated after one year. On September 21st 1999 the two-tier levy on profit repatriation was replaced by a 10 % levy. On October 27th 2000 the authorities announced that profit earned from foreign portfolio investments in the country for a period of more than one year was exempted from this levy. The 10 % levy on capital gains repatriated after investing in Malaysia for more than one year was effectively removed on January 1st 2001.
2. On February 26th 2000 the KLSE and the Singapore Stock Exchange reached an agreement on the transfer of the shares trapped in the CLOB market to the Malaysian stock exchange and allowed to resume trading (Athukorala, 2001, p.78; Jomo, 2005).

The change of the capital controls policy by changing the one-year moratorium on portfolio capital with an exit tax was mainly interpreted in the financial press as a major backsliding from the original capital controls. The change was introduced in consultation with key players in the capital market (International Herald Tribune, February 9th 1999) and it was a pragmatic revision of the former capital control policy to only one element of the comprehensive controls in order to manage capital inflows in the recovery phase. The tax on profit repatriation from portfolio investment, together with the restrictions in place on foreign short-term bank borrowing, was intended to discourage excessive reliance of

Malaysian corporations on volatile foreign capital (Athukorala, 2001, pp. 78-79). The ringgit offshore market was destroyed by this policy package and the exchange rate controls limited access to the ringgit for non-residents preventing the re-emergence of an offshore ringgit market.

The fixed peg of the ringgit to the US dollar was removed with the announcement of BNM on July 21st 2005. At the same time the Chinese authorities announced that it allowed appreciating its currency. The movements by China but as well by Malaysia imply that the economic environment in and outside the region changed and therefore the authorities in Malaysia moved to a managed float, based on a currency basket consisting of the currencies of their major trading partners. In the months after the move to a managed float, the ringgit appreciated slightly with respect to the US dollar (from 3.8RM/US\$ to almost 3.7RM/US\$). This change in the exchange rate policy did not re-establish the offshore ringgit market i.e. its internationalization is still banned.

The alterations of the reactions of the IMF with respect to the introduction of the capital controls in Malaysia can be seen from the following quotes:

'The introduction by Malaysia in early September of exchange and capital controls may also turn out to be an important setback not only to that country's recovery and potentially to its future development, but also to other reemerging market economies that have suffered from heightening investor fears of similar actions elsewhere.' (IMF, 1998e, page 4)

'Despite stimulative monetary and fiscal measures introduced last year, however, domestic demand is expected to strengthen only gradually, and inflationary pressures are expected to remain low.' (IMF, 1999c, page 19)

'In Malaysia, a strong economic recovery is also now underway in response to fiscal and monetary stimulus and the pegging of the exchange rate at a competitive level.' (IMF, 1999d, page 19)

The capital controls combined with the fixed exchange rates gave the authorities policy autonomy and this resulted into macroeconomic stimulation and the restructuring of the banking and corporate sector. In 1999 the budget deficit was planned to increase to 3.2 % of GNP (before 1.8 %) and in 2000 to 4.4 % of GNP. The government expenditures comprised of no new major proposals in either budgets but some moderate increase in funds for road and rail projects while the main source for the increased deficit were tax cuts and new tax incentives. A further advantage of the controls on capital outflows was that the Malaysian government was able to finance the deficits through issuing Malaysian government securities (MGS) that were absorbed largely by provident, pension and insurance funds while only one third of the financial needs were funded externally, mainly from concessionary bilateral and multilateral sources. The funds for the deficit came mainly from domestic borrowing (86 %, mainly from centrally controlled Employees Provident Fund and other saving funds) and the remainder was externally (concessionary

long-term credit from multilateral sources such as World Bank, the Asian Development Bank, and Islamic Development Bank, from bilateral borrowing from Japan under the New Miyazawa Initiative, Japanese Overseas Cooperation Fund and Japan Import-Export Bank, and from a global bond issue made in May 1999 raising US\$1 billion) and therefore Malaysia remained a net creditor to the IMF throughout the crisis period (Athukorala, 2001, p. 79).

The domestic economic policies during the period of capital controls were characterized by monetary expansion by the cut of the statutory reserve requirement (SRR) ratio for banking institutions in successive stages in order to inject liquidity into the debt-ridden banking system (from a pre-crisis level of 13.5 % to 4 % in late 1998). And, also the reformulation of the base lending rate (BLR) in order that reductions in the intervention rate are better reflected in the cost of bank credit and the three-month inter-bank rate, which was Bank Negara Malaysia's policy rate and was cut in different stages (from 11 % in early 1998 to 4 % in early 1999). The default period of the classification of bank loans, which was changed in January 1998 from six months to three months, but reverted back to six months reducing the pressure on the bank to set aside capital against NPLs (Athukorala, 2001, pp. 79-80). Accompanied by monetary expansion were policies that tried to boost credit expansion which included the announcement of an indicative annual loan growth target of 8 % for commercial banks, relaxation of credit limits on lending by commercial banks and financial companies for the purchase of property and shares, a scheme for providing soft loans for the purchase of cars, a special loan scheme for assisting smaller industries and low-income groups, and relaxing credit limits on credit cards (BNM, 1999a).

The Malaysian government decided to implement a macroeconomic stimulation package using monetary policy and not so much fiscal policy as there was a need to avoid crowding out the private sector investment recovery because of the former interest rate hikes and the resulting credit squeeze (Athukorala, 2001, p. 80).

On the banking and corporate side the new policies stressed the importance of the implementation of the banking and corporate restructuring programmes initiated in the first half of 1998. As mentioned above this programme set up Danaharta, the National Asset Management Company to carve out bad debt from the banking system, Danamodal, the Bank Recapitalization Company to inject fresh capital, and CDRC. The institutions remained largely inactive before the imposition of new policies due to a lack of essential funds. This problem was resolved by supplying a framework for raising required funds from domestic sources. Additionally Bank Negara Malaysia embarked on ambitious merger

programmes for domestic finance companies and banks in order to increase their competitiveness. Hence the number of financial companies was reduced from 39 to less than a half through merger and/or amalgamation with banks and the banks were forced to consolidate the 58 financial institutions into six (subsequently increased to ten) banking groups (Athukorala, 2001, pp. 80-81).

In 1998 the Malaysian economy experienced a 7.5 % contraction in GDP after 11 years of uninterrupted expansion with an average of 8 % per year (only in the mid-1980s GDP contracted for about 1 %). In the first quarter of 1999 output contracted by approximately 1.3 % (on an annual basis), but the trend reversed and output recovered to positive levels in the following quarters resulting in a 5.4 % positive growth in 1999. In 2000 the economy returned back to pre-crisis levels of growth. As the output recovered, employment improved as well and the unemployment rate bounced back to pre-crisis levels (Athukorala, 2001, p. 84). During the period of implementation of the new policies (i.e. expansionary monetary policies) the inflation rate did not rise excessively (CPI 2.7 % in 1997 to 5.3 % in 1998; PPI 2.7 % in 1997 to 10.7 % in 1998 and 3.2 % in 1999). Business confidence increased again and trading on KLSE increased from mid-1999 again (Athukorala, 2001, p. 88), although the latter did not return to pre-crisis level.

Domestic demand increased due to the reflationary policies and public expenditure. Therefore public consumption increased recording double-digit growth from the first quarter of 1999 and contributing 70 % of the total consumption growth of 6.7 % in 1999. Public fixed investment contracted by around 10 % in 1998 but private fixed investment declined by 58 % in the same year. In 1999 public fixed investment expanded by 14 % while private investment contracted at a lower level and total annual investment contracted only at 6 % in 1999 compared to 45 % in 1998. Furthermore, private consumption stabilized in the first half of 1999 and grew strongly in the second half of 1999 (Athukorala, 2001, p. 89).

The sectors in Malaysia recovered soon, where the services sectors, particularly in financial services, and domestic market-oriented manufacturing recovered first and by the second quarter of 1999 the recovery spread beyond those sectors and the export-oriented manufacturing played a leading role. Growth of export manufacturing bounced back faster than domestic manufacturing showing that the experience of Malaysia is consistent with the conventional wisdom that greater export orientation is an important facilitator of economic rebound following a crisis (Bhagwati, 1998; Sachs, 1985).

Export of electronics and electronic parts were the main driver of manufacturing growth in the second half of 1999 while processed foods, plastic and rubber goods (export-oriented

industries) and domestic market-oriented industries continued their recovery benefiting from an increased demand of electronics and electronic parts (semiconductors) on the world market and an improvement of international competitiveness due to the exchange rate depreciation.

On the other side, the agricultural sector (including forestry and fishing) recorded negative growth in 1997 and 1998 due to the crisis and unfavourable world market conditions of the major export products (rubber and palm oil) rebounding to positive growth only in the second quarter of 1999. The service sector grew in 1999 by 6 % (Athukorala, 2001, p. 91).

The fiscal position of Malaysia changed as the government introduced expansionary measures in September 1998 and therefore the government budget deficit was at 1.8 % of GDP in 1998 and increased in 1999 to 3.8 % of GDP as a result of the intensification of expansionary policies (Athukorala, 2001, p. 91).

After the introduction of the new policies the main driver of the output changed from government to private sector driven. More interesting is the fact that government expenditure relative to GDP declined from the pre-crisis level in 1996 of 23 % to 20 % in 1999 while at the same time the share of gross development expenditure in total expenditure increased from 25 % to 39 % during this period. Hence, it can be concluded that the government committed itself to fiscal expansion in order to get out of the crisis but was careful to do it by keeping current expenditure under control (current expenditure as a percentage of total government revenue remained almost unchanged at the pre-crisis level of 56 %). The deficit was funded by an increase of net total borrowing by RM12.8 billion (after six consecutive years of debt redemption) where more than two-thirds of the new debt were funded domestically and the latter by foreign debt which was mainly long-term concessionary loans obtained from multilateral financial organizations and foreign governments as mentioned above (Athukorala, 2001, p. 92).

As real GDP growth turned into positive, the balance of payment strengthened as external trade balance became more favourable and the economy experienced significant inflows of long-term capital. In 1999 the trade balance recorded a surplus of RM74 billion boosted by a stronger export performance than import growth, 7.4 % higher than the surplus registered in 1998. By end of 1999 the foreign exchange reserves of Malaysia stood at US\$31 billion and provided 300 % cover for total outstanding short-term debts and 200 % cover for the stock of volatile capital (i.e. outstanding short-term debt plus cumulating portfolio investment). Total external debt as a percentage of GDP increased from 44 % in 1997 to 58 % in 1998 and declined to 53 % in 1999 while the short-term debt in total

outstanding debt declined from 25.2 % in 1997 to 19.9 % in 1998 and to 14.3 % in 1999 (Athukorala, 2001, pp. 92-93).

After a slowdown in growth for 2002 the economy maintained its positive GDP growth levels albeit not returning to pre-crisis levels and other economic fundamentals improved from 1999 onwards, too.

4.3.2.1 The Banking Sector Restructuring

The financial sector in Malaysia was weakened in the period before the crisis but as mentioned above it retained a better condition than in other Asian countries as the economy experienced a bank crisis in the late 1980s and therefore the authorities maintained more prudential regulations. This resulted in a lower exposure to foreign borrowings of the domestic economy. Therefore the external commitments during and after the crisis were smaller than in the other crisis-hit countries and especially with respect to Indonesia.

Nevertheless, during the period of political confusion in the second half of 1997 until the imposition of capital controls, non-performing loans increased not only due to economic factors but also due to some changes in the classification system of non-performing loans in late 1997 with the introduction of a tighter definition of non-performing loans as can be seen from Table 4.8 below.

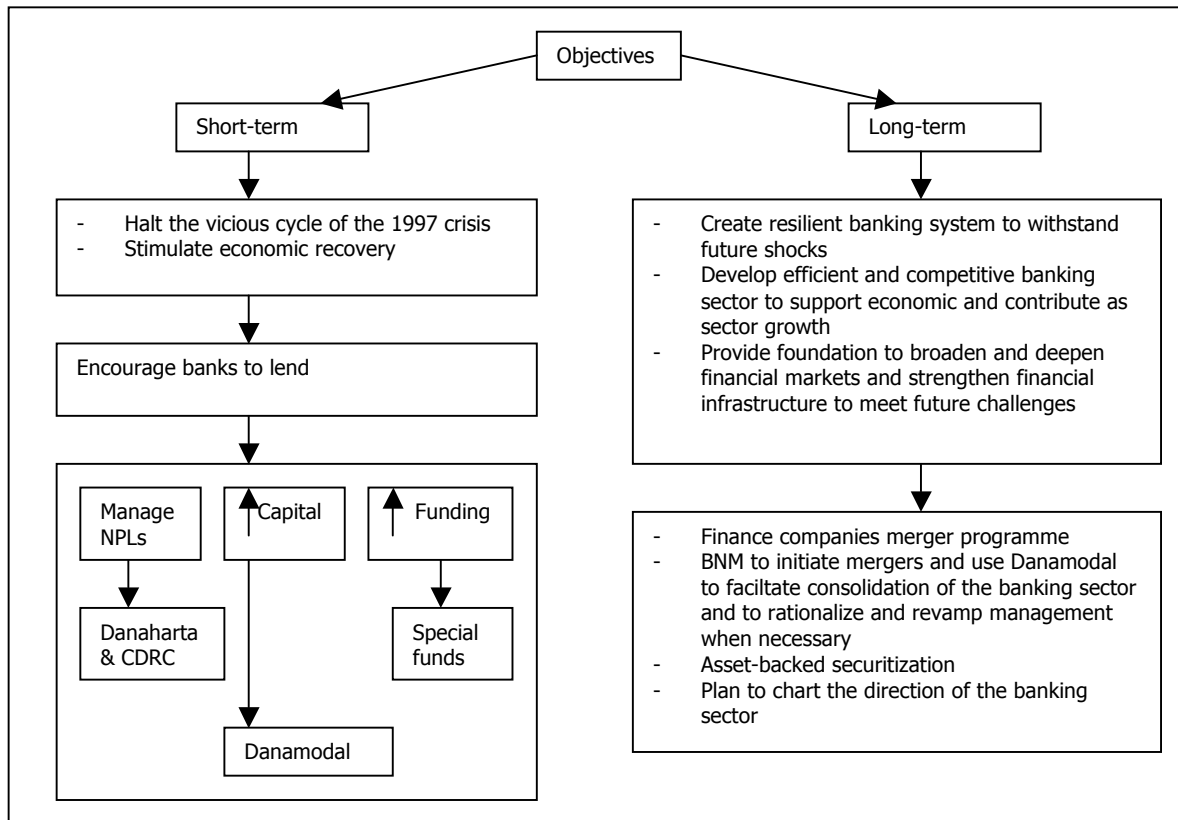
TABLE 4.8 – Loan Classification and Reserve Requirements in Malaysia in 1997-1998

	Old (since September 1997)	Revised (since September 1998)
<i>Classification of NPLs</i>		
General	Overdue for 3 months	Overdue for 6 months
BA's, trade bills	Dormant for 6 months	Dormant for 6 months
Credit cards	3 months in arrears	Unpaid 1 month after maturity
<i>Reclassification of NPLs to Performing Status</i>		
General	Full settlement of arrears on interest and principle	Total period in arrears less than 6 months
Rescheduled/Restructured	Complies with rescheduling terms for 12 consecutive months	Complies for 6 consecutive months
<i>Provisioning</i>		
General provisioning	Minimum 1.5%	Minimum 1.5%
Specific provisioning		
Substandard	20% (3 to 6 months overdue)	20% (3 to 6 months overdue)
Doubtful	50% (6 to 12 months overdue)	50% (6 to 12 months overdue)
Bad	100% (12 months and more)	100% (12 months and more)

Source: Chin (2004, p. 207)

The restructuring plan of the Malaysian banking sector consisted of short-term stabilization measures and medium to longer-term strategies to develop and strengthen the banking sector (BNM, 1999c, p. 421). Figure 4.4 illustrates in more detail the outline of the restructuring plan.

FIGURE 4.4 – Restructuring Plan of the Banking Sector in Malaysia



Source: BNM (1999c, p.145)

As can be seen from Figure 4.4 above BNM introduced clear objectives for the restructuring of the financial sector: short-term objectives were to rid of NPLs and strengthen banks and on the long term objectives were to increase the strength and prudence of the banking sector.

The Malaysian authorities introduced three institutions for the resolution of short-term problems:

- *Pengurusan Danaharta Nasional Berhad (or short Danaharta)*, which became the national asset management company and had to ensure that the level of non-performing loans in the banking system remained manageable,
- *Danamodal Nasional Berhad (Danamodal)* which was given the function of recapitalizing the banking sector, and
- the *Corporate Debt Restructuring Committee (CDRC)* provided a mechanism for banks and debtors to work out feasible debt workout solutions.

The estimates of costs borne by the government for the purchase of the non-performing loans of the banking system and the recapitalization were RM15 billion and RM16 billion

respectively, while the total costs of the restructuring was estimated to amount to 17 % of real GDP (Chin, 2004, p. 209).

Danaharta was given the right to purchase and manage non-performing loans with a gross value of RM5 billion from banking institutions in order to promote bank lending (NEAC, 1999, p. 34). At the end of 1999 Danaharta had acquired already RM45.5 billion of non-performing loans of which 35.7 billion were loan rights acquired from the banking system (BNM, 2000), i.e. 42 % of non-performing loans in the banking system. There were two ways how Danaharta acquired NPLs (Danaharta, 2002, p. 3):

1. NPLs were acquired from the financial institutions at an average discount rate of 54.4 %. The payment was made either by issuing zero-coupon Danaharta bonds to the selling financial institution or in cash. The total cost of this method was RM9.03 billion.
2. The NPLs of the now defunct Sime Bank and Bank Bumiputra Malaysia were assigned at no cost and Danaharta had to manage on behalf of the government.

In 2000 Danaharta had already completed its loan acquisition phase and focused in 2001 on the management and resolution of loans and assets (Chin, 2004, p. 210) engaging thereafter in exit options. In August 1998 the NPL ratio, just before the start of activity of Danaharta, was at 11.4 % (6-month classification) and declined over the years below 10 % (Danaharta, 2005). The institution, which was closed on September 30th 2005, dealt with a portfolio consisting of acquired NPLs of RM19.71 billion from over 70 financial institutions and RM27.97 billion from the defunct Sime Bank Group and Bank Bumiputra Malaysia Group, dealing in total with RM47.68 billion (at original transfer value of the loans (Danaharta, 2005)). By September 30th 2005, the recovery rate, measured by adjusting the original transfer value of the loan plus interest accrued from the date of acquisition by Danaharta, amounted in overall to 58 %. Whereby the adjusted loan rights acquired amounted in overall to RM52.42 billion, consisting of RM47.68 billion of principal loan rights acquired and accrued interest of RM4.74 billion, and the recovery cost in overall RM30.35 billion (Danaharta, 2005). The zero-coupon bonds issued by Danaharta were all fully repaid and no bond remained on the market (ADB, asiabondsonline).

Danamodal was given the task to recapitalize the banking sector with capital 'injections' in the form of equity or hybrid instruments. In order to identify the banks that needed to be recapitalized, Danamodal used objective guidelines developed by Bank Negara Malaysia,

where the following steps were included but not limited to (Chin, 2004, pp. 212-213):

- In-depth analysis of the competitive position and financial standing of each banking institution.
- Quantification of potential synergies to be realized through consolidation.
- Capital, assets, management, earnings, liquidity – short CAMEL – analysis.

Furthermore, viable banking institutions were identified by an assessment and a review conducted by reputable, international financial advisors. By injecting fresh money into the sector, Danamodal had the possibility to better facilitate the rationalization of banking institutions in connection with their consolidation (Chin, 2004, p. 213). Since December 1999 no capital injections had been made as the capital position of banking institutions continued to improve (BNM, 2002, p.134). The bonds issued by Danamodal were fully repaid and it ceased its activity in late 2003.

The third institution, the CDRC, was given the aim to facilitate the restructuring of large corporate loans, enabling borrowers and creditors to work out feasible debt restructuring schemes (Chin, 2004, p. 214). Although the progress of corporate debt restructuring in Malaysia was better than in Indonesia or Thailand it lagged behind Korea (table 4.9) as CDRC had no legal or statutory powers and could only act as an advisor and mediator between the two parties (CDRC, 2002).

TABLE 4.9 – Progress of Corporate Debt Restructuring in the Four East Asian Crisis Economies (1999)

Country	Per cent of Corporate Debt Cases Resolved	Per cent of Corporate Debt Restructured, by value
Indonesia (August 1999)	1	13
Malaysia (December 1999)	22	35
Republic of Korea (September 1999)	78	50
Thailand (December 1999)	14	15

Source: Binamira and Haworth (2000, p. 143)

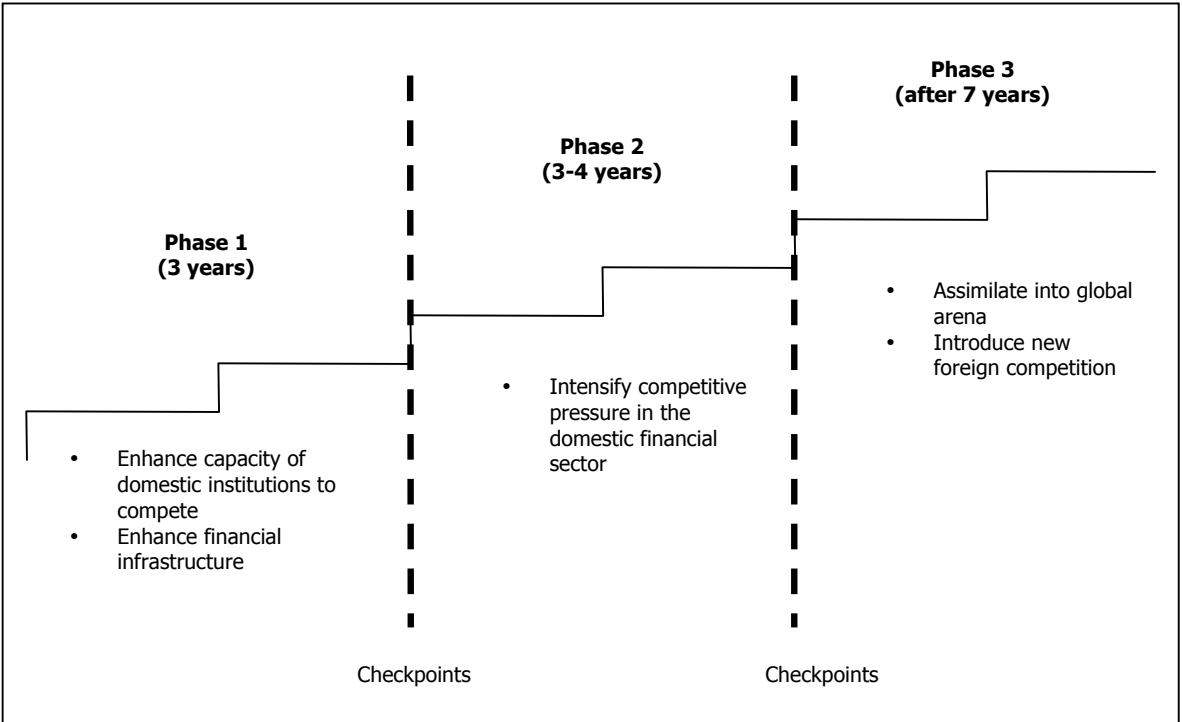
During the period of activity CDRC resolved 48 cases with total debts amounting to RM52.6 billion and representing almost 65 % of the total cases und its auspices (Chin, 2004, p. 216).

Before the outbreak of the crisis, Bank Negara Malaysia had little power for forcing mergers in the banking sector, and hence increasing profitability. In July 1999 the government announced the plan of merging financial institutions in order to get six 'anchor banks' and banks were given two months to sign a Memorandum of Understanding (MOU)

and eight months to complete the exercises. The rationale behind this was to increase efficiency and competitiveness of the banking sector as the banking sector prior to these forced mergers was split up in many small banks (the merger decreased not only the number of banks and finance companies from almost 90 in 1997 to 45 in 2002 but as well the number of branch networks) (Chin, 2004, pp. 217-218). After the announcement some controversies were observed as not only small inefficient banks should have merged with larger ones but as well mid-sized profitable banks (e.g. Hon Leong Bank). In October 1999, due to objections about the number and composition of the proposed banking groups Prime Minister Mahathir decided to allow ten banks to remain in the revised merger policy (Chin, 2004, p. 220).

Although these policies attempted to enhance profitability, efficiency and competitiveness of financial companies and banks, the process is yet unfinished and for the future there still remain some tasks for the central bank (see Figure 4.5 below).

FIGURE 4.5 – Implementation of Recommendations into the Financial Sector Masterplan (2001-2010)



Source: Bank Negara Malaysia (2001)

4.3.2.2 Ownership and Governance in Malaysia

As mentioned above, the riots of May 1969 led the government implement the New Economic Policy (NEP) in 1970 in order to promote an economic development of all ethnic groups in Malaysia and as a result should have increased the concept of national unity.

The key point of this NEP was to increase the share of Bumiputera in the corporate sector and therefore this was a reversal of the laissez-faire policy in the period between independence and the riots in 1969. The outcome of the NEP renamed after 1990 in National Development Policy (NDP) was that there was an effective increase over the years of the ownership of Bumiputera in local corporations, but the plan of the government to increase the share of them to 30 % failed as can be seen from official records (e.g. different issues of economic five year plans).

Most of the leading companies in Malaysia in the mid-1990s were connected to one of the three most powerful politicians in Malaysia: Prime Minister Mahathir, Deputy Prime Minister and Finance Minister Anwar Ibrahim, and Economic Adviser Daim Zainuddin. After the onset of the crisis and the change of political landscape, businessmen connected to Anwar and Daim lost their influence and importance in Malaysia. Connections, corporate ownership and control patterns were rather complex. During the crisis, Mahathir was afraid of the debt crisis in the private sector which led to some political intervention in the corporate sector not always respecting shareholder's rights (Gomez, 2004, pp. 161-178).

It seems that Chinese capitalists endured the crisis better than others did. By early 2001, no Malay was among the ten wealthiest business people; instead almost all of them were Chinese (*Malaysian Business*, February 1st 2001).

More details on corporate governance in Malaysia will be the topic of Chapter 6.

4.3.2.3 Political Implications of the Crisis

Contrary to Indonesia the political change in the leadership was not during the first period of the crisis, although the political landscape changed during 1998 as well. In late 1997 and beginning of 1998 the tension between Anwar and Mahathir became more and more obvious. The step down of Soeharto in Indonesia encouraged Anwar and his supporters even more to challenge Mahathir over the succession of UMNO and the leadership in Malaysia (Haggard, 2000, p.63). It seems that until mid-1997 Anwar was supported by Mahathir and appointed as acting prime minister before Mahathir's two month overseas travel in May 1997. During this period Anwar proposed the Anti-Corruption Bill 1997 in order to strengthen the Anti-Corruption Agency as well as the penalties. This topic was very 'hot' during this period and Anwar became more exposed to political adversaries and to uncertainty about his political future (Hwang, 2003, pp. 289-290). The following months were characterized by rumours about a possible homosexuality of Anwar and the political struggle between Mahathir and Anwar. Anwar tried to assert his claims to leadership, opposing bailouts of closely connected corporations to Mahathir and pausing mega projects. At the same time Mahathir was confronted with the criticism of foreign media

and the differences of the management of the economic crisis between him and Anwar and the insight that Anwar would not protect his family after becoming prime minister (Hwang, 2003, p. 292). NEAC was a response on the economic side against Anwar and his policy. Hence, the appointment of former Finance Minister Daim Zainuddin as executive director of the NEAC on December 20th 1997 showed that Mahathir was going to cut the political influence of Anwar (Hwang, 2003, p. 296).

Prior to the political crisis in September 1998, Mahathir had succeeded in the triennial party elections in March 1998 for local policy leadership positions where 165 division chiefs were confirmed in their office while only 24 were replaced, which means that more than 80 % of the incumbent leaders were confirmed during the elections. In order to protect the presidency of Mahathir at UMNO, his supporters tried to introduce measures limiting in this way the challenge of Anwar and his supporters (Hwang, 2003, p. 298). Anwar raised the issue of 'corruption, cronyism, and nepotism' during the next months in several speeches. But as the General Assembly supported Mahathir, the outcome of the political conflicts between Anwar and Mahathir was in favour of the prime minister and Anwar's political authority was formally undercut by the changes of the cabinet. After the release of the new economic package for economic growth stimulation and the pressure of the government on the Bank Negara Malaysia to ease monetary policy in early July, the central bank governor Ahmad Mohamed Don resigned in late August 1998. After the exit of Anwar from the cabinet, Mahathir took over the Finance Ministry and appointed close associates to the central bank (Haggard, 2000, p. 64).

Following his expulsion from political offices (from the office as deputy and finance minister on September 2nd 1998 and from UMNO on September 4th 1998) Anwar initiated demonstrations against the political leadership and was arrested in late September 1998. In October 1998 supporters of Anwar were expelled from UMNO and Mahathir left the deputy prime minister position unfilled (*Far Eastern Economic Review*, October 15th 1998). The demonstrations and the opposition movement were kept under control by the police, while Anwar was beaten in jail. Finally, he was sentenced to a 15-year sentence but on September 2nd 2004 released from prison.

By the elections of 1999 UMNO received the worst election outcome since existence and lost some of its importance in the National Front, i.e. the coalition that governs the country and includes Chinese and Indian parties.

Prime Minister Mahathir stepped down after 22 years in politics by age 78 as he proposed himself to retire as 'everything is in place. That's the right time to leave. You don't want to leave after people kick you out.' (Time, October 23rd 2003). The office as prime minister was overtaken by Abdullah Ahmad Badawi in October 2003, which had joined the cabinet

of Mahathir in January 1999, and in March 2004 he was sworn by for a new, five-year term. The coalition government was confirmed in parliamentary and regional elections. In February 2006 the cabinet was reshuffled but Abdullah maintained his position as finance and internal security minister.

4.3.3 The Role of Capital Controls and the Controversy

During the 1980s the so-called Washington Consensus emerged and this led to the view that financial liberalization would contribute to economic growth although theory leaves no unambiguous prediction of whether opening the capital account helps in the promotion of growth or not. It seems that opening the capital account influences positively economic growth if the domestic financial markets are well developed and regulated, and the operation of the international financial system is smooth and stable while it might be more negative if domestic and international financial markets are subject to crises (Eichengreen and Leblang, 2002).

In theory there are many different types of capital controls possible and the nature of them changes with the circumstances in which they are imposed. According to Jomo (2004, pp. 188-189) the following arguments of opponents and supporters of the introduction of capital controls can be identified:

- Opponents: argued that capital tends to flow from capital-rich to capital-poor economies or between economies with different savings rates, investment opportunities, risk profiles or even demographic patterns.
 - o Capital flows enable national economies to trade imports in the present for imports in the future (inter-temporal trade).
 - o Capital flows allow national economies to offset pressures to reduce imports by borrowing from abroad or by selling assets to foreigners.
 - o Capital flows enhance economic development as foreign direct investment is expected to involve technology transfer and which should increase future industrial capabilities.
- Supporters: argued that free capital flows have an adverse effect on national economic policy-making and implementation and as a worst case they might undermine economic stability. As capital control can be considered any policy or measure that restricts or redirects capital account transactions (see below). They argue that the following major reasons support the introduction of capital controls:
 - o Achieve greater leeway for monetary policy, e.g. to re-inflate the economy;
 - o Enhance macroeconomic stability by limiting potentially volatile capital inflows;

- Secure exchange rate stability, e.g. protect a fixed exchange rate or peg;
- Correct international payments imbalances, both deficits and surpluses;
- Avoid inflation due to excessive inflows;
- Avoid real currency appreciation due to monetary expansion;
- Reduce financial instability by changing the composition of – or limiting – capital inflows;
- Restrict foreign ownership of domestic assets, which might cause nationalistic resentment;
- Ensure the domestic utilization of national savings by restricting outflows;
- Enable governments to allocate credit domestically without risking capital flight;
- Enable domestic financial houses to attain scale economies in order to better compete internationally;
- Facilitate revenue generation, particularly taxation of wealth and interest income; by allowing higher inflation, more revenue can be generated.

As it was the case in East Asia, the countries by having fixed exchange rate regimes could raise interest rates or devalue exchange rates in the situation of the net capital outflow. Both options may lead in this situation to strong recessionary pressure due to higher interest rates or further capital flight (Jomo, 2004, p. 189). The result of a monetary contraction might be not only higher interest rates and therefore dampen economic activity but also it may put pressure on the banking system which is possibly exposed to foreign borrowings (Kaminsky and Reinhart, 2002).

The different types of capital controls at disposal and the major differences are the following (Jomo, 2004, pp. 190-191):

1. Taxes versus quantitative controls. Taxes imposed on price or market mechanism try to limit certain types of flows and they may be imposed on certain types of transactions or returns to foreign investment or may even involve mandatory reserve requirements. Quantitative controls could be quotas, authorization requirements or even outright bans.
2. Controls on inflows versus outflows. Controls on inflows may allow higher interest rates in order to check money supply and inflation. Controls on outflows may allow lower interest rates and greater money supply and have often been used to postpone hard choices between devaluation and tighter monetary policy.
3. Controls on different types of inflows especially in terms of expected duration. Authorities may prefer to encourage long-term inflows such as FDI but may

discourage short-term inflows such as bank loans or money market instruments or easily reversible inflows such as portfolio investments.

Important for the implementation of capital controls is to clearly state which kind of control will be imposed and objectives pursued as well as to state for short-term controls the timing of the exit strategy.

The view that capital account liberalization would always boost economic growth was disproven even by an IMF research in 2003 (Rogoff et al., 2003); other empirical researches show mixed results, for example Quinn (1997) finds positive results between growth and liberalization; Edwards (2001) finds positive relationships especially in high income countries; Edison, Klein, Ricci and Slok (2002) finds a positive relationship especially in emerging markets; Alesina, Grilli and Milesi-Ferretti (1994) find a negative relationship in industrial countries; Rodrik (1998) finds no stable association between liberalization and growth; Bordo and Eichengreen (1998) find no impact of liberalization on growth; Arteta, Eichengreen and Wyplosz (2001) finds results that question about the robustness of growth effects of capital account policies). Quantitative studies about the association of capital controls with crisis show that there exists a positive association of capital controls with crises (Glick and Hutchison, 2000; Leblang, 2001; Bordo, Eichengreen, Klingebiel and Martiney Peria, 2001) while qualitative studies claim that capital account liberalization can set the stage for crises (e.g. Furman and Stiglitz, 1998). Eichengreen and Leblang (2002) argue in their work that capital controls influence macroeconomic performance through a direct channel i.e. the 'cost' as they have a strong impact on resource allocation and efficiency and an indirect channel, i.e. limiting the disruptive effects of crises at home and abroad and due to their opposite directions they conclude that in periods of financial instability capital controls are positive as they can insulate the economy, while in periods of financial stability the cost, i.e. the impact on resource allocation and efficiency, is more likely to dominate.

Some studies have shown that financial liberalization not only does not seem to have contributed to economic growth but that it has succeeded more adverse consequences including deflationary macroeconomic policy pressures, slower growth and greater vulnerability to crisis. Additionally it has been shown that the promised gains from international financial liberalization have not materialized and there is evidence that capital account convertibility has increased net capital flows from the capital poor to the capital rich countries as well as there is little evidence that the costs of capital was declining

significantly and to a sustainable level. Furthermore, the frequency of currency, banking and other financial crisis in the past years increased. The economic liberalization and international financial integration have resulted in the greater likelihood of cross-border transmission of financial crises and increased the danger of contagion (Jomo, 2005).

The financial liberalization proposed by the Washington Consensus was not based on the theoretical analysis of the outcome of financial liberalization. Ronald McKinnon, an early proponent of the Washington Consensus, based on the singular case of the Republic of Korea during the 1960s when savings rates continued to rise despite alleged financial repression, argues that it was not interpreted in his sense and published thereafter the book 'The Order of Economic Liberalization' suggesting that capital account liberalization should be the last step in financial liberalization. But the IMF was proposing to include in the Fund's Articles of Agreement currency convertibility for capital transactions until the outbreak of the East Asian Crisis. The objective of capital account liberalization was after the outbreak of the East Asian Crisis was no longer included in the daily agenda (Fischer, 1998).

Looking at history, the imposition of capital controls is not as new as it seemed in 1998 as for example capital controls were imposed before by Chile and Malaysia. These capital controls were on inflows whereas the 1998 experiment of Malaysia was to impose controls on outflows. While there is more agreement that temporary capital controls on inflow are beneficial for the recovery and stabilization of an economy, there is much more controversy on temporary capital controls on outflows. Therefore the capital controls introduced in September 1998 in Malaysia are considered to be an 'unorthodox' step (i.e. 'orthodox' policies were promoted especially by the IMF and other institutions). Although there is a huge literature on the effectiveness and advantages and disadvantages of capital controls on inflows (e.g. Williamson, 1999; Montiel, 1995, Dooley, 1995; Cooper 1999; Saxena and Wong, 1999) and empirical studies (e.g. Johnston and Ryan, 1994; Dooley, 1995; Grilli and Milesi-Ferretti, 1995; Epstein et al., 2003; Montiel and Reinhart, 2001; Ariyoshi et al., 2000, Edwards, 2003), the topic of capital controls on outflows has received more attention consequently after its imposition in Malaysia. The result of analyses of capital controls on inflows is rather mixed depending on sampling and methodology used.

In the case of Malaysia the proponents of the success of the capital controls on outflows argue that the economic and stock market decline came to a stop soon after the controls were implemented (Kaplan and Rodrik, 2001; Jomo ed., 2001; Palma, 2000; Dornbusch, 2002). Opponents argue that the reversals have been more pronounced in the rest of the

region. The empirical study of Kaplan and Rodrik (2001) suggests that there is strong evidence that the controls had a positive effect on the economy as they provided some room for breath for domestic monetary and financial policies. For these reasons, they permitted a faster recovery than by implementing the orthodox IMF policies. Kaplan and Rodrik (2001) also argue that the controls averted another crisis that had to hit Malaysia and note that the offshore overnight ringgit market interest rates, principally in Singapore, remained at high levels (around 40 %) for some months. This put pressure on domestic interest rates in Malaysia. On the other hand, a leading Malaysian neo-liberal economist, R. Thillainathan, argued that the speculative offshore market was very thin although the huge amount of ringgit held abroad (around RM25-30 billion) but failed to provide further evidence (Jomo, 2004, p. 182). Epstein et al. (2003) argue that the Malaysian government reached their goal of eliminating the offshore ringgit market by the implementation of the policy package in 1998; therefore the targets of these policies were reached. On the other side, Jomo (Ed. 2001) argues that the imposition of capital controls might have contributed to cronyism and corruption. Additionally, Jomo (2005, p. 12) argues that the policy package is generally recognized as being comprehensive and cleverly designed to limit foreign exchange outflows and ringgit speculation by non-residents as well as residents but at the same time not affecting foreign direct investors. Furthermore, the Central Bank effectively enforced the measures and its success is often attributed to Malaysian conditions i.e. the adequacy of its foreign exchange reserves, its lower exposure to foreign debt and strong economic fundamentals.

A recent paper on the effectiveness on capital controls (Magud and Reinhart, 2006) evaluates empirically the effectiveness of controls on capital inflows and outflows by standardizing the outcome with two indices (Capital Control Effectiveness Index – CEE Index; Weighted Capital Control Effectiveness Index – WCCE Index; for a detailed discussion please consult Magud and Reinhart, 2006) and gives a good overview of results of other studies. Magud and Reinhart (2006) argue that by comparing Malaysia to other cases of controls on capital outflows, in Malaysia outflows were reduced and monetary policy became more independent while Spain (ERM crisis in 1992) performed better in reducing real exchange rate pressures. The following tables gives an overview of the methodologies used by different authors and a summary of the results on effectiveness of capital outflows discussed before Malaysia was compared with Spain, ERM Crisis in 1992, and Thailand, East Asian Crisis 1997.

TABLE 4.10 – Methodology and Degree of Methodological Rigor of East Asian Crisis

Country Studies

Study	Sample	Methodology	Econometric Rigor
Malaysia (1997)			
Tamirisia (2004)	1991:1 – 2002:12	Error-correction model. Series on net foreign portfolio assets are by foreign portfolio assets to isolate country-specific effects	High
Dornbusch (2001)		Descriptive analysis of different variables	Low
Edison & Reinhart (2000)		Test for equality of moments and changes in persistence between capital controls and no controls, principal components analysis; block exogeneity tests (VAR) for causality; GARCH for the effects of controls on volatility; and Wald tests for structural brakes over a rolling window	High
Kaplan & Rodrik (2002)	1992 – 1996	Shifted difference in differences to separate the counterfactual of capital controls versus IMF-based program recovery. This methodology enables the authors to re-schedule the episodes in terms of the timing of the crises (shifted). The difference in differences allows them to capture the comparison effect of the recovery with capital controls vis á vis with a successful IMF program, controlling for exogenous and country-specific effects (static and dynamics)	High
Ariyoshi, Habermeier, Laurens, Okter-Robe, Canales-Kriljenko & Kirilenko (2000)	1998 – 2000	Extensive descriptive and comparative country-studies analysis of time-series in each episode, dividing facts according to controls on capital inflows (limiting short-term flows), control on capital outflows (financial crises), extensive exchange controls (financial crises), long standing controls and their liberalization, rapid liberalization	Low
Spain (1992)			
Jose Viñals(1992)	1992	Descriptive analysis of economic policy measures and its effect on various macroeconomic variables	Low
Edison & Reinhart (1999)	1991 – 1993	Test for equality of moments and changes in persistence between capital controls and no controls, principal components analysis; block exogeneity tests (VAR) for causality; GARCH for the effects of controls on volatility; and Wald tests for structural brakes over a rolling window	High
Ariyoshi, Habermeier, Laurens, Okter-Robe, Canales-Kriljenko & Kirilenko (2000)	1992	Extensive descriptive and comparative country-studies analysis of time-series in each episode, dividing facts according to controls on capital inflows (limiting short-term flows), control on capital outflows (financial crises), extensive exchange controls (financial crises), long standing controls and their liberalization, rapid liberalization	Low
Thailand (1997)			
Edison & Reinhart (2000)	1995 – 1999	Test for equality of moments and changes in persistence between capital controls and no controls, principal components analysis; block exogeneity tests (VAR) for causality; GARCH for the effects of controls on volatility; and Wald tests for structural brakes over a rolling window	High
Ariyoshi, Habermeier, Laurens, Okter-Robe, Canales-Kriljenko & Kirilenko (2000)	1997 – 1998	Extensive descriptive and comparative country-studies analysis of time-series in each episode, dividing facts according to controls on capital inflows (limiting short-term flows), control on capital outflows (financial crises), extensive exchange controls (financial crises), long standing controls and their liberalization, rapid liberalization	Low

Source: Magud and Reinhart (2006)

TABLE 4.11 – Summary of Key Findings on ‘Effectiveness’ on Controls on Capital Outflows

Study	Episode	Did controls on outflows:			
		Reduce the volume of net capital outflows	Alter the composition of flows	Reduce real exchange rate pressures	Make monetary policy more independent
Malaysia (1997)					
Tamirisia (2004)	1991:1 – 2002:12			No	Yes
Dornbusch (2001)				No	
Edison & Reinhart (2000)				Yes	Yes
Kaplan & Rodrik (2002)	1992 – 1996				Yes
Ariyoshi, Habermeier, Laurens, Okter-Robe, Canales-Kriljenko & Kirilenko (2000)	1998 – 2000	Yes		Yes	Yes
Magud and Reinhart (2006)		Yes		No	Yes (strong)
Spain (1992)					
Jose Vinals(1992)	1992	No			
Edison & Reinhart (2001)	1995 – 1999			No	No
Ariyoshi, Habermeier, Laurens, Okter-Robe, Canales-Kriljenko & Kirilenko (2000)	1992	Yes		Yes (ST)	Yes
Magud and Reinhart (2006)		Yes		Yes	Yes (weak)
Thailand (1997)					
Edison & Reinhart (2000)				No	No
Ariyoshi, Habermeier, Laurens, Okter-Robe, Canales-Kriljenko & Kirilenko (2000)	1997 – 1998	Yes		Yes	Yes (ST)
Magud and Reinhart (2006)		Yes		No	No

Notes: A blank entry refers to the cases where the study in question did not analyze that particular relationship. An (ST) refers to cases where only short-term effects were detected.

Source: Adapted from Magud and Reinhart (2006)

Paul Krugman suggested the imposition of capital controls in his Fortune magazine column in early September 1998 in order to create a window of opportunity to facilitate economic recovery just by coincidence at the same time when Malaysia was announcing its effective imposition of capital controls, (Krugman, 1998). Although Malaysia recovered soon (experiencing a so-called ‘V-shaped’ recovery), at the time of announcement of the policy package and the capital controls on outflows, the sentiment of the IMF and other institutions as well as some market observers was rather pessimistic and negative. The pessimism changed within a few months and the IMF in an Article IV Consultation with Malaysia praised the Malaysian authorities for ‘using the breathing space [by introducing the policy measures in September 1998 and] to push ahead with a well-designed and effectively implemented strategy for financial sector restructuring’ (IMF, 1999a, 2000). The

United Nations Conference on Trade and Development (UNCTAD) even suggested in its 1998 'Trade and Development Report' to impose capital controls as means to avoid financial crises.

4.4 Conclusion

Although prior to experiencing a crisis both Indonesia and Malaysia has a balanced economic growth. However, both suffered from the sudden outbreak of the East Asian Crisis in mid 1997 followed by fundamental changes in politics and economics. Indonesia experienced after a long period of political instability in 1997/1998 while Malaysia did experience some political uncertainty. The economic landscape changed in both countries from mid 1997: Indonesia called in the IMF and adopted strict policies limiting e.g. public spending but leaving capital movements free; Malaysia did not call in the IMF, being the only crisis hit country to deal the problems by themselves, and in September 1998 decided to introduce capital controls on short term capital outflows, which was observed by the international financial community sceptical. The imposition of capital controls as discussed just before is controversial and not yet finished.

5

Comparing Indonesia and Malaysia – a Qualitative Approach

This chapter will deal with some qualitative approaches such as the evolution of governance and corporate governance in Indonesia and Malaysia along with the construction and an analysis of federal government spending before and during the East Asian Crisis.

The chapter will start with the governance in the two countries, analyse corporate governance and lastly discuss shortly federal government revenue and expenditures during the crisis period.

5.1 Governance

This section deals with the results of the world governance indicators by the World Bank. As the World Bank argues in one of its publications (World Bank, 2006), governance is important for not only development but there are other important impacts:

"Good governance pays a very large development dividend. An improvement in governance of one standard deviation can triple a nation's per capita income in the long run. Higher income also correlates with better governance, but the causal relationship is mostly from governance to income. Although governance quality on average changes slowly, it can in some countries decline sharply in a few short years, but it can also quickly improve. Responses to specific questions on governance from citizens, firms, and country experts are important, because stakeholders make decisions based on those views and perceptions. Direct data from citizens, firms, and experts, even if they contain a subjective element, can paint a richer picture of actual conditions on the ground than counting laws and regulations, which in fact may not be enforced or observed. Aggregate indicators yield more reliable information about governance than any individual indicator can provide." (World Bank, 2006)

The study comprises six different indicators available for 213 countries and territories for 1996, 1998, 2000 and 2002-2005 and is based on different individual variables from 31 different data sources constructed by 25 different organizations. The six indicators were constructed according to the methodology presented in the paper of Kaufmann, Kraay, and Mastruzzi (2004) and are as follows:

1. *Voice and accountability (VA)*: The extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and free media;
2. *Political stability and absence of violence (PV)*: Perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including political violence and terrorism;
3. *Government effectiveness (GE)*: The quality of public services, the quality of the civil service and the degree of its independence from political pressures, the

quality of policy formulation and implementation, and the credibility of the government's commitment to such policies;

4. *Regulatory quality (RQ)*: The ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development;

5. *Rule of law (RL)*: The extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence;

6. *Control of corruption (CC)*: The extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests.

Although the methodology used is the same for all countries analyzed in the study there are some limits in cross-country comparisons as the methodology generates margins of errors for the estimates of governance in each country and which should be taken into account (for a more detailed discussion see Kaufmann, Kraay, and Mastruzzi, 2006).

The following tables and figures show the results of latest available data for Indonesia and Malaysia.

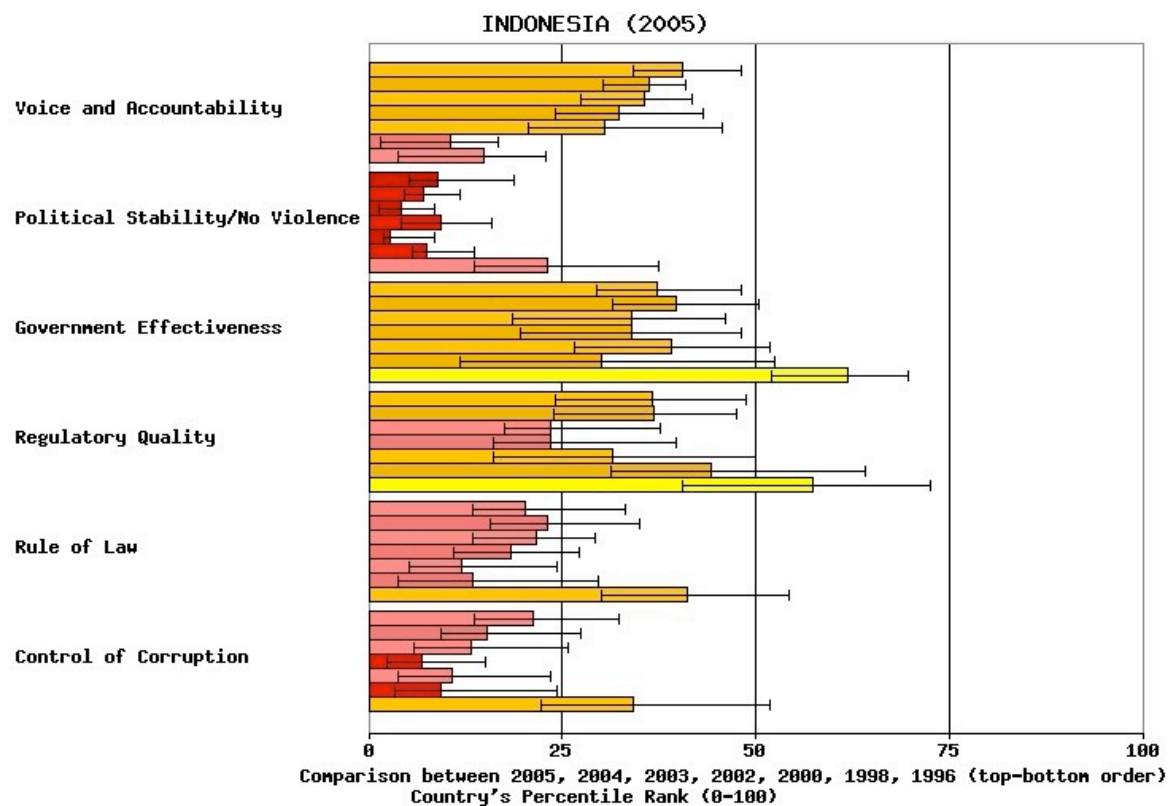
TABLE 5.1 – Governance in Indonesia

Voice and Accountability	1996	1998	2000	2002	2003	2004	2005
Estimate (-2.5 - + 2.5)	-1.	-1.45	-0.54	-0.52	-0.45	-0.43	-0.21
Percentile Rank (0-100)	14.9	10.6	30.4	32.4	35.7	36.2	40.6
Standard Error	0.22	0.24	0.24	0.17	0.16	0.14	0.14
Number of surveys/polls	5	5	7	10	10	12	10
Political Stability/No Violence	1996	1998	2000	2002	2003	2004	2005
Estimate (-2.5 - + 2.5)	-0.66	-1.57	-2.01	-1.57	-1.94	-1.60	-1.42
Percentile Rank (0-100)	23.1	7.5	2.8	9.4	4.2	7.1	9.0
Standard Error	0.29	0.26	0.24	0.20	0.22	0.20	0.21
Number of surveys/polls	6	6	9	10	12	10	10
Government Effectiveness	1996	1998	2000	2002	2003	2004	2005
Estimate (-2.5 - + 2.5)	+0.08	-0.57	-0.39	-0.55	-0.58	-0.42	-0.47
Percentile Rank (0-100)	61.9	30.1	39.2	34.0	34.0	39.7	37.3
Standard Error	0.19	0.26	0.17	0.16	0.16	0.15	0.14
Number of surveys/polls	7	7	10	12	12	13	12
Regulatory Quality	1996	1998	2000	2002	2003	2004	2005
Estimate (-2.5 - + 2.5)	+0.22	+0.04	-0.41	-0.71	-0.69	-0.44	-0.45
Percentile Rank (0-100)	57.4	44.3	31.5	23.6	23.6	36.9	36.6
Standard Error	0.23	0.27	0.29	0.18	0.16	0.17	0.16
Number of surveys/polls	7	6	8	10	10	11	11

Rule of Law	1996	1998	2000	2002	2003	2004	2005
Estimate (-2.5 - + 2.5)	-0.41	-1.06	-1.03	-0.97	-0.89	-0.82	-0.87
Percentile Rank (0-100)	41.1	13.5	12.0	18.3	21.6	23.1	20.3
Standard Error	0.16	0.19	0.15	0.13	0.12	0.12	0.13
Number of surveys/polls	9	10	14	16	15	17	15
Control of Corruption	1996	1998	2000	2002	2003	2004	2005
Estimate (-2.5 - + 2.5)	-0.49	-1.03	-1.05	-1.19	-1.01	-0.96	-0.86
Percentile Rank (0-100)	34.1	9.3	10.8	6.9	13.2	15.2	21.2
Standard Error	0.20	0.17	0.15	0.13	0.13	0.12	0.12
Number of surveys/polls	7	9	12	13	13	15	13

Source: Kaufmann, Kraay and Mastruzzi (2006)

FIGURE 5.1 – Governance in Indonesia (1996, 2000, 2002-2005)



Source: Kaufmann, Kraay and Mastruzzi (2006), <http://info.worldbank.org/governance/kkz2005/>

Note: Color Coding: 0th – 10th percentile: dark red; 10th – 25th percentile: pink; 25th – 50th percentile: orange; 50th – 75th percentile: yellow; 75th – 90th percentile: light green; 90th – 100th percentile: dark green.

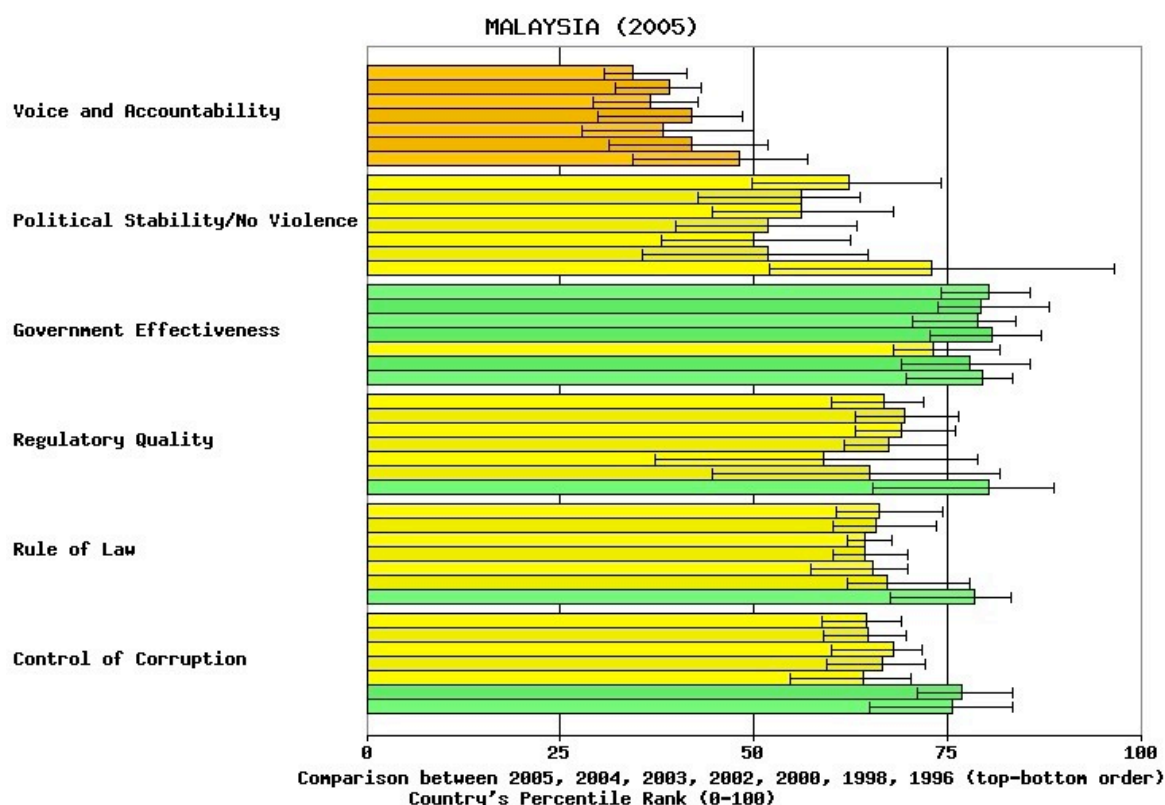
TABLE 5.2 – Governance in Malaysia

Voice and Accountability	1996	1998	2000	2002	2003	2004	2005
Estimate (-2.5 - + 2.5)	-0.11	-0.22	-0.35	-0.30	-0.39	-0.35	-0.41
Percentile Rank (0-100)	48.1	42.0	38.2	42.0	36.7	39.1	34.3
Standard Error	0.22	0.24	0.23	0.17	0.16	0.14	0.14
Number of surveys/polls	5	6	8	10	10	12	10
Political Stability/No Violence	1996	1998	2000	2002	2003	2004	2005
Estimate (-2.5 - + 2.5)	+0.77	+0.18	+0.15	+0.24	+0.32	+0.24	+0.49
Percentile Rank (0-100)	73.1	51.9	50.0	51.9	56.1	56.1	62.3
Standard Error	0.29	0.25	0.24	0.20	0.22	0.20	0.21
Number of surveys/polls	6	7	10	10	10	12	10

Government Effectiveness	1996	1998	2000	2002	2003	2004	2005
Estimate (-2.5 - + 2.5)	+0.75	+0.73	+0.71	+0.95	+0.85	+0.95	+1.01
Percentile Rank (0-100)	79.5	78.0	73.2	80.9	78.9	79.4	80.4
Standard Error	0.19	0.25	0.19	0.16	0.16	0.16	0.15
Number of surveys/polls	7	8	10	11	11	12	11
Regulatory Quality	1996	1998	2000	2002	2003	2004	2005
Estimate (-2.5 - + 2.5)	+0.80	+0.49	+0.28	+0.53	+0.59	+0.57	+0.50
Percentile Rank (0-100)	80.4	65.0	59.1	67.5	69.0	69.5	66.8
Standard Error	0.23	0.27	0.32	0.18	0.17	0.17	0.17
Number of surveys/polls	7	7	7	9	9	10	10
Rule of Law	1996	1998	2000	2002	2003	2004	2005
Estimate (-2.5 - + 2.5)	+0.80	+0.57	+0.39	+0.48	+0.48	+0.55	+0.58
Percentile Rank (0-100)	78.5	67.3	65.4	64.4	64.4	65.9	66.2
Standard Error	0.16	0.18	0.15	0.13	0.13	0.12	0.13
Number of surveys/polls	9	11	14	15	14	16	14
Control of Corruption	1996	1998	2000	2002	2003	2004	2005
Estimate (-2.5 - + 2.5)	+0.57	+0.67	+0.21	+0.33	+0.36	+0.29	+0.27
Percentile Rank (0-100)	75.6	77.0	64.2	66.7	68.1	64.7	64.5
Standard Error	0.20	0.16	0.17	0.14	0.13	0.13	0.12
Number of surveys/polls	7	10	11	12	12	14	12

Source: Kaufmann, Kraay and Mastruzzi (2006)

FIGURE 5.2 – Governance in Malaysia (1996, 2000, 2002-2005)



Source: Kaufmann, Kraay and Mastruzzi (2006), <http://info.worldbank.org/governance/kkz2005/>

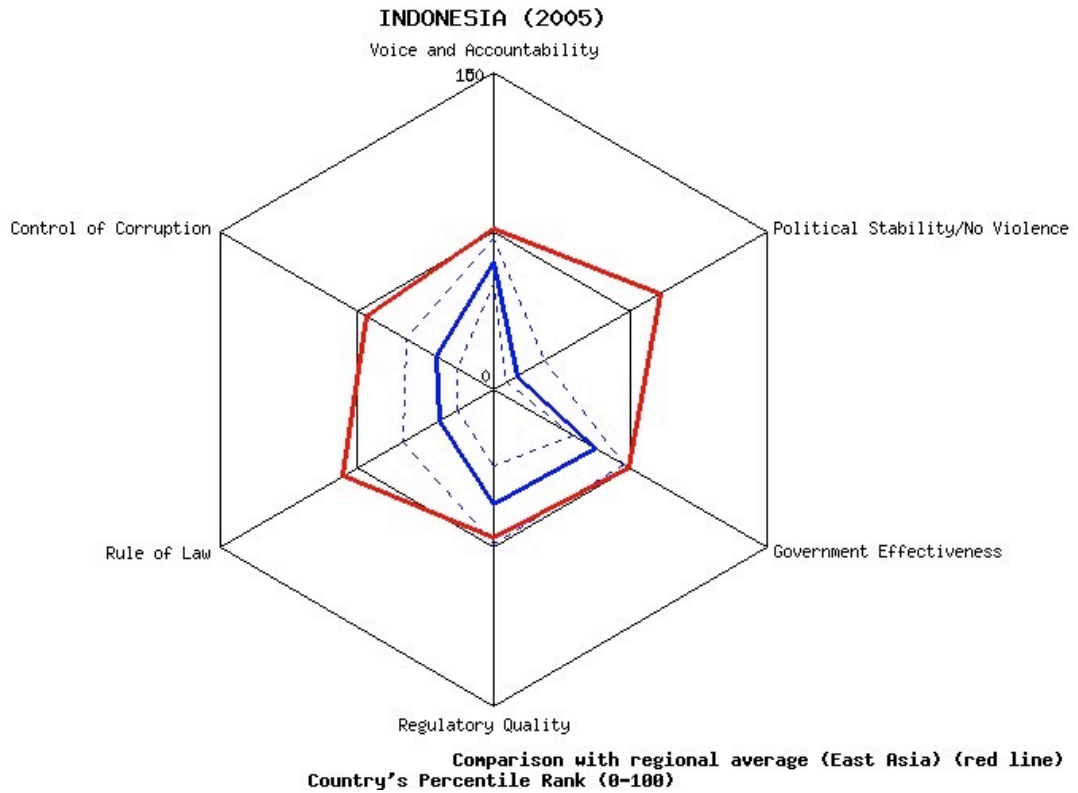
Note: Color Coding: 0th – 10th percentile: dark red; 10th – 25th percentile: pink; 25th – 50th percentile: orange; 50th – 75th percentile: yellow; 75th – 90th percentile: light green; 90th – 100th percentile: dark green.

As can be seen from Table 5.1 and Table 5.2., the percentile ranks of Indonesia are lower compared to Malaysia. It can also be observed that in both countries voice and accountability are negative, meaning that the possibility of participation of citizens in choosing their government, freedom of expression and association are relatively bad. Overall Malaysia outperforms Indonesia from the period 1996 – 2006 this is evident not only from the tables but also when one studies Figures 5.1 and 5.2. Examining Figures 5.2 – 5.7 below other comparisons which can be made it can be seen that

- Compared to regional averages (East Asia): Indonesia performs below the regional average, while Malaysia performs better in four indicators (Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption), although in one case it is at least as good (Political Stability/No Violence) and in one case Indonesia is below the regional average (Voice and Accountability).
- Regarding income category averages: Indonesia is performing as good as the group of lower middle-income country averages for one indicator (Voice and Accountability), for two indicators almost as good (Government Effectiveness and Regulatory Quality) and for the other indicators worse than the average (Political Stability/No Violence, Rule of Law, and Control of Corruption). On the contrary Malaysia is compared with the group of higher middle income country averages and performs for five indicators almost or better than the average (Political Stability/No Violence, Government Effectiveness, Regulatory Quality, Rule of Law, Control of Corruption) and in one case below average (Voice and Accountability).
- comparing Indonesia and Malaysia: Indonesia has lower ranks for five indicators and is performing better for the indicator 'Voice and Accountability' also evident from Tables 5.1 and 5.2 above. Looking at the bar charts above it can be seen, that 'Voice and Accountability' is the weakest indicator for Malaysia. While for Indonesia this indicator is in the same percentile group since 2000. The relatively low performance of Malaysia for 'Voice and Accountability' takes into account the political landscape (i.e. large coalition and small opposition) and freedom of expression/free media.

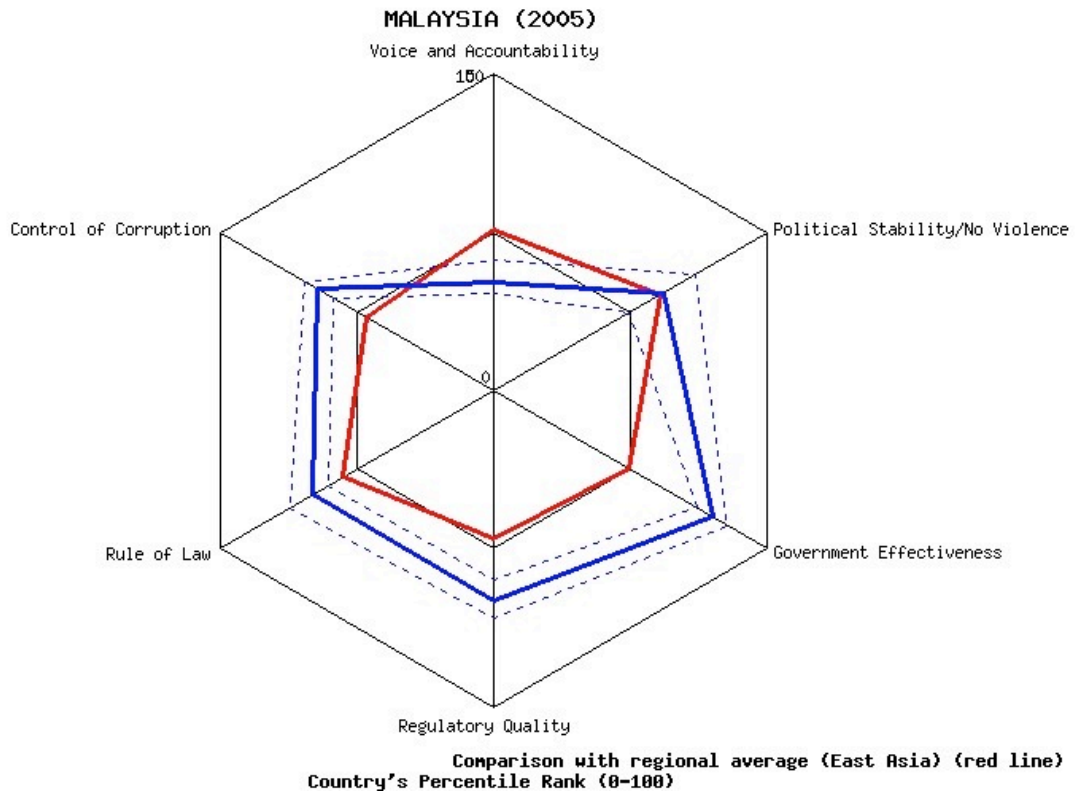
These indicators can be seen as a guideline for reviewing different countries but are not free of errors and should therefore be used with caution.

FIGURE 5.3 – Governance: Indonesia vs. Regional Average (2005)



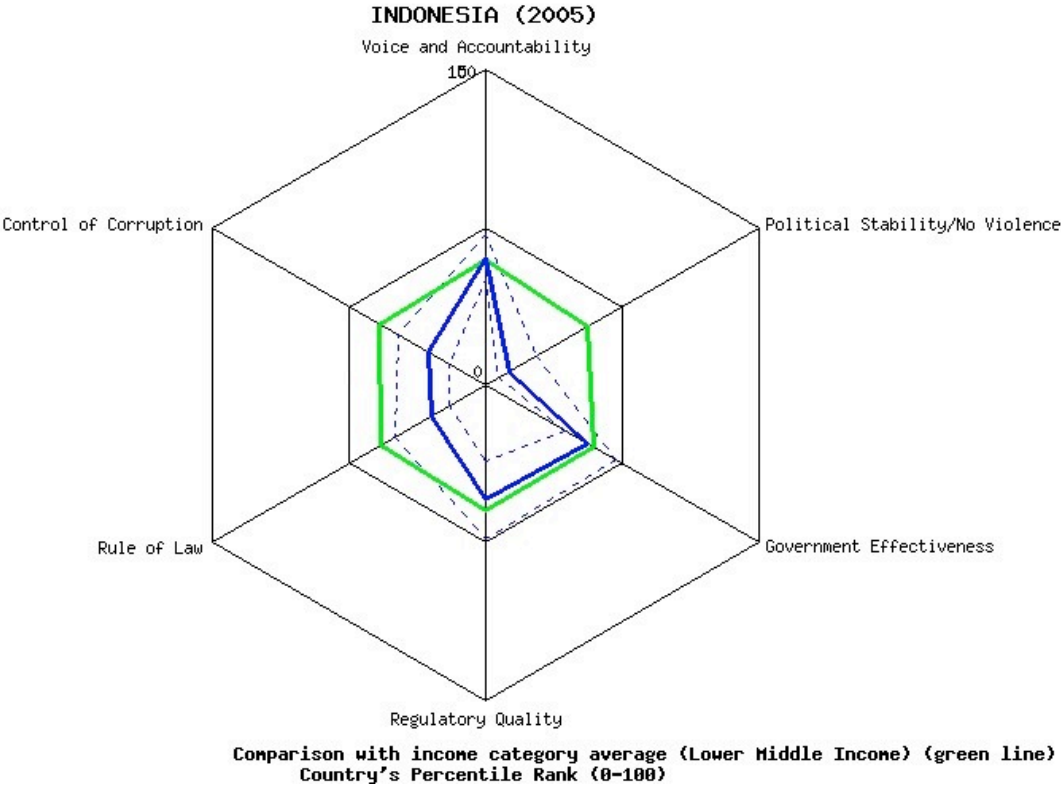
Source: Kaufmann, Kraay and Mastruzzi (2006), <http://info.worldbank.org/governance/kkz2005/>

FIGURE 5.4 – Governance: Malaysia vs. Regional Average (2005)



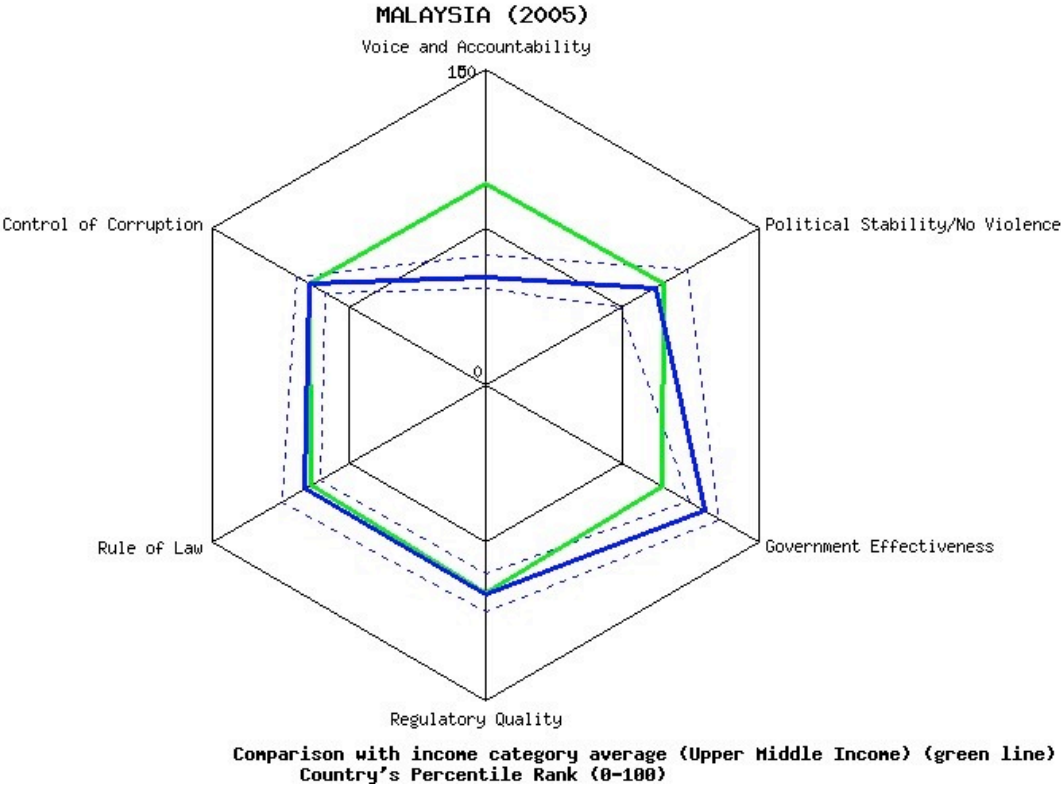
Source: Kaufmann, Kraay and Mastruzzi (2006), <http://info.worldbank.org/governance/kkz2005/>

FIGURE 5.5 – Governance: Indonesia vs. Income Category Average (2005)



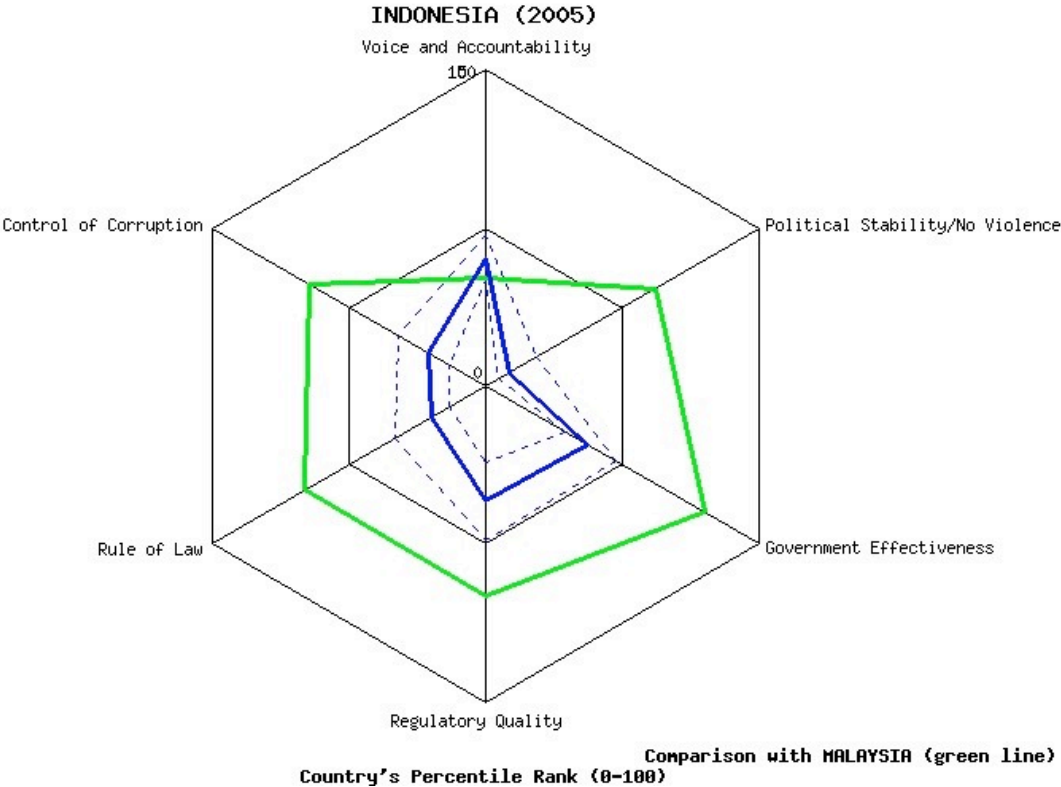
Source: Kaufmann, Kraay and Mastruzzi (2006), <http://info.worldbank.org/governance/kkz2005/>

FIGURE 5.6 – Governance: Malaysia vs. Income Category Average (2005)



Source: Kaufmann, Kraay and Mastruzzi (2006), <http://info.worldbank.org/governance/kkz2005/>

FIGURE 5.7 – Governance: Indonesia vs. Malaysia (2005)



Source: Kaufmann, Kraay and Mastruzzi (2006), <http://info.worldbank.org/governance/kkz2005/>

5.2 Corporate Governance

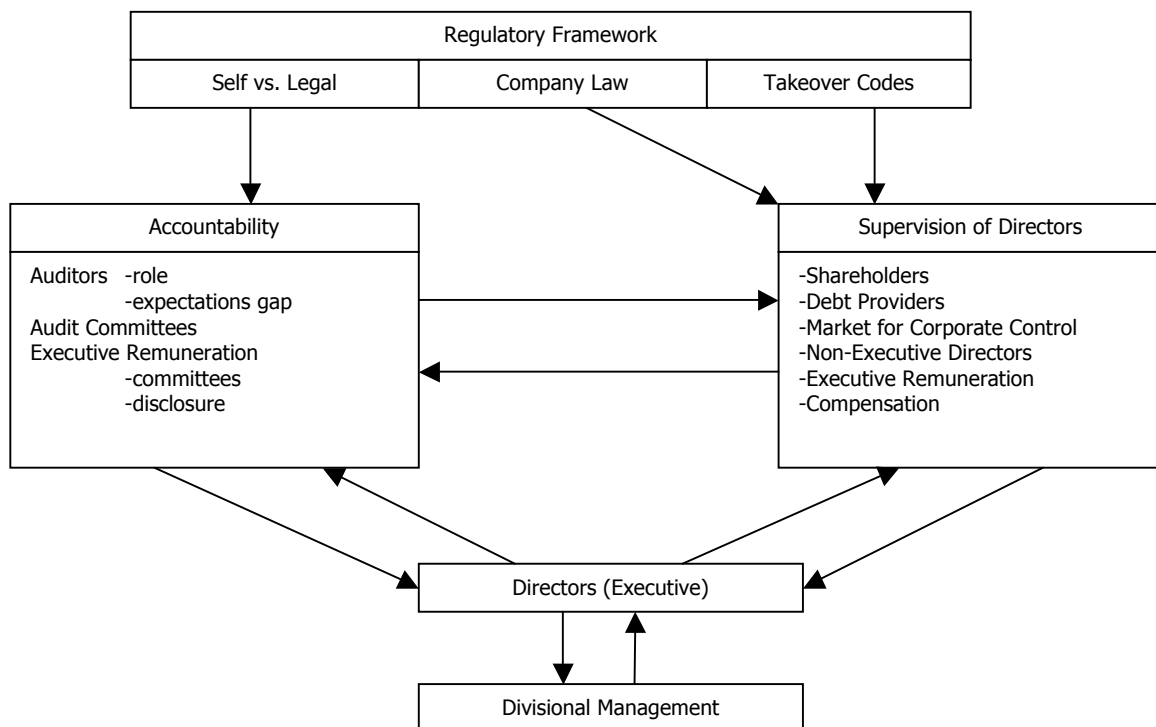
A comparison of economies should not be made without looking into corporate governance issues in the countries analyzed. Corporate governance is a highly debated issue discussed on both the international (e.g. OECD) and national level. East Asian economies became more aware of corporate governance after the East Asian Crisis but as can be seen from recent cases in the USA or Europe (e.g. Enron, Arthur Anderson, and WorldCom) the topic is important in both emerging and developed markets.

After a short introduction, developments in Indonesia and Malaysia over the past years will be discussed above and with respect to other Asian emerging economies.

5.2.1 Corporate Governance: Introduction

Corporate governance could not be defined by one single word as it consists of a set of different actions, rules and interactions. Figure 5.1 shows a simple framework of corporate governance showing the sets of activities.

FIGURE 5.8 – Framework of Corporate Governance



Source: Keasy and Wright (1997), p. 3.

Key elements of corporate governance include supervision (monitoring) of management performance and ensuring the accountability of management to shareholders and other stakeholders (Keasy and Wright, 1997, p.2). The supervision and accountability of

directors is needed due to the so-called divorce between ownership and control in large enterprises with diffuse ownership (Hart, 1995). Audit committees usually provide supervision from outside the companies. The focus is primarily on the review of financial statements and internal procedures. Internal supervision and accountability are more difficult but include self-regulation and internal audit committees.

5.2.1.1 The OECD and the Initiatives on Corporate Governance

The OECD plays an important role in the establishment and introduction of Corporate Governance rules in all countries around the world. The OECD published in 1999 its 'Principles on Corporate Governance', the first international code of good corporate governance approved by member countries. The principles are neither prescriptive nor binding but are rather recommendations and are applied as a benchmark for good practice in corporate governance. In 2002 the Principles were reviewed and in April 2004 governments approved a revised version of the OECD Principles of Corporate Governance. These principles should provide assistance both in developed and emerging markets. The revised version of the Principles reinforces the role of shareholders and stresses the role that institutional investors can play in monitoring company performance and conveying to the board of a company. Additionally, the principles stress a minimum level of transparency and disclosure of companies as well as the requirement of measures for independence and transparency in order to limit possible conflicts of interest. Implementation of good corporate governance rules should lead to lower costs of capital for companies. The OECD stresses in the Preamble of the Principles of Corporate Governance 2004 that there does not exist one single model of good corporate governance as jurisdictions, ethics and macroeconomic environment differ across the countries. Nevertheless, OECD encourages regional round table discussion in order to harmonize corporate governance regulations across the countries but with focus to the local environment. The OECD Principles were identified by the Financial Stability Forum as one of 12 core standards for sound financial systems and they were endorsed by the International Organisation of Securities Commissions (IOSCO) as well as by private-sector bodies (e.g. International Corporate Governance Network).

There can be identified six key areas in the OECD Principles (OECD, 2004):

I. Ensuring the basis for an effective corporate governance framework

The corporate governance framework should promote transparent and efficient markets, be consistent with the rule of law and clearly articulate the division of responsibilities among different supervisory, regulatory and enforcement authorities.

II. The rights of shareholders and key ownership functions

The corporate governance framework should protect and facilitate the exercise of shareholders' rights.

III. The equitable treatment of shareholders

The corporate governance framework should ensure the equitable treatment of all shareholders, including minority and foreign shareholders. All shareholders should have the opportunity to obtain effective redress for violation of their rights.

IV. The role of stakeholders in corporate governance

The corporate governance framework should recognise the rights of stakeholders established by law or through mutual agreements and encourage active co-operation between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises.

V. Disclosure and transparency

The corporate governance framework should ensure that timely and accurate disclosure is made on all material matters regarding the corporation, including the financial situation, performance, ownership, and governance of the company.

VI. The responsibilities of the board

The corporate governance framework should ensure the strategic guidance of the company, the effective monitoring of management by the board, and the board's accountability to the company and the shareholders.

Other activities by the OECD for improvement of corporate governance include the creation of the Steering Group on Corporate Governance and the Regional Corporate Governance Roundtables in co-operation with the World Bank (Asia, Latin America, Eurasia, Southeast Europe and Russia). The latter one used the Principles as a framework for policy dialogue for the promotion of corporate governance and reforms. The results of these dialogues are regional White Papers in which common policy objectives and recommendations for policy actions are put down. The White Paper on Corporate Governance in Asia was first issued in 2003 after the meeting of the roundtable from 1999 to 2003 and in co-operation with the World Bank, the Asian Development Bank, the Government of Japan and the Global Corporate Governance Forum. The White Paper on Corporate Governance in Asia was designed to deal with the shortcomings leading to the East Asian financial crisis but it is like the OECD Principles not binding. The priorities of reform are the following (OECD, 2003):

Priority 1: Public and private sector institutions should continue to raise awareness among companies, directors, shareholders and other interested parties of the value of good corporate governance.

Priority 2: All jurisdictions should strive for effective implementation and enforcement of corporate-governance laws and regulations.

Priority 3: Asian Roundtable Countries should work towards full convergence with international standards and practices for accounting, audit and non-financial disclosure. Where, for the time being, full convergence is not possible, divergences from international standards and practices (and the reasons for these divergences) should be disclosed by standards setters; company financial statements should repeat or reference these disclosures where relevant to specific items.

Priority 4: Boards of directors must improve their participation in strategic planning, monitoring of internal control systems and independent review of transactions involving managers, controlling shareholders and other insiders.

Priority 5: The legal and regulatory framework should ensure that non-controlling shareholders are protected from exploitation by insiders and controlling shareholders.

Priority 6: Governments should intensify their efforts to improve the regulation and corporate governance of banks.

The following meetings of the Roundtable will focus on implementation and enforcement issues. The Roundtable set itself a two-year time period for a study of stocktaking developments in Asia. Two key points are stressed in Asia: the protection of minority shareholder rights as in Asia a high share of corporations is dominated by the government or families, and the strengthening of banks.

The next paragraphs will show the main results of a survey conducted in 2005 in East Asia (Cheung and Jang, 2005) which evaluated Corporate Governance in the following countries: China, Hong Kong, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand. The survey was split in two parts: one part on rules and regulations and the second part on investor perception. As a main result the authors point out, that there are significant differences in the evaluation of results of the two surveys: the rankings given by the evaluation of rules and regulations are not consistent with rankings that investors gave for the quality of corporate governance practices.

Furthermore, the ranking of the two surveys are not significantly correlated, but the correlation between them could even become negative with statistical significance by using a different evaluation measurement system of rules and regulations. Therefore the authors conclude that this implies significant differences between what the rules and regulations intend and how corporate governance is practiced by corporations. The authors conclude that corporate governance rules and regulations are not enforced in some economies as they should and that economies which practice poor corporate governance have introduced new rules and regulations in order to improve corporate governance.

Most rules and regulations were only introduced after the East Asian crisis in 1997 and therefore it can be stated that the East Asian economies made a significant effort to improve their corporate governance practices.

The following differences and commonalities in the economies, focusing on Malaysia and Indonesia, can be identified (Cheung and Jang, 2005):

1. Rights of shareholders

The following elements can be found in both economies:

- Audited annual reports, and un-audited semi-annual reports and quarterly financial statements have to be disclosed;

- There is a minimum period of notice for shareholder meetings;
- Proxy voting is allowed in all economies;
- Multiple voting shares are not allowed;
- Shareholders have the right to vote on the following matters: appointment/removal of directors, authorizing share capital changes, amendments to the company's articles or statute, major corporate transactions (acquisitions, disposals, mergers, takeovers);
- Shareholders can nominate candidates for the position of director;
- Shareholders can propose an agenda item at shareholder meetings;
- Existence of non-voting shares;
- Transactions with related parties exceeding a certain amount should be approved by shareholders in both countries;
- Derivative lawsuits are allowed;
- Shareholders can vote on the appointment/removal of auditors.

Differences arise in the following areas:

- The number of days constituted by law in order to notice for a shareholder meeting;
- Mail voting is allowed in Indonesia only;
- Class action lawsuits are only allowed in Malaysia.

2. Equitable treatment of shareholders

Common features are:

- Law defines who insiders are;
- Insiders are required to disclose their transactions;
- Law explicitly defines penalties attached to the offence of insider trading regulations;
- Fines and imprisonment are part of the penalty for insider trading;
- The legal and regulatory framework requires disclosure of related party transactions;
- Cumulative voting in the election of directors.

Difference:

- Indonesia does not attach any civil liability to the offence of insider trading.

3. Role of stakeholder

Although there are four main factors that are to be considered in this topic the economies have sometimes similar and sometimes different regulations:

- An ESOP or another long-term employee incentive plan is not required in Indonesia and Malaysia;

- Details of the safety and welfare of employees do not have to be disclosed in both countries;
- The wage and benefits of employees take the first priority in the event of insolvency in Indonesia while it is not clear whether this has first priority in Malaysia;
- Indonesia requires that companies disclose any event that is related to environmental issues while this is not true in Malaysia.

4. Disclosure and transparency

Commonalities are:

- The following information has to be included in the annual report of a company: general information on the company, main business, audited annual accounts, basis of board remuneration, consolidated financial reports, information on corporate governance (CG code, CG structure and practice);
- The shareholdings of directors have to be disclosed;
- Directors are required to report their transactions in the stock of the company;
- Financial statements of companies have to be audited externally;
- Management shareholdings do not have to be disclosed.

Differences are:

- In Malaysia shareholders cannot obtain minutes of board meetings;
- In Malaysia the top 10 shareholders must be disclosed in addition to any shareholders with 5 per cent or more of share on the company;
- Rotation of audit firms is mandatory in Indonesia;
- Attendance records of board members are not disclosed in Indonesia.

5. Board responsibilities

Commonalities:

- The remuneration of directors has to be disclosed in both countries;
- Requirement of an audit committee;
- The presence of outside directors (or independent directors) on the board is required;
- There are no regulations on a minimum number of board meetings in both countries.

Differences:

- Only in Malaysia a code of ethics or business conduct is required;
- Malaysia requires continuing training or education for board directors;

- The disclosure of remuneration of outside directors (independent directors) is only required in Malaysia;
- Malaysia has guidelines on the number of corporate boards on which an individual executive director may serve.

Tables 5.3 to 5.5 show the results of this first survey of corporate governance rules and regulations (for more details of methodology and weights used please consult the paper of Cheung and Jang, 2005). Details of the questionnaire and answers can be found in the appendix (Table A5.1).

TABLE 5.3 – Scores of Five Areas of Corporate Governance for East Asian Countries

Rank		A – Rights of Shareholders	B – Equitable Treatment of Shareholders	C – Role of Shareholders	D – Disclosure and Transparency	E – Board Responsibilities	Sum
1	China	0.766	1.0	0.5	0.778	0.722	3.766
2	Philippines	0.865	0.667	0.5	0.833	0.722	3.587
3	Korea	0.611	0.917	0.5	0.778	0.519	3.325
4	Thailand	0.639	1.0	0.5	0.528	0.426	3.093
5	Indonesia	0.782	0.938	0.5	0.5	0.315	3.035
6	Taiwan	0.865	0.917	0	0.722	0.250	2.754
7	Malaysia	0.698	0.75	0	0.528	0.648	2.624
8	Hong Kong	0.778	0.75	0	0.389	0.648	2.565
9	Singapore	0.833	1.0	0	0.528	0.204	2.565

Source: Cheung and Jang, 2005

From Table 5.3 it can be seen that Indonesia ranks higher in the following areas: rights, equitable treatment and role of shareholders. While Malaysia ranks higher in the areas of disclosure and transparency and board responsibilities. Overall, Indonesia has a higher ranking, in fifth position, in comparison to Malaysia in seventh. Looking at the results of the investor perception i.e. the results of the answers of fund managers and analysts, a different ranking may be observed. Now Malaysia ranks ahead of Indonesia.

TABLE 5.4 – Total Score for all 10 Questions Asked on Investor Perception in East Asia

Ranking	Economy	Total	Fund manager	Analysts
1	Singapore	40.18	40.88	38.66
2	Hong Kong	39.24	39.59	38.46
3	Taiwan	26.26	27.35	23.77
4	Korea	26.11	25.12	28.25
5	Thailand	25.64	25.88	25.09
6	Malaysia	25.25	26.71	22.04
7	Philippines	19.75	21.06	16.34
8	Indonesia	17.60	17.99	16.58
9	China	17.03	16.94	17.21
	Number of people questioned	25	17	8

Source: Cheung and Jang, 2005

Another survey is conducted annually by the Asian Corporate Governance Association (ACGA), an independent, non-profit membership organisation funded by various sponsors

and corporate members (e.g. Citigroup Asset Management, Asia; CLSA Asia-Pacific Markets; ING Asia-Pacific; Standard and Poor's; Deloitte Touche Tohmatsu; Fidelity Investments Management). The goal of the organization is to provide better insight into the interested parties on corporate governance in Asia and it has initiated a confidential 'Investor Discussion Group' on corporate governance for institutional investors in Asia. The secretariat is located in Hong Kong.

ACGA supervises ten markets in Asia (China, Hong Kong, India, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan and Thailand) and includes more than 400 companies; from each market the top 30-50 companies are selected. The ACGA has been working together with CLSA since 2003, the Asian investment-banking arm of Cr dit Agricole, on the country rankings, i.e. the development of the scoring methodology and the templates of questions of which CLSA comments on. In close cooperation with the CLSA, research heads in each market are required to answer the questions and to ensure the consistency of the approach across the ten markets. The methodology consists of questions which can be put into five categories:

- corporate governance rules and regulations,
- enforcement (public and private),
- political and regulatory environment,
- adoption of international accounting standards (IGAAP), and
- corporate governance culture.

During the past three years the methodology was changed, i.e. the questionnaire was tightened and specified. Results of previous surveys can be seen from Table 5.5.

TABLE 5.5 – Rankings of East Asian Countries on Corporate Governance (2000-2004)

Country ¹	2000	2001	2002	2003 ²	2004 ³
Singapore	7.5	7.4	7.4	7.7	7.5
Hong Kong	7.1	6.8	7.2	7.3	6.7
India	5.6	5.4	5.9	6.6	6.2
Malaysia	3.2	3.7	4.7	5.5	6.0
Korea	5.2	3.8	4.7	5.5	5.8
Taiwan	5.7	5.3	5.8	5.8	5.5
Thailand	2.8	3.7	3.8	4.6	5.3
Philippines	2.9	3.3	3.6	3.7	5.0
China	3.6	3.4	3.9	4.3	4.8
Indonesia	2.9	3.2	2.9	3.2	4.0

Notes: ¹ Ranked in descending order according to 2004 score; scores out of 10. ² First year in which ACGA collaborated with CLSA. ³ Introduced more rigorous scoring methodology in 2004.

Source: ACGA, 2005.

From Table 5.5 above the scores in 2004 are in general lower than previous years, as a consequence of different factors such as: switching to a stricter methodology, certain weaknesses in the detail of laws and regulations became more apparent; there is a gap

between national accounting policies and practices; some major corporate governance best practices are not yet fully implemented among listed companies.

Table 5.5 shows that, with the exception in the year 2000, Indonesia has always ranked on the last position while Malaysia improved and maintained a middle ranking position.

In general ACGA (2005) shows the following strengths of corporate governance issues in Asian markets:

- there has been improvement in financial reporting standards in most markets,
- the rules on disclosure of 'material transactions' and substantial ownership are generally good,
- voting by poll is an issue in some markets, while a rule in most markets,
- there are some plans of legislative improvements in some countries (e.g. China),
- regulators are making larger efforts in the enforcement of regulations,
- supervision of intermediaries (e.g. brokers, advisors) and initial public offerings (e.g. quality of prospectus disclosure) has increased,
- stock exchanges have become a good source of information on listed companies although information available is not necessarily in English,
- there seems that the degree of media freedom to report on corporate governance issues does appear to rise,
- looking at corporate governance culture there is a tendency that in addition to the large caps a small group of mid-caps is gaining reputation for good governance,
- the remuneration of independent directors is on the rise,
- there is an improvement in internal controls and the practice of risk management,
- some brave companies begin to appoint independent chairmen.

The ACGA highlights as well some weak points and gives some recommendations (ACGA, 2005):

- problematic rules and procedures (e.g. pre-emption rights, voting systems, shareholder meetings) should be reviewed with market participants,
- if mandatory rules are sound (e.g. audit committees) it should be ensured that they are implemented properly,
- there should be an improvement of the enforcement track record in order to get a higher trust in the stock market,

- all major laws and regulations should be translated and easily accessible.

5.2.2 Corporate Governance in Indonesia and Malaysia

The following section is concerned with Corporate Governance in Indonesia and Malaysia. From Tables 5.3 – 5.5 above and the tables which will follow in this section it can be seen that both countries are not leaders in corporate governance issues in Asia, with Malaysia in the middle-field and Indonesia ranking on the last position in the regional comparison. This absence is not due to the inadequate regulations in neither Indonesia nor Malaysia but rather due to enforcement. In Indonesia enforcement of existing rules and regulations seems to be very low compared to other Asian economies.

TABLE 5.6 – Corporate Governance Ratings in Southeast Asia (2001)

	Discipline	Transparency	Independence	Accountability	Responsibility	Fairness	Social Awareness
Indonesia	36	57	22	21	34	53	37
Malaysia	49	63	67	38	52	70	60
Philippines	41	44	46	34	36	41	78
Singapore	56	67	81	45	70	76	54
Thailand	36	65	43	63	47	70	65

Notes:

Discipline – management’s commitment to emphasize shareholder value and financial discipline

Transparency – the ability of outsiders to access the true position of a company

Independence – the board of directors’ independence of controlling shareholders and senior management

Accountability – the accountability of the management to the board of directors

Responsibility – the effectiveness of the board to take necessary measures in case of mismanagement

Fairness – the treatment of minority shareholders received from majority shareholders and management

Social awareness – the company’s emphasis on ethical and socially responsible behaviour

Source: CLSA (2001).

5.2.2.1 Corporate Governance in Indonesia

As is evident from Tables 5.5 and 5.6 above the level of corporate governance in Indonesia is very low compared to other countries in the region. Although Indonesia was very fast in passing new laws, amending existing ones and to setting up new institutions (regulatory institutions and constitutional court) enforcement is lagging behind (Simanjuntak, 2005, p.162). Indonesia has adopted over the past two decades many regulations that should promote corporate governance like the adoption of accounting and auditing standards based on international standards, the enactment of a new bankruptcy law, and the establishment of a new commercial court and the publication of a national Code for Good Corporate Governance (CGCG). Nevertheless, Indonesia lags behind other countries in the region as the enforcement is very low (Rosser, 2005, p. 180).

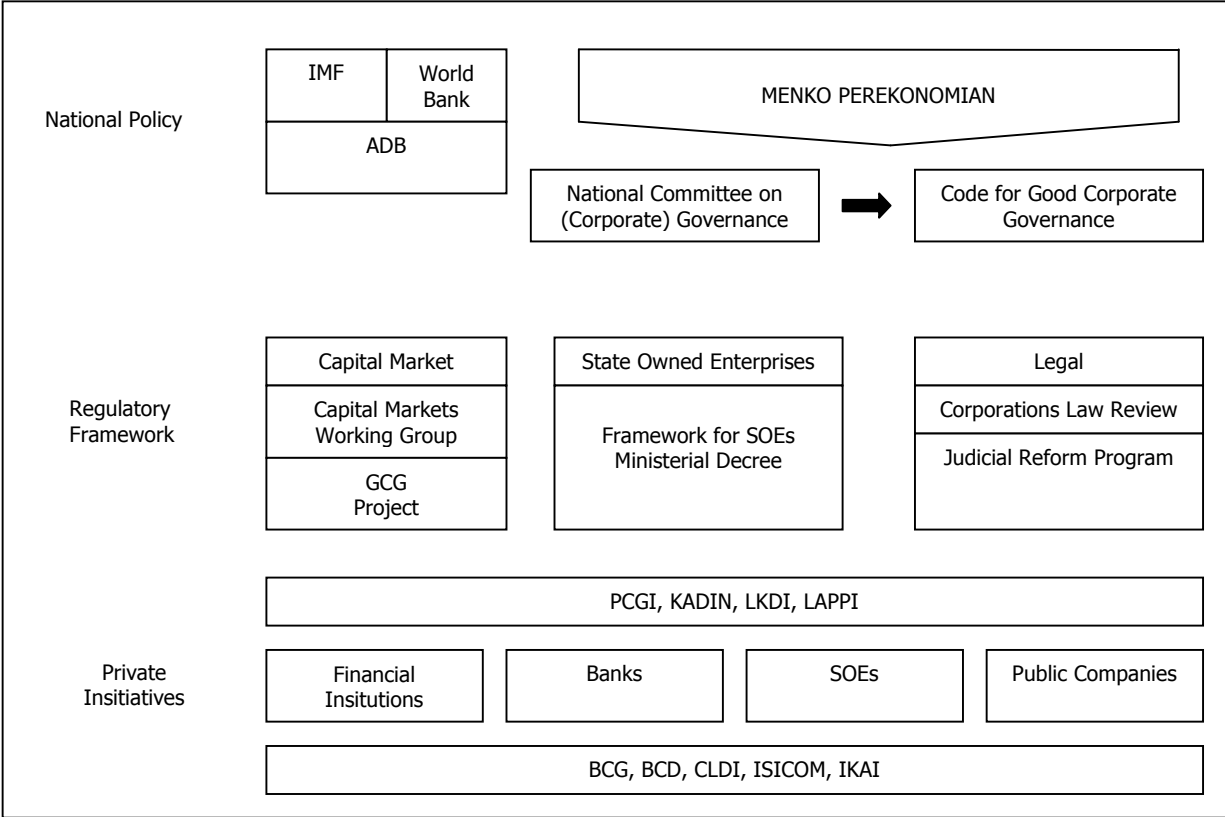
Corporate Governance in Indonesia is split in three levels (Figure 5.9 below; Daniri, 2005):

1. *National Policy*: Through the Coordination of the Ministry on Economy the government has issued the Ministry Decree in 1999 which sets up the National

Committee on Corporate Governance (renamed in 2004 into National Committee on Governance (NCG)). During the period of 1999-2004 the NCG published a Code for Good Corporate Governance followed by the publication of Code for Corporate Governance in Banking Sectors, Code for Audit Committee, and Code for Independent Commissioners in 2004. The 2009 destination statement of NCG is: 'Indonesia placed in top quartile of international rating of good governance'.

2. *Regulatory framework:* Projects were conducted by Bapepam (Indonesia Capital Market Supervisory Agency) together with self regulatory organizations of the capital market like the Jakarta Stock Exchange, Surabaya Stock Exchange, Kustodian Sentral Efek Indonesia (KSEI; the central securities depository institution in Indonesia capital market) and Kliring Penjaminan Efek Indonesia (KPEI) (a clearing and guarantee body in the Indonesian capital market) with the support of the World Bank and ADB (projects include: JSX Pilot project, ACORN, ASEM, ROSC). In parallel the SOEs ministry has developed a framework for good corporate governance implementation and there were some reviews related to corporation law and regulation.
3. *Private initiatives:* There are some voluntary organizations focusing on corporate governance issues, which provide education, training, rating, research and advocacy (Forum for Corporate Governance in Indonesia (FCGI), Indonesian Institute for Corporate Directorship (IICD), Indonesian Institute for Corporate Governance (IICG), Ikatan Komite Audit Indonesia/Indonesian Institute of Committee Audit (IKAI), Lembaga Advokasi Proxy Proteksi Investor/Indonesian Institution for Shareholder Activism (LAPPI), Indonesian Society for Independent Commissioners (ISICOM) and Lembaga Komisaris dan Direktur Indonesia/Indonesian Institute for Commissioners and Directors (LKDI)).

FIGURE 5.9 – The Indonesian Agenda on Corporate Governance Implementation



Source: Daniri, 2005

In addition to these initiatives the government has introduced in collaboration with the business community good corporate governance regulations: for the sector of SOEs based on Ministerial Decree No. 117/M-MBU/2002 and for the capital markets based on regulations and guidelines issued by the Jakarta Stock Exchange. Furthermore, BAPEPAM plays an active role in the implementation of good corporate governance principles in Indonesia through the issue of rules and policies that are related to good corporate governance (regarding transparency, implementation of fairness principle and responsibility and accountability principles). Other laws that promote good corporate governance in Indonesia are the enactment of the new Central Bank Law in 1998, Anticorruption Law in 1999, the Antimonopoly Law in 1999, the Oil and Gas Law in 2001 and SOEs Law and SOEs privatization in 2003 as well as amendments of the Corporate Law, Company Registry Law, Capital Market Law and its implementing rules. The Judicial Reform Programs include the establishment of a Commercial Court in 1997 and the establishment of Capital Market Arbitration agency in 2001 (Daniri, 2005).

As it was recognized in Indonesia that the implementation of good corporate governance was still lagging behind other countries in the region the NCG was revitalized in 2004 to socialize, educate, and advocate good corporate governance not only in the private sector

but also in the public sector. NCG is positioned in such a way to implement corporate governance holistically in collaboration with all stakeholders. In order to do this Indonesia wants to adopt the recommendations of the World Bank Policy Recommendation of ROSC (based on OECD Principles of Corporate Governance) with the following the major points (Daniri, 2005):

1. Minority shareholders must be given voting rights to nominate members of board of commissioners and directors;
2. Public companies are recommended to have Nomination and Remuneration Committee;
3. It is recommended to adopt the international standard on financial reporting;
4. Steps to promote the interest of minority shareholders should be done;
5. The market surveillance of BAPEPAM and JSX should be strengthened;
6. Legal liability of accountants should be confirmed;
7. The limit date of annual reports submission should be shortened;
8. The rights and accountability of independent commissioners should be clarified;
9. The code on independence should be defined further;
10. There must be clear definitions of transactions that may have conflict of interest with the directors.

As mentioned above, in 2000 a Code of Corporate Governance was introduced which was then revised in 2001 (the full report can be found in the Appendix).

As can be seen from the short list above, corporate governance in Indonesia is regulated but there is a lack of enforcement in the country. By studying the Table 5.7 shows the rating history of CLSA over the past four years, while Table 5.8 shows the changes from 2003 to 2004 rating.

TABLE 5.7 - Indonesian Ratings for Macro-Determinants of Corporate Governance (2001-2004)

	2001 (Rating 1-10)	2002 (Rating 1-10)	2003 (Rating 1-10)	2004 (Rating 1-10)
Rules and regulations	4	4	4.5	5.3
Enforcement	2	1	1.5	2.7
Political and regulatory environment	5	5	3.8	4.0
Adoption of IGAAP	4	4	6.0	5.0
Institutional mechanisms and CG Culture	2	2	2.7	2.5

Source: CLSA – ACGA.

TABLE 5.8 – Indonesian Ratings for Macro-Determinants of Corporate Governance (2003 and 2004 with Comments)

	2004 (Rating 1-10)	2003 (Rating 1-10)	Comment
Rules and regulations	5.3	4.5	Rules continue to improve gradually. Reporting deadlines shorter than in some more advanced markets, but in general, disclosure rules and board accountability are weak.
Enforcement	2.7	1.5	Higher score largely due to our new methodology, which takes into account private enforcement by the market.
Political and regulatory environment	3.8	4.0	No improvement in 2004. Implementation, government commitment to CG, and the legal system remain weak.
Adoption of IGAAP	6.0	5.0	Accounting rules are improving. Some efforts to strengthen independence of external auditors and regulation of the accounting profession.
Institutional mechanisms and CG Culture	2.7	2.5	CG culture is being implemented, but with many loopholes.

Source: CLSA – ACGA (2004).

5.2.2.2 Corporate Governance in Malaysia

Corporate Governance played a role in Malaysia even before the East Asian Crisis in 1997/1998. In 1993 a watchdog for Malaysia's stock market introduced listing requirements that mandated all publicly listed companies to set up audit committees within the board of directors and in April 1996 the Registrar of Companies introduced guidelines to regulate the behaviour of company directors and secretaries, known as 'Guidelines on Voluntary Codes of Company Directors and Company Secretaries' and only a few weeks before the outbreak of the crisis the Financial Reporting Act (FRA) was introduced under which the Financial Reporting Foundation (FRF) and the Malaysian Accounting Standards Board (MASB) were established (Cheah, 2005, p. 86).

In Malaysia many government agencies are involved in regulating corporate governance. The principal regulator for companies in Malaysia, the Companies Commission of Malaysia (CCM), is responsible for the administration of the Companies Act 1965 while the Securities Commission (SC) is the central regulatory authority for the capital market and administers the Securities Industry Act (SIA) 1983 (which deals with the provisions of the stock exchanges and persons dealing in securities, and for certain offences relating to trading securities) and regulates capital market activities and enacts regulations for securities and futures intermediaries and issuers in Malaysia (in primary and secondary

market). The KLSE is a self-regulatory agency which is in charge of the regulation of its members and public listed companies and for the surveillance of the marketplace; the Listing Requirements (LRs) is the most important and comprehensive non-legislative regulation which is administered by the KLSE (Cheah, 2005, p.86-87).

In the past years corporate governance in Malaysia has been changed. Most changes have been in the regulatory framework which can be divided into statutory reforms and non-statutory reforms. Other reforms include corporate governance initiatives which establish institutions and elaborate new policies and plans. Some other initiatives involve the efforts to upgrade corporate governance education and training and the enhancement of public and investor awareness of corporate governance in general and upgrading the knowledge and competency of company directors in particular. The following classification is allocated by Cheah (2005, p. 87-92) and will give an overview of the major reforms in corporate governance in Malaysia:

1. *Statutory reforms*

Corporations, and in particular public listed companies, are subject to the following legislative acts: the Companies Act 1965, Securities Industry Act 1983, and the Securities Commission Act 1993. There were amendments over the past years and improvements of corporate governance practices.

The amendment of the Securities Industry Act (SIA) 1983 in April 1998 was a direct result of the East Asian Crisis; the goal was to enhance the Securities Commissions powers and to institute civil remedies against offences for insider trading. The power of the Securities Commission and the KLSE have been increased and reinforced in order to ensure more transparency and disclosure of the companies and to prosecute directors personally. Other regulatory changes include amendments of the Securities Commission Act 1993 and the introduction of the Securities Commission (Amendment) Act 2000 as well as amendments of the Companies Act (CA) 1965 in 1999 and 2000 in order to incorporate proposals made in the Finance Committee Report (1999). The amendments since 1997 have strengthened the corporate governance regulatory framework by empowering authorities.

2. *Development of Codes of Conduct and Industry Best Practices*

The Securities Commission introduced not only statutory legislations but also non-legislative rules. Examples of such rules issued include the Policies and Guidelines on Issue/Offer of Securities and the Code on Takeover and Mergers 1987, while one of the most important non-legislative regulations is the KLSE Listing Requirements which applies to all public listed companies and is administered by

the KLSE. From 1997 to 2000 the LRs underwent significant changes but the most important change was in January 2001 when the LRs underwent a major and comprehensive revamp which is known as the KLSE Revamped Listing Requirements that not only includes earlier amendments but incorporated a significant component of the recommendations contained in the Finance Committee Report, particularly the Malaysian Code of Corporate Governance (MCCG). In March 2000 the MCCG was introduced and it represents a milestone in government-industry collaboration as the code is a product of an industry-led working group which was set up under the supervision and guidance of the High Level Finance Committee of the government. The MCCG consists of 13 principles of conduct and 33 best governance practices (please consult the Appendix for the MCCG).

Progress in Malaysia experienced more support and cooperation by professional bodies which are preparing the respective codes of conduct and promoting awareness and standards of corporate governance (e.g. the publications of the Malaysian Association of the Institute of Chartered Secretaries and Administrators – MAICSA – entitled 'A Guide to Annual General Meetings' and 'The Company Secretary: A Reference Kit').

3. Institutional Reforms

The most important events were the introduction of the High Level Finance Committee on Corporate Governance (1998) and the release of the Finance Committee Report (1999). The goal of the High Level Finance Committee is to review the framework for corporate governance in Malaysia. The Committee (the Securities Commission is working as a Secretariat) adopted a severe process of consultation which involved the whole financial community including regulatory agencies, corporates, banks, industry associations, standard setting bodies, and members of academia. The report which was published on March 26th 1999 is known as 'The Finance Committee Report on Corporate Governance' and covers three areas: the development of the Malaysian Code on Corporate Governance which sets out a set of principles and best practices for good governance; reform of laws, regulations and rules to strengthen the regulatory framework for corporate governance; and training and education to ensure that the framework for corporate governance is supported by the necessary human and institutional capital. The KLSE LRs revamp introduced 22 of the 25 recommendations proposed by the report.

Two other important institutions were established shortly after the outbreak of the East Asian crisis: the Malaysian Institute of Corporate Governance (MICG) and the

Minority Shareholder Watchdog Group (MSWG) which help to increase the awareness of corporate governance in Malaysia.

4. *Education and Training*

To increase the use of Corporate Governance at the firm's level different institutions introduced different educational and training programmes. The KLSE introduced a mandatory training for company directors with PN5/2001 which is divided into Mandatory Accreditation Programme (MAP) and Continuing Education Programme (CEP). The goals of these programmes are to enhance the effectiveness of directors in discharging their duties and to ensure that they are continuously updated on developments in the securities industry.

On the other hand there is the Securities Industry Development Centre of the Securities Commission which was set up in 1994 and tries to promote corporate governance by organizing training, education and research.

The role of capital markets in Malaysia for the implementation of Corporate Governance is very limited as the source of financing corporation's activities is mainly provided by banks which do not play a major role in governance in Malaysia with respect to the appointment of managers or director or the choice of investments (Cheah, 2005, p. 92).

Most of the initiatives in Malaysia are government-led and the reforms are largely compliance-based. Only recently the authorities seem to have adopted the incentives approach and also some professional bodies have started to introduce codes of best practice and codes of conduct. Nevertheless there seems to remain two problems, i.e. the protection of minority shareholders which is not appropriately dealt with and the lack of takeovers that would punish poor management and encourage a higher degree of corporate governance. The last point to note is the enforcement of the rules and regulations which is still not very strict as for example KLSE is a self-regulatory body with rules and regulations but has virtually a very low degree of law-enforcement (Cheah, 2005, p. 97-99).

Looking at the CLSA-ACGA Corporate Governance Watch of 2004, 2003 and the CLSA Survey of 2002 and 2001 the change in the following ratings in Malaysia can be seen in Table 5.9.

TABLE 5.9 – Malaysian Ratings for Macro-Determinants of Corporate Governance (2001-2004)

	2001 (Rating 1-10)	2002 (Rating 1-10)	2003 (Rating 1-10)	2004 (Rating 1-10)
Rules and regulations	9	9	9.0	7.1
Enforcement	2	4	3.5	5.0
Political and regulatory environment	2	3	4.0	5.0
Adoption of IGAAP	5	6	7.0	9.0
Institutional mechanisms and CG Culture	5	6	6.5	4.6

Source: CLSA – ACGA.

In recent years Malaysia has experienced an improvement of the corporate governance environment, as illustrated in Table 5.9 above; Malaysia improved in regional ranking and is maintaining its position in the upper half. The Malaysian Code on Corporate Governance can be found in the Appendix.

5.2.3 Corporate Governance in the Banking Sector

With respect to corporate governance of banks the countries affected by the East Asian Crisis have tried to improve their standard. Corporate governance of the financial sector is considered to be different from corporate governance of non-financial corporations. And, in Asia, as can be seen in Table 5.10 below banking institutions play a more important role than the capital market for efficiently allocating and monitoring the use of funds. Hence, compliance to good corporate governance is important, since problems in the banking sector can be transmitted throughout the economy resulting in liquidity constraints, loss of confidence or capital flight. Table 5.11, illustrates costs of banking crises.

TABLE 5.10 – Composition of External Finance for East Asian Economies (in percentage Shares of Total)

	Domestic credit provided by banking sector	Stock market capitalization	Outstanding debt issues
China	62.89	25.49	11.63
Hong Kong	26.29	71.25	2.46
Malaysia	41.81	36.58	21.61
Singapore	31.22	57.72	11.07
South Korea	57.52	20.76	21.72
Thailand	71.15	14.11	14.74

Source: Eichengreen (2004), p. 5.

TABLE 5.11 – The Costs of Banking Crises

		Peak non-performing loans as % of total loans	Cost of restructuring as % of GDP
Chile	1978-83	19	41
United States	1984-91	4	5-7
Norway	1988-92	9	4
Finland	1991-93	9	8-10
Sweden	1991-93	11	4-5
Mexico	1995-97	13	14
Argentina	1995	-	2
Brazil	1995-	15	5-10
Thailand	1997-	47	24
South Korea	1997-	25	17
Indonesia	1997-	55	58
Malaysia	1997-	25	10
Philippines	1998-	12	7

Source: Randhawa (2005), p. 55.

From the tables above the importance of banks in Asia can be seen along with the excessive burden of bailing out banks in trouble in some crisis countries in East Asia. In Table 5.12 the status-quo of the banking system and NPLs by end-2002 is shown. From this table the difficulties in the banking sector can be observed along with the extent of how large the bailouts of the government were. Thailand and Indonesia both had to deal with a high share of NPLs with respect to GDP respectively total loans.

TABLE 5.12 – Overview of the Banking System and NPLs, End-2002 (in percentage)

	Indonesia	South Korea	Malaysia	Philippines	Thailand
Banking system assets as % of GDP	74	154	158	84	136
Assets of state-owned banks as % of total assets	49	NA	NA	11.5	27.7 ¹
NPLs/GDP					
Peak	26.8	8.4	25.5	7.9	54.1
End-2002	2.1 ²	8.4	18.5	6.2 ³	8.4
NPLs/Total loans					
Peak	48.6	9.7	30.1	18.1	51.6
End-2002	8.1 ²	9.7	8	15 ³	10.1 ¹

Notes: ¹ As of November 2002. ² Excludes NPLs transferred to Asset Management Companies. ³ NPLs in commercial banks under the central bank's new NPL definition.

Source: Fung et al. (2004), p. 53.

Looking at these tables some differences between the governance of non-financial companies and banking institutions can be observed (Levine, 2004):

1. Banks are usually opaque. The informational asymmetries between insiders and outsiders of the corporate sector make it difficult to estimate the risk of bank balance sheets and its portfolio.
2. The financial sector is one of the most regulated sectors in the economy. The goal of regulating the financial sector is to ensure its fair and efficient functioning and to

create conditions for financial stability. The banking sector is usually highly concentrated sometimes with monopolistic market structures and leverage of banks is sometimes very high which increases the vulnerability not only of the banking sector but as well of the whole economy.

Table 5.13 will give an overview of the challenges in governance of financial institutions and the main differences.

TABLE 5.13 – Challenges in Governance of Financial Institutions

	Assumptions underlying traditional model	Banks
Market structure	Competitive	Banking structures tend towards monopolistic competition
Information asymmetry	Forms crux of agency problem	Agency problem far more complex; banks are opaque
Capital structure	Low leverage ratios	Highly leveraged
Regulation	Common for all sectors	Intensive and extensive regulation in the financial sector, with intervention of third party regulatory agency
Ownership	Dispersed, or a few controlling owners	Family ownership and government ownership/control common in Southeast Asia

Source: Randhawa (2005), p. 57.

Reforms of the banking sector with respect to regulations and legal environment was carried out at different rate across the region. While Singapore is the most effective, Indonesia lags behind; Malaysia's reform is considered to be effective (Randhawa, 2005, p. 63).

The implementation of the Basel II Accord on capital adequacy for developed economies is due in 2008 and the major ASEAN economies have committed themselves to adhering to the guidelines but with varying deadlines. The three pillars of the accord are minimum capital requirements, supervisory oversight, and market discipline based on risk-based disclosure. Table 5.14 shows that Malaysia, Indonesia, Thailand, South Korea, Singapore and Hong Kong meet the minimum capital adequacy requirement. What is still problematic is the introduction of risk-based supervision, with the exception of Singapore and Hong Kong, and the internal ratings based approach will not be introduced in the region before 2008. But still far ahead lies market discipline based on risk-based disclosure in the region since it requires good data collection and dissemination; the prevailing disclosure method in the developing economies of East-Asia is not adequate enough (Randhawa, 2005, p. 65-66).

TABLE 5.14 – Percentage of Bank Capital to Assets in East Asian Economies (in percentage)

	1998	1999	2000	2001	2002	2003
Bank Regulatory Capital to Risk-Weighted Assets						
Hong Kong	18.5	18.7	17.8	16.5	15.7	15.6
Indonesia	-13.0	-2.4	-18.2	19.2	19.7	21.4
Korea	8.2	10.8	10.5	10.8	10.5	10.4
Malaysia	11.8	12.5	12.5	13.0	13.2	13.4
Philippines	17.7	17.5	16.2	15.8	16.7	16.1
Singapore	18.1	20.6	8.3	7.8	8.1	7.6
Thailand	10.9	12.4	12.0	13.9	13.7	13.6
Bank Capital to Assets						
Hong Kong	7.7	8.1	9.0	9.8	10.7	11.5
Indonesia	-12.9	-4.1	5.2	5.4	7.3	8.3
Korea	2.8	3.9	3.8	4.1	4.0	4.0
Malaysia	8.9	8.9	8.5	8.5	8.7	...
Philippines	14.8	16.0	15.3	15.4	15.5	15.9
Singapore	7.5	7.8	7.1	9.6	8.3	8.5
Thailand	4.8	5.5	4.5	5.5	5.8	6.2

Source: Randhawa (2005), p. 61.

Looking at the development of the institutional framework before and after the crisis it can be observed that all the economies hit by the crisis improved although progress is uneven across the region. In Indonesia state owned banks have taken the step to become publicly listed corporations while private sector banks have been sold to foreign investors; this produced a considerable fall in connected lending. In Malaysia on the other hand direct ownership of banks by the government is negligible. The loan classification criteria are agreed to harmonize in the region but implementation is uneven throughout. Accounting standards still do not meet global best practice norms (Randhawa, 2005, p. 73).

With respect to the development of Asian capital markets the Asian countries agreed to develop the bond market in Asia; this is done under the Chiang Mai initiative for integration of regional financial markets. This initiative should help to diversify fund sourcing in East Asia.

Comparing the performance of the corporate and the financial sector (1998 and 2003) in Indonesia and Malaysia it can be said that these sectors improved over time with the exception that in Malaysia the commercial bank return on assets remained almost stable (see table 5.15).

TABLE 5.15 – Corporate and Financial Sector Comparison for Asian Crisis Countries (1998 and 2003)

	Indonesia		Malaysia	
	1998	2003	1998	2003
Corporate Sector				
Ordinary income to sales	-12.0	8.0	3.0	7.0
Interest expense to sales	13.0	3.0	4.5	1.7
Financial Sector				
Commercial bank return on assets	0.6	2.7	1.8	1.6
Capital adequacy ratio	2.3	22.0	11.0	13.0

Source: World Bank (2005), p. 71.

Another interesting statistic is the number of banks and the bank concentration in the crisis affected countries in East Asia which compares the status-quo in 1994 and 2000. This data shows that every country has attempted in concentrating its banking sector, which was carried out successfully. The concentration of the banks with respect to the share of total deposits has decreased as well. A similar picture should be true for Indonesia from 1994 to 2005, too, although no figures are available.

TABLE 5.16 – Share of Total Deposits (in percentage)

	1994				2000			
		Share in total deposits (in %)				Share in total deposits (in %)		
	Number of banks	Largest 3 banks	Largest 10 banks	HH Index (1994)	Number of banks	Largest 3 banks	Largest 10 banks	HH Index (2000)
Korea	30	52.8	86.9	1263.6	13	43.5	77.7	899.7
Malaysia	25	44.7	78.3	918.9	10	43.4	82.2	1005.1
Philippines	41	39.0	80.3	819.7	27	39.6	73.3	789.9
Thailand	15	47.5	83.5	1031.7	13	41.7	79.4	854.4

Notes: HH Index is the Herfindhal-Hirschman Index which is a standard measure of consolidation in any industry and is defined as the sum of squared deposit market shares of all the banks in the market. The upper-value of 10,000 will be reached in the case of a monopolist firm with 100 per cent share of the market; the index tends to zero in the case of a large number of firms with very small market shares.

Source: Gelos and Roldós (2002).

5.2.3.1 Corporate Governance in Banking Sector in Indonesia and Malaysia

Corporate Governance principles for banks in Indonesia and Malaysia are enacted by the central banks, Bank Indonesia respectively Bank Negara Malaysia. In Indonesia Corporate Governance rules were only introduced by the Bank Indonesia Regulation No. 8/4/PBI/2006 on January 30th 2006. Bank Indonesia based this regulation on five main principles (Bank Indonesia, 2006):

1. Transparency – openness in disclosure of material and relevant information and openness of the decision making process.

2. Accountability – clarity of functions and implementation of accountability of the bank's organs in order to ensure effective management.
3. Responsibility – consistency between bank management and prevailing laws and regulations and prudential bank management principles, too.
4. Independency – bank management in professional manner without undue influence/pressure from any parties.
5. Fairness – justice and equality in fulfilling stakeholders' rights arising from agreements and prevailing laws and regulations.

This regulation is a minimum requirement, regulating the essentials of good corporate governance such as composition, function and responsibilities of the board of commissioners, the board of directors, the committees, compliance, internal audit and external audit functions, essentials of risk management implementation, provisions of funds to related parties and provision of funds in large amount (large exposures), bank's strategic plans, transparency aspect in bank condition, internal reporting and conflict of interests, report and assessment of good corporate governance implementation, good corporate governance implementation at branch offices at a foreign bank and sanctions. Some of the provisions are transitional for specific determined banks.

In Malaysia corporate governance is directly regulated by the Development Financial Institutional Act 2002 (Act 618) (DFIA) which came into force on February 15th 2002 (BNM, 2002a). The DFIA focuses on the promotion of the

"[...] development of effective and efficient development financial institutions (DFIs) to ensure that the roles, objectives of the DFIs are consistent with the Government policies and that the mandated roles are effectively and efficiently implemented. DFIA also emphasises on efficient management and effective corporate governance, provides a comprehensive supervision mechanism and mechanism to strengthen the financial position of DFIs through the specification of prudential requirements." (Bank Negara Malaysia, <http://www.bnm.gov.my/index.php?ch=66>)

The main points of the DFIA are that the regulation is applicable very flexible (i.e. Malaysia is a common law country) according to the kind of DFIs, the establishment of a centralized supervisory body of DFIs, the introduction of monitoring mechanisms to enable Bank Negara Malaysia efficient and effective implementation of the regulation, emphasising on efficient management and effective corporate governance, introducing a comprehensive supervision mechanism and therefore strengthening the financial sector (Bank Negara Malaysia, <http://www.bnm.gov.my/index.php?ch=14&pg=464&ac=361>).

Following the conclusions of a survey conducted by Sang-Woo Nam and Chee Soon Lum in 2005, where 26 banks in Indonesia and 10 banks in Malaysia (and 14 banks in Korea and 13 in Thailand, too) were surveyed, the following lists the main results (detailed results of the survey can be seen from table A6.2 appendix):

A. Supervision and Financial Safety Net: Supervision and financial safety nets are important not only for the normal course of the business but also for the protection of the rights of shareholders and stakeholders.

1. Bank Supervisory Agency: In Indonesia and Malaysia the bank supervisory agency is located at the central banks (Bank Indonesia respectively Bank Negara Malaysia). The head of the bank supervisory agency is appointed by the President in Indonesia and by the Minister of Finance in Malaysia. In both countries the bank supervisory agency has legal power to make changes in the internal organizational structures of problem banks and they favour prevention, hence both supervisory agencies increased on-site inspections of banks by professional bank supervisors over the past years. Important to mention is, that there seems not to be any conflict of interests among bank supervisors in discharging their responsibilities in both countries.
2. Deposit Protection: Before the East Asian Crisis in 1997 neither of the two countries, Indonesia and Malaysia, had an explicit deposit insurance. Both countries have only an implicit deposit insurance system and are planning to introduce an explicit deposit insurance system in the future. Nevertheless, both countries introduced after the crisis a blanket deposit guarantee system in which both deposits and liabilities of creditors were fully covered.
3. Competitive Environment: Looking at official statistics in 2004 there were 135 commercial banks in Indonesia and 23 in Malaysia with the market share for the 5 largest commercial banks in terms of deposits at 57.3 % in Indonesia and 54.8 % in Malaysia. In Indonesia government-controlled banks have the highest market shares with 41.5 % and foreign-controlled banks have the lowest market shares with 10.6 %. A similar picture is true for Malaysia where government-controlled banks and foreign-controlled banks each constitutes about one-third of the market shares (37.0 per cent respectively 31.4 per cent).
4. Business Segments and Restrictions: Indonesia has restrictions on the banking institutions with respect to offering various fee income businesses (e.g. credit cards, insurances) while Malaysia does not have any restriction.
5. Specific Regulations on Banking Operations: The banking institutions in Indonesia and Malaysia have to follow government-directed credit guidelines in their loan

portfolios and they have to maintain a minimum capital adequacy ratio of 8 %. While in Malaysia banks subject for minimum investment in government securities and subject to restrictions on taking equity investment or ownership in non-financial firms, this is not the case in Indonesia. In both countries there is no limit on fees for bank services in the banks. In Indonesia and Malaysia banks have to maintain minimum liquidity requirements. Looking at interest rates there is no limit in Malaysia while in Indonesia there is a limit set indirectly by the blanket guarantee scheme. The requirements and restrictions for opening up branches by the banking institutions are different in Indonesia and Malaysia.

6. Ownership of Banks: In both countries there are restrictions on the maximum allowable ownership of a bank by an individual or corporation although the specific regulations vary. Non-financial firms or groups can be a controlling owner of a bank in Indonesia and Malaysia, too.

B. Board of Directors: The organizational structure and characteristics of the internal corporate governance mechanism of a bank are influenced by the Board of Directors.

1. Board Accountability: The board is accountable to shareholders, depositors and creditors in Indonesia and Malaysia.
2. Responsibilities of the Board: In both countries the banking laws and regulations define the role and responsibilities of the Board of Directors clearly; the degree of the involvement of the Board in overseeing and implementing major corporate policies vary across the countries.
3. Board Composition: In Indonesia and Malaysia government officials and foreigners can be appointed as Board members with the exception of politicians. The restrictions on the minimum size of a Board vary: in Indonesia it has to consist of two people while in Malaysia it has to consist of five. Additionally, there exist restrictions on the maximum number of Boards on which a bank director can serve and which vary across the countries.
4. Independent Directors: The appointment and definition of the role of the independent directors in the Board were introduced by the Central Banks, where these independent directors have to fulfil specific requirements. Large shareholders of a bank are allowed to become an independent director in both countries respecting some restrictions on the number of shares while their families cannot.
5. Bank's CEO (President): In Indonesia and Malaysia the appointment of the CEO is subject to a fit and proper test.

6. Enhancing the Effectiveness of the Board: While the survey showed that an effective board is believed to be important in both countries but it showed as well that there are some problems that may cause Board ineffectiveness.
 7. Related-Party Transactions: In Indonesia and Malaysia the rules governing the conduct of 'interested' directors are similar: board members are prohibited from participating or voting in any decision making that involves conflicts of interest affecting the bank adversely and there is an obligation for the bank to disclose conflicts of interests; the disclosure requirements for related-party transactions also apply to senior management and the directors (including their close family members). Regarding the conflict of interest with respect to favourable bank loans to senior management staff and Board members it is allowed with some restrictions in Indonesia but prohibited in Malaysia.
 8. Board Committees: In both countries the establishment of an audit committee is mandatory while the rules governing the composition of the members of the audit committee are varying. Only in Malaysia the establishment of remuneration and nomination committees are mandatory, while the establishment of risk management committees is mandatory in both countries.
- C. Disclosure rules and other regulations: Since the crisis the Central Banks of both Indonesia and Malaysia have given a high priority to regulatory changes that encourage disclosures of relevant information in the banking industry. This is a step closer to full disclosure and more transparency.

5.3 Comparing Government Revenues and Expenditures

The following paragraphs deal with federal government revenues and expenditures and will compare actual and projected figures for the crisis period. Intuitively one could expect that in 1997 and/or 1998 both countries experienced a slump in revenues (i.e. revenues include tax revenues) and regained slowly in the following years.

The data used in this section are data published by national authorities:

- for Indonesia: Central Government Financial Statistics (Statistik Keuangan Pemerintah Pusat), various issues, Badan Pusat Statistik, Indonesia: Jakarta;
- for Malaysia: Economic Report, various issues, Ministry of Finance, Malaysia.

The data has been issued on a yearly basis and therefore updates of projected data were possible for the time shortly after the crisis. This is important for reading and interpreting the results as the period after the crisis includes adjustments which reflect changes in the situation. Nevertheless, the most interesting data is that of the crisis period and are 'authentic' forecasts of the respective government agencies. The highlighted data in Tables 5.17 and 5.18 show the crisis period.

Table 5.17 – Indonesia: Actual and Projected Central Government Revenues and Expenditures (Deflated, in Billions of 2003 Rupiah – Year-Over-Year Percentage Change in Brackets)

	1994/1995	1995/1996	1996/1997	1997/1998
Revenue	318.597	312.365	348.220	79.830
Actual	(NA)	(-1.956%)	(11.479%)	(-77.075%)
Revenue	291.411	297.136	317.033	314.466
Projected	(NA)	(1.965%)	(6.696%)	(-0.810%)
Difference	27.186	15.229	31.187	-234.635
	(NA)	(-43.982%)	(104.783%)	(-852.352%)
Expenditure	312.351	301.675	344.662	398.092
Actual	(NA)	(-3.418%)	(14.249%)	(15.502%)
Expenditure	291.411	297.136	317.033	314.466
Projected	(NA)	(1.965%)	(6.696%)	(-0.810%)
Difference	20.940	4.539	27.629	83.626
	(NA)	(-78.322%)	(508.638%)	(202.676%)
Rev.-Exp.	6.246	10.690	3.558	-318.261
Actual	(NA)	(71.143%)	(-66.715%)	(-9044.636%)
Rev.-Exp.	0	0	0	0
Projected	(NA)	(NA)	(NA)	(NA)
Difference	6.246	10.690	3.558	-318.261
	(NA)	(71.143%)	(-66.715%)	(-9044.636%)

	1998/1999	1999/2000*	2001	2002	2003
Revenue	382.026	381.584	227.114	311.635	341.400
Actual	(378.547%)	(-0.116%)	(-40.481%)	(37.215%)	(9.551%)
Revenue	468.610	341.577	333.950	350.830	349.934
Projected	(49.018%)	(-27.108%)	(-2.233%)	(5.055%)	(-0.255%)
Difference	-86.584	40.007	-106.836	-39.194	-8.534
	(63.098%)	(146.206)	(-367.042%)	(63.313%)	(78.226%)
Expenditure	382.836	381.377	377.897	336.265	376.500
Actual	(-3.832%)	(-0.381%)	(-0.913%)	(-11.017%)	(11.965%)
Expenditure	468.610	341.577	349.307	359.026	370.592
Projected	(49.018%)	(-27.108%)	(2.263%)	(2.783%)	(3.221%)
Difference	-85.774	39.800	28.590	-22.761	5.908
	(-202.569%)	(146.401%)	(-28.166%)	(-179.612%)	(125.957%)
Rev.-Exp.	-0.810	0.207	-150.783	-24.630	-35.100
Actual	(99.746%)	(125.547%)	(-72987.231%)	(83.665%)	(-42.508%)
Rev.-Exp.	0	0	-15.357	-8.197	-20.658
Projected	(NA)	(NA)	(NA)	(46.625%)	(-152.023%)
Difference	-0.810	0.207	-135.426	-16.433	-14.442
	(99.746%)	(125.547%)	(-65563.749%)	(87.865%)	(12.118%)

Source: Central Government Financial Statistics, various issues; author's own calculations.

Note: *Change of Fiscal Year.

Table 5.18 – Malaysia: Actual and Projected Central Government Revenues and Expenditures (Deflated, in Millions of 2003 Ringgit – Year-Over-Year percentage Change in Brackets)

	1994	1995	1996	1997	1998
Revenue	100.163	99.574	112.006	127.391	112.368
Actual	(NA)	(-0.59%)	(12.49%)	(13.74%)	(-11.79%)
Revenue	85.259	85.837	94.608	108.340	114.108
Projected	(NA)	(0.68%)	(10.22%)	(14.51%)	(5.32%)
Difference	14.903	13.737	17.397	19.051	-1.740
	(NA)	(-7.83%)	(26.65%)	(9.51%)	(-109.13%)
Expenditure	91.399	90.956	99.758	106.845	103.283
Actual	(NA)	(-0.49%)	(9.68%)	(7.10%)	(-3.33%)
Expenditure	86.627	90.331	102.316	102.738	102.327
Projected	(NA)	(4.28%)	(13.27%)	(0.41%)	(-0.40%)
Difference	4.772	0.625	-2.558	4.106	0.956
	(NA)	(-86.91%)	(-509.44%)	(260.55%)	(-76.73%)
Rev.-Exp.	8.763	8.618	12.247	20.546	9.085
Actual	(NA)	(-1.65%)	(42.11%)	(67.76%)	(-55.78%)
Rev.-Exp.	-1.368	-4.494	-7.708	5.601	11.781
Projected	(NA)	(-228.54%)	(-71.52%)	(172.67%)	(110.33%)
Difference	10.131	13.112	19.955	-14.945	-2.696
	(NA)	(29.42%)	(52.19%)	(-174.89%)	(81.96%)
	1999	2000	2001	2002	2003
Revenue	128.017	122.129	140.704	146.880	162.706
Actual	(13.93%)	(-4.60%)	(15.21%)	(4.39%)	(10.78%)
Revenue	97.313	98.177	132.586	124.894	146.265
Projected	(-14.72%)	(0.89%)	(35.05%)	(-5.80%)	(17.11%)
Difference	30.704	23.951	8.118	21.985	16.441
	(1864.66%)	(-21.99%)	(-66.11%)	(170.82%)	(-25.22%)
Expenditure	111.757	119.709	141.677	149.452	167.478
Actual	(8.21%)	(7.12%)	(18.35%)	(5.49%)	(12.06%)
Expenditure	104.460	113.585	138.117	137.635	144.828
Projected	(2.08%)	(8.74%)	(21.60%)	(-0.35%)	(5.23%)
Difference	7.297	6.124	3.560	11.817	22.650
	(663.54%)	(-16.08%)	(-41.87%)	(231.97%)	(91.68%)
Rev.-Exp.	16.260	2.420	-0.972	-2.572	-4.772
Actual	(78.97%)	(-85.12%)	(-140.18%)	(-164.53%)	(-85.54%)
Rev.-Exp.	-7.147	-15.408	-5.531	-12.741	1.437
Projected	(-160.66%)	(-115.60%)	(64.10%)	(-130.36%)	(111.28%)
Difference	23.407	17.828	4.559	10.169	-6.209
	(968.31%)	(-23.84%)	(-74.43%)	(123.07%)	(-161.06%)

Source: Economic Report, Malaysia, Various issues; author's own calculations.

Table 5.17 and 5.18 show the deflated figures for Indonesia and Malaysia and the year-over-year changes in percentages in brackets.

Looking at Table 5.17 for the fiscal year 1997/1998 the actual revenue differed significantly from the precedent year (being approximately one quarter) and the expected figure. On the other hand actual expenditures increased by approximately 15 percentage from 1996/1997 to 1997/1998. From these figures it is clear how unexpected and unheralded the East Asian Crisis befell Indonesia. Nevertheless, in 1998/1999 actual revenues bounced back again to pre-crisis levels; actual expenditures stayed almost stable over the whole period.

Table 5.18 shows revenues and expenditures for the central government of Malaysia. While Indonesia has been hit very hard in 1997/1998 by the East Asian Crisis it seems from the data below that Malaysia did not experience a crisis at all, as actual revenues and expenditures do not show any slump in 1997 or 1998.

Although, the result for Indonesia is as expected (a slump in 1997/1998) the result for Malaysia is unexpected and might be due some different accounting method of the central government budget.

5.4 Conclusion

Governance and Corporate Governance are fields that are growing in importance; this can be seen by the developments and the improvements of Indonesia and Malaysia from before the outbreak of the crisis to nowadays. However, there is still a long way to go, not only in Emerging Markets such as Indonesia and Malaysia but as well in developed economies (e.g. Enron in the USA or the bribe scandal of Siemens in Germany). Furthermore, corporate governance rules for the financial industry are important and need to be adapted to the fast changing environment. Good corporate governance should prevent and buffer some smaller and bigger disturbances (e.g. the so-called 'subprime squeeze' in the US markets in 2007) of local and due to integration efforts international financial markets. Macroeconomic and political stability are contributing to the health and to a prospering economy as corporate governance rules (and rules for the financial sector) that are transparent, constantly adapted to the fast changing environment and enforced by independent authorities.

6

Comparing Indonesia and Malaysia – a Quantitative Approach

The following chapters, Chapter 6 and 7 will analyze the events by using a quantitative approach allowing the answers to the following questions to be elucidated:

Which country recovered faster? Which of the countries experienced a lower impact of economic growth respectively on the performance of companies? And finally: Is the policy adopted by Malaysia a possible option for countries in a similar situation as Malaysia was in 1997/1998?

Giving answers to the above questions is difficult as there are many influencing factors which contribute to the functioning of an economy. Nevertheless the following two chapters will try to answer these questions and at the same time give an overview of the economic situation before, during and after the crisis by using different types of data. The focus lies on a comparison of data on a macroeconomic and a corporate sector level. The difficulties of doing the analyses are due to limited data availability.

Sources of data used will be specified followed by a delineation of the theoretical models used. The analysis can be roughly divided in two parts: analysis of macroeconomic data, i.e. indicator analysis and difference-in-difference methodology, and of microeconomic data, i.e. annual data of stock listed companies analysed by an ordered logistic and a quantile regression.

This chapter will give the overview of the theoretical models used while the results will be discussed in the next chapter (Chapter 7).

6.1 Data

The data used in this analysis derive from various sources:

The source of macroeconomic data is Thomson DataStream (i.e. a recognized database including data from national statistical offices, central banks, international organizations e.g. IMF, WB, OECD and other research institutions such as Economist Intelligence Unit) while corporate data derives mainly from stock market guides of local entities (for Indonesia: Institute for Economic and Financial Research (various issues) 'Indonesian Capital Market Directory', and for Malaysia: Thomson Information (S. E. Asia), 'Corporate Handbook Malaysia: The definitive guide to listed companies', (various issues) and Dynaquest Sdn. Bhd., 'Stock Performance Guide' (various issues)).

As different data requires aligned techniques, different methods will be discussed: Firstly, the indicator analysis which uses data of annual frequency (1990 to 2005); secondly, the

difference-in-difference analysis, which uses data on monthly and quarterly frequency; thirdly, a logistic regression and lastly, a quantile regression which will be computed based on annual audited corporate balance sheet data.

The period chosen is from 1990 to 2005 (macroeconomic data/indicators) respectively from 1991 to 2004 (microeconomic/corporate data) in order to look for impacts on economic growth of the East Asian Crisis but discussion of the results will concentrate on a five year period (1996 to 2000) which will illustrate more clearly the impacts of the East Asian crisis; following Kaplan and Rodrik (2001), who used in their difference-in-difference analysis data from 1992 to 1996 as the period 'before treatment' and the one year data described below as the 'treatment' period, the same observation period has been selected for this method.

For the difference-in-difference (conventional and time-shifted) analyses the breakpoints of the two economies have been defined by using the definition given by Kaplan and Rodrik (2001):

Indonesia:

- Date of first official announcement that country will seek IMF assistance: October 8th, 1997
- Date of IMF executive board approval of program: December 4th, 1997
- Treatment window (difference-in-difference analysis):
 - Monthly Data: October 1997 to September 1998
 - Quarterly Data: Q4 1997 to Q3 1998
- 'Before' treatment period: 1990 (1991) to 1997
- 'Treatment' and after treatment period: 1998 to 2004 (2005)

Malaysia:

- No date of IMF announcement of assistance/approval
- Introduction of capital controls: September, 2nd 1998
- Treatment window (difference-in-difference analysis):
 - Monthly Data: September 1998 to August 1999
 - Quarterly Data: Q4 1998 to Q3 1999
- 'Before' treatment period: 1990 (1991) to 1998
- 'Treatment' and after treatment period: 1999 to 2004 (2005)

The break points as defined by Kaplan and Rodrik (2001) and explained above will be used as break points in all subsequent analyses. This means that for the indicator analysis the break point will be 1997 for Indonesia, 1998 for Malaysia, i.e. the 'before' period will be from 1990 to 1997 for Indonesia and from 1990 to 1998 for Malaysia while the 'treatment'

and after treatment period will be from 1998 to 2005 for Indonesia and 1999 to 2005 for Malaysia.

For the other two analysis based on annual corporate balance sheet data the 'before' treatment period will be from 1991 to 1997 for Indonesia and 1991 to 1998 for Malaysia, while the 'treatment' and after treatment period will be from 1998 to 2004 for Indonesia and from 1999 to 2004 for Malaysia.

Difficulties

One major problem is dealing with corporate data. The data is usually released in line with national accounting standards and annual financial statements are audited by approved national auditors if corporations are listed on the stock market. However, accounting and auditing standards differ across countries. Since harmonization of International Accounting Standards has not been completed there are some differences for the calculation of items in annual financial statements. Therefore, calculations based on annual reports should be treated carefully especially by making comparisons between different markets. Corporate data from Indonesia consists of companies listed on 'Jakarta Stock Exchange Composite Index' and from Malaysia listed on the 'Main Board of Kuala Lumpur Stock Exchange'. The limitation of companies on the 'top'-national stock market should guarantee coherent data, stricter supervision of local supervisory bodies and higher quality of financial reports. Additionally, not all companies listed on the composite index were selected for the analysis as data was not available on a continuous basis for all companies (e.g. due to mergers, acquisitions) for the period 1991 to 2004. Therefore only companies with continuous data sets over the period were selected. Interpretation of data has to be done cautiously as the quality of data is not the same for the two countries; this could lead to some misinterpretations.

6.2 Hypothesis

The hypotheses which will be used this chapter and discussed in the Chapter 7 is described below.

The null hypothesis for all calculations is that there has been no significant change in the period before, during and after the crisis in the macroeconomy and on the corporate level meaning that the East Asian Crisis did not have any significant impact on the Indonesian and Malaysian economy.

The alternative hypothesis is that firstly, a significant change at the macroeconomic and corporate level are observed and secondly the recovery experienced by the two economies had a different outcome and speed.

The economic rationale for the hypotheses is to show how the two policy approaches affected the economies which experienced a similar economic growth before the outbreak of the East Asian crisis. Furthermore, the results of the analyses, both on a qualitative and quantitative approach, should give the insight how the two different policies applied to Indonesia and Malaysia affected the recovery and what lessons can be drawn from their experience for the future.

6.3 Methodology

This part of the chapter will concentrate on the methodology used. Firstly, indicators will be described, followed by a description of a difference-in-difference analysis and the ordered logistic regression. The chapter concludes with the quantile regression. The overviews of the methodology used will be summarized and the results will be discussed.

6.3.1 Indicator Analysis

For a good overview of the macroeconomic development of the economies and a rough picture of the impact of the East Asian Crisis an analysis based on macroeconomic indicators will be used. The selected ratios show possible threats in the two economies before the outbreak of the crisis and the impacts of the remedies for the two economies. The following indicators, accompanied by a short description and expected results, will be used:

- Current Account (as % of GDP)

This indicator shows the share of exports, imports, and unilateral transfers in the economy as a percentage of overall economic performance. An inversion of the sign of the current account balance shows a reversal of economic events (e.g. sharp decrease in imports, sharp increase in exports).

Expected results: Considering the large share of exports of both economies the ratio should be positive, as exports should exceed imports. Due to the real currency depreciations during the crisis the current account should become even more positive as imports should become more costly for the two economies.

- Short Term Debt (as % of Reserves)

The ratio 'short term debt as % of reserves' shows the amount of volatile financial means that are covered by reserves of the central bank. The indicator shows for an economy with an open capital account the exposure to so-called 'hot money' i.e. to volatile funds that can reverse sharply the direction of flow. Furthermore, it shows how much of these volatile funds are backed by central bank reserves and therefore are an indicator for resistance to financial market turmoil or speculative attacks of an economy. A ratio higher than 100 percent indicates a lack of liquidity in the system and a high exposure of the economy to exogenous shocks and investor confidence.

Expected results: Both countries should have positive and large ratios in the period before the outbreak of the crisis, although the ratio of Malaysia should be lower due to some problems in the banking sector in 1994/95. During the crisis the ratio

is expected to fall dramatically and recover thereafter in both countries. The indicator for Malaysia should show the consequences of the policy measures (i.e. capital controls), too, and therefore the ratio for Malaysia should not bounce back to pre-crisis level.

- International Reserves to Total Debt

The ratio 'international reserves to total debt' shows a country's possibility to cope with debt. As the ratio decreases a situation of default becomes more realistic.

Expected results: Both countries should not experience any huge increment of total debt. Instead it is expected that international reserves should decrease in the pre-crisis period as both countries are expected to defend their currencies due to the openness of the capital account. Therefore, the ratio should increase for a short period during the crisis and improve only thereafter.

- Net Foreign Debt (as % of GDP), Net Foreign Debt to Exports of Goods and Services

These are measures of indebtedness and show how much of the gross domestic product/exports of goods and services is due to foreign investors.

Expected results: As net foreign debt should increase during the crisis period due to the financial distress, the ratios should increase, too. For Indonesia the return to pre-crisis levels is expected to last longer than for Malaysia due to policy measures adopted.

- Debt Service Paid (as % of GDP), Debt to Service Due, Debt to Service Paid, Total Public Debt (as % of GDP)

These ratios show the amount of debt repaid. Furthermore they can be interpreted as an indicator of distress of a sovereign economy.

Expected results: All three ratios should be stable for both economies over time as both countries did not expose themselves during and after the crisis to additional debt. The repayments are expected to be stable, too, as the sovereign governments did not expect problems with the debt exposure. Lastly, there should only be some variations for the first ratio (debt service paid as % of GDP) because of the expected economic downturn during the crisis which should be smaller for Malaysia than for Indonesia.

- Interest Paid (as % of GDP)

A high ratio means that the economy is running close to bankruptcy, as a large share of economic output is needed to cover interest payments that do not include principal repayments.

Expected results: This ratio should be low for both economies as they did not experience high outstanding debt owed to international organizations over the whole period.

- Interest Paid to Debt Service Paid

The relative size of this ratio shows the debt position of a country and measures the exposure to its debt position.

Expected result: As both countries did not experience any huge increase of debt service from international organizations or similar before the crisis the ratios should be relatively low and stable over the period even during the crisis. Both, Indonesia and Malaysia did not have any significant increase of debt owed to international organizations before, during and after the crisis.

- Interest Due to Exports of Goods and Services (in %)

The ratio 'interest due to exports of goods and services' shows the amount of interests due which is covered by the value of exports of goods and services. It shows the relative amount of debt service of a country and the possibility to generate funds to cover interest and debt owed to international organizations.

Expected results: This ratio should be relatively low as both countries experienced a very low share of debt owed to international organizations before the outbreak of the crisis. Furthermore, the ratio should be stable during and after the crisis as both countries are expected not to increase their debt position owed to international organizations.

- Fiscal Balance (as % of GDP), Government Budget Expenditure (as % of GDP) and Government Budget Revenue (as % of GDP)

These ratios demonstrate the degree of fiscal reflation of a government i.e. the intervention in an economy. The ratio 'fiscal balance as % of GDP' shows how much the government could 'save' for future investments (i.e. a positive ratio), while a negative ratio shows that the government is spending more than it could earn from fiscal income. The other two ratios regarding the government budget expenditure/revenue illustrate in more detail the composition of the fiscal balance.

Expected results: The ratio regarding fiscal balance should be positive before the outbreak of the East Asian crisis in both economies as Indonesia and Malaysia were experiencing economic growth and therefore fiscal income (e.g. tax revenues) should be large enough to cover fiscal expenditure. In the period during and after the crisis the ratio should become negative; due to the sudden slowdown of economic growth fiscal income should also decrease. Lastly, the ratio should become rapidly positive for Malaysia compared with Indonesia, as economic growth in Malaysia recovered faster.

The ratio of government expenditure (as % of GDP) is expected to be stable for Indonesia, while increasing during and after the crisis for Malaysia. The ratio government budget revenue (as % of GDP) is expected to decrease in both economies during the crisis but increasing faster in Malaysia than in Indonesia.

- Gross Fixed Investment (as % of GDP)

This ratio shows the investment climate of an economy. An increase of the share over time shows that no fundamental changes regarding investment were occurring in the economy.

Expected results: As gross fixed investment is a volatile component of aggregate demand the ratio should show the impacts of the short-term financial shock i.e. the East Asian crisis and become relative volatile in the crisis period, too.

- M2 (year-over-year change, in %)

This indicator shows the growth of money M2 (i.e. this definition includes total amount of currency and checking deposits as well as time deposits). The growth of M2 in open economies is related to both interest rates and exchange rates. Therefore changes of interest rates could cause not only alter M2 but also the exchange rate changes (see the introductory chapters in order to see problems with monetary policies in open economies as explained by the impossible trinity)

Expected results: As the economies were growing during the period before the outbreak of the crisis M2 should be positive. The year-over-year change should be lower in the crisis period compared to pre-crisis levels in both countries.

- Different economic indicators: Exports of Goods and Services (as % of GDP), Exports of Goods and Service to Imports of Goods and Services, GDP per capita (in USD), GDP Growth (real; year-over-year change, in %), Consumer Price Index (CPI) (year-over-year change, in %, average over period), Exchange Rate (average over period), Real Effective Exchange Rate (average over period)

These are ratios giving some signals in the degree of economic growth, openness to trade and international financial integration.

Expected results: The ratios are expected to be positive during the pre-crisis period. During the crisis the economic indicators are expected to reflect the spreading problems of the financial markets to the real economy, i.e. a higher inflation rate, a depreciated exchange rate, negative GDP growth etc. Due to the policies adopted it is expected that Indonesia experienced problems in the real economy for a longer period than Malaysia.

6.3.1.2 Expected Results

Summing up, Indonesia should show similar patterns as Malaysia before the crisis although absolute values might differ significantly. The pattern during the crisis should be similar, too, but shortly after the crisis the pattern for Indonesia should not show any major improvement while Malaysia should show a sharp improvement. Lastly, Indonesia should not show the so-called V-recovery which was observed with Malaysia.

Therefore this indicator analysis should show in a brief overview two similar developments of the economies before the outbreak of the East Asian crisis but differences after the crisis giving a hint to the effectiveness of the policies used during and after the crisis.

6.3.2 Difference-in-Difference Analysis

This section will deal with a difference-in-difference analysis as proposed by Kaplan and Rodrik (2001). The model used here is slightly different to what was proposed by the two authors: here two countries will be compared, i.e. Indonesia and Malaysia, (for an introduction to the difference-in-difference methodology please refer to Meyer (1995)) instead of a set of countries as in Kaplan and Rodrik (2001).

6.3.2.1 The Model

Let y_{it} denote some economic performance of interest (e.g. interest rates), where t stands for time and i for the countries examined (i.e. $i = \text{Indonesia and Malaysia}$). The representation is then the following:

$$y_{it} = \sum_i \alpha_i d_i + \beta d_{t>\tau} + \gamma d_M d_{t>\tau} + u_{it}$$

where

α_i is the country specific, time-invariant intercept;

β is the time-varying coefficient, that captures the common effect when Malaysia was under 'treatment' (i.e. when Malaysia applied the 'unorthodox' policies);

γ is the coefficient that captures the differential effect of the capital controls in Malaysia;

d_i is a country specific ($d_M = 1$ when $i = \text{Malaysia}$ and 0 otherwise, and so on);

$d_{t>\tau}$ is a time-varying dummy variable that takes the value 1 during the 12 months (respectively four quarters) that follow $\tau = \text{September 1}^{\text{st}}, 1998$ (i.e. during the one-year period subsequent to the imposition of capital controls in Malaysia), and is 0 otherwise;

u_{it} is the time-varying error term.

This model is the conventional difference-in-difference approach and has the advantage that it controls for ('differences out') the effects of both country specific and time-varying influences that might be attributed otherwise to the use of capital controls. In particular the term $\beta d_{t>\tau}$ washes out common improvements across countries in fundamentals that coincide with the use of capital controls in Malaysia. The problem with this conventional difference-in-difference method is that for γ to be an unbiased estimator of the effect of the capital controls, the condition that Malaysia would have experienced the same economic recovery as the other crisis country in the months following September 1998 had capital controls not been imposed, must hold. The problem arises as Indonesia already had agreed to IMF programs in October 1997 and undergone some 'treatment' while Malaysia had only begun to stick to strict policies in September 1998. To account for these time differences in the analysis a slightly changed model will be used and presented below.

Looking more carefully at the model, one has to look at the treatment and its counterfactual: the treatment in the case of Malaysia had been the introduction of capital controls and the counterfactual is calling in the IMF, which Indonesia did. Reformulating, the following assumption can be constructed (Kaplan and Rodrik (2001)): In absence of capital controls, Malaysia would have called in the IMF and the post-September 1998 economic performance would have exhibited the same change that Indonesia experienced after its calling in of the IMF. This allows reformulating the above equation, too, into a time-shifted difference-in-difference method of the following form

$$y_{it} = \sum_i \alpha_i d_i + \beta d_{i(t>\tau)} + \gamma d_M d_{i(t>\tau)} + u_{it}$$

where

α_i is the country specific, time-invariant intercept;

β is the country specific, time-varying coefficient, that captures the effect undergoing the IMF 'treatment' during an economic crisis relative to outcomes in more normal times, i.e. it picks up a mix of IMF and crisis effects;

γ is the coefficient that captures the differential effect of the capital controls in Malaysia compared to an IMF program, i.e. is a unbiased estimate of the effect of the Malaysian controls relative to the counterfactual of an IMF program under the assumption that Malaysia implemented its capital controls at a stage in the financial crisis that is comparable to that at which the other countries called in the IMF; furthermore this coefficient picks up the effects of all policies applied in Malaysia which include fixed exchange rates, reflation via interest cuts etc. but in particular it includes the impact of not receiving billions of dollars of loans from the IMF;

d_i is a country specific dummy ($d_M = 1$ when $i = \text{Malaysia}$ and 0 otherwise, and so on);

$d_{i(t>\tau)}$ is a country specific, time-varying dummy variable that takes the value 1 during the 12 months (respectively four quarters) that follow the country specific treatment period (i.e. during the one-year period subsequent (a) in Indonesia of approval of the IMF of loan – October 1997 or fourth quarter 1997 – and (b) to the imposition of capital controls in Malaysia – September 1998 or fourth quarter 1998), and is 0 otherwise;

The main difference from the equation above is that the time-varying dummy that specifies treatment is in this equation country-specific and accounts for the different treatment periods of the countries. The problem that might arise applying the time-shifted difference-in-difference method is that there might be a correlation between the external economic environment and $d_{i>\tau_i}$, i.e. Malaysia may have imposed the capital controls in a much more favourable environment than prevailed at the time Indonesia had implemented its IMF package which then might have accounted for a substantial part of the faster recovery of Malaysia. This cannot be ruled out entirely but according to Kaplan and Rodrik (2001), firstly, it is not very obvious that the external environment was improving during the second half of 1998 when Malaysia introduced the capital controls; secondly, Malaysia cut itself off from the external financial markets and therefore it is not obvious that any improvement of the external environment would have produced many benefits to this country; lastly, in the empirical analysis some variables that account for the external environment are included (e.g. US inflation rate, US interest rate, S&P500).

6.3.2.2 The Methodology

As proposed by Kaplan and Rodrik (2001) the following equation, which is an augmented version of the equation just discussed before, will be estimated:

$$y_{it} = \sum_i \alpha_i d_i + \beta d_{i(t>\tau)} + \gamma d_M d_{i(t>\tau)} + \sum_j \delta_j X_{it}^j + \sum_k \phi_k Z_{it}^k + u_{it}$$

where

y_{it} is a measure of economic performance (e.g. interest rate);

d_i is a set of country dummies;

$d_{i(t>\tau)}$ is the 'treatment' period dummy which is 1 during the 12 month or four quarter period following i 's first appeal for IMF assistance or in the case of Malaysia, during the 12 month or four quarter period following the introduction of capital controls, and is 0 otherwise;

$d_M d_{i(t>\tau)}$ is the interaction term of the Malaysia dummy with $d_{i(t>\tau)}$;

β is the baseline post-treatment response;

γ is the estimate of the difference that is attributable to capital controls in Malaysia;

X_{it}^j is a set of country specific time-varying variables (country-specific monthly or quarterly dummies);

Z_{it}^k is a set of time-varying variables capturing the external economic environment (e.g. US interest rates, US inflation rate, S&P 500)

u_{it} is the error term.

This specification includes not only a time trend but also country specific monthly respectively quarterly dummies and the external economic environment is controlled for by the inclusion of Z_{it}^k . Data used for the regression are from 1990 to 1996 (the 'before' period) and the one-year 'treatment' or 'after' period (as described in the introduction to this chapter is the treatment window for Indonesia from October 1997 to September 1998 respectively Q4 1997 to Q3 1998 and for Malaysia from September 1998 to August 1999 respectively Q4 1998 to Q3 1999).

6.3.2.3 Expected Results

This analysis should show that Malaysia recovered faster, especially when used the time-shifted difference-in-difference analysis. Hence, the coefficients should show that Malaysia experienced less of a downturn as Indonesia did. Lastly, this analysis should show that the policies applied by Malaysia lead to a faster recovery than the policies applied during the crisis in Indonesia.

6.3.3 Ordered Logistic Regression Analysis

In contrast with the methodologies presented above the last two methodologies will deal with corporate data. The methodology used here is an ordered logistic regression model (Greene, 2003) and computed with the aid of Stata which reports different from Greene no constants (i.e. the first constant is set to zero and for finding the appropriate constants the 'cut' has to be transformed but which will not be done here – for further information please consider http://www.stata.com/support/faqs/stat/ologit_con.html). This model has been chosen as it adheres to code financial strength easily in categories (see below) and compare the corporate sector of Malaysia and Indonesia. Using a simple regression would have distorted the interpretation as absolute values are different. Furthermore this model allows one to see how.

The set of corporate data is divided into the following five categories where one is bad and five is very good.

- for P/E a high ratio is interpreted as being bad (1) and a low ratio is very good (5) as a high ratio implies that it will take longer to pay back the investment in the stock
- for ROE, ROA, Current Ratio and Operating Margin a low ratio is interpreted as being bad (1) while a high ratio is very good (5) as an increase in these ratios are usually interpreted by investors that the corporations are stronger and healthier

6.3.3.1 The Model

The general model can be described by the following equations (Greene, 2003, pp. 736-740). The model is based on a latent regression like a binominal probit model and there can be started with

$$y^* = x'\beta + \varepsilon$$

y^* is unobserved but there can be observed

$$y = 0 \text{ if } y^* \leq 0,$$

$$y = 1 \text{ if } 0 < y^* \leq \mu_1,$$

$$y = 2 \text{ if } \mu_1 < y^* \leq \mu_2,$$

⋮

$$y = J \text{ if } \mu_{J-1} \leq y^*$$

and where μ s are unknown parameters to be estimated with β and ε is assumed to be normally distributed across observations. Normalizing the mean and the variance ε to zero and one which will lead to the following probabilities

$$\text{Prob}(y = 0|x) = \Phi(-x'\beta),$$

$$\text{Prob}(y = 1|x) = \Phi(\mu_1 - x'\beta) - \Phi(-x'\beta),$$

$$\text{Prob}(y = 2|x) = \Phi(\mu_2 - x'\beta) - \Phi(\mu_1 - x'\beta),$$

⋮

$$\text{Prob}(y = J|x) = 1 - \Phi(\mu_{J-1} - x'\beta).$$

For the probabilities to be positive there has to be $0 < \mu_1 < \mu_2 < \dots < \mu_{J-1}$.

The interpretation of the coefficients is similar to a logistic regression but has to be done carefully, too.

6.3.3.2 The Methodology

The sources of data used are, as discussed in the previous chapter, local stock market guides that publish different ratios and a very short balance sheet of companies listed at

the local stock markets. Due to availability and comparability the following ratios have been selected:

Price-Earnings Ratio (PER): Profit after tax divided by the number of issued and fully paid-up ordinary shares. This ratio reflects the consensus of future earnings growth prospects. The advantage of the PER is that it provides a relative simple and reliable 'rule of thumb' while the disadvantages are that it is based on accounting figures (and therefore accounting principles matter) and for comparison a reference indicator (e.g. the industry average) has to be selected which is rather tricky.

The PER can be interpreted in the following way: A PER of five means that it will take five years for the company's earnings to add up to the original investment, i.e. five years before the original investment in shares will be paid back. Or in other words: an investor is willing to pay five currency units for one unit of current earnings and therefore the PER is sometimes referred to as a 'multiple', too.

Return on Equity (ROE): Profit attributable to shareholders, but before extraordinary items minus preference dividend divided by shareholder's equity. ROE is based on accounting figures and should be compared with ROE of the same industry. Furthermore ROE is a profitability indicator (in percentage).

Return on Asset (ROA): Profit before tax divided by total assets. ROA is an indicator for profitability and shows how assets are used to generate earnings (in percentage) i.e. how debt and equity funds are used to invest and generate income.

This measure, as ROE, is widely used and can be easily compared across industry. Nevertheless, it is based on accounting figures and therefore has to be interpreted carefully.

Current Ratio (CR): Current assets divided by current liabilities. CR is a liquidity measure and shows the ability of a company to pay back its short-term liabilities (debt and payables) with its short-term assets (cash, inventory, receivables). A ratio above one suggests good financial health while a ratio under one suggests some liquidity problems but does not necessarily show that the company will go bankrupt; the higher the ratio the more capable the company to pay its obligations. Furthermore, CR can show how efficient the operating cycle or the company's ability to turn its products into cash is. For comparison an industry average should be used.

Operating Margin (OM): Profit/Loss before tax divided by turnover/total income/operating revenue. OM is an indicator of the company's pricing strategy and operating efficiency and shows how much is left after paying for variable costs of production (e.g. wages, raw materials) for covering fixed costs such as interest on debt. Or in other words: OM shows how much income (before taxes) is generated on each monetary unit of sales. A change over time of OM shows excellently how the quality of a company evolves i.e., the higher the margin, the better.

The following empirical ordered logistic regression model will be estimated

$$ROE_t = \beta_1^{(\mu)} P/E_t^{(\mu)} + \beta_2^{(\mu)} ROA_t^{(\mu)} + \beta_3^{(\mu)} Current\ Ratio_t^{(\mu)} + \beta_4^{(\mu)} Operating\ Margin_t^{(\mu)} + \varepsilon_t^{(\mu)}$$

where

P/E_t is the dependent variable (i.e. the price-earnings ratio);

β are the unknown regression parameter associated with μ (with its estimate $x_t \hat{\beta}^{(\mu)}$);

ROE, ROA, Current Ratio and Operating Margin are a set of independent variables;

$\varepsilon_t^{(\mu)}$ is an unknown error term with normal distribution.

This empirical model has been chosen in order to explain best with data available the events in Indonesia and Malaysia. Although there might be some positive correlation between the independent and the dependent variables this model should give the best explanation if and how the underlying structures changed. As ROE usually gives a good overview about the health of a company this ratio is identified as being the independent variable while the other are expected to explain how fundamentals like profit (i.e. P/E), liquidity (i.e. current ratio) and sales (i.e. operating margin) change the profitability of a company.

6.3.3.3 Expected Results

The results expected from this analysis are that the correlation of the corporate data will worsen (i.e. the correlation will increase) during the crisis period: The behaviour of market participants (i.e. 'herding behaviour') should heavily influence without a 'rationale' the price of stocks in the market (see also the previous chapters and the different explanations to the causes of the crisis). Due to the turmoil in the markets the goodness of the model is expected to worsen as irrational behaviour in the market will increase

which means that the above described fundamentals influencing the profit of a company will only play a minor role in explaining the movements of the ratios (like P/E and current ratio). During the crisis due to the behaviour of investors it is expected that prices will not reflect all fundamentals of the companies. The current ratio is expected to worsen during the crisis, due to the spill-over effects of the financial markets problems to the real economy (see previous Chapter 2 for theoretical explanation and foundation).

To summarize, the data analysis should show that not only the macroeconomy was affected by the financial market turmoil but also the corporate sector changed. Therefore the ordered logistic regression should show changes in both countries, Indonesia and Malaysia, especially during the crisis (i.e. data ranging from 1997 to 1998). Furthermore, as it is expected that the East Asian crisis had an impact on the profitability of the corporations hence the prediction of the model will decrease (e.g. due to an increase of noise and irrational behaviour of market participants). And finally, it is expected that Malaysia will return faster to the pre-crisis levels and therefore the prediction of the model should improve faster than for Indonesia.

6.3.4 Quantile Regression Analysis

The methodology used here is a quantile regression model, as first introduced by Koenker and Bassett (1978). The quantile regression is an extension of classical least square regression of the conditional mean for a collection of models for different conditional quantile functions; the difference is that the median (quantile) regression estimator does minimize the symmetrically weighted sum of absolute errors (where the weight is equal to 0.5) in order to estimate the conditional median (quantile) function while other conditional quantile functions are estimated using minimized asymmetrically weighted sum of absolute errors (weights are functions of the quantile of interest; for a good introduction please refer to Koenker and Hallock (2001)). Quantile regression is robust to the presence of outliers and it can be seen from some simple descriptive statistics in Chapter 7 that the value of mean and median of the corporate data used here differs significantly. Furthermore, quantile regression can show how some specific selected quantile (e.g. lowest fifth percentile and top fifth percentile of the sample) evolve over a specific period of time.

6.3.4.1 The Model

Following Koenker and Bassett (1978) the general quantile regression equation can be expressed as

$$y_t = \beta_0^{(\theta)} + \beta_1^{(\theta)}x_t + \varepsilon_t^{(\theta)}$$

where

y is a continuous response variable depending on x ,

x is the dependent variable,

data pairs (x_t, y_t) are denoted by the subscription $t = 1, \dots, n$,

ε_t is the error term and has zero expectation,

$0 < \theta < 1$ indicates the proportion of the population having scores below the quantile θ

As can be observed from this very simple construction, the error term does not need to be independently and identically distributed (i.i.d.). Therefore this methodology allows analysis of a population of different, heterogeneous companies using different levels of θ , which need not to be equidistant.

The θ th quantile regression estimators $\hat{\beta}_0^{(\theta)}$ and $\hat{\beta}_1^{(\theta)}$, $0 < \theta < 1$, are chosen to minimize

$$\min_{\beta_0, \beta_1 \in \mathbb{R}} \left(\sum_{t \in \{y_t \geq \beta_0^{(\theta)} + \beta_1^{(\theta)}x_t\}} \theta |y_t - \beta_0^{(\theta)} - \beta_1^{(\theta)}x_t| + \sum_{t \in \{y_t < \beta_0^{(\theta)} + \beta_1^{(\theta)}x_t\}} (1 - \theta) |y_t - \beta_0^{(\theta)} - \beta_1^{(\theta)}x_t| \right)$$

in words, minimizing a weighted sum of absolute errors, where the weights are symmetric in the case $\theta = 0.5$ (median) and asymmetric otherwise.

According to Buchinsky (1998) this minimization can be formulated as a linear programming (which implies that the method is computationally straightforward) or as a GMM (Generalized Method of Moments) problem which leads to

$$\sqrt{n}(\hat{\beta}^{(\theta)} - \beta^{(\theta)}) \xrightarrow{d} N(0, \Omega^{(\theta)})$$

implying that tests can be constructed using critical values of the normal distribution with asymptotic justification.

In order to estimate $\Omega^{(\theta)}$ several estimators are available and the most commonly used in practice is the bootstrap estimator described below and suggested by Buchinsky (1995), being more efficient in small samples and robust between the regressors and regression errors. This method computes

$$\hat{\Omega}^{(\theta)BS} = \frac{n}{B} \sum_{j=1}^B \left(\hat{\beta}_j^{(\theta)BS} - \hat{\beta}^{(\theta)} \right) \left(\hat{\beta}_j^{(\theta)BS} - \hat{\beta}^{(\theta)} \right)$$

where

$\hat{\beta}_j^{(\theta)BS}$ is the quantile regression estimator based on the j^{th} bootstrap sample, $j = 1, \dots, B$.

The bootstrap samples (y_t^{BS}, x_t^{BS}) are obtained by sampling with replacement from the original sample, (y_t, x_t) ; the procedure just described can be implemented using Stata[©] software. The advantage of the bootstrap method is that it does not necessarily require the i.i.d. assumption and results may therefore be more robust than other asymptotic procedures requiring stronger assumptions.

The bootstrap method is used to compute standard errors in the calculation of the next chapter and limited to 500 bootstraps replications.

For a good introduction to quantile regression analysis refer to Hao and Naimann (2007).

6.3.4.2 The Methodology

The following empirical quantile model will be estimated

$$ROE_t = cons^{(\theta)} + \beta_1^{(\theta)} P/E_t + \beta_2^{(\theta)} ROA_t + \beta_3^{(\theta)} Current\ Ratio_t + \beta_4^{(\theta)} Operating\ Margin_t + \varepsilon_t^{(\theta)}$$

where

P/E_t is the dependent variable (i.e. the price-earnings ratio);

$cons^{(\theta)}$ is the intercept;

$\beta^{(\theta)}$ are the unknown regression parameter associated with the θ^{th} percentile (with its estimate $x_t \hat{\beta}^{(\theta)}$);

ROE, ROA, Current Ratio and Operating Margin are a set of independent variables;

$\varepsilon_t^{(\theta)}$ is an unknown error term with properties as described above.

The chosen bootstrap sample is 500 bootstrap replications as suggested by literature (e.g. Hao and Naiman, 2007). The levels of θ have been selected at, $\theta = 10$, $\theta = 50$ and $\theta = 90$.

As Hao and Naiman (2007) suggest the variables are used on a raw scale and not transformed by a log-operation as a log-transformation would influence the estimation result.

The calculations were done on a basis of 'event study' i.e. focusing on a period of five years including the pre- and after-crisis period which comprises the period of 1996 to 2000.

The model described above has been chosen due to data availability (only annual data has been available for the firms analyzed over this period). The Price/Earnings Ratio is a ratio that incorporates both stock performance (and therefore movements on the market) as well as firm specific performance (i.e. earnings). The four explanatory variables reflect the performance of the operative business (i.e. ROE, ROA and Operating Margin) as well as the liquidity position (i.e. Current Ratio). Due to the data structure (annual data) the model has to be interpreted with caution. For the explanation of the empirical model as well as for the interpretation of the independent and dependent variables please refer to the previous section.

6.3.4.3 Expected Results

Although the data set is limited and on an annual basis there should be significant differences looking at the quantiles of Malaysia and Indonesia during and after the crisis. Furthermore, as the analysis is very rough and simple it should show that differences in quantiles over the whole period and especially during the crisis occurred, i.e. that changes in the structure of the data set over the period of 1997 to 1999 can be found which could be interpreted that the East Asian Crisis influenced the real economy and especially the corporate sector, too. A rough comparison between pre-crisis, crisis and after-crisis outcomes should show that in these bigger time periods fundamental changes on corporate level were occurring. This would imply that the East Asian Crisis did not only affect the macroeconomy but as well the corporate sector which is typical for a third-generation crisis.

Nevertheless, the result have to be interpreted cautiously due to reliability of data, sampling and possible misspecification of the model used here.

6.4 Conclusion

This chapter has given the overview to the methodologies that will be used (the results are interpreted in Chapter 7). A top-down approach will be used, i.e. moving from macroeconomic to corporate data and looking for changes in the economy of Indonesia and Malaysia. While the two analyses with macroeconomic data should give good predictions, the results of the two analyses with corporate data have to be interpreted with caution due to limited data quality. Additional noise in model and model prediction could be caused by the data quality could lead to misinterpretations of results.

To summarize, the analysis should show that Malaysia has recovered faster (experiencing a so-called V-shaped recovery) while Indonesia struggled with the East Asian Crisis for a longer time. Furthermore, the analysis should give a hint how the policies used by the two countries during the crisis helped to boost their recovery. While the difference-in-difference analysis gives good insights to the effectiveness of the influence of the policies used the ratio analysis and the ordered logistic regression analysis have to be interpreted much more careful and the quantile regression should not be interpreted without looking at the other analysis. The latter should only be used as integration for the interpretation of the other methods used.

7

Discussion of Results

This chapter will deal with the empirical results of the methodologies discussed in Chapter 6. The first part will consider the result of the indicators, followed by the results of the difference-in-difference analysis, quantile regression and paneldata analysis.

7.1 Indicator Analysis

The analysis by means of indicators can give only a general overview of the situation in the two countries. Table 7.1 shows selected indicators, as discussed previously, which cover economic performance measures, liquidity and indebtedness. The dark shaded cells cover the immediate pre- and after-crisis period with the darkest cell covering the most affected year.

TABLE 7.1 – Results: Indicators of Indonesia and Malaysia

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Current Account (as % of GDP)																
Indonesia	-3.5	-4.1	-2	-1.1	-1.3	-3.7	-2.7	-1.3	6.8	6.3	7	6	4	3.6	0.6	0.3
Malaysia	-2	-8.5	-3.7	-4.7	-6.1	-9.7	-4.4	-5.9	13.2	15.8	9.3	8.3	7.6	12.9	12.6	12.2
Short Term Debt (as % of Reserves)																
Indonesia	258.7	172	149.6	161.6	181.4	231.8	234.2	218.4	118.3	81	82.2	94.2	81.3	63.5	55.5	58
Malaysia	16.7	24.3	29.3	23.5	21.8	26.8	36.9	53.5	33.2	19.3	16.3	21.3	25.3	20.1	16.8	12.5
International Reserves to Total Debt																
Indonesia	12.2	12.9	12.9	13.9	12.2	11.9	15	12.8	15.5	18	20.3	20.9	24.2	26.5	25.8	24.9
Malaysia	64.4	64.4	86.6	104.6	84.2	69.6	68.4	44.3	60.5	73.1	67.8	65.6	69.2	90.4	126.5	134
Net Foreign Debt (as % of GDP)																
Indonesia	48.5	49	49.8	44	48.4	49.1	43.6	49.8	121.1	80.1	69.8	64.6	50.1	42.9	41	37
Malaysia	12.4	12.4	4.5	-1.8	6.4	11.8	12.4	26.3	23.2	14.2	14.9	17.6	15.6	4.5	-11.7	-13.6
Net Foreign Debt to Exports of Goods and Services																
Indonesia	205.4	206.8	200.4	183.2	203.4	199.7	186.5	180.4	221.3	210.7	155.1	160.9	146.4	139.5	120.4	98.4
Malaysia	15.7	15.3	5.7	-2.2	6.9	12	13.1	27.2	19.5	11.4	11.7	14.8	13.3	3.8	-9.3	-10.7
Debt Service Paid (as % of GDP)																
Indonesia	7.9	8.1	8.1	8.1	7.3	7.3	8.6	8.3	17.4	11.4	10.1	9.5	8.5	7.9	8	5.8
Malaysia	9.8	5.9	7.1	7.1	8.2	6.8	8.4	7.1	8.4	6	7.1	7.1	8.3	9.2	7.8	7.2
Debt to Service Due																
Indonesia	33.3	34.2	32.6	33.6	30.7	29.9	36.6	30	36.4	36.5	24	25.1	25.9	35.8	24.7	15.4
Malaysia	12.4	7.3	9	8.7	8.9	7	8.8	7.3	7.1	4.8	5.6	5.9	7.1	7.8	6.2	5.6
Debt to Service Paid																
Indonesia	33.3	34.2	32.6	33.6	30.7	29.9	36.6	30	31.7	30	22.5	23.6	24.7	25.6	23.6	15.4
Malaysia	12.4	7.3	9	8.7	8.9	7	8.8	7.3	7.1	4.8	5.6	5.9	7.1	7.8	6.2	5.6
Total Public Debt (as % of GDP)																
Indonesia	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22.6	65.7	89.8	92.9	84.7	76.3	69.1	69.4	63.6
Malaysia	89.5	82.1	71.8	65.1	58.3	53.2	46.8	45.4	55.8	56.2	54.1	63.7	63.6	63	62.3	61
Interest Paid (as % of GDP)																
Indonesia	3.1	3.3	2.9	2.8	2.7	2.8	2.6	2.8	6.7	3.8	4.5	3.6	2	1.8	1.9	1.2
Malaysia	2.6	2.2	1.9	2	1.9	1.8	2.1	2.8	3.1	2.4	2.5	2.4	2.1	2.1	1.8	1.7
Interest Paid to Debt Service Paid																
Indonesia	40	40.2	36.2	35.1	37.3	37.9	30.9	34.1	38.8	33.7	44.3	38	23.7	22.7	23.8	20.8
Malaysia	26.9	37	26.3	28.3	23.4	26.3	24.7	39.8	37.3	40.2	35.7	34.3	24.8	22.8	22.7	24.1
Interest Due to Exports of Goods and Services																
Indonesia	13.3	13.8	11.8	11.8	11.4	11.3	11.3	10.2	12.3	16.1	11.5	10.5	7	7.2	5.6	3.2
Malaysia	3.3	2.7	2.4	2.5	2.1	1.8	2.2	2.9	2.6	1.9	2	2	1.8	1.8	1.4	1.4
Fiscal Balance (as % of GDP)																
Indonesia	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1.4	-1.9	-1.6	-3.2	-0.8
Malaysia	-2.9	-1	0	0.8	2.9	1.5	1.5	2.8	-1.4	-2.8	-5.8	-5.5	-5.6	-5.3	-4.2	-3.8

Government Budget Expenditure (as % of GDP)																
Indonesia	16.6	15	16.6	14.9	15.6	14	14.3	17	17.6	17.4	17.2	19.3	20.1	20.6	21.9	21.2
Malaysia	27.7	27.2	26.9	24	23	22.1	22.3	21	21.8	22.7	23.8	29.3	28.7	28.7	26.4	25.3
Government Budget Revenues (as % of GDP)																
Indonesia	17	15.4	16.2	15.5	16.4	16	15.3	16.4	14.9	16.3	14.7	18.3	19.2	19.2	20.2	20.8
Malaysia	24.8	25.2	26	24.2	25.3	22.9	23	23.3	20	19.5	18	23.8	23.1	23.4	22.1	21.5
Gross Fixed Investment (as % of GDP)																
Indonesia	25.6	25.5	24.6	23.8	24.9	25.7	26.8	25.6	23	18.6	19.9	19.2	19	19.5	21.7	22
Malaysia	33	36.4	36.6	38.9	40.2	43.6	42.5	43.1	26.8	21.9	25.6	24.9	23.1	22	20.4	20
M2 (year-over-year change, in %)																
Indonesia	46.8	25.9	20.9	19.5	21.5	24.8	28.2	25.8	62.2	23.4	8.4	14.7	8	6.4	6.9	14.6
Malaysia	-43.7	16.9	71.9	26.4	11.5	18.5	18.5	16	0.2	12.1	10	9.1	3.9	8.1	11.7	6.3
Exports of Goods and Services (as % of GDP)																
Indonesia	25.1	26	27.9	25.4	25.2	25	24.5	26.4	50.3	33.7	41	38.2	32	30.5	32.1	33.5
Malaysia	74.5	77.8	76	78.9	89.2	94.1	91.6	93.3	115.7	121.3	124.4	116.4	114.6	113.4	121.2	123.2
Exports of Goods and Services to Imports of Goods and Services																
Indonesia	106.5	103.4	106.6	106.1	102.9	97.2	95.6	100.7	124.6	129.9	126.1	124.4	124.9	122.3	115.9	111.8
Malaysia	102.8	95.5	101.8	99.9	98.3	96	101.6	101	123.5	126	119.1	118.8	118.1	122.5	121.3	123.5
Effective Maturity on Foreign Debt (Years)																
Indonesia	8.7	8.9	8.4	7.7	8	8.7	6.6	7.4	9	10.4	13	14.1	9.8	7.8	7.1	9.1
Malaysia	4.4	7.3	4.8	4.8	4.1	5.4	4.3	6.7	8.5	11.9	8.7	9.1	6.4	5.4	5.6	5.7
GDP per Capita (in USD)																
Indonesia	660	730	780	880	960	1080	1200	1110	480	700	730	700	840	990	1060	1160
Malaysia	2,400	2,600	3,100	3,400	3,700	4,300	4,800	4,600	3,300	3,484	3,876	3,668	3,858	4,133	4,601	4,918
GDP Growth (real, year-over-year change, in %)																
Indonesia	0	7	6.5	6.8	7.5	8.2	7.8	4.7	-13.1	0.8	5.4	3.6	4.5	4.8	5.1	5.6
Malaysia	9	9.5	8.9	9.9	9.2	9.7	10.2	7.3	-7.4	6.1	8.9	0.4	4.1	5.3	7	5.5
CPI (year-over-year change, in %, average over period)																
Indonesia	7.8	9.4	7.6	9.7	8.5	9.4	8	6.2	57.9	24.1	3.8	11.5	11.9	6.6	6.2	10.4
Malaysia	2.6	4.4	4.8	3.5	3.7	3.5	3.5	2.7	5.3	2.7	1.5	1.4	1.8	1.1	1.5	3.1
Exchange Rate (average over period)																
Indonesia (Rupiah/USD)	1843	1950	2030	2087	2161	2249	2342	2909	10014	7855	8422	10261	9311	8577	8939	9705
Malaysia (Ringgit/USD)	2.7	2.75	2.55	2.57	2.62	2.5	2.52	2.81	3.92	3.8	3.8	3.8	3.8	3.8	3.8	3.79
Real Effective Exchange Rate (average over period)																
Indonesia (Jan 2000=100)	163	157.9	154	153.5	152.6	151	159.8	146.2	67.8	95.8	89.3	83.2	100.6	108.9	112.3	112.2
Malaysia (1989=100)	106.6	101.9	108.1	102.4	98.9	98.8	108.3	105.6	82.6	81.8	82.8	89	90.1	83.5	79.4	82.1

Source: DataStream, EIU, DBResearch and authors own calculations.

Looking at the above ratios it can be seen that before the outbreak of the crisis short term debt (as percentage of reserves), net foreign debt (as percentage of GDP), net foreign debt to exports of goods and services, debt to service due and debt to service paid, were larger while gross fixed investment (as percentage of GDP) and international reserves to total debt were lower in Indonesia than in Malaysia. Hence, suggesting that the Indonesian economy was exposed to a larger degree of foreign debt especially short term debt. Therefore indebtedness of Indonesia was marginally worse compared to Malaysia before the crisis.

Looking at indebtedness of both economies after the crisis there can be seen, that Indonesia experienced a larger degree of socialization of debt (total public debt as percentage of GDP increased by 40 % (!) from 1997 to 1998, just within one year) and exposure to foreign debt (as percentage of GDP) almost tripled within one year (from 49.8 to 121.1 %) which can be also be attributed to a slump of GDP.

Both economies experienced an outflow of international reserves which can be seen by the decrease of short term debt as percentage of reserves and the increase of international reserves to total debt discussed previously.

One interesting point to note is that Malaysia relied more on exports of goods and services than Indonesia before the outbreak of the crisis that guarantees to some extent that the economy generates funds for the coverage of foreign debt. The indicator exports of goods and services to imports of goods and services increased in both countries from 1997 to 1998 by almost 20 %; this can be explained by a reduction of imports due to the sharp decline of the exchange rate (versus the US Dollar) affecting imports which became relatively expensive.

Furthermore, both economies experienced a slump in GDP growth (nominal and real) and an increase of inflation rate. The inflation rate increased in Indonesia by almost ten times while in Malaysia the inflation rate 'only' doubled. Not only a decline of exchange rate (versus US Dollar) hit the economies but the real effective exchange rate (which reflects terms of trades, too) declined sharply in both countries, too. The observation that M2 (year-over-year change, in percentage) increased sharply in Indonesia reflects that the floating exchange rate system has been secured with free capital movements. As explained in the previous chapters this means that under these circumstances monetary policy is very effective. However, the combination of a declining exchange rate and the sharp increase of the inflation rate with the mix of an unfavourable investor sentiment in the region limited the effectiveness of monetary policy in the economy. This is evident from economic performance indicators which bounced back only after a couple of years

and not immediately after the crisis. On the other hand, the capital controls introduced by Malaysia and reflected by the indicator regarding the fiscal balance (as percentage of GDP) shows that under capital controls fiscal policy is more effective than monetary policy. Therefore M2 growth and fiscal expenditure in Malaysia has not been changed to the same degree as in Indonesia during and after the crisis.

Comparing the expected results of indicators discussed in the previous chapter and the results presented in the Table above there can be seen that the ratios 'Short Term Debt (as % of Reserves)', 'Debt Service Paid (as % of GDP)', Debt to Service Due, Debt to Service Paid, Total Public Debt (as % of GDP)', 'Interest Paid to Debt Service Paid', 'Interest Due to Exports of Goods and Services (in %)', 'Gross Fixed Investment (as % of GDP)', 'M2 (year-over-year change, in %)' and the different economic indicators (including Exports of Goods and Services (as % of GDP), Exports of Goods and Services to Imports of Goods and Services, GDP per capita (in USD), GDP Growth (real; year-over-year change, in %), Consumer Price Index (CPI) (year-over-year change, in %, average over period), Exchange Rate (average over period), Real Effective Exchange Rate (average over period)) are behaving as expected (see Chapter 6.3.1).

The ratio 'Current Account (as % of GDP)' is due to large inflows in the capital market negative (i.e. in the private sector; This differs from the Mexican experience when before the outbreak of the 'Tequila Crisis' inflows financed the government debt) before the outbreak of the crisis and in 1998 both economies experienced a sharp reversal of this ratio which becomes positive. The empirical result of 'International Reserves to Total Debt' is as expected for 1997 but Malaysia recovers rapidly and in 1998 reaches again pre-crisis levels (Indonesia only in 1999). The ratios 'Net foreign Debt (as % of GDP)' and 'Net Foreign Debt to Exports of Goods and Services' are as expected for Indonesia but stay relatively stable for Malaysia; this could be interpreted as a sign that Malaysia did experience a lower degree of exposure to foreign debt. 'Interest Paid (as % of GDP)' doubles for Indonesia in 1998 but returns to the pre-crisis levels in 1999. The ratios 'Fiscal Balance (as % of GDP)', 'Government Budget Expenditure (as % of GDP)' and 'Government Budget Revenue (as % of GDP)' are in general as expected. For these results it can be seen that the ratio 'Government Budget Expenditure (as % of GDP)' increased only in 2001 as it was allowed to pursue a reflationary macroeconomic policy.

In general, the Malaysian economy reached the pre-crisis levels faster than Indonesia. By 2005 both economies regained momentum and reached or even surpassed pre-crisis levels as shown by economic performance indicators.

This indicates that for the macroeconomic indicator analysis the null hypothesis should be rejected and the alternative hypothesis should be accepted (see chapter 6.2), i.e. the East Asian Crisis did affect the macroeconomy and the economies did recover at a different speed.

For completeness some additional economic indicators are shown graphically in the Appendix and discussed here.

A. Exchange Rates

Here it can be seen (Appendix Figure A7.1 and A7.2) that both (Indonesian Rupiah and Malaysian Ringgit) exchange rates were strongly affected by the East Asian Crisis, i.e. there can be seen that in 1997 the Indonesian Rupiah versus other major currencies depreciated significantly. However, while Indonesia let the currency float Malaysia changed its strategy and by September 1998 the Malaysian Ringgit was fixed against the US Dollar.

Even more interesting is that the daily change of the Rupiah and Ringgit versus the US Dollar (Appendix Figure A7.3) also changed dramatically in 1997. The implications for companies which were exposed to unhedged foreign exchange debt were immense as the volatility of exchange rate increased drastically implying a lower degree of prediction of exchange rates.

Looking at the real effective exchange rate (Appendix Figure A7.4) it can be seen, that once again the Malaysian economy did not experience such a dramatic slump as the Indonesian economy.

B. Interest Rates

The interest rates (Appendix Figure A7.5 and A7.6) show that the Indonesian economy has been hit by a sharp increase in interest rates, while Malaysia experienced a lower increment of interest rates. This is important if companies have a relatively large exposure to bank finance i.e. if their prime source of financing is not from capital markets but from the banking sector as was the case in both countries. The combination of high volatility of exchange rates and the huge increase in interest rates hit local companies very hard as they were exposed to unhedged foreign debt and their primary source of capital has been the banking system. Therefore problems in the financial sector were passed-through to companies and affected the real economy in both countries, as could be seen by the indicators and its discussion above.

C. Stock market and related indices

Looking at JSX and KLSE Composite Index respectively their monthly change (Appendix Figure A7.7, A7.8 and A7.9) shows the following: The Indonesian stock exchange index experienced a slump in 1997 and 1998 but recovered in 1999 and 2000, falling back again thereafter and growing since spring 2003 surpassing even the pre-crisis level. This contrasts with the experience of the Malaysian stock exchange index, which experienced a slump in 1997/1998, too, but did not reach pre-crisis levels thereafter. This difference can be explained by new regulations on the Malaysian stock market (refer to chapter five for a discussion of corporate governance) as well as stricter regulations during and after the imposition of capital controls while the Indonesian stock market remained not only during but even after the East Asian Crisis relatively open.

Comparing monthly changes of the 'JP Morgan Trade Weighted Index' i.e. this index calculates the changes of the local currency to a basket of foreign currencies weighted by each country's bilateral manufactured trade pattern (Appendix Figure A7.10) here it can be seen that the volatility of the Indonesian Index was larger during and after the East Asian Crisis which can be explained by a larger degree of economic and political instability in Indonesia (as discussed before) and by more difficulties in the local production and subsequently trade.

D. Capital flow

Net capital flight (Appendix Figure A7.11) which is capital outflow minus capital inflow (a positive sign means capital flight) can be interpreted in the following way: Due to free capital account convertibility Indonesia experienced a large capital outflow in 1998 while Malaysia experienced a sharp increase in capital outflow, but to a lesser extent when compared with Indonesia. The reason for this difference is due to capital controls, i.e. free movement of capital was limited by Malaysia. Problems for an economy might arise if there are mismatches in the time structure of balance sheets which was the case in both economies. Furthermore it can be seen from these figures that investor confidence returned soon after the crisis to pre-crisis levels in Malaysia but not in Indonesia. As previously mentioned this can be attributed to the economic and political instability after the crisis in Indonesia as discussed before.

A greater insight can be gained by looking at the financing sources of both economies (Appendix Figure A7.12 and A7.13); where it can be seen that

Malaysia's sources of financing were more stable with constant direct investment and portfolio flows compared to Indonesia.

E. Other economic indicators

As can be seen from the Appendix Figure A7.14 - A7.25 the economic situation in Indonesia shows some differences compared to Malaysia which is obvious when looking at trade indicators, labour market (i.e. unemployment rate) and money supply (including money supply growth rate and inflation rate). As before, in general Indonesia has been hit much harder than Malaysia shown by a sharper decrease of unemployment rates and lower inflation rates in the latter economy.

The ranking of export markets is different but it can be seen that both countries have the same major export markets (i.e. Japan, Singapore and USA). The four major export products are different with Malaysia concentrating on processed goods (i.e. electronics and electrical machinery) while Indonesia concentrates on processed and raw products such as textiles and garments, petroleum and its products, liquefied natural gas and wood and its products.

Figure A7.24 shows the fund position at IMF of Indonesia and Figure A7.25 shows a comparison of CPI vs. CPI Food Index. The latter one is very interesting as it shows that the inflation rate for a basket of food has been higher from 1998 to 2000 than for the CPI basket. This is important as rice has been subsidized in Indonesia until the East Asian Crisis as discussed in the chapters before; thereafter this subsidy has been abolished and these changes in prices for food had major impacts for the poorer class of population which bear a higher burden on increasing food prices. Since 2001 Index CPI has been higher than Index CPI Food.

In conclusion these indicators demonstrate that Malaysia was not hit as hard as Indonesia by the East Asian Crisis and that the Malaysian economy recovered rapidly following a so-called V-shape recovery. The various indicators which reflect the health of an economy and discussed here indicate that Malaysia and Indonesia were both hit by the East Asian Crisis but dealt with it in a different way with the sudden problems arising especially in the capital markets and experienced a different speed of recovery, as discussed previously. Furthermore it can be observed that Indonesia did not only suffer for a longer period from the outcomes of the crisis but costs of the crisis were split on the whole population (i.e. socialization of costs of the crisis was much higher in Indonesia compared to Malaysia also resulting in problems in the cohabitation of the heterogeneous population of the peninsula of Indonesia).

While from this single event and the comparison of only these two country experiences it can not be deducted that the Malaysian policies - the imposition of specific, tailored capital controls on short term capital outflows - during and shortly after the crisis were better than the IMF policies pursued by Indonesia. Nevertheless, the result shows that so-called 'unorthodox' policies might however work in specific situations.

7.2 Difference-in-Difference Analysis

The following tables, Table 7.2 - show the results of the difference-in-difference analysis for both monthly and quarterly data. For a better legibility and clarity of understanding only the baseline effect (i.e. β) and the difference effect (i.e. γ) are presented; standard errors are in parentheses. Furthermore, conventional and time-shifted estimation results are presented in the same table in order to compare directly the results.

TABLE 7.2 – Results: Difference-in-Difference Analysis: Monthly Data

Variable	Comparator	Conventional			Time-Shifted		
		Baseline effect	Difference in Malaysia	R-Squared	Baseline effect	Difference in Malaysia	R-Squared
Stock Market Index (log)	Indonesia	0.6882* (0.3109)	-1.6234* (0.2434)	0.7925	-0.1193 (0.1897)	-1.0721* (0.1610)	0.7682
JP Morgan Trade Weighted Index, Real (log)	Indonesia	0.4075* (0.2987)	-0.4639* (0.0234)	0.9836	-0.0041 (0.0207)	-0.0208 (0.0176)	0.9895
Interest Rate (money market, %)	Indonesia	0.0352 (0.0451)	-0.0310 (0.0353)	0.9061	0.1050* (0.0222)	-0.0952* (0.0187)	0.9448
Exchange Rate (HC/US\$, log)	Indonesia	1.1518* (0.0429)	-0.8724* (0.0376)	0.9997	0.8552* (0.0473)	-0.6139* (0.0492)	0.9994
Total Reserves minus Gold (log)	Indonesia	0.2755 (0.3234)	-0.9316* (0.2532)	0.8504	-0.1654 (0.1888)	-0.530* (0.160)	0.8399
Inflation Rate (CPI, annual, %)	Indonesia	-0.0216 (0.0627)	0.0037 (0.0491)	0.9133	-0.1294* (0.0199)	0.0943* (0.0174)	0.9559

Source: Authors own calculations. Data Source: DataStream, IMF

Note: Standard errors in parentheses. Levels of statistical significance: * 5% level, **10% level.

TABLE 7.3 – Results: Difference-in-Difference Analysis: Quarterly Data

Variable	Comparator	Conventional			Time-Shifted		
		Baseline effect	Difference in Malaysia	R-Squared	Baseline effect	Difference in Malaysia	R-Squared
Stock Market Index (log)	Indonesia	0.4480 (0.5110)	-1.6721* (0.4335)	0.8984	-0.0071 (0.2895)	-1.3127* (0.2564)	0.8967
GDP (log)	Indonesia	0.0151 (0.2093)	-0.7029* (0.1776)	0.9892	-0.0064 (0.1186)	-0.6751* (0.1050)	0.9873
Claims on Private Sector (log)	Indonesia	-1.1119* (0.3873)	0.3684 (0.3285)	0.9461	- 0.3555** (0.2076)	-0.4268* (0.1838)	0.9594
Government Consumption Expend. (log)	Indonesia	1.2802* (0.6221)	-1.5691* (0.5277)	0.8062	0.4641 (0.3469)	-0.8365* (0.3073)	0.7411
Household Consumption (log)	Indonesia	-0.2543 (0.3531)	-0.6952 (0.2995)	0.9798	0.1496 (0.2105)	-0.9992* (0.1865)	0.9718
Imports of Goods and Services (log)	Indonesia	0.6330** (0.3408)	-1.2802* (0.2891)	0.9638	0.1633 (0.2054)	-0.9350* (0.1820)	0.9626
Exports of Goods and Services (log)	Indonesia	0.9171* (0.3196)	-1.2503* (0.2712)	0.9727	0.1920 (0.2028)	-0.6703* (0.1796)	0.9687

Source: Authors own calculations. Data Source: DataStream, IMF

Note: Standard errors in parentheses. Levels of statistical significance: * 5% level, **10% level.

The tables should be read in the following way:

Consider the variable 'Stock Market Index (log)' for the time-shifted method of Table 7.2. Then the baseline effect is $\beta = -0.1193$, i.e. that the stock market during the 12-month period after calling in the IMF in Indonesia witnessed 0.1193 percentage points relative to trend. In Malaysia the difference in stock market growth in the 12-month period subsequent to the introduction of capital controls with respect to Indonesia is $\gamma = -1.0721$, i.e. that in Malaysia stock market growth has been 0.9528. The recovery in the 12-month period after the imposition of capital controls in Malaysia has in fact boosted the KLSE and therefore this result is in line with observations.

Repeating this exercise for all the other variables (including quarterly data) it can be seen that Malaysia outperforms for all variables in this analysis, i.e. that Malaysia's 'treatment' (capital controls) was more effective than the treatment applied by Indonesia (calling in the IMF). This result holds for both, the conventional and time-shifted analysis. The results suggest therefore that the goal of Malaysia of stabilizing the economy i.e. stabilizing the exchange and interest rate, reflating the economy and restore investor confidence has worked. The capital controls allowed Malaysia (as discussed earlier) to use expansionary policies as well as restoring investor confidence by eliminating uncertainty on the economic and political level.

Nevertheless the result has to be interpreted carefully as it does not lead to the conclusion that capital controls are always better than calling in the IMF but it shows that for two economies with a similar starting position and experiencing such an unexpected financial turmoil there exist not only the 'conventional' or 'orthodox' policy but as well other possibilities. The results are in line with those found by Kaplan and Rodrik (2001).

7.3 Ordered Logistic Regression Analysis

The ordered logistic regression tries to answer the question how the East Asian Crisis influenced the growth and development of the corporate sector and therefore on a microeconomic level. Using the ordered logistic regression is on the one hand problematic as it codes and categorizes 'original' data i.e. categorization might be wrong and on the other hand the ordering makes dataset sizes relative.

The issue of structural breaks is not addressed here as the hypotheses are based on the assumption that Indonesia and Malaysia experienced the East Asian Crisis and clearly imposed their policies at specific points in time (this also was assumed in the previous calculation). As described in detail in Chapter 6 the period before the crisis broke out in Indonesia is 1991-1997, in Malaysia 1991-1998, while the treatment/after-crisis period is 1998-2004 for Indonesia and 1999-2004 for Malaysia. Therefore the year of policy change is considered being 1997 for Indonesia (remember Indonesia called in the IMF in 1997) while Malaysia introduced in 1998 the controls on short term capital outflow as described in the previous chapters.

Regarding the data set it can be seen that the size is not the same for the two countries (approximately 115 observations for Indonesia and 50 observations for Malaysia). The cause of the different sizes of the sets is that the size of the stock market indices differs. Only companies were selected which were listed in the stock market index of the relative prime market. The following Table 7.4 and 7.5 show some descriptive statistics of the variables just described.

TABLE 7.4 – Indonesia: Descriptive Statistics of Corporate Data Used

	1996		1997		1998		1999		2000	
	Mean	STD	Mean	STD	Mean	STD	Mean	STD	Mean	STD
PER	29.478	111.585	8.399	32.049	3.890	20.902	19.942	351.381	18.24	109.909
ROE	8.064	28.725	-46.711	232.348	-284.026	2065.428	-26.805	260.578	-95.674	478.513
ROA	7.117	11.897	0.055	13.005	-3.909	32.379	7.248	12.599	-2.903	21.603
CR	1.889	1.584	1.662	2.273	1.578	1.753	2.019	3.057	1.843	2.498
OM	16.443	24.115	41.313	254.928	32.070	181.757	40.635	298.270	10.833	21.493

Source: Authors own calculations. NB: 115 Observations per variable; STD = standard deviation; PER = Price-Earnings Ratio; ROE = Return on Equity; ROA = Return on Asset; CR = Current Ratio; OM = Operating Margin.

TABLE 7.5 – Malaysia: Descriptive Statistics of Corporate Data Used

	1996		1997		1998		1999		2000	
	Mean	STD	Mean	STD	Mean	STD	Mean	STD	Mean	STD
PER	20.568	11.194	166.759	1113.59	3.322	63.245	21.684	18.452	24.866	23.898
ROE	16.554	8.024	15.427	12.347	-8.891	94.994	-0.964	74.787	-0.414	68.685
ROA	12.300	9.213	10.554	9.502	4.444	12.406	5.317	14.186	6.243	7.473
CR	1.678	1.164	1.614	0.980	1.471	0.842	1.757	1.315	1.808	1.182
OM	22.802	25.436	18.114	15.043	10.638	15.598	32.679	15.887	30.503	15.413

Source: Authors own calculations. NB: 50 Observations per variable; STD = standard deviation; PER = Price-Earnings Ratio; ROE = Return on Equity; ROA = Return on Asset; CR = Current Ratio; OM = Operating Margin.

Table 7.4 shows descriptive statistics of company's data from Indonesian stock market, while Table 7.5 shows descriptive statistics for the Malaysian stock market. The PER in Indonesia is higher in 1996 than in Malaysia with a much higher standard deviation meaning that the distribution is much more widespread for the Indonesian data. This higher PER shows that investments in Indonesia took a longer time to repay that is reflected by the profitability indicators, ROE and ROA, too. Both indicators, ROE and ROA, are much lower and approximately half as much as the Malaysian figures for 1996. A similar picture arises from OM which is lower for Indonesia, too, implying that Indonesian companies seem to be less efficient in doing business. The liquidity measure CR shows a stronger position for Indonesian companies and the standard deviation is lower for Malaysia reflecting a more homogenous liquidity position in 1996.

Looking at data from 1997 it can be seen that the PER for Indonesia decreases while for Malaysia it shoots up dramatically. ROE and ROA do not differ significantly for Malaysia while becoming negative respectively zero for Indonesia. The more interesting ratio, CR, remains relative stable for both countries showing only a slight deterioration in the liquidity position. The change of OM in Indonesia is very high which could indicate a sudden fall in operating income while the same ratio stayed relative stable in Malaysia.

The figures for 1998 show further troubles for companies in Indonesia and Malaysia: Both markets experience a sudden drop in PER, ROE and ROA as well as a slight worsening of the liquidity position. OM falls in both markets, too.

Moving to 1999 it can be seen that both markets gained momentum moving again towards pre-crisis levels. Profitability and liquidity as well as operating efficiency increase; still some indicators reflect problems in the market e.g. the ROE is negative for both countries. The year 2000 shows a calming in Malaysia as not only most ratios reach again pre-crisis levels but there is also a decrease in the standard deviation. On the other hand Indonesian indicators are showing a mixed outcome some problems supposedly caused by domestic affairs (e.g. independence movements in Aceh).

7.3.1 Discussion of Results

The ordered logistic regression has been computed for all corporations as well as for the set of corporations ex-finance (i.e. excluding finance industry). Each single regression was advanced by an analysis of correlation of the different variables used in the regression. All results can be found in Tables A.7.1, A.7.2, A.7.3 and A.7.4. Firstly, the results for all companies will be interpreted followed by the interpretation of the ex-finance regression results. The coefficients presented in the tables give only an indication how likely it would be to move to a different category (i.e. in the category 1 = bad to 5 = good).

Looking at Tables A.7.1 and A.7.3 it can be seen that the correlation in Indonesia increased constantly from the period 1991 to 1997 ('before' crisis) and started to decrease very slowly in the period 1998 to 2004 ('treatment' period). In same period the data shows for Malaysia that in the period 1991 to 1998 ('before' crisis) the variables were increasing slightly but in 1998 there can be seen that correlation jumped up suddenly, subsequently decreasing sharply again over the period analyzed. This could indicate that the Indonesian market experienced more noise after the imposition of their policies while it seems that Malaysia reduced with the imposition of controls on capital outflows some noise in the market.

Looking at the results of the ordered logistic regression for Indonesia (Table A.7.1) it can be seen that prior to 1997 the model worked relatively well showing an average R² of 25 % and at least good significance levels (at the 1% respectively 5% significance level) for at least three independent variables. The PER showed a positive relationship over the whole period before the outbreak of the crisis however being smaller than one; ROA showed a positive but decreasing relationship over this period. The relationship of CR is negative but increasing over the period until 1997 suggesting that a higher CR decreases ROE which can be explained by the following: the size of ROE is dependent on the leverage effect, i.e. the higher the external financing the more ROE will grow as the external financing will contribute to an increment of earnings but equity will stay stable and in sum ROE will increase. Therefore a high CR is imposing a limit on this just described leverage effect and companies usually try to increase the leverage effect by decreasing for example the CR as appears to happen in Indonesia in the period before the crisis. The OM, during this same period, however demonstrates no significance at all (in 1991, 1992 and 1993) and ranges from -0.03 to 0.50; suggesting that there is no pattern underlying the behaviour of OM.

Looking at 1997 there can be seen that only PER and ROA are significant showing a positive relationship, while PER is increasing sharply to 1.18 ROA is staying stable at 1.07 suggesting that the influence of PER in defining the category of ROE increases strongly in 1997 (i.e. a low category means that the ratio is considered as being bad while a high category means that the ratio is good). The other two variables are not significant. The period 1998 to 2004 is characterized in general by a lower degree of significance level of the variables, i.e. only PER and ROA show good significance levels on average while the other two, CR and OM, are almost in every year not significant. R² ranges from 34% in 2002 to 24% in 2003, showing a tendency to decrease over the period. The fact that correlation was relatively high in the after-crisis period influences the interpretation of R², i.e. actual R² might be lower as some R² seems to be due to the high correlation of variables. The results for the ordered logistic regression show that the period after the crisis was characterized by much more noise than the pre-crisis period in the markets and that prediction on the profitability of a company was not anymore based on fundamental corporate data (i.e. significance levels which are for CR and OM worse in the after-crisis period than in the pre-crisis period and the higher correlation of the variables).

Looking at the results of the regression for Malaysia (Table A.7.3) there can be seen that in the period until 1998 R² is ranging from 18% to 46% and OM is never significant at any level. Furthermore, CR is only significant at 1% respectively 5% level in 1991, 1995 and 1997. This might be due to the minor banking crisis in 1994/95 in Malaysia (discussed in the previous chapters) where the balance sheets of banks were cleaned up to some degree and profitability influenced by other measures (e.g. write downs), too. Looking at PER this ratio ranges from -0.41 to 1.08 while ROA is ranging from 1.2 to 2.3. In 1998, the year when the policy approach changed in Malaysia (i.e. introduction of capital controls), again only PER and ROA are significant while CR and OM are not significant. There can be seen that the two coefficients increased sharply in this year for PER and ROA as well as R² which reaches almost 50%, but as before, correlation increases and gets very closed to one which decreases the goodness of fit of the model. The period after 1998 until 2004 is characterized not only by a decreasing correlation but also by an improvement in the significance levels of the independent variables. The single variables return fast to pre-crisis levels, too, as well as R². Therefore, it seems that Malaysia limited the noise in the market. Furthermore, fundamentals were not neglected in predicting profitability of corporations.

Comparing now the results of Indonesia and Malaysia there can be seen that both economies experienced some change in 1997 respectively 1998. Both economies seem to have suffered under more noise in the markets and therefore prediction of profitability by the use of fundamental data was limited. While Malaysia returned relatively soon back to pre-crisis levels Indonesia only started at the end of the observed period (i.e. 2004) coming back to pre-crisis levels.

Looking at the results of the ordered logistic regression – EX-FINANCE (Table A.7.2) it can be seen that the correlation for the data of Indonesia increases as before until 1997 and reaches its peak in 1997 not improving in the after crisis-period significantly. R2 increases until 1997 to 47% and decreases thereafter again to pre-crisis levels. But the relatively high level of R2 and correlation in the after-crisis period indicates that there might exist a better model and with a better fit. In general, the coefficients are lower than in the overall set but the significance level is lower, too. An important observation is that no significant change can be observed in 1997 for the size of the variables. Therefore it appears that much noise was added by the finance industry of the Indonesian market. Furthermore, Indonesia does not reach pre-crisis levels and sizes of the variables in the after-crisis period. This could indicate that the real sector experienced some major changes during and after the crisis which is in line with the results discussed above.

The picture for Malaysia (Table A.7.4) shows that correlation increases sharply in 1998 but decreases again sharply and returns almost to pre-crisis levels by 2004. R2 stays relatively stable over the whole period, although decreasing in the pre-crisis period. Again the high R2 in 1998 has to be interpreted carefully as correlation also increased. Significance levels of the independent variables are much lower leading to a high insignificance over the whole period. It seems that the financial industry explained in the case of Malaysia a significant part of the model but also the relative small size of the dataset could have affected strongly the model. Overall, it seems that Malaysia returned to pre-crisis levels by 2004.

Comparing the results of the Indonesian and the Malaysian ordered logistic regression EX-FINANCE it can be seen that the results differ: While the model is relatively stable for Indonesia, it does not work so well for Malaysia. Therefore, it seems that in Indonesia the finance industry seemed to add noise in the market and the real sector seems to be changed more than in Malaysia, although the results of the Malaysian regression might have been influenced by the relative small sample size.

To conclude it can be seen that the corporate sector experienced some troubles after the East Asian Crisis respectively after imposing the policies: While Indonesia seems only of being returned to pre-crisis levels in Indonesia and experiencing much noise, the results for Malaysia suggest that even the recovery in the corporate sector was relatively fast returning to pre-crisis levels soon after the imposition of capital controls in 1998, although a drawback of the Malaysian regressions is that the size of the sample is relatively small compared to Indonesia. Both countries show in the years of the policy introduction (i.e. 1997 for Indonesia and 1998 for Malaysia) some changes in the size of coefficients in the model as well as correlation. The results of the ordered logistic regression indicate that the null hypothesis i.e. for all calculations there has been no significant change in the period before, during and after the crisis in the macro-economy and on the corporate level meaning that the East Asian Crisis did not have any significant impact on the Indonesian and Malaysian economy, should be rejected and that the alternative hypotheses, i.e. firstly, there can be observed a significant change in the macro-economy and on the corporate level and secondly, the recovery experienced by the two economies had a different outcome and speed, appear true.

7.4 Quantile Regression Analysis

The quantile regression analysis used should answer the question how different quantiles (here the 10th, 50th and 90th quantile) evolved during the crisis, i.e. if there had been a change over the period observed. As discussed in the Chapter 6 no analysis of break points will be conducted but assumed that the pre-crisis period is for Indonesia from 1991 to 1997 and for Malaysia from 1991 to 1998, while the after-crisis period is for Indonesia 1998 to 2004 and for Malaysia 1999 to 2004. The period of policy change is 1997 for Indonesia and 1998 for Malaysia (for detailed descriptions refer to Chapter 6).

Interpretation of the results of the quantile regression should be made carefully and incorporated above with the results. The quantiles are selected to give an overview of the movements in the lower, the middle and the higher quantiles of the data set. In contrast to the previous calculations (i.e. ordered logistic regression) the quantile regression as suggested by literature with raw data and not as done before with categorized data.

7.4.1 Discussion of Results

The results of the quantile regression model, which were described in Chapter 6, are shown in the appendix, Tables A.7.5 and A.7.6. The results show in detail the estimation output for every year from 1991 to 2004 for both, Indonesia and Malaysia. As the quality of the data is not very good, the estimation of the model used here should be read carefully. Furthermore, the results presented here should be read as an integration note to the results of the analyses done before and not exclusively on its own.

Looking at Table A.7.5 it can be seen that the correlation are relatively stable over the period 1991 to 1996 but changes in 1997 and returns thereafter to pre-crisis levels. Looking at the different quantiles there will not be discussed the single year-over-year development but the trend between the different stages (before crisis, policy change, after crisis).

Although R² is relatively high at the beginning (around 50%) it is decreasing from 1991 to 1996 reaching in 1997 only on average over the quantiles 18% but staying relatively stable over the period 1998 to 2004 at an average over quantiles of 10%. Significance levels of the different coefficients are relatively low or show even insignificance over the whole period but especially in the period 1997 to 2004. Looking at the PER there can be seen that the coefficient is in some periods negative which can be interpreted as a discount in the case of a high PER; until 1997 PER ranged below or around 0 but in 1997 PER shoots up dramatically for the 10th quantile while staying relatively stable for the 50th

and the 90th quantile. In 1998 the 10th quantile of PER increases even more (almost tripling) and decreases over the period 1999 to 2004 reaching again almost pre-crisis levels. ROA stays relatively stable until 1996 when the 10th quantile decreases sharply; in 1997 ROA shoots up drastically especially for the 10th quantile. The period 1998 to 2004 is characterized by the return to pre-crisis levels for the 10th and the 50th quantile while the 90th quantile seems to follow a different pattern moving up and down over the period and reaching in 2003 pre-crisis levels. In general CR is negative over the whole pre-crisis period although the 90th quantile increases in 1996 sharply and becoming positive; a negative CR implies that the leverage effect is not considered being good while a positive implies that the leverage effect could increase profitability. In 1997 CR decreases sharply for the 10th and the 50th quantile while decreases moderately for the 90th quantile. Over the period from 1998 to 2004 the CR returns almost to pre-crisis levels although showing a different pattern for 1998 when CR almost triples for the 10th quantile. The pattern of the CR for 1998 suggests that the top 10th quantiles of corporations in the market is demanding a premium of having more leverage which could suggest that the market seems to know the companies being in financial distress. OM is staying around zero over the period with the exception of 2001 and 2002 when it differs significantly from zero for the 90th quantile.

Summing up, the model worked relatively well for Indonesia for the pre-crisis period but coefficients changed dramatically in 1997 and 1998 subsequently returning to pre-crisis levels. Furthermore, it seems that the market knows which corporations are healthy and which have in the period from 1991 to 1996 and 1999 to 2004 but not for the period 1997 to 1998 when there seems being a lot of noise in the market as all coefficients change drastically for all quantiles. The results point out that the causes of the crisis identified by literature and discussed in the chapters before are reflected by the corporate data used here, too, e.g. noise as a signal for irrational behaviour.

Looking at Table A.7.6 it can be seen that the correlation remain relatively stable over the entire period changing only drastically in 1998 when all variables are positively correlated. R2 is relatively high and stable and slightly decreasing over the period 1991 to 1996 and averaging over quantiles and the period at 40% but decreasing sharply for the 10th quantile in 1998 reaching an absolute low over the whole period of 17%, while the other quantiles stay relatively stable. The period 1999 to 2004 is characterized by almost the same level of R2 as in the pre-crisis period. The coefficients are in general not significant over the whole period with exception of 1998 where significance levels are very low and the p-value reaches almost one indicating a very low goodness of fit of the model in 1998.

PER is ranging around zero over the whole period with no exceptional identified movements. The same is true for other variables, ROA, CR and OM which move within a relative small band over the whole period and show no significant outlier.

To conclude, Malaysia did not experience huge movements within the whole group of corporations analyzed here – the model is relatively stable with the exception of 1998 when the p-value of almost all coefficients reaches one. This suggests that there has been some noise in the Malaysian financial market in 1998 which seems to disappear in 1999 when pre-crisis levels are almost reached for all quantiles.

Comparing the results of the quantile regression analysis for Indonesia and Malaysia it can be seen that the model fits much better for the Malaysian data set while the results for the Indonesian data set are not so good. Furthermore, it can be seen that the period of policy change and the period after the crisis were characterized by much more noise in Indonesia than in Malaysia suggesting that the causes of the crisis identified and discussed in literature and presented in the previous chapters are applying (e.g. irrational behaviour). Lastly, the results of the analysis made in this section suggest that the null hypothesis discussed in Chapter 6 should be rejected and suggesting that the alternative hypotheses could be accepted, i.e. that firstly, there can be observed a significant change in the macroeconomy and on the corporate level and secondly, the recovery experienced by the two economies had a different outcome and speed.

7.5 Conclusion

The different analyses used in this chapter try to show an integrated picture of the effects of the policy instruments imposed during the crisis by Indonesia and Malaysia. For a generalization of results a comparison of more countries experiencing similar situations would be required which seems to be rather difficult in this kind of empirical studies as not many countries used a similar policy approach of Malaysia and therefore data available is rather limited.

To conclude from the results seen above it can be said that Malaysia, when compared to Indonesia, experienced a faster recovery starting in 1998 while Indonesia needed more years to recover. This result has been expected and suggests that the alternative hypothesis might be true and rejecting the null hypothesis (i.e. there has been no significant change in the period before, during and after the crisis in the macro-economy and on the corporate level meaning that the East Asian Crisis did not have any significant impact on the Indonesian and Malaysian economy) but it is interesting that it is reflected by the results of macroeconomic indicators (e.g. difference-in-difference analysis) as well as by corporate data analyses (i.e. ordered logistic regression and quantile regression). The analyses of macroeconomic data show that Indonesia socialized much more of private debts while Malaysia circumvented socializing debt which was one of the causes in Indonesia for social unrest during and after the crisis. Furthermore, it seems that Indonesia had to deal with much more noise in the financial markets as shown by the results of corporate data which could be interpreted as a signal of irrational behaviour.

Nevertheless, limiting the relative good performance of the Malaysian economy exclusively to the imposition of capital controls is not trivial and correct. The outcome of the analyses of data suggests that the capital controls were beneficial but could neither define the degree of being beneficial nor the direct effectiveness. This would need further investigation and further analyses showing the degree of direct influence of the capital controls especially on the corporate level.

Due to the data analysis it can be shown that capital controls on short-term capital outflows with a specified exit strategy are an option for economies in a similar position as Malaysia in 1997/1998; but as mentioned above, any general recommendation for a country in a situation of crisis could not be drawn from the data analysis presented in this chapter. The results discussed in this chapter are in line with the expectations and findings discussed in literature as discussed above and in the previous chapters.

8

Conclusion

The goal of this study is aimed at giving an overview of two different policy approaches i.e. the 'orthodox' and 'unorthodox' policies during the East Asian Crisis and the implications for Indonesia and Malaysia. The comparison has been limited to these two countries, which were selected due to some affinities (e.g. both were colonies until mid of 19th century, both are Islamic countries) and their experiences during the East Asian Crisis (e.g. both countries were considered as economies with high growth potential before the outbreak of the crisis but hit by the crisis suddenly). However, the outcome of this study cannot be generalized although some results are very interesting (e.g. that Malaysia recovered faster not only on a macroeconomic level but as well as shown by the quantile regression on the corporate sector level) due to the limited focus on Indonesia and Malaysia. Generalizations could only be done if a larger set of countries could be compared experiencing a similar situation which is rather difficult as similar crisis experiences are very limited due to a small number of crisis of the same crisis generation and the use of policy instruments which tended to be influenced mainly by the IMF in the past (with an exception of Chile in the 1990s and Malaysia as discussed in Chapters 2 – 3).

This study analyses and compares the experiences of Indonesia and Malaysia during and after the East Asian Crisis not only on a macroeconomic level but as well on the corporate level analysing the causes of the crisis on a qualitative and quantitative level and showing how the 'orthodox' and 'unorthodox' policies applied during the crisis influenced the economies and their growth.

8.1 Conclusion and Future Discussion

This study started with a general overview of the so-called 'The East Asian Miracle' and introduced in more detail the experiences of Indonesia and Malaysia, i.e. the economic and political situation, before the outbreak of the East Asian Crisis (Chapter 1). A longer discussion about the timing and the causes of the East Asian Crisis followed and different views and models (e.g. the three generations of crises) describing the crisis were introduced and discussed (Chapter 2). In addition remedies at the disposal for the two economies were presented showing the different possibilities for the crisis countries available (e.g. assistance from IFIs or from neighbouring countries) (Chapter 3). Consequently a detailed discussion of the remedies applied by Indonesia and Malaysia during the crisis followed; the policies introduced and applied were aimed at limiting the troubles in the financial market and the real economy (Chapter 4). Successively, the change of governance and corporate governance (including the change in banking in Indonesia and Malaysia) has been analysed (Chapter 5). Chapters 6 and 7 concluded with data analysis of macroeconomic and corporate data was discussed and analyzed by using different techniques. While a few similar studies have been done over the past ten years since the outbreak of the East Asian Crisis there such a comprehensive analysis of the experience of Malaysia and Indonesia and using both macroeconomic and corporate data does not exist in literature.

The analysis of the two major policy options have been of major interest and show that not only the so-called 'orthodox' policies could be used in a situation of crisis but other policies as well the so-called 'unorthodox' policies. The application of unorthodox policies and their outcome have been subject of some studies (as discussed in the chapters before). These policies are nowadays accepted in literature as a policy option in a situation of economic turmoil. Therefore, the experience of Malaysia is an example that shows other countries the possibilities and strategies which are available based on economic theory and could be imposed without violating membership at IMF or other IFI's.

The experiences of the two examined economies were similar before the crisis but developed differently after the crisis and show how different policy actions can influence economic and political stability pushing prospering economies into a slump (i.e. Indonesia) or leading to a sharp recovery (i.e. Malaysia). Summing up the results of the previous chapters it seems that Indonesia recovered only after approx. ten years after the outbreak of the crisis while Malaysia recovered sooner and has not been expected during the crisis (i.e. IMF – see Chapter 4). Furthermore, Indonesia experienced political rumours and

turmoil while Malaysia seems after a short period of political instability in 1997/98 being returned to political stability in 1999.

Concluding, countries have at disposal various policies in periods of economic instability such as the East Asian Crisis. The 'one medicine helps all' approach seems not to work in every situation and although 'unorthodox' policies are controversial for some policymakers and actors of the international financial markets, they seem to work properly if adopted with caution. Theory does not suggest in advance one single policy as a specific remedy – as discussed in Chapter 3 there are different possibilities and choices and each choice comes with benefits and costs which have to be weighed up which can be seen clearly by the impossible trinity.

Additionally, the East Asian Crisis has shown that fundamental problems in the private and corporate sector can be transmitted to the real economy causing not only stock markets to tumble but also other sectors and branches of the economy. Therefore a healthy banking sector following prudent rules of matching assets and liabilities which is supervised by strong and independent authorities seems to play one but important part answering crisis prevention and being a lesson drawn from the East Asian Crisis. Additionally, corporations have to become aware of possible risks of currency mismatches and how to deal with potential risks (e.g. currency risks) i.e. giving incentives to hedge. The introduction of new governance and corporate governance rules is just one step towards the strengthening of the corporate and banking sector.

One major issue before the outbreak of the East Asian Crisis has been the liberalization of goods and services followed by the progress of liberalization of capital flows. While the former ones seem to increase economic growth the liberalization of capital flows seems to be much more controversial in economic theory and as discussed in the previous chapters. The outbreak of the East Asian Crisis has stopped the initiatives of the IMF to push full capital mobility in all member countries. Nowadays, the approach of a stepwise opening to capital mobility i.e. starting with FDI's and ending by short term capital flows is adopted by most countries. The pressure on some high performing emerging economies of major international financial market players might be still huge but there is an increased awareness of full capital account convertibility (not only openness for FDI's but as well short term capital flows), too, as can be seen by the example of some Asian economies like People's Republic of China and India.

Doubtless, it seems almost impossible predicting any new kind of crisis or how the crisis generation models will develop in future. Nevertheless, the awareness and crisis prevention seems to be better than cure. Therefore, sound macroeconomic policies, whatever they are, and observing the interconnections of financial markets have to be regarded as one task of crisis prevention.

As mentioned before, the results of the analyses presented and discussed in the Chapters 6 and 7 could not be generalized meaning that there could not be concluded due to the limited data sets and comparison of only two countries that the imposition of capital controls on short term capital outflows in Malaysia is better than the use of the 'orthodox' policies in Indonesia. It can be concluded that Malaysia's economy recovered faster following a V-shaped recovery while Indonesia needed more time for recovery. Furthermore, this seems to be true as well for corporations in Malaysia that have recovered faster and did not experience such a huge slump in performance as Indonesian companies did. This is an interesting finding as it shows the interconnections of the performance of corporations in one country and the macroeconomy and could be seen as empirical evidence for the Bernanke-Gertler effect which has been introduced and discussed in chapter two.

Future research could continue to investigate about the interconnections of the performance of the corporations and the macroeconomic situation. Furthermore, future research might use different techniques which are technically not yet feasible such as a quantile-panel data analysis of corporate data which how different companies moved over different quantiles but as well how the company's performance would change in different years and groups.

Lastly, the research could be extended to a larger set of countries which is tricky as there are not many experiences observed using 'unorthodox' policies and there is a lack of reliable and comprehensive datasets for most financial markets outside the developed economies and major financial markets.

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APPENDIX

TABLE A.3.1 – Interest Rates in Indonesia, Malaysia and the USA

Time	Ind. Discount Rate	Ind. 3-Months Deposits	Mal. Interbank Overnight Rate	Mal. Treasury Bill 3 Months	US Discount Rate	US Treasury Bill Rate
1990/1	13,2	16,78	4,7	4,83	7	7,64
1990/2	13,13	16,55	4,57	4,84	7	7,76
1990/3	13,13	16,23	4,99	5,09	7	7,87
1990/4	13,13	15,85	5,52	5,38	7	7,78
1990/5	13,2	15,99	6,09	5,99	7	7,78
1990/6	16,94	16,08	5,96	6,2	7	7,74
1990/7	17,74	16,5	5,03	6,22	7	7,66
1990/8	17,4	17,24	6,16	6,31	7	7,44
1990/9	17,63	18,36	6,56	6,76	7	7,38
1990/10	18,25	19,47	6,7	7,12	7	7,19
1990/11	18,36	20,32	6,86	7,4	7	7,07
1990/12	18,83	21	6,7	7,23	6,5	6,81
1991/1	19,25	21,35	6,79	7,14	6,5	6,3
1991/2	19,25	22,09	6,49	6,8	6	5,95
1991/3	23,55	24,21	6,48	6,53	6	5,91
1991/4	20,5	25,28	6,73	6,99	5,5	5,67
1991/5	19,01	25,66	6,96	7,1	5,5	5,51
1991/6	18,99	25,01	6,96	7,08	5,5	5,6
1991/7	18,73	24,44	7,01	7,07	5,5	5,58
1991/8	18,5	23,54	7,44	7,5	5,5	5,39
1991/9	18,5	22,61	7,77	7,93	5	5,25
1991/10	18,5	21,89	7,75	7,72	5	5,03
1991/11	18,5	21,84	7,7	7,71	4,5	4,6
1991/12	18,47	21,88	7,68	7,7	3,5	4,12
1992/1	18	21,57	7,94	7,74	3,5	3,84
1992/2	18	21,46	7,98	7,69	3,5	3,84
1992/3	17,99	21,29	7,87	7,63	3,5	4,05
1992/4	17	21,13	7,82	7,88	3,5	3,81
1992/5	17	20,83	8,06	8,02	3,5	3,66
1992/6	16	20,09	7,99	7,98	3,5	3,7
1992/7	16	19,42	7,73	7,81	3	3,28
1992/8	15,21	18,88	7,84	7,69	3	3,14
1992/9	14,66	18,48	7,96	7,64	3	2,97
1992/10	14,49	17,97	7,94	7,64	3	2,84
1992/11	14	17,39	7,91	7,09	3	3,14
1992/12	13,5	16,72	7,96	7,1	3	3,25
1993/1	13,5	16,35	7,88	7,16	3	3,06
1993/2	13	16,14	7,56	7,18	3	2,95
1993/3	12,5	15,71	7,5	7,15	3	2,97
1993/4	12,5	15,52	7,45	7,04	3	2,89
1993/5	11,83	15,26	7,3	6,76	3	2,96
1993/6	10,74	15,19	7,17	6,86	3	3,1
1993/7	8,75	14,9	7,26	6,76	3	3,05
1993/8	7,45	14,47	6,93	6,64	3	3,05
1993/9	9,11	13,75	6,63	5,75	3	2,96
1993/10	9,69	13,06	6,84	5,64	3	3,04
1993/11	9,52	12,42	6,48	5,58	3	3,12
1993/12	8,82	11,79	6,25	5,24	3	3,08
1994/1	8,83	11,65	3,6	3,47	3	3,02

1994/2	8,21	11,66	4,21	2,97	3	3,21
1994/3	8,45	11,53	4,33	2,77	3	3,52
1994/4	8,72	11,43	4,17	3,26	3	3,74
1994/5	9,66	11,58	3,89	3,88	3,5	4,19
1994/6	9,94	12,07	4,14	3,38	3,5	4,18
1994/7	10,7	12,51	4,13	3,95	3,5	4,39
1994/8	10,87	12,94	4,08	3,95	4	4,5
1994/9	11,55	13,35	3,95	4,03	4	4,64
1994/10	11,99	13,67	4,34	3,9	4	4,96
1994/11	12,17	13,74	4,65	4,11	4,4	5,25
1994/12	12,44	14,27	4,91	4,51	4,75	5,64
1995/1	13,05	14,69	4,8	4,57	4,75	5,81
1995/2	13,66	15,35	5,08	5,29	5,25	5,8
1995/3	14,13	15,92	5,17	5,23	5,25	5,73
1995/4	14,34	16,39	5,35	5,41	5,25	5,67
1995/5	14,74	16,73	5,47	5,61	5,25	5,7
1995/6	14,74	17,09	5,6	5,2	5,25	5,5
1995/7	14,67	17,42	5,5	5,33	5,25	5,47
1995/8	14,06	17,61	5,73	5,61	5,25	5,41
1995/9	14,02	17,6	5,66	5,73	5,25	5,26
1995/10	13,95	17,41	6,01	6,16	5,25	5,3
1995/11	13,99	17,25	6,34	6,04	5,25	5,35
1995/12	13,99	17,15	6,48	5,85	5,25	5,16
1996/1	13,99	17,2	6,52	6,03	5,24	5,02
1996/2	13,92	17,22	7,15	6,39	5	4,87
1996/3	13,99	17,29	6,98	6,4	5	4,96
1996/4	13,98	17,38	6,86	6,32	5	4,99
1996/5	13,99	17,38	6,72	6,28	5	5,02
1996/6	13,99	17,35	6,87	6,37	5	5,11
1996/7	13,92	17,35	7,21	6,52	5	5,17
1996/8	13,96	17,26	6,54	6,55	5	5,09
1996/9	13,96	17,25	6,97	6,53	5	5,15
1996/10	13,93	17,18	6,55	6,5	5	5,01
1996/11	13,4	17,18	7,5	6,56	5	5,03
1996/12	12,12	17,03	7,15	6,48	5	4,87
1997/1	12,06	16,85	7,19	6,3	5	5,05
1997/2	11,75	16,66	7,49	6,27	5	5
1997/3	11,07	16,47	6,42	6,31	5	5,14
1997/4	10,72	16,25	7,26	6,41	5	5,17
1997/5	10,63	16,06	10,12	6,41	5	5,13
1997/6	10,5	15,93	7,18	6,48	5	4,92
1997/7	10,87	15,84	11,44	6,29	5	5,07
1997/8	13,67	21,73	6,26	6,31	5	5,13
1997/9	22	26,22	5,71	6	5	4,97
1997/10	20,7	27,73	6,68	6,24	5	4,95
1997/11	20	26,51	7,26	7,1	5	5,15
1997/12	20	23,92	8,29	6,76	5	5,16
1998/1	20	22,86	8,99	5,92	5	5,09
1998/2	22	24	10,1	5,85	5	5,11
1998/3	27,75	27,26	9,62	6,08	5	5,03
1998/4	46,43	29,4	10,59	7,71	5	5
1998/5	58	32,95	9,13	8,95	5	5,03
1998/6	58	40,63	10,19	9,98	5	4,99

1998/7	70,81	43,01	9,21	8,06	5	4,96
1998/8	70,73	44,35	9,18	6,48	5	4,94
1998/9	68,76	47,38	6,64	6,26	5	4,74
1998/10	59,72	54,67	6,24	5,91	4,75	4,08
1998/11	51,25	53,06	6,11	5,8	4,5	4,44
1998/12	38,44	49,23	5,41	5,38	4,5	4,42
1999/1	36,43	45,5	5,31	5,57	4,5	4,34
1999/2	37,5	38,2	5,23	5,31	4,5	4,45
1999/3	37,84	34,85	5,23	5,4	4,5	4,48
1999/4	35,19	34,09	3,53	3,94	4,5	4,28
1999/5	28,73	31,2	3,08	2,65	4,5	4,51
1999/6	22,05	27,39	2,81	2,73	4,5	4,59
1999/7	15,01	23,45	2,6	2,72	4,5	4,6
1999/8	13,2	19,06	2,54	2,97	4,75	4,76
1999/9	13,02	15,88	2,53	2,82	4,75	4,73
1999/10	13,13	13,37	2,54	2,72	4,75	4,88
1999/11	13,1	12,91	2,66	2,77	5	5,07
1999/12	12,51	12,95	2,52	2,71	5	5,23
2000/1	11,48	12,85	2,55	2,61	5	5,34
2000/2	11,13	12,64	2,55	2,74	5,25	5,57
2000/3	11,03	12,4	2,57	2,89	5,5	5,72
2000/4	11	12,16	2,51	2,81	5,5	5,67
2000/5	11,08	11,81	2,55	2,75	6	5,92
2000/6	11,74	11,69	2,53	2,71	6	5,74
2000/7	13,53	11,79	2,63	2,76	6	5,93
2000/8	13,53	12,36	2,8	3,09	6	6,11
2000/9	13,62	12,84	2,79	3,12	6	5,99
2000/10	13,74	13,09	2,78	2,95	6	6,1
2000/11	14,15	13,17	2,82	2,92	6	6,18
2000/12	14,53	13,24	2,82	2,98	6	5,83
2001/1	14,74	13,83	2,8	2,92	5	5,26
2001/2	14,79	14,35	2,78	2,82	5	4,93
2001/3	15,82	14,86	2,87	2,81	4,5	4,5
2001/4	16,09	14,93	2,79	2,79	4	3,91
2001/5	16,3	14,92	2,85	2,79	3,5	3,66
2001/6	16,55	15	2,77	2,84	3,25	3,48
2001/7	17,17	15,14	2,77	2,81	3,25	3,54
2001/8	17,67	15,62	2,78	2,78	3	3,39
2001/9	17,57	16,16	2,78	2,78	2,5	2,87
2001/10	17,58	16,67	2,8	2,73	2	2,22
2001/11	17,6	17,06	2,76	2,71	1,5	1,93
2001/12	17,62	17,24	2,76	2,73	1,25	1,72
2002/1	17,21	17,39	2,76	2,75	1,25	1,66
2002/2	16,86	17,24	2,7	2,73	1,25	1,73
2002/3	16,76	17,02	2,71	2,71	1,25	1,81
2002/4	16,61	16,57	2,72	2,72	1,25	1,72
2002/5	15,51	16,24	2,72	2,72	1,25	1,74
2002/6	15,11	15,85	2,72	2,72	1,25	1,7
2002/7	14,93	15,26	2,74	2,73	1,25	1,68
2002/8	14,35	14,77	2,73	2,72	1,25	1,63
2002/9	13,22	14,36	2,72	2,72	1,25	1,63
2002/10	13,1	13,94	2,74	2,72	1,25	1,59
2002/11	13,06	13,76	2,75	2,71	0,83	1,25

2002/12	12,93	13,63	2,79	2,82	0,75	1,2
2003/1	12,69	13,49	2,77	2,8	2,25	1,17
2003/2	12,24	13,15	2,75	2,8	2,25	1,16
2003/3	11,4	12,9	2,81	2,79	2,25	1,12
2003/4	11,06	12,48	2,74	2,79	2,25	1,14
2003/5	10,44	12,02	2,76	2,78	2,25	1,08
2003/6	9,53	11,55	2,77	2,77	2,2	0,94
2003/7	9,1	10,65	2,75	2,77	2	0,9
2003/8	8,91	9,58	2,73	2,82	2	0,95
2003/9	8,66	8,58	2,71	2,82	2	0,94
2003/10	8,48	7,96	2,71	2,77	2	0,92
2003/11	8,49	7,58	2,71	2,78	2	0,94
2003/12	8,31	7,14	2,71	2,77	2	0,89
2004/1	7,86	6,68	2,7	2,68	2	0,89
2004/2	7,48	6,38	2,71	2,38	2	0,92
2004/3	7,42	6,11	2,71	2,54	2	0,94
2004/4	7,33	6,01	2,72	2,49	2	0,94
2004/5	7,32	6,17	2,7	2,58	2	1,03
2004/6	7,34	6,31	2,7	2,57	2,01	1,28
2004/7	7,34	6,49	2,7	2,34	2,25	1,35
2004/8	7,37	6,54	2,7	2,51	2,43	1,5
2004/9	7,39	6,61	2,69	2,52	2,58	1,67
2004/10	7,41	6,65	2,69	2,35	2,75	1,75
2004/11	7,41	6,66	2,69	1,84	2,93	2,08
2004/12	7,43	6,71	2,69	1,96	3,15	2,2
2005/1	7,42	6,71	2,7	2,25	3,25	2,35
2005/2	7,43	6,74	2,69	2,22	3,49	2,59
2005/3	7,44	6,93	2,7	2,56	3,58	2,76
2005/4	7,7	6,87	2,7	2,56	3,75	2,78
2005/5	7,95	7,03	2,7	1,74	3,98	2,87
2005/6	8,25	7,19	2,7	2,66	4,01	3
2005/7	8,49	7,41	2,7	2,3	4,25	3,21
2005/8	9,51	7,71	2,7	2,27	4,44	3,46
2005/9	10	8,51	2,7	2,69	4,59	3,46

Source: IMF, International Financial Statistics Database.

TABLE A.4.1 – Overview of Capital and Exchange Control Measures Before and After September 1st 1998

Transaction	Prior to September 1 st 1998	New
Transfers based on external accounts	Transfer between external account holders freely allowed.	Transfer of any amount between external accounts requires prior approval Sources of funding external accounts are limited to: <ul style="list-style-type: none"> ❖ Proceeds from sale of ringgit instruments, securities registered in Malaysia or other assets in Malaysia, ❖ Salaries, wages, commissions, interest or dividends, and ❖ Sales of foreign currency. Use of funds in accounts is limited to purchase of ringgit assets in Malaysia.
General payments	Residents were freely allowed to make payments to non-residents for any purpose. Amounts of RM100000 and above were permitted provided the resident did not have any domestic borrowing (if the payment was for investment abroad) or the payment was made in foreign currency (for non-trade purposes).	Residents are freely allowed to make payments to non-residents for any purpose up to RM10000 in ringgit or foreign currency, except for imports of goods and services. Amounts exceeding RM10000 require approval and are allowed in foreign currency only.
Export of goods	Payments to be received in foreign currency or ringgit from an external account.	Payments are to be received from an external account in foreign currency only.

Credit facilities to non-residents	Non-resident correspondent banks and stock-broking companies were permitted to obtain credit facilities up to RM5 million from domestic banks to fund mismatch of receipts and payments in their external accounts.	Domestic credit facilities to non-resident corresponding banks and non-resident stock-broking companies are no longer allowed.
Investment abroad	Corporate residents with domestic borrowing were allowed to invest abroad up to the equivalent of RM10 million per calendar year on a corporate group basis.	Residents with no domestic borrowing are allowed to make payment to non-residents for investment abroad up to an amount or RM10000 or its equivalent in foreign currency per transaction.
Credit facilities from non-residents	Residents were allowed to obtain ringgit credit facilities of less than RM100000 in the aggregate from non-resident individuals.	All residents require prior approval to make payments to non-residents for investing abroad an amount exceeding RM100 equivalent in foreign currency. Residents are not allowed to obtain ringgit credit facilities from any non-resident individual.
Trading in securities	There were no restrictions on secondary trading of securities registered in Malaysia between residents and non-residents and among non-residents. For transfer of Securities registered outside Malaysia from a non-resident to a resident, the resident was subject to the rules on investment abroad.	Ringgit securities held by non-residents must be transacted through an authorized depositor. All payments by non-residents for any security registered in Malaysia must be made from an external account (in foreign currency or in ringgit). All proceeds in ringgit received by a non-resident from the sale of any Malaysian security must be retained in an external account for at least one year before converting to foreign currency. All payments to residents for any security registered outside Malaysia from non-residents must be made in foreign currency.
Import and export of currency notes, bills of exchange, insurance policies etc.	A resident or non-resident traveller was free to import or export any amount of ringgit notes or foreign currency notes in person. Export of foreign currencies required approval. Authorized currency dealers were allowed to import any amount of ringgit notes, subject to reporting to Bank Negara Malaysia on a monthly basis.	A resident traveller is permitted to bring in ringgit notes up to RM1000 only and any amount of foreign currencies. A resident traveller is permitted to export ringgit notes only up to RM1000 and foreign currencies up to the equivalent of RM10000. A non-resident traveller is permitted to import ringgit notes up to RM1000 only and any amount of foreign currencies. A non-resident traveller is permitted to export ringgit notes up to RM1000 only and foreign currencies up to the amount brought into the country.
Transaction in the Labuan Offshore Financial Centre	Licensed offshore banks were allowed to trade in ringgit instruments up to permitted limits.	Licensed offshore banks are no longer allowed to trade in ringgit instruments.

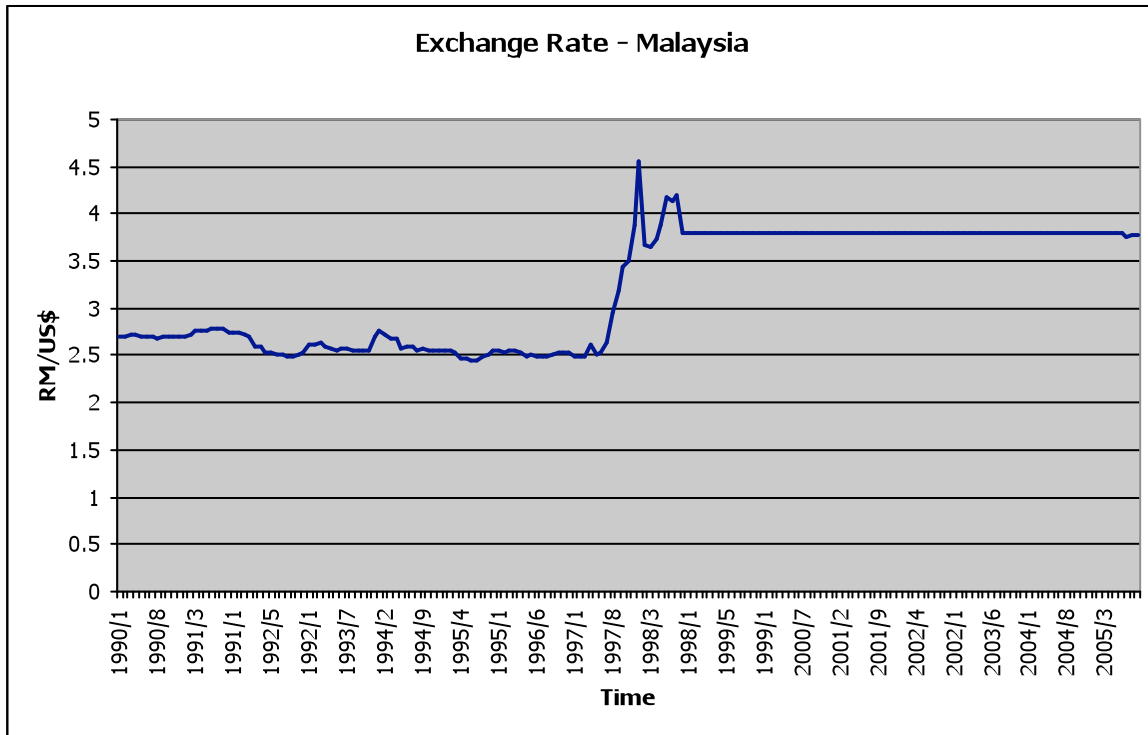
Source: Athukorala (2001, pp. 128-129)

FIGURE A.4.1 – Monthly Exchange Rate Movement of Indonesian Rupiah



Source: IMF, International Financial Statistics Database.

FIGURE A.4.2 – Monthly Exchange Rate Movement of Malaysian Ringgit



Source: IMF, International Financial Statistics Database.

TABLE A.5.1 – Summary of Questionnaires and Answers

	Indonesia	Malaysia
A. The Rights of Shareholders		
1. What periodic information are listed companies required to disclose?		
1.1 Annual Reports	Yes	Yes
1.2 Unaudited semi-annual reports	Yes	
1.3 Quarterly financial statements	Yes	Yes
1.4 AGM minutes	No	Yes
1.5 AGM attendance records	No	Yes
1.6 Audit Committee Report (if have Audit Committee)	Yes	Yes
2. Convening of shareholder meetings		
2.1 Time of notice (days before meeting)	28 days	14-21 days
2.2 Thresholds for requesting or convening an extraordinary shareholder meeting, including number of shares, number of shareholders and minimum holding period required.	10% share	2 or more members holding more than 10% of the issued share
2.3 Legal minimum quorum requirements for None EGM (Quorum means the minimum number of shareholders attending EGM)	½ of independent shareholders	Up to company, usually 2 members
2.4 Is non-voting shares allowed?	Yes	No
2.5 Is multiple voting shares allowed?	No	No
3. Can shareholders vote by		
3.1. proxy	Yes	Yes
3.1.a Any document required	Yes	Yes
3.1.b Any notarization required	Yes	Yes
3.2 mail	Yes	No
3.3 other means (such as electronic voting, please specify)	No	No
4. Do shareholders have the right to vote on:		
4.1 Appointment/Removal of directors	Yes	Yes
4.2 Appointment/Removal of auditors	Yes	Yes
4.3 Authorizing share capital	Yes	Yes
4.4. Issuing share capital	Yes	Yes
4.5 Disapplication of pre-emption rights	Yes	Not prescribed
4.6 Amendments to company articles or statute	Yes	Yes

4.7 Remuneration of board members	Yes	Yes
4.8 Major corporate transactions (acquisitions, disposals, mergers, takeovers)	Yes	Yes
4.9 Transaction with related parties	Yes	Yes
Size of related party transaction subject to shareholder voting	None	≥5% of net tangible assets
4.10 Can shareholders nominate a candidate of director?	Yes	Yes
If yes, what is the requirement to do so? (i.e. number of shares or number of shareholders required to make such nomination)	10% of legal voting rights	≥5% of voting rights, or not less than 100 members holding shares
4.11 Can shareholder propose an agenda at shareholder meeting?	Yes	Yes
If yes, what is the requirement to do so? (i.e. number of shares or number of shareholders required to make such proposal)	10% of legal voting rights	≥5% of voting rights, or not less than 100 members
5. What are the minimum number of shares required to approve the solution?		
5.1 Appointment of directors	½ of the total shares with legal voting rights	Ordinary resolution, simple majority
Removal of directors	½ of the total shares with legal voting rights	Ordinary resolution, simple majority
5.2 Appointment of auditors	½ of the total shares with legal voting rights	Ordinary resolution, simple majority; An election of directors shall take place each year
Removal of auditors	½ of the total shares with legal voting rights	Ordinary resolution, simple majority
5.3 Authorizing share capital	½ of the total shares with legal voting rights	Ordinary resolution, simple majority
5.4 Issuing share capital	½ of the total shares with legal voting rights	Ordinary resolution, simple majority
5.5 Dissapplicatoin of pre-emption rights	½ of the total shares with legal voting rights	None
5.6 Amendments to company articles or statute	Attendance of 2/3 of the total shares with legal voting rights and approved by at least 2/3 of such votes	Special resolution, not less than 75%
5.7 Remuneration of board members		Ordinary resolution, simple majority
5.8 Major corporate transactions (acquisitions, disposals, mergers, takeovers)	Attended by ¾ of the total shares with legal voting rights and approved by more than ¾ of such votes	Special resolution, not less than 75% majority
5.9 Transaction with related parties	Attended by at least ½ of independent shareholders and approved by more than ½ of such votes	Ordinary resolution, simple majority
6. How can shareholders seek redress if their rights are violated?		
6.1 Derivative action/derivative lawsuit	Yes	Yes
If yes, what is the requirement to do so? (i.e. number of shares or number of shareholders required to make such proposal)		
6.2 Class action lawsuit	No	Yes
If yes, what is the requirement to do so? (i.e. number of shares or number of shareholders required to make such proposal)		Procedural limitations
7. Does staggered election term allowed?		Yes
B. Equitable Treatment of Shareholders		
1. Is one-share-one-vote required? (Different from convening EGM)	Yes	Yes
2. Is cumulative voting allowed for minority shareholders when they vote for election of directors or outside directors?	Yes	No
3. Insider trading		
3.1 Does the law define who insiders are?	Yes	Yes
3.2 Are insiders required disclosing their transactions?	Yes	Yes
3.3. How many days required to disclose the transaction after insider trading occurs?	2 days	
3.4 Penalties attached to the offence of insider trading		
Civil liability (Please specify the liable amount)	No	Yes
Fines (please specify the fine amount)	Yes (maximum Rp 15,000,000,000)	Yes (Not less than one million ringgit)

Imprisonment	Yes	Yes
4. Related party-transactions		
4.1 Does the legal and regulatory framework require disclosure of the transaction?	Yes	Yes
4.2 What is the minimum amount of transaction that is subject to approved by shareholders?	Every related party transaction regardless the amount of transaction	Yes ($\geq 5\%$ of net tangible assets)
4.3 How many days should the transaction be disclosed after it takes place?	Within 2 days	Immediately
4.4. Are related persons required to abstain from voting on the transactions?	Yes	Yes
C. Role of Stakeholders		
1. Employees' rights		
1.1 Is it required to disclose employees' safety and welfare?	No	No
1.2 What priority do employee wages and benefits have in the event of insolvency?	The employee wages is priority	Second, after costs and expenses of winding up, including the taxed costs of petitioner, remuneration of liquidator and costs of audit
1.3 Is ESOP (Employee Share Option Program), or other long-term employee incentive plan required?	No	No
2. Is it required to disclose if any environmental issue occurs?	Yes	No
D. Disclosure and Transparency		
1. What information must be contained in the company's annual report?		
1.1 General information on the company/main business	Yes	Yes
1.2 Audited annual accounts	Yes	Yes
1.3 Personal details of company's directors	Yes	Yes
1.4 Basis of the board remuneration	No	Yes
1.5 Operating risks	Yes	No
1.6 Business operation and competitive position	Yes	Yes
1.7 Consolidated financial reports	Yes	Yes
1.8 Management discussion and analysis (MD&A)	Yes	Yes
1.9 Information on Corporate Governance (CG code, CG structure & practice)	No	Yes
1.10 Does minutes of board meeting can be obtained by shareholders?	Yes	No
If so, what are requirements for shareholder to obtain it?		Not prescribe
2. Ownership Structure		
2.1 Is it required to disclose Top 10 shareholders?	No	Yes
2.2 Is it required to disclose shareholders with 5% of shares or above?	Yes	Yes
2.3 Is director shareholding required to disclose?	Yes	Yes
2.4 Is management shareholding required to disclose?	No	No
3. Are directors required to report their transactions of the company stocks?	Yes	Yes
4 Auditing/Accounting		
4.1 Are companies required to have their financial statements externally audited?	Yes	Yes
If so, how often? (annually/semi-annually/quarterly)	Annually/semi-annually/quarterly	Annually
4.2 Is internal audit (separate unit) required?	No	Yes
4.3 Is a rotation of audit firms mandatory?	Yes	No
If so, how should it be rotated?	5 years	
5 Is it required to have company website, with up-to-date information?	No	No
5.1 Business operation		
5.2 Financial statement		
5.3 Press release		
5.4 Shareholding structure		
5.5 Organization structure		
5.6 Corporate group structure		
5.7 Annual report downloadable		
5.8 Be provided in both local language and English		
6. Is attendance records of board member disclosed	No	Yes
E. Board Responsibilities		
1. Are the following documents required?		

1.1 Corporate Governance related rules	No	Yes
1.2 Code of ethics or business conduct	No	Yes
1.3 Corporate mission	Yes	Yes
2. Are the following committees required to be carried out by independent members?		
2.1 Audit Committee	Yes	Yes
2.2 Compensation Committee	No	No
2.3 Nomination Committee	No	No
3. Quality of the Audit Committee Report		
3.1 Attendance	No	Yes
3.2 Internal control	No	Yes
3.3 Management control	No	No
3.4 Proposed auditors	No	No
3.5 Financial report review	No	No
3.6 Legal compliance	No	No
3.7 Conclusion or opinion	No	No
4. Board composition		
4.1 Any minimum/maximum limitation of number of directors?	Min. 2, no maximum	Min. 2, no maximum
4.2 What is the minimum number/proportion of INED?	30% of directors	2 directors or 1/3 of the board of directors, whichever is the higher
4.3 Is the separation of Chairman and CEO required?	No	No
5. What is the minimum number of board meetings to be held per year?	No limitation	No limitation
6. Directors' qualification		
6.1 Minimum professional experience	No	No
6.2 Does law or regulations require continuing training for board directors?	No	Yes
6.3 Minimum professional experience for INED	No	No
6.5 Any continuing education requirement for INED?	No	Yes
7. Is specific investor relation person required?	Yes	No
8. Remuneration of board members		
8.1 Is remuneration of directors required to disclose?	Yes	Yes
8.2 Is remuneration of INEDs required to disclose?	No	Yes
8.3 Is there a regulation that governs director's stock option? If so, specify it	No	No
9. Limitation on serving as director		
9.1 Is there a limit to the number of boards on which an individual executive director may serve?	No	Yes (10 for listed firms)
9.2 Is there a limit to the number of boards on which an individual outside director may serve?	No	Yes
10 What is the maximum election term for board member?	No	3 years

Source: Cheung and Jang (2005)

TABLE A.5.2 – Legal and Regulatory Environment

	Indonesia	Malaysia
Supervision and Financial Safety Nets: Bank Supervisory Agency		
1. What agency/organization supervises banks?	Bank Indonesia (central bank)	Bank Negara Malaysia (central bank)
2. How is the head of the supervisory agency appointed?	By President prior to parliament's approval (the same for Senior Deputy Governor and Deputy Governor)	By the Minister of Finance
3. Can it force a bank to change its internal organizational structure?	Yes. If a bank faces a difficulty endangering the continuity of its business, Bank Indonesia can let the shareholders replace the board of commissioners and/or board of directors of the bank.	Yes, by way of imposing conditions on the license, threat of revocation or prosecution, and approval of appointment or threat of removal of directors.
4. Can it take legal action against external auditors for their negligence?	It can advice Ministry of Finance and the Association of Public Accountant to revoke their business license.	BNM can blacklist auditors for auditing banks. BNM may institute negligence suit against bank auditors, but this has not been done.
5. Can it legally declare insolvency of a bank and supersedes the rights of bank shareholders?	Yes.	Yes.
6. How many professional bank supervisors?	About 100 persons: members of Directorate of Bank Supervision.	345 persons in charge on on-site inspection, bank regulation and IT

		audit.
7. How frequent are onsite inspections conducted per bank on average?	Once a year (by regulation), but more than once if needed.	Average 4 times: total of 93 on-site inspections covering 23 banks in 2003.
8. Roughly what % of bank supervisors get employed by a bank after quitting their job?	Most of them work for BI until they retire.	Approximately 50%. But no evidence of their interfering in the supervisory process.
9. How are bank supervisors' salary level compared with that of bankers (with similar qualifications)?	The salary and other income of Governor are to be maximum twice of the highest-ranked employee in BI. Salary of working-level supervisors is competitive with that of private bank, though their fringe benefit is slightly better.	Competitive with the banking sector.
10. Are bank supervisors legally liable for their actions? May they be sued for their act conducted in good faith?	No, they are not as long as the decisions and policies are taken in accordance with the task and authority as stated in the Act and conducted in good faith.	No, there is statutory immunity for actions provided that such actions or omissions are done in good faith.
Supervision and Financial Safety Nets: Depositor Protection		
1. What was the depositor protection system before the Asian crisis in 1997?	Implicit guarantee: liquidity guarantee: liquidity support to problem banks on a ad-hoc basis in non-transport manner.	Implicit guarantee.
2. What was the nature and experience of the blanket deposit guarantee system introduced right after the crisis?		
2.1. Coverage: Both deposits and other liabilities fully covered? Was the coverage reduced later?	Yes, both deposits and other liabilities on or off the balance sheets.	Yes, fully covered until now.
2.2. On average, how long did it take for depositors at closed banks to be fully paid? When did it happen?	Within one month. In April 2004, the operating licenses of Bank Dagang Bali & Bank Asiatic were revoked.	No bank failure.
3. Is there a system of explicit deposit insurance system now? If not, is there any plan (from when)?	No. But, the Banking Law 1998 amendment mandates a partial deposit insurance system.	Not yet. But, the government is considering introducing it issuing a consultation document.
4. If there is an explicit insurance system now,		
4.1 How is it funded: government, banks or both?		Central bank is considering both.
4.2. What is the limit (per person or account) in absolute amount and % of per capita GDP?		Central bank is still working on the details.
4.3 Any uncovered categories of deposits (such as inter-bank or foreign currency deposits)?		(No)
4.4 Is there variable insurance premium or differential capital requirement for high-risk banks?		(Yes)
4.5 Have there been cases of bank failure under this system?		
5. Can the deposit insurance (or bank supervisory) agency take a legal action against bank directors or other officers? Have there been such cases?	Yes, they can take legal actions, and there have been some cases (involving Bank Bali, Bank BNI, Bank Dagang Bali and Bank Asiatic). Administrative sanctions can be taken against banks or their business licenses may be evoked.	Legally, yes. There have been a few isolated cases of prosecution for contravention of the Banking Act.
Regulations on Banking Activities, Operation, and Ownership: Competitive environment		
1. How many commercial banks are there in the country?	135 banks (as of May 2004): 5 state banks, 26 regional government banks, 74 private national banks, and 30 foreign or joint venture banks	23 banks including foreign banks (as of October 2004)
2. What is the market share for the five largest commercial banks in terms of deposits? (%)	57.3% (March 2004)	54.8% (end of 2003)
3. What is the market share for all the government-controlled commercial banks in terms of deposits? (%)	41.5% (March 2004)	37.0% (end of 2003)
4. What is the market share for all foreign-controlled commercial banks in terms of deposits? (%)	10.6% (foreign banks and joint venture banks; March 2004)	31.4% (end of 2003)
Regulations on Banking Activities, Operation, and Ownership: Can banks provide the following businesses either directly or by their subsidiaries? Are there any restrictions?		
1. Credit cards	Yes	Yes

2. Insurance	Not directly (though they may have capital participation in other banks or companies that engaged in insurance business)	Yes
3. Underwriting corporate equities/bonds, public debentures, etc.	Not directly	Yes
4. Securities brokerage	Not directly	Yes
5. Fund management	Not directly	Yes
6. Investment advice	Yes	Yes
7. Real estate	No	Yes
Regulations on Banking Activities, Operation, and Ownership: Are there regulations on the following banking operation?		
1. Any requirement for minimum investment in government securities?	No	Yes
2. Any government-directed credit guideline?	Yes	Yes
3. Any restrictions on taking ownership (equity investment) in (non-financial) firms?	Yes. Not allowed except for the businesses stipulated in the Banking Act (leasing, venture capital, securities business, insurance, deposit and settlement clearing).	No
4. Any requirement for minimum capital-asset ratio?	Yes, the minimum requirement for CAR is 8%.	Yes, there is a requirement to maintain a minimum CAR of 8%.
5. Any liquidity requirement?	Yes, the Minimum Obligatory Demand Deposit at Bank Indonesia (reserve requirement): 5% for third party funds in Rupiah and 3% for third party funds in foreign currencies.	Yes. Since 1999, there is a compliance requirement. For example, banks must be able to withstand, by holding liquid assets, the withdrawal of up to 5% of their deposit base over a one-week period or 7% of their deposit base over a one-month period.
6. Any limits on interest rates?	Under the blanket guarantee scheme, guarantees are given only to deposits accepted at interest rates not exceeding the stipulated ceilings: weighted average SBI discount rate (3 month maturity) in the latest auction plus/minus a specified margin for Rupiah deposits; and average US\$ time deposits rate at JIBOR member banks (by maturity) plus/minus a specified margin.	No.
7. Any limits on fees for bank services?	No.	No.
8. Any branching restriction/requirement?	No restriction.	Only for foreign banks.
Regulations on Banking Activities, Operation, and Ownership: Ownership of banks		
1. What is the maximum allowable ownership of a bank by an individual or corporation/institution?	The ownership of a commercial bank by an Indonesian legal entity shall not exceed the net worth of the legal entity concerned.	10% for individuals and 20% for others unless MOF approves.
2. May non-financial firms (or groups) be a controlling owner of a bank?	Yes.	Yes.
3. What is the maximum allowable ownership of a bank by a foreigner (foreign firm/institution)?	99% of the bank's paid-up capital.	None for existing approved foreign entities. 10-15% for new entrants (though the Central Bank is willing to consider up to 30% in certain cases).
4. Do large shareholders need the approval of the banking supervisory agency before having beyond certain levels of ownership within the allowed limit?	No, they don't need the approval from Bank Indonesia. But any change in the ownership of banks should be reported to Bank Indonesia.	Acquisition or disposal for shares of 5% or more also requires a BNM consent. However, fund managers unwittingly buying shares of a listed bank beyond the 5% threshold would not be penalized if there is no intention to gain control over the bank.
5. Are there separate ownership rules for banks owned by financial holding companies, financial groups, or non-bank financial firms? What are they?	No.	No.
Board of Directors: Board accountability		
1. To whom is the board mainly accountable? (bank, shareholders,	Depositors.	Shareholders. The BNM also exercises a strong supervisor

depositors, other creditors, government)		presence directly impacting governance process exercised by the BOD.
2. To whom is the board also accountable? (bank, shareholders, depositors, other creditors, government)	Shareholders.	Depositors and creditors.
3. Are directors liable for false or misleading information disclosed?	Yes (as stated in the Law on Capital Market).	Yes.
Board of Directors: Are the followings specified by law as the responsibilities of the board?		
1. Reviewing and guiding corporate strategy and major plans of actions	Yes	Yes (not by law but recommended as Best Practices under the Corporate Governance Code – same for items below).
2. Reviewing and approving risk policy	Yes	Yes
3. Reviewing and approving annual budget	Yes	Yes
4. Setting performance objectives	Yes	Yes
5. Overseeing major capital expenditures, acquisitions and divestitures	Yes	Yes
6. Selecting executives, monitoring and replacing key executives	Yes	Yes (in consideration of recommendations by Nomination Committee)
7. Setting key executive compensation and board remuneration	Yes	Yes (in consideration of recommendations by Remuneration Committee)
8. Oversee the process of disclosure	Yes	Yes (aided by company secretary and legal manager)
9. Monitor and manage potential conflicts of interests of the controlling shareholders and other stakeholders	Yes	Yes
10. Are there other responsibilities laid out in the law? Please specify.	Overseeing the board of directors' implementing corporate policies and giving advice to the board of directors.	Duties of care and skill and prohibiting insider trading.
Board of Directors: Board composition		
1. Can the following persons be appointed as board members?		
1.1 Current government officials	Yes	Yes (but rare now)
1.2 Ex government officials	Yes	Yes (common)
1.3 Politicians (including cabinet members)	No (restriction particularly applied to members of the house of representatives)	No (members of Parliament, State Assembly or Supreme Council of political parties)
1.4 Foreigners (or non-residents)	Yes	Yes
1.5 Are there any other restrictions? Please specify.	Members of the board should be those deemed by Bank Indonesia to possess competence and high integrity: <ol style="list-style-type: none"> 1. those possessing good character and strong moral values 2. those complying with the prevailing regulation 3. those strongly committed to the development of sound bank operations 4. those having the capacities to execute their duties 	There is a fit and proper test for the appointment of directors. The test excludes: <ol style="list-style-type: none"> 1. those bankrupt 2. those charged for offence relating to dishonesty 3. those charged and proven offence under the Banking Act 4. those subject to order of detention, supervision, etc. 5. director of a company that has been wound up within or without Malaysia
2. How many foreigners are allowed to serve on the board?	No restriction.	No restriction.
3. what is the minimum required number of independent directors?	Independent commissioners should be at least 30% of the total.	For listed banks, at least tow directors or 1/3 of the total (whichever higher).
4. Are there any other restrictions on board size or composition? Please specify.	The minimum size of the board of commissioners is 2 persons.	Minimum 5 directors (average board size is about 9).
5. What is the maximum number of boards (banks or other corporations), on which a bank director can serve?	Member of the board of commissioners may only hold concurrent positions as follow: <ol style="list-style-type: none"> 1. as member of commissioners 	An executive director (ED) cannot serve as ED of another company. For listed banks, a non-executive director cannot hold directorship at

	<p>of one bank</p> <p>2. as commissioner, director, or executive officer at not more than two non-bank firms or institutions</p>	more than 25 firms (10 listed companies and 15 unlisted firms).
Board of Directors: Independent directors		
1. Can the following persons be appointed as independent directors?		
1.1 Family members of the major shareholders	No	No
1.2 Bank's employees	Yes, as long as he/she has no affiliation with the controlling shareholder, directors, or other commissioner.	No
1.3 Bank's major borrowers	Yes	No
1.4 Bank's (large) shareholders	Yes, but independent commissioners are not allowed to hold controlling shares, i.e., 20%	Yes, but independent directors may hold the listed bank's shares only up to 5%.
1.5 Foreigners (or non-residents)	Yes	Yes
2. Are there any restrictions that disqualify some categories of persons from serving as independent directors? Please specify.	Yes, disqualified for: <ol style="list-style-type: none"> 1. those with affiliated relationship with the controlling shareholder, directors or other commissioners of the bank 2. those with a position as director in other companies affiliated to the bank 	Yes, those with family relationship or otherwise closely associated with, or de facto controlled by, major shareholders.
3. Are there any minimum qualification requirements for independent directors? Please specify.	No	No
4. What is the maximum term permitted for independent directors (number of years)?	No restriction	No restriction
Board of Directors: Bank's CEO (President)		
1. Can the Chairperson and CEO be the same person?	No, since Indonesian firms have a dual board system.	Yes (but most Malaysian banks have them separately).
2. Are there any separate regulations on the qualifications of bank CEOs?	Yes, President Director of a bank should be independent from the controlling shareholder.	No, (other than the BNM approval on the basis of a fit and proper test).
3. Are bank CEOs subject to a Fit and Proper Test of the bank supervisory agency?	Yes	Yes
4. Are CEOs required to certify the bank's financial statement?	Yes	Yes
Board of Directors: Board meeting		
1. Is there requirement for the board to meet regularly, or the minimum number of meetings a year? Please specify.	No	Yes, minimum of 6 board meetings.
2. Are banks required to disclose the directors' attendance at board meetings? Please specify.	No	Yes
Board of Directors: Related-party transactions		
1. Are banks permitted to make loans to the board members or top management? If yes, what are relevant rules?	Yes, according to the internal regulation of each bank.	No, prohibited unless exempted. They include loans to its officers and employees <ul style="list-style-type: none"> - personally - any firm they serve (or have interest in serving) as partner, director, manager, agent or guarantor - any firm in which they have a material interest - any individuals for whom they stand as guarantor.
2. Are there any rules governing the conduct of "interested" directors (who are connected to controlling/major shareholders or others with vested interests in the outcome of board decisions)? If yes, please specify.	Yes. Members of BoD or BoC are prohibited from joining any decision-making involving conflicts of interest that may incur losses to the bank; and such conflicts of interest should be disclosed.	No related-party transactions allowed that may involve connected persons.

3. Are the following entities included in the disclosure requirement for related party transactions?		
3.1 Top management, other directors, and their close family members	Yes	Yes (not permitted unless exempted)
3.2 Individuals who are major shareholders and their close family members	Yes for major shareholders, but not for their close family members.	Yes (not permitted unless exempted)
Board of Directors: Board committees		
1. Audit committee		
1.1 Is the committee mandatory?	Yes, mandatory (all listed companies by the end of 2004)	Yes, mandatory.
1.2 If mandatory, are there rules concerning the composition of the committee (minimum number of independent directors, etc.)?	Yes, the committee should consist of at least one independent commissioner and minimum two outsiders.	Yes, independent directors required to constitute a majority for all banks. At least three non-executive members required.
2. Nomination committee		
2.1 Is the committee mandatory?	Not mandatory	Yes mandatory
2.2 If mandatory, are there rules concerning the composition of the committee (minimum number of independent directors, etc.)?		Yes, the committee should be composed of 5 members of which 4 are non-executive members, and chaired by an independent director.
3. Remuneration/compensation committee		
3.1 Is the committee mandatory?	Not mandatory	Yes, mandatory
3.2. If mandatory, are there any rules concerning the composition of the committee (minimum number of independent directors, etc.)?		Yes, the committee should be composed of only non-executive members (and majority independent directors) and chaired by an independent director.
4. Risk management committee		
4.1 Is the committee mandatory?	Yes, mandatory	Yes, mandatory
4.2 If mandatory, are there rules concerning the composition of the committee (minimum number of independent directors, etc.)?	Yes, the committee should consist of majority of directors and related executive officers (BI regulation). According to the national and banking sector corporate governance codes, however, the committee should have at least one independent director.	Yes, the committee should be composed of a minimum 3 non-executive members and chaired by an independent director.
Disclosure and Others: Disclosure rules: Is the following information required to be disclosed in the annual report?		
1. Policies on risk management	No, not mandatory	Yes
2. Policies on risk factors	No, not mandatory	Yes
3. Consolidated accounts covering all bank and non-bank subsidiaries	Yes	Yes
4. Major off-balance sheet items	Yes	Yes
5. Identity of major shareholders	Yes	Yes
6. Relationship between major shareholders	Yes	Yes
7. Relationship between board members	Yes	Yes
8. Professional background of board members	Yes	Yes
9. Top executive compensation individually	No	Yes for CEO, but only aggregate total for other executive directors.
10. Non-executive/independent directors compensation individually	No, only aggregate total	No, only aggregate total
Disclosure and Others: Others		
1. Is there a regulatory requirement that banks' audit standards should materially conform to the International Standards on Auditing (ISA)?	Yes	Yes
2. Is external audit a compulsory obligation for banks?	Yes	Yes
3. Are specific requirements for the extent of nature of the audit spelled out?	Yes	Yes
4.1 Is there a corporate governance code targeted for banks/financial institutions?	Yes	Yes
4.2 If yes, who issued the code?	National Committee on Corporate Governance (NCGG)	The Central Bank
Number of surveyed banks	26	10

Source: Sang-Woo Nam and Chee Soon Lum (2005).

A.5.3 – Indonesian Code for Good Corporate Governance, April 2001 (National Committee on Corporate Governance)

PREAMBLE

This Code for Good Corporate Governance ("Code") has been drafted by the National Committee for Corporate Governance Policies with the objective that it shall become the reference point as a Model of Good Corporate Governance for the Indonesian Business Community.

Consistent with such objective, the principles of Good Corporate Governance herein set forth are intended to apply to all Indonesian companies. In the initial stage, however, public companies, state-owned enterprises and companies utilizing public funds or engaged in the business of managing public funds shall be the first to commence proper adherence to the principles of the Code. It is hoped that all other legal entities established under the regulations having the force of law of the Republic of Indonesia will subsequently realize and implement these principles as soon as practicable.

Considering the diversity of companies, however, the pace of implementation hereof should take into account the different characteristics of each company, for instance, the size of share capital, the impact of its activities on the public, and the degree of internationalization. Recognizing that a company or a group of companies belonging to a specific industrial sector may share specific characteristics, it is also intended to eventually formulate sectoral codes containing more specific principles of Good Corporate Governance, for which this Code should serve as a model.

The formulation of principles of Good Corporate Governance contained in this Code is intended to allow for more constructive and flexible methods of raising standards of corporate governance in Indonesian companies, as opposed to adopting the more prescriptive approach of imposing mandatory regulations having the force of law.

The National Committee for Corporate Governance Policies recognizes that there are aspects of Good Corporate Governance where regulations having the force of law would be necessary, but that there are also other aspects where self-regulation in accordance with market developments is more appropriate. Therefore, it should be borne in mind that the principles contained in this Code are intended to be dynamic, which should evolve in correspondence with dynamic markets and structures. As the external context changes, the requirements of relevant sound corporate governance follow. Hence the Code is evolutionary in nature and should be seen and reviewed in light of anticipated changes in circumstances nationally and internationally.

PURPOSE OF THE PRINCIPLES

The purpose of the principles set forth in this Code are:

1. to maximize corporate and shareholder value by enhancing transparency, accountability, reliability, responsibility, and fairness in order to strengthen the company's competitive position both domestically and internationally, and to create a sound environment to support investment;
2. to encourage the management of the company to behave in a professional, transparent, and efficient manner, as well as optimizing the use of and enhancing the independence of the Dewan Komisaris, the Direksi, and the GMOS;
3. to encourage shareholders, members of the Dewan Komisaris and the Direksi to make decisions and to act with a strict sense of morality, in compliance with the prevailing regulations having the force of law, and in accordance with their social responsibility towards the various stakeholders and the environmental protection.

I. SHAREHOLDERS

1.1. Shareholders Rights

Principle:

The rights of the shareholders shall be protected and, accordingly, shareholders shall be able to exercise their rights through reliance upon appropriate procedures that have been adopted by the Company concerned, which procedures shall be required under applicable regulations having the force of law.

The rights of shareholders are basically:

- (a) the right to attend and vote at any GMOS on a one share/one vote basis;
- (b) the right to obtain relevant corporate information, in a timely and regular manner, to enable a shareholder to make informed investment decisions concerning their shares in the Company; and
- (c) the right to receive part of the Company's distributable profit in proportion to their respective shareholding in the Company, through dividends or other distributions.

1.2. General Meetings of Shareholders ("GMOS")

Principle:

All shareholders shall be entitled to obtain a full explanation and accurate information concerning the procedures to be followed prior to and at the GMOS concerned in order to enable the shareholders to participate in the decision making regarding matters which may affect the existence of the company and the rights of the shareholders.

This may include:

(a) notices for a GMOS including information about each item of the agenda of the GMOS, including any proposals which the Direksi may contemplate to submit at the GMOS, to enable a shareholder to participate in the discussions at the GMOS and to vote responsibly. If such information and/or proposals are not available at the time the notices were sent, such information and/or proposals shall be made available for the shareholders at the offices of the Company prior to the GMOS;

(b) explanations of other relevant matters which are provided, prior to and/or at the GMOS;

(c) resolutions of a GMOS be adopted through transparent and fair proceedings. It is desirable that the shareholders are allowed to join in the making of decisions on issues which may affect the Company's existence and the rights of shareholders;

(d) minutes of a GMOS provided to each shareholder upon request and should include opinions as well as dissenting comments and be properly maintained;

(e) the system for determining the remuneration and facilities of each member of the Dewan Komisaris and Direksi, and the specific remuneration and facilities received by the incumbent members of the Dewan Komisaris and Direksi, shall be disclosed to the shareholders; and

(f) in order to monitor compliance with this Code, the Direksi disclosing financial as well as non-financial matters in the Annual Reports of the Direksi to the shareholders, and identify therein any discrepancies from and/or non-compliance with the principles of Good Corporate Governance contained in this Code, and provide the reasons for such discrepancies and non-compliance.

1.3. Equitable Treatment of Shareholders

Principle:

Shareholders of the same kind of shares shall be treated equitably based on the principle that shareholders of the same kind of shares have equitable position in the company.

1.3.1 Shareholders shall hold voting rights according to the type and number of shares they are holding.

1.3.2. Each and every shareholder shall be provided with full and accurate information about the Company, unless there is a justifiable reason not to do so. The Company shall not show partiality to certain shareholders by providing information not disclosed to the other shareholders. Such information shall be provided to each and every shareholder, irrespective of the class of shares held by such shareholders.

1.3.3. No shareholder, member of the Dewan Komisaris, or member of the Direksi may engage in insider trading or self-dealing with the intent of personal gain. The Company, therefore, must have an effective internal control mechanism to monitor and address these types of practices. If discovered, such insider transactions shall be disclosed to the shareholders through fair means.

1.4. Shareholder Responsibilities

Principle:

Shareholders owning a controlling interest in a Company shall be mindful of their responsibilities as shareholders when they exercise any influence over corporate management, whether by the exercise of their voting rights or otherwise. Any unlawful intervention in the management of the Company should be addressed through greater transparency, accountability of management and, ultimately, resolved by prevailing law. Minority shareholders also have corresponding responsibilities to the effect that they do not misuse their rights under the prevailing regulations having the force of law.

1.5. Appointment of the members of the Dewan Komisaris and the Direksi and their Remuneration Systems

Principle:

At a GMOS, the shareholders shall adopt a system for

- (a) the appointment of members of the Dewan Komisaris and the Direksi of the Company;
- (b) the determination of the remuneration of the members of the Dewan Komisaris and the Direksi of the Company; and
- (c) the evaluation of their performance.

Procedures regarding such nomination and remuneration can be formulated by the Dewan Komisaris or by retaining independent professional advisors appointed by the Dewan Komisaris subject to approval of the GMOS. The Dewan Komisaris should recommend to the GMOS the establishment of a Nomination and Remuneration Committee as dealt with in section 2.9, to implement such system, including proposing the candidates for the Dewan Komisaris and the Direksi and their remuneration. Such Committee shall consist of at least 1 (one) member of the Dewan Komisaris and 1 (one) member of the Direksi who both fall under the category of "outside members" as stated in section 2.2 and 3.2. Such Committee shall endeavour to attract members of the Dewan Komisaris and the Direksi of high quality, and should keep in mind that the amount of their remuneration should be appreciable and reflect their responsibility and commitment. The remuneration of the members of the Dewan Komisaris and the Direksi as determined by any GMOS shall not be dependent upon the results of the Company, without prejudice to the right of the GMOS to decide payment of bonuses to members of the Dewan Komisaris and the Direksi dependent upon the results of the Company. A member of the Dewan Komisaris or the Direksi shall not be remunerated separately for his/her advice to any organ of the Company.

II. THE BOARD OF COMMISSIONERS (DEWAN KOMISARIS)

2.1. Function of the Dewan Komisaris

Principle:

The Dewan Komisaris shall be responsible and shall have the authority to supervise the actions of the Direksi, and shall give advice to the Direksi when required. To assist it in doing so, the Dewan Komisaris may, pursuant to the procedures it has adopted, retain independent professional advisors and/or establish special committees. Each member of the Dewan Komisaris shall be a person of good character and shall have relevant experience.

Each member of the Dewan Komisaris and the Dewan Komisaris as an organ shall perform their duties honorably in the best interests of the Company, and shall also ensure that the Company perform its social responsibilities and consider the interests of the various stakeholders in the Company.

The Dewan Komisaris should monitor the effectiveness of the Good Corporate Governance practices under which it operates and make changes as needed.

The Dewan Komisaris may delegate part of its authority to a special committee or to two or more members of the Dewan Komisaris by virtue of a special power of attorney. In such special power of attorney the authority so delegated must be clearly specified, and the period of delegation may not exceed 6 (six) months. The members of the Dewan Komisaris or such special committee shall report to the Dewan Komisaris all actions and transactions effected by them by virtue of such special power of attorney no later than 30 (thirty) days after the expiration thereof.

2.2. Composition of the Dewan Komisaris

Principle:

The composition of the Dewan Komisaris shall be such as to allow effective, appropriate and swift decision making. The Dewan Komisaris should be composed in such a way that its members act independently and that they shall hold no interests that might impair their ability to perform their duties independently and critically in relation to each other and the Direksi, in order to increase the effectiveness and transparency of its deliberations. Depending on the specific characteristics of a Company, at least 20% of the members of the Dewan Komisaris should fall under the category of outside members as stated in Section 3.2.

Such members of the Dewan Komisaris shall be independent from the Direksi and controlling shareholders.

It shall be afforded that during the process of nomination and appointment of the "outside members" of the Dewan Komisaris, the opinion of the minority shareholders considered in order to provide real protection for the interest of the minority shareholders and stakeholders.

The Annual Reports of the Company shall include not only the names of the members of the Dewan Komisaris, but also their occupation, and their principal external jobs, to the extent that such jobs are relevant to the performance of their tasks as members of the Dewan Komisaris.

2.3. Compliance with Articles of Association and prevailing regulations having the force of law

Principle:

The Dewan Komisaris shall observe the Articles of Association of the Company and all applicable regulations having the force of law when performing its duties, and shall ensure that the Direksi also complies with the Articles of Association of the Company and all applicable regulations having the force of law.

For this purpose, it is equally important that the members of the Dewan Komisaris familiarize themselves with the Articles of Association and all regulations having the force of law in effect from time to time that are relevant to their duties and authorities.

2.4. Meetings of the Dewan Komisaris

Principle:

The Meetings of the Dewan Komisaris shall be held regularly, i.e., at least once every month in principle, depending on the specific characteristics of the Company.

The Dewan Komisaris shall adopt procedures for Meetings of the Dewan Komisaris and shall clearly set out such procedures in the Minutes of the Meetings of the Dewan Komisaris and when such procedures were determined and decided. A member of the Dewan Komisaris can only be represented by another member of the Dewan Komisaris at a meeting of the Dewan Komisaris.

Minutes of the Meeting of the Dewan Komisaris shall be drawn-up for each Meeting of the Dewan Komisaris. Any dissent from decisions taken in the Meeting of the Dewan Komisaris shall be noted in the Minutes of any Meeting of the Dewan Komisaris. Each member of the Dewan Komisaris shall be entitled to receive a copy of the Minutes of the Meeting of the Dewan Komisaris, irrespective whether such member has been present or not at a Meeting of the Dewan Komisaris. Within 14 (fourteen) days from the date of the delivery thereof, each member of the Dewan Komisaris shall advise the Chairman of the Meeting of the Dewan Komisaris concerned of his/her objections and/or corrections to any matter referred to therein.

If no such objections and/or corrections are received, the other members of the Dewan Komisaris shall be entitled to assume that there are no objections and/or corrections to the Minutes of the Meeting of the Dewan Komisaris concerned. Any dissent from decisions taken in the Meeting of the Dewan Komisaris shall be noted in the Minutes of any Meeting of the Dewan Komisaris.

The originals of the Minutes of each Meeting of the Dewan Komisaris shall be bound annually and kept at the Company's offices; and each member of the Dewan Komisaris, and each member of the Direksi shall be entitled to read each Minutes of the Meeting of the Dewan Komisaris.

2.5. Information for the Dewan Komisaris

Principle:

The Dewan Komisaris shall be entitled to have access to information of the Company in a timely and comprehensive manner. Since the Dewan Komisaris have no executive authority within the Company, the Direksi responsible for ensuring that the information regarding the Company is furnished to the Dewan Komisaris timely and comprehensively.

2.6. Other Business Relations between a member of the Dewan Komisaris and/or the Direksi and the Company

Principle:

In the Annual Reports, the Direksi shall clearly specify if there exists any other business relationship between any member of the Dewan Komisaris and/or the Direksi and the Company, and what kind of business relationship that is.

2.7. No Personal Gain

Principle:

Members of the Dewan Komisaris should derive no form of personal gain from the Company's activities other than through their remuneration as members of the Dewan Komisaris.

2.8. A system for the appointment of Executives who are not members of the Direksi, determination of their remuneration and the evaluation of their performance

Principle:

The Dewan Komisaris shall establish a transparent system for (a) the appointment of the executives who are not members of the Direksi; (b) the determination of their remuneration; and (c) the evaluation of their performance.

2.9. Committees which may be established by the Dewan Komisaris

Principle:

The Dewan Komisaris shall consider to establish from among their members certain committees to support the implementation of the tasks of the Dewan Komisaris.

Such committees shall report their findings and make recommendations with respect to their relevant mandates to the Dewan Komisaris.

The establishment of such Committees shall be reported in the Annual Reports.

The following are a number of the Dewan Komisaris duties in respect of which decision-making can be prepared by the various Committees.

1. Nomination Committee

Preparation of the selection criteria and nomination procedures for the executives who are not members of the Direksi and for other executive positions in the Company, and to formulate a system of assessments and provide recommendations in respect of the number of members of the Dewan Komisaris and Direksi in the Company.

2. Remuneration Committee

To prepare a remuneration system and provide recommendations in respect of (i) the assessment of such system, (ii) the granting of options, such as a stock option, (iii) pension rights, and (iv) redundancy and other compensation schemes.

3. Insurance Committee

To conduct periodical assessments and provide recommendations in respect of the type and coverage of the insurance of the Company.

4. Audit Committee

(will be dealt with in Article IV paragraph 4.2 of this Code)

III. THE BOARD OF MANAGING DIRECTORS (DIREKSI)

3.1. Function of the Direksi

Principle:

The Direksi are charged with the overall management of the Company. The Direksi shall be responsible for the implementation of their duties to the shareholders at the GMOS. To assist it in doing so, the Direksi may, pursuant to procedures it has adopted, retain independent professional advisors and/or establish special committees.

Each member of the Direksi shall be a person of good character and relevant experience.

The Direksi shall perform their duties faithfully in the best interests of the Company and the Direksi shall also cause the Company to perform its social responsibilities and consider the interests of various stakeholders.

The Direksi should consistently promote compliance with the principles of Good Corporate Governance contained in this Code.

3.2. Composition of the Direksi

Principle:

The composition of the Direksi shall be such as to allow effective, appropriate and swift decision making. The Direksi should be composed in such a way that its members act independently by means that they shall hold no interests that might impair their ability to perform their duties independently and critically.

Depending on the specific character of the Company, at least 20% of the members of the Direksi should be "outside directors" as mentioned in section 2.2 in order to increase the effectiveness of its management role, and the transparency of its deliberations.

Such members of the Direksi shall be independent from the Dewan Komisaris and controlling shareholders.

It shall be afforded that during the process of nomination and appointment of the "outside directors", the opinion of the minority shareholders shall be considered in order to provide actual protection for the interest of the minority shareholders and stakeholders.

3.3. Compliance with Articles of Association and prevailing regulations having the force of law

Principle:

The Direksi shall observe the Articles of Association of the Company and all applicable regulations having the force of law when performing its duties. It is equally important that each member of the Direksi familiarize themselves with the Articles of Association and prevailing regulations having the force of law prevailing from time to time, that are relevant to their duties and authorities.

3.4. No Personal Gain

Principle:

Members of the Direksi should derive no forms of personal gain from the Company's activities other than through their remuneration as members of the Direksi.

3.5. Meetings of the Direksi

Principle:

The Meetings of the Direksi shall be held periodically, namely in principle at least once every month, depending on the specific characteristics of the Company.

The Direksi shall adopt procedures for Meetings of the Direksi and shall clearly set out such procedures in the Minutes of the Meetings of the Direksi during which such procedures were determined and decided.

Minutes of the Meeting of the Direksi shall be drawn-up for each Meeting of the Direksi. Any dissent from decisions taken in the Meeting of the Direksi shall be noted in the Minutes of any Meeting of the Direksi. Each member of the Direksi shall be entitled to receive a copy of the Minutes of the Meeting of the Direksi irrespective whether such member has been present or not at a Meeting of the Direksi.

Within 14 (fourteen) days since the date of the delivery thereof, each member of the Direksi shall advise the Chairman of the Meeting of the Direksi concerned of his/her objections and/or corrections to any matter referred to therein.

If no such objections and/or corrections are received, the other members of the Direksi shall be entitled to assume that there are no objections and/or corrections to the Minutes of the Meeting of the Direksi concerned

The originals of the Minutes of each Meeting of the Direksi shall be bound annually and kept at the Company's offices; and each member of the Dewan Komisaris, and each member of the Direksi shall be entitled to read each Minutes of the Meeting of the Direksi.

3.6. Internal Controls

Principle:

The Direksi should establish an effective system of internal controls in order to safeguard the investment and assets of the Company.

The Direksi should also establish an appropriate internal information control system, in order (a) to safeguard important information of the Company, and (b) that such information can be quickly transmitted to the corporate secretary (if any).

Internal controls are the process aimed at achieving reasonable certainty about the realization of objectives in regard to (a) the reliability of the financial information, (b) the effectiveness and efficiency of the corporate processes, and (c) compliance with all relevant regulations having the force of law.

3.7. Role of Direksi in Accounting Matters

Principle:

The Direksi should advise the Audit Committee when it seeks a second opinion on a significant accounting issue.

3.8. Maintenance of Registers by the Direksi

Principle:

The Direksi shall organize and maintain a Register of Shareholders and a Special Register in accordance with the provisions of prevailing regulations having the force of law. Such Register of Shareholders and Special Register shall be held in the office of the Company, and the shareholders, the members of the Dewan Komisaris and the Direksi of the Company shall be entitled to read such Registers. Each of these Registers shall be signed in accordance with the Articles of Association.

IV. AUDIT SYSTEMS

4.1. External Auditors

Principle:

The external auditors shall be appointed by the GMOS from candidates nominated by the Audit Committee. The Audit Committee through the Dewan Komisaris will provide to the GMOS the reasons for such nominations and the proposed remuneration for such external auditors.

Such external auditors shall be independent from the Company's Dewan Komisaris, Direksi and stakeholders of the Company.

The Company must make available to the external auditors all accounting records and supporting data necessary to enable such auditors to render their opinion as to the fairness, consistency and conformity of the Company's financial statements with Indonesian accounting standards. The external auditors shall notify the Company through its Audit Committee, (if any), of any event related to the Company that is contrary to prevailing regulations having the force of law (if any).

4.2. Audit Committee

Principle:

The Dewan Komisaris shall establish an Audit Committee comprised of certain members of the Dewan Komisaris. The Dewan Komisaris may invite outsiders as member(s) of the Audit Committee with the requisite mixture of relevant skills, experience and other qualities to achieve all of the Audit Committee's objectives.

The Audit Committee shall be independent of the Direksi and external auditors and thus should report solely to the Dewan Komisaris. The removal of a member of the Audit Committee should require the approval of more than 50% of the number of the members of the Dewan Komisaris. The duties and responsibilities of the Audit Committee shall be specified in a Charter. Such duties and responsibilities should inter alia include:

(a) promoting an adequate structure of internal control;

(b) improving the quality of financial disclosure and reporting;

(c) reviewing the scope, accuracy and cost effectiveness of the external audit and the independence and objectivity of the external auditors;

(d) preparing a letter (signed by the Chairman of the Audit Committee) describing the Audit Committee's duties and responsibilities during the year under review, which letter shall be included in the Annual Reports to be submitted to shareholders.

The Audit Committee should have adequate resources and authority to discharge their duties and responsibilities.

4.3. Information

Principle:

The Dewan Komisaris and Direksi shall ensure that both external and internal auditors and the Audit Committee shall have full access to information necessary to perform their audits.

4.4. Confidentiality

Principle:

Both external and internal auditors, and the Audit Committee shall not reveal, unless required by regulations having the force of law, any confidential information obtained while performing such audits.

4.5. Audit regulations

Principle:

The GMOS shall approve/adopt mandatory internal regulations to govern all aspects of audits including the qualifications, rights, duties, responsibilities and operations of external and internal auditors.

V. CORPORATE SECRETARY

5.1. Function

Principle:

Depending on the specific characteristics of the Company, it is recommended that the Direksi recommend a person as corporate secretary who should act as a liaison officer and can be assigned to administer and maintain of corporate documents, including but not limited to the Register of Shareholders, the Special Register and the Minutes of all meeting of the Direksi and GMOS.

5.2. Qualifications

Principle:

The corporate secretary shall have such academic qualifications adequate to perform his/her duties and responsibilities. The function of the corporate secretary can be carried out by a member of the Direksi.

5.3. Accountability

Principle:

The Corporate Secretary is accountable to the Direksi.

5.4. Role of Corporate Secretary in Disclosure Matters

Principle:

The corporate secretary shall ensure that the Company complies with prevailing regulations having the force of law in respect of disclosure requirements. The corporate secretary shall periodically provide to the Direksi any information relevant to their duties. Such information shall also be provided to the Dewan Komisaris when required.

VI. STAKEHOLDERS

6.1. Rights of Stakeholders

Principle:

The rights of stakeholders under prevailing regulations having the force of law and/or pursuant to any contracts entered into with the Company, customers, suppliers, creditors and surrounding community, shall be respected. Furthermore, stakeholders shall be afforded appropriate means of redress if there is an evidence of infringements of their rights.

6.2. Stakeholder Participation in Monitoring the Compliance with prevailing regulations having the force of law by the Direksi

Principle:

Stakeholders shall be provided with an opportunity to monitor and offer input to the Company's Direksi. Whereas, the Company shall provide stakeholders with relevant information necessary for protecting their rights. The Company will cooperate with stakeholders for their mutual benefit.

VII. DISCLOSURE

7.1. Timely and Accurate Disclosure

Principle:

The Company shall disclose material information through its Annual Reports and financial statements to shareholders, and the relevant government authorities in accordance with the prevailing regulations having the force of law in a timely, accurate, understandable and objective manner.

7.2. Matters of material importance to Decision-Making

Principle:

In addition to the contents of the Annual Reports required by prevailing regulations having the force of law, companies shall take the initiative to disclose not only matters required under the regulations having the force of law, but also those of material importance to the decision-making of institutional investors, shareholders, creditors and other stakeholders with respect to such matters, such as, but not limited to:

- (a) the Company's objectives, business goals and strategies;
- (b) the status of major shareholders and all other shareholders and pertinent information on the exercise of shareholders' rights;
- (c) cross-shareholdings and cross-debt guarantees, if any;
- (d) evaluations of the Company by external auditors, credit rating agencies and others;
- (e) curriculum vitae on members of the Dewan Komisaris, the Direksi, key executives, and their remuneration;
- (f) honorarium system for external auditors
- (g) remuneration systems for internal auditors, members of the Dewan Komisaris, Direksi and key executives;
- (h) material foreseeable risk factors, including management assessment of the business climate and risk factors;
- (i) material issues regarding the Company's employees and other stakeholders;
- (j) material claims submitted by and/or against the Company and court cases involving the Company;
- (k) potential and ongoing conflict of interests; and
- (l) Good Corporate Governance implementations.

7.3. Disclosure of Adherence to this Code

Principle:

The Company shall actively disclose how they have applied the principles of Good Corporate Governance set out in this Code and any discrepancies from and/or non-compliance with such principles, including reasons therefore.

This should include a statement of the corporate governance issues specific to the Company so that investors understand how a particular company deals with those issues.

7.4. Disclosure of Price Sensitive Information

Principle:

The Company shall ensure that all price sensitive information is kept confidential until a public announcement is made.

However, if there is a concern that confidentiality cannot be maintained until the particular transaction or matter has been concluded, a warning announcement may be necessary to avoid the creation of a misleading information, according to the prevailing regulations having the force of law.

VIII. CONFIDENTIALITY

Principle:

The Dewan Komisaris and the Direksi are under an obligation of confidentiality to the Company.

Confidential information, which their members have obtained while acting as a member of the Dewan Komisaris or as a member of the Direksi, or key executives, must remain confidential according to the prevailing regulations having the force of law.

IX. INSIDER INFORMATION

Principle:

Members of the Dewan Komisaris and the Direksi holding shares in the Company and, for public companies, any other "insiders" as meant in prevailing regulations having the force of law, shall not misuse such material information in relation to the Company.

Information concerning take-overs, mergers, and share repurchase programs is in general considered as insider information and the Dewan Komisaris and the Direksi and key executives of the Companies concerned with the planning and implementations of these programs should afford fair treatment to all affected shareholders.

X. BUSINESS ETHICS AND CORRUPTION

Principle:

Members of the Dewan Komisaris, the Direksi, and all employees of the Company shall never make or offer, directly or indirectly, anything of value to a customer or government official to influence or reward an action, in accordance with the prevailing regulations having the force of law.

A business courtesy, such as gift, contribution or entertainment, should never be offered under circumstances that might create the appearance of an impropriety.

The Company should adopt a codification of ethical conduct, which essentially is a statement of values, such Code should be expressed briefly and clearly but sufficiently detailed to give a clear direction to the behavior of those to whom it is directed.

XI. DONATIONS

Principle:

It is inappropriate that any of the corporate funds or assets or profits that rightfully accrue to the shareholders be diverted to political donations.

Political contributions by the Company, or the use of any Company's assets, to any political party or any legislative candidate, shall be carried out under the prevailing public election regulations having the force of law.

Donations to charities are acceptable within reason.

XII. COMPLIANCE WITH HEALTH, SAFETY AND ENVIRONMENTAL PROTECTION REGULATIONS HAVING THE FORCE OF LAW

Principle:

The Direksi shall ensure that the Company, its production and manufacturing facilities, plans, shops, and other Company facilities, comply with applicable environmental and health regulations having the force of law. The Direksi shall take appropriate measures to prevent workplace injuries and illness. Employees shall be provided with a safe and healthy working environment. In carrying out this task, the Direksi shall consider evolving industry practices, regulatory requirements and societal standards of care.

XIII. EQUAL EMPLOYMENT OPPORTUNITY

Principle:

The Direksi shall use merit, qualifications and other job-related criteria as the sole basis for all employment-related decisions.

The Direksi shall recruit, hire, train, compensate, promote and provide other conditions of employment without regard to a person's race, religion, sex, age, disability, or other characteristic protected by regulations having the force of law.

The Direksi shall provide a work environment free of harassment of any kind based on diverse human characteristics and cultural backgrounds.

A.5.4 – Malaysian Code on Corporate Governance, March 2000 (Finance Committee on Corporate Governance)

PRINCIPLES OF CORPORATE GOVERNANCE

A Directors

I The Board

Every listed company should be headed by an effective board which should lead and control the company.

II Board Balance

The board should include a balance of executive directors and non-executive directors (including independent non-executives) such that no individual or small group of individuals can dominate the board's decision making.

III Supply of Information

The board should be supplied in a timely fashion with information in a form and of a quality appropriate to enable it to discharge its duties.

IV Appointments to the Board

There should be a formal and transparent procedure for the appointment of new directors to the board.

V Re-election

All directors should be required to submit themselves for re-election at regular intervals and at least every three years.

B Directors' Remuneration

I The Level and Make-up of Remuneration

Levels of remuneration should be sufficient to attract and retain the directors needed to run the company successfully. The component parts of remuneration should be structured so as to link rewards to corporate and individual performance, in the case of executive directors. In the case of non-executive directors, the level of remuneration should reflect the experience and level of responsibilities undertaken by the particular non-executive concerned.

II Procedure

Companies should establish a formal and transparent procedure for developing policy on executive remuneration and for fixing the remuneration packages of individual directors.

III Disclosure

The company's annual report should contain details of the remuneration of each director.

C Shareholders

I Dialogue between Companies and Investors

Companies and institutional shareholders should each be ready, where practicable, to enter into a dialogue based on the mutual understanding of objectives.

II The AGM

Companies should use the AGM to communicate with private investors and encourage their participation.

D Accountability and Audit

I Financial Reporting

The board should present a balanced and understandable assessment of the company's position and prospects.

II Internal Control

The board should maintain a sound system of internal control to safeguard shareholders' investment and the company's assets.

III Relationship with the Auditors

The board should establish formal and transparent arrangements for maintaining an appropriate relationship with the company's auditors.

BEST PRACTICES IN CORPORATE GOVERNANCE

AA The Board of Directors

I Principal Responsibilities of the Board

The board should explicitly assume the following six specific responsibilities, which facilitate the discharge of the board's stewardship responsibilities -

- Reviewing and adopting a strategic plan for the company;
 - Overseeing the conduct of the company's business to evaluate whether the business is being properly managed;
 - Identifying principal risks and ensure the implementation of appropriate systems to manage these risks;
 - Succession planning, including appointing, training, fixing the compensation of and where appropriate, replacing senior management;
 - Developing and implementing an investor relations programme or shareholder communications policy for the company;
- and

- Reviewing the adequacy and the integrity of the company's internal control systems and management information systems, including systems for compliance with applicable laws, regulations, rules, directives and guidelines.

Constituting an effective board

II Chairman and Chief Executive Officer

There should be a clearly accepted division of responsibilities at the head of the company, which will ensure a balance of power and authority, such that no one individual has unfettered powers of decision. Where the roles are combined there should be a strong independent element on the board. A decision to combine the roles of Chairman and Chief Executive should be publicly explained.

III Board Balance

Non-executive directors should be persons of calibre, credibility and have the necessary skill and experience to bring an independent judgement to bear on the issues of strategy, performance and resources including key appointments and standards of conduct. To be effective, independent non-executive directors need to make up at least one third of the membership of the board.

Size of non-executive participation

IV In circumstances where a company has a significant shareholder, in addition to the requirement that one third of the board should comprise independent directors, the board should include a number of directors which fairly reflects the investment in the company by shareholders other than the significant shareholder. For this purpose, a "significant shareholder" is defined as a shareholder with the ability to exercise a majority of votes for the election of directors.

V In circumstances, where the shareholder holds less than the majority but is still the largest shareholder, the board will have to exercise judgment in determining what is the appropriate number of directors which fairly reflects the investment in the company by the remaining holders of the shares.

VI The board should disclose on an annual basis whether one third of the board is independent and in circumstances where the company has a significant shareholder, whether it satisfies the requirement to fairly reflect through board representation, the investment of the minority shareholders in a company. The board should disclose its analysis of the application of the best practices set out above, to the circumstances of the board.

VII Whether or not the roles of Chairman and Chief Executive are combined, the board should identify a senior independent non-executive director of a board in the annual report to whom concerns may be conveyed.

VIII Appointments to the Board

The board of every company should appoint a committee of directors composed exclusively of non-executive directors, a majority of whom are independent, with the responsibility for proposing new nominees for the board and for assessing directors on an on-going basis. The actual decision as to who shall be nominated should be the responsibility of the full board after considering the recommendations of such a committee. The nominating committee should -

- Recommend to the board, candidates for all directorships to be filled by the shareholders or the board.
- Consider, in making its recommendations, candidates for directorships proposed by the Chief Executive Officer and, within the bounds of practicability, by any other senior executive or any director or shareholder.
- Recommend to the board, directors to fill the seats on board committees.

IX The board, through the nominating committee, should annually review its required mix of skills and experience and other qualities, including core competencies which non-executive directors should bring to the board. This should be disclosed in the annual report.

X The board should implement a process, to be carried out by the nominating committee annually for assessing the effectiveness of the board as a whole, the committees of the board and for assessing the contribution of each individual director.

XI Boards should be entitled to the services of a company secretary who must ensure that all appointments are properly made, that all necessary information is obtained from directors, both for the company's own records and for the purposes of meeting statutory obligations, as well as obligations arising from the Listing requirements of Exchanges or other regulatory requirements.

XII Size of Boards

Every board should examine its size, with a view to determining the impact of the number upon its effectiveness.

XIII Directors' Training

As an integral element of the process of appointing new directors, each company should provide an orientation and education program for new recruits to the board.

Board structures and procedures

XIV The board should meet regularly, with due notice of issues to be discussed and should record its conclusions in discharging its duties and responsibilities. The board should disclose the number of board meetings held in a year and the details of attendance of each individual director in respect of meetings held.

XV The board should have a formal schedule of matters specifically reserved to it for decision to ensure that the direction and control of the company is firmly in its hands.

Relationship of the board to management

XVI The board, together with the Chief Executive Officer, should develop position descriptions for the board and for the Chief Executive Officer, involving definition of the limits to management's responsibilities. In addition, the board should approve, or develop with the Chief Executive Officer, the corporate objectives, which the Chief Executive Officer is responsible for meeting.

XVII Quality of Information

The board should receive information that is not just historical or bottom line and financial-oriented but information that goes beyond assessing the quantitative performance of the enterprise and looks at other performance factors such as customer satisfaction, product and service quality, market share, market reaction, environmental performance and so on, when dealing with any item on the agenda.

XVIII The chair of the board shall undertake primary responsibility for organising information necessary for the board to deal with the agenda and for providing this information to directors on a timely basis. If the chair is also the Chief Executive Officer, the board should also have in place a procedure to ensure that its agenda items are placed on the agenda and for providing this information to directors.

XIX Access to Information

Directors should have access to all information within a company whether as a full board or in their individual capacity, in furtherance of their duties.

XX Access to Advice

There should be an agreed procedure for directors, whether as a full board or in their individual capacity, in furtherance of their duties to take independent professional advice at the company's expense, if necessary.

XXI All directors should have access to the advice and services of the company secretary.

XXII Directors should appoint as secretary someone who is capable of carrying out the duties to which the post entails and their removal should be a matter for the board as a whole. The board should recognise that the Chairman is entitled to the strong and positive support of the company secretary in ensuring the effective functioning of the board.

XXIII Use of Board Committees

Where the board appoints a committee, it should spell out the authority of the committee, and in particular, whether the committee has the authority to act on behalf of the board or simply has the authority to examine a particular issue and report back to the board with a recommendation.

XXIV Remuneration Committees

Boards should appoint remuneration committees, consisting wholly or mainly of non-executive directors, to recommend to the board the remuneration of the executive directors in all its forms, drawing from outside advice as necessary. Executive directors should play no part in decisions on their own remuneration. Membership of the remuneration committee should appear in the directors' report.

The determination of remuneration packages of non-executive directors, including non-executive chairmen should be a matter for the board as a whole.

The individuals concerned should abstain from discussion of their own remuneration.

BB Accountability and Audit

The audit committee

I The board should establish an audit committee of at least three directors, a majority of whom are independent, with written terms of reference which deal clearly with its authority and duties. The Chairman of the audit committee should be an independent non-executive director.

II The duties of the audit committee should include the following -

- (i) To consider the appointment of the external auditor, the audit fee and any questions of resignation or dismissal;
- (ii) To discuss with the external auditor before the audit commences, the nature and scope of the audit, and ensure co-ordination where more than one audit firm is involved;
- (iii) To review the quarterly and year-end financial statements of the company, focusing particularly on:-
 - Any changes in accounting policies and practices;
 - Significant adjustments arising from the audit;
 - The going concern assumption;
 - Compliance with accounting standards and other legal requirements;
- (iv) To discuss problems and reservations arising from the interim and final audits, and any matter the auditor may wish to discuss (in the absence of management where necessary);
- (v) To review the external auditor's management letter and management's response;
- (vi) To do the following where an internal audit function exists:
 - review the adequacy of the scope, functions and resources of the internal audit function, and that it has the necessary authority to carry out its work;

- review the internal audit programme and results of the internal audit process and where necessary ensure that appropriate actions are taken on the recommendations of the internal audit function;
 - review any appraisal or assessment of the performance of members of the internal audit function;
 - approve any appointment or termination of senior staff members of the internal audit function;
 - inform itself of resignations of internal audit staff members and provide the resigning staff member an opportunity to submit his reasons for resigning.
- (vii) To consider any related party transactions that may arise within the company or group;
- (viii) To consider the major findings of internal investigations and management's response;
- (ix) To consider other topics as defined by the board.

III The Finance director, the Head of Internal Audit (where such a function exists) and a representative of the external auditors shall normally attend meetings. Other board members may attend meetings upon the invitation of the audit committee. However, at least once a year the committee shall meet with the external auditors without executive board members present.

IV The audit committee must have explicit authority to investigate any matter within its terms of reference, the resources which it needs to do so and full access to information. The committee should be able to obtain external professional advice and to invite outsiders with relevant experience to attend, if necessary.

V The audit committee should meet regularly, with due notice of issues to be discussed and should record its conclusions in discharging its duties and responsibilities.

VI The board should disclose in an informative way, details of the activities of audit committees, the number of audit meetings held in a year and details of attendance of each individual director in respect of meetings.

VII The Board should establish an internal audit function. Where an internal audit function does not exist, the Board should assess whether there are other means of obtaining sufficient assurance of regular review and/or appraisal of the effectiveness of the system of internal controls within the company. The board should explain, in summary, the means that exist for obtaining such assurance of regular review and/or appraisal.

VIII The internal audit function should be independent of the activities they audit and should be performed with impartiality, proficiency and due professional care. The board or the audit committee should determine the remit of the internal audit function.

CC Shareholders

The relationship between the board and shareholders

I Boards must maintain an effective communications policy that enables both the board and management to communicate effectively with its shareholders, stakeholders and the public generally. This policy must effectively interpret the operations of the company to the shareholders and must accommodate feedback from shareholders, which should be factored into the company's business decisions.

PRINCIPLES AND BEST PRACTICES FOR OTHER CORPORATE PARTICIPANTS

I Shareholder Voting

Institutional shareholders have a responsibility to make considered use of their votes.

II Dialogue between Companies and Investors

Institutional investors should encourage direct contact with companies including constructive communication with both senior management and board members about performance, corporate governance and other matters affecting shareholders' interest.

III Evaluation of Governance Disclosures

When evaluating companies' governance arrangements, particularly those relating to board structure and composition, institutional investors and their advisers should give due weight to all relevant factors drawn to their attention.

IV External Auditors

The external auditors should independently report to shareholders in accordance with statutory and professional requirements and independently assure the board on the discharge of its responsibilities under D.I and D.II above in accordance with professional guidance.

FIGURE A.7.1 – Indonesia: Exchange Rate

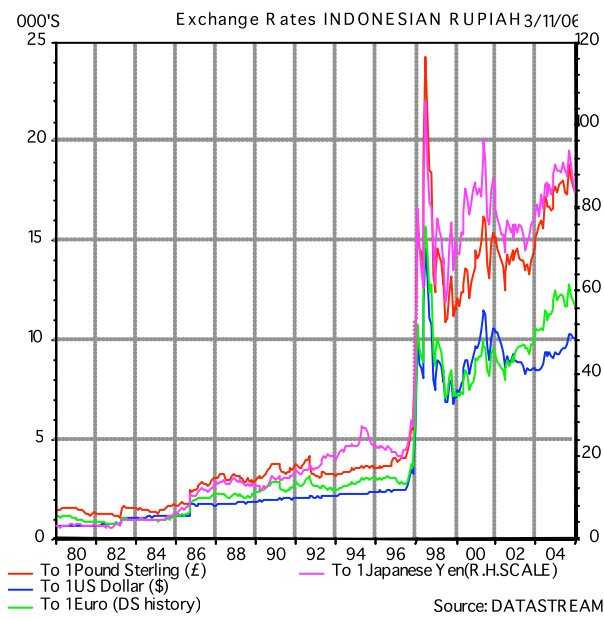


FIGURE A.7.2 – Malaysia: Exchange Rate

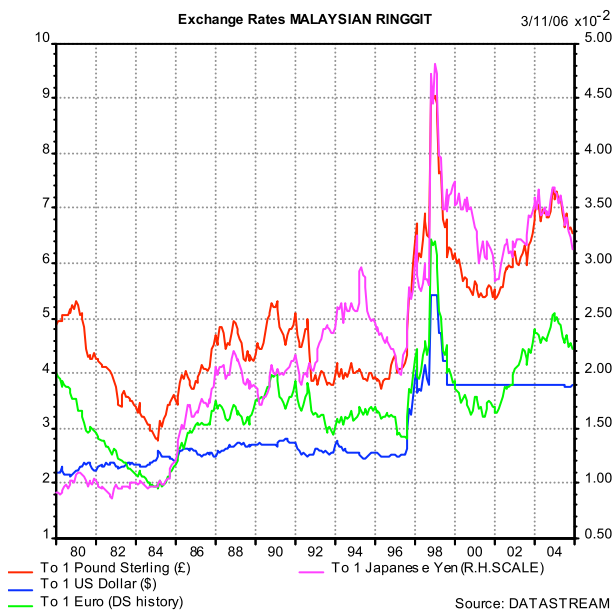


FIGURE A.7.3 – Exchange Rates: Daily Change (percentage, 1990-2005)

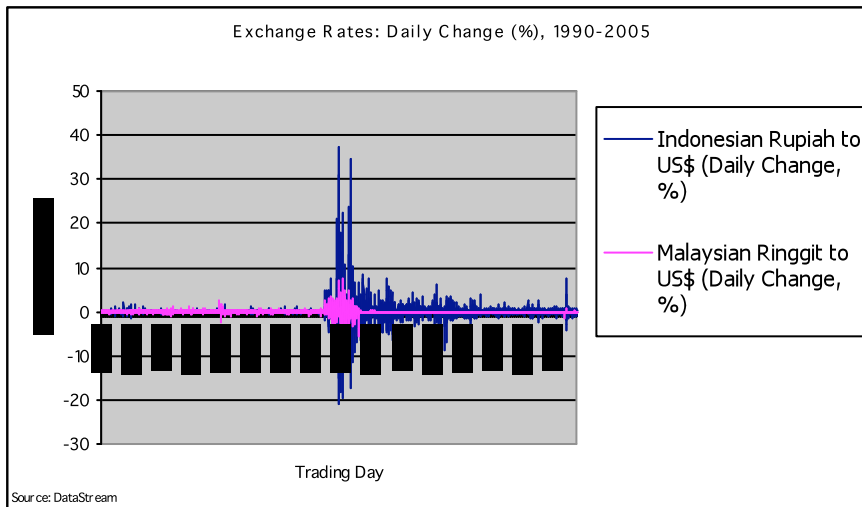


FIGURE A.7.4 – Real Effective Exchange Rate

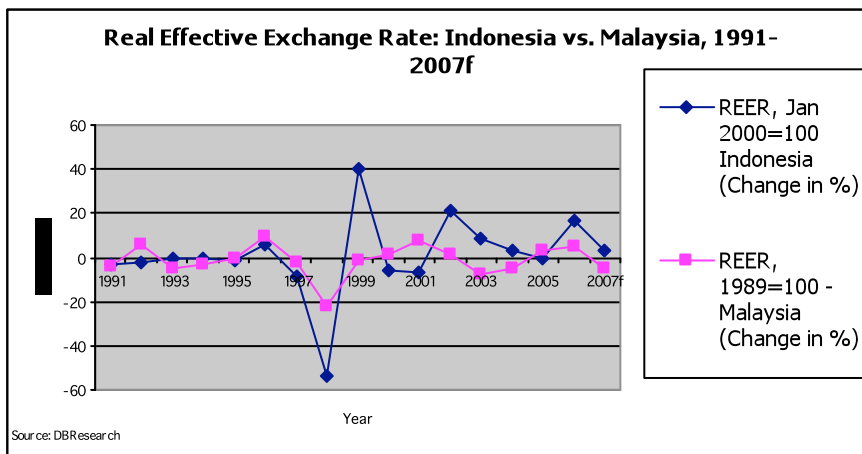
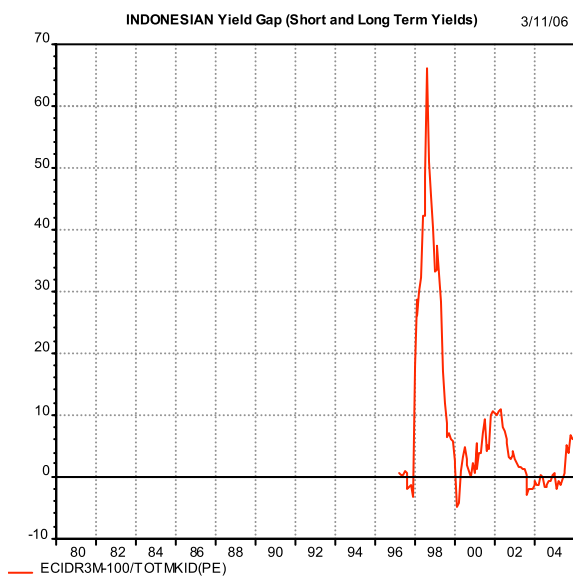
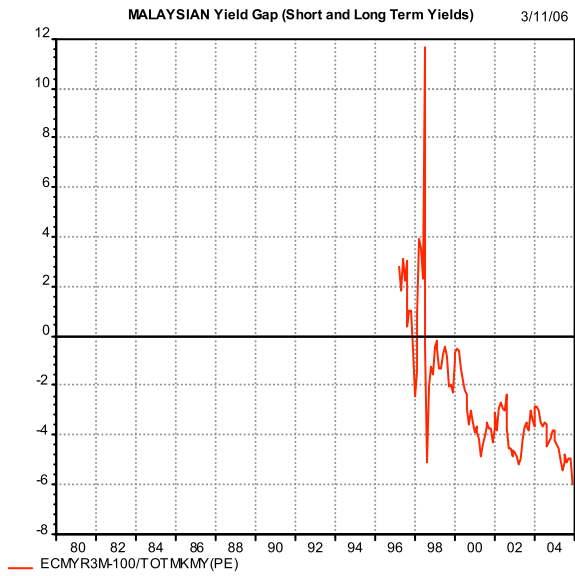


FIGURE A.7.5 – Indonesia: Interest Rate



Source: DATASTREAM

FIGURE A.7.6 – Malaysia: Interest Rate



Source: DATASTREAM

FIGURE A.7.7 – Indonesia: JSX Composite Index

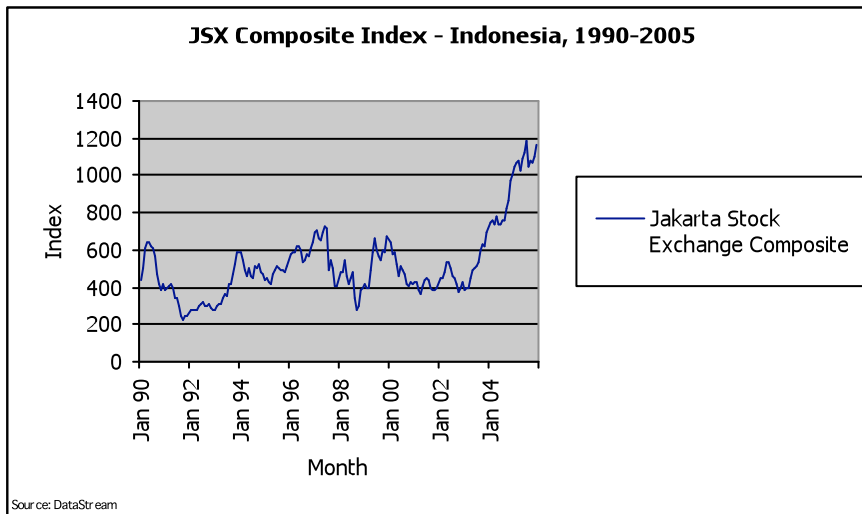


FIGURE A.7.8 – Malaysia: KLSE Composite Index

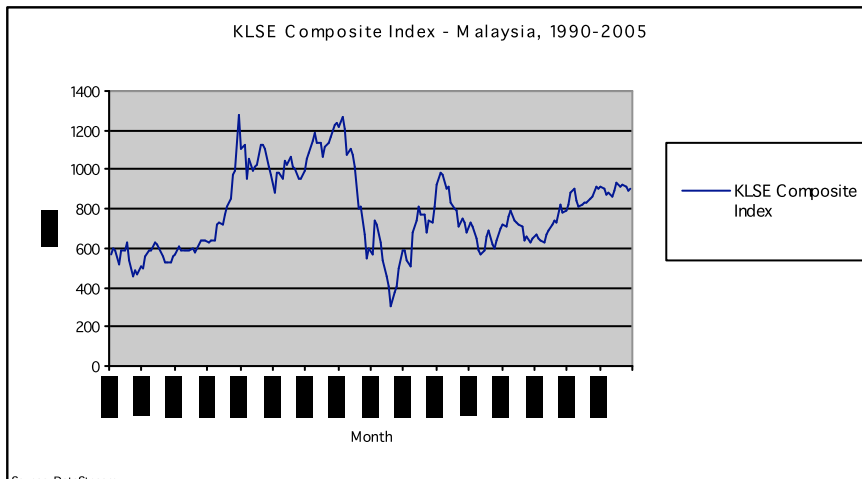


FIGURE A.7.9 – Stock Market Indices, Monthly Change (percentage)

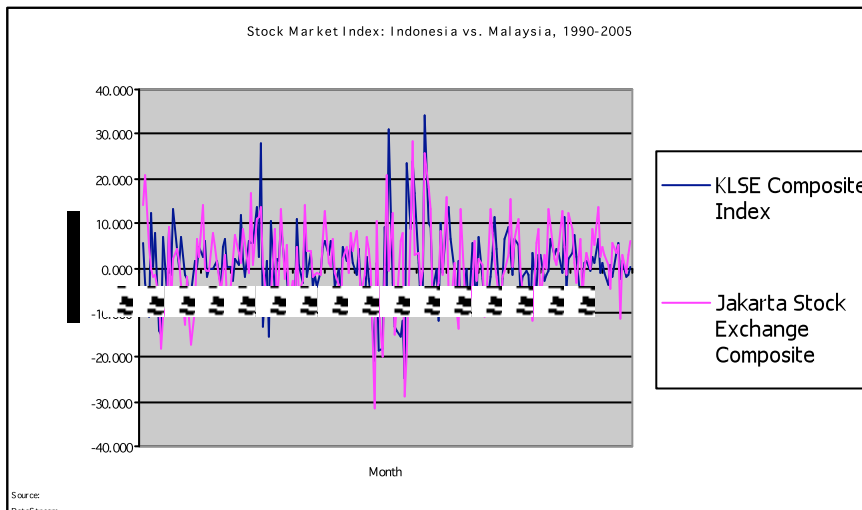


FIGURE A.7.10 – JP Morgan Trade Weighted Index Indonesia vs. Malaysia (1990-2005)

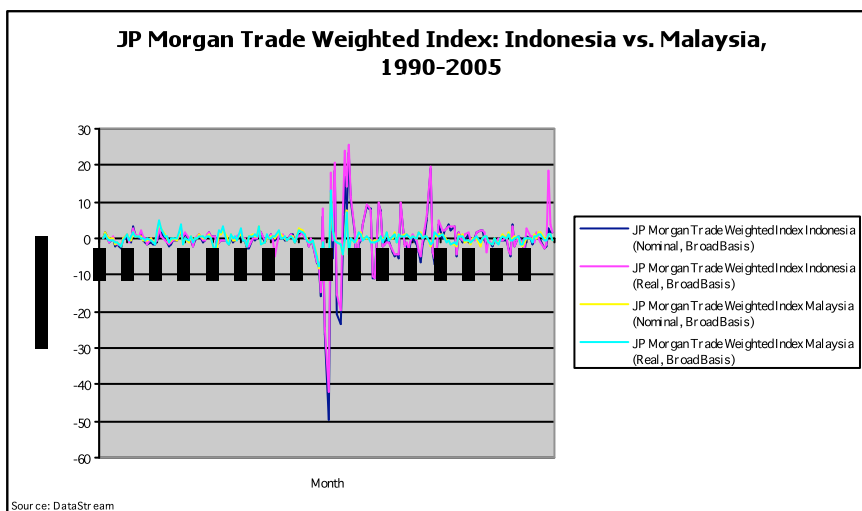


FIGURE A.7.11 – Capital Flight (net): Indonesia vs. Malaysia

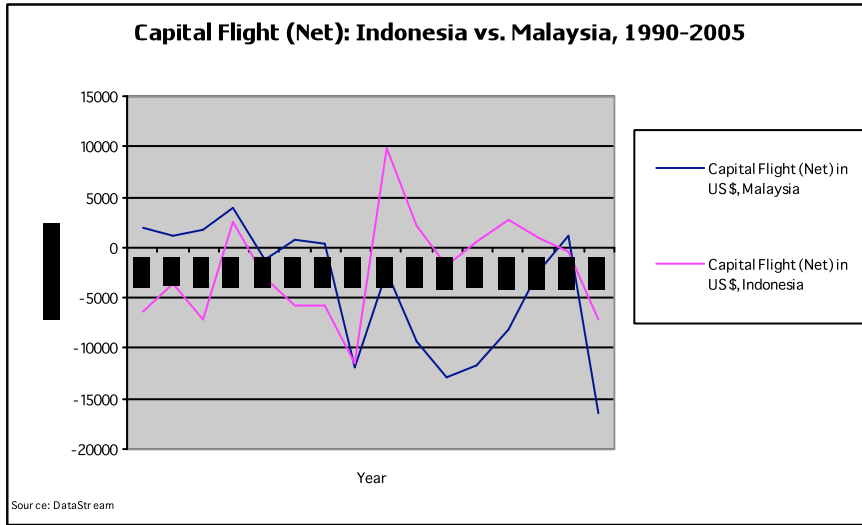


FIGURE A.7.12 – Indonesia: Financing

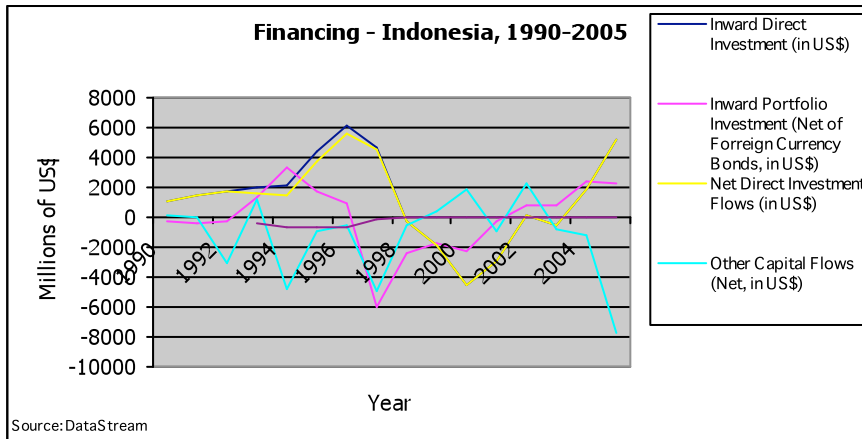


FIGURE A 7.13 – Malaysia: Financing

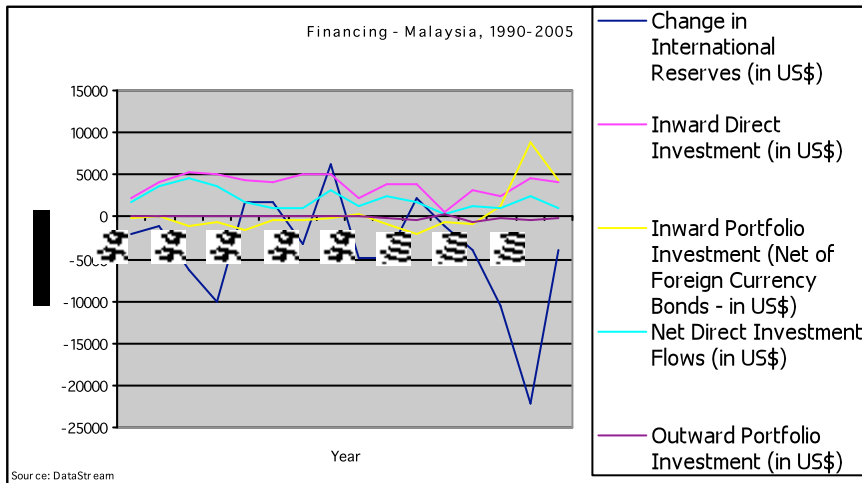


FIGURE A.7.14 – Indonesia: Trade Indicators

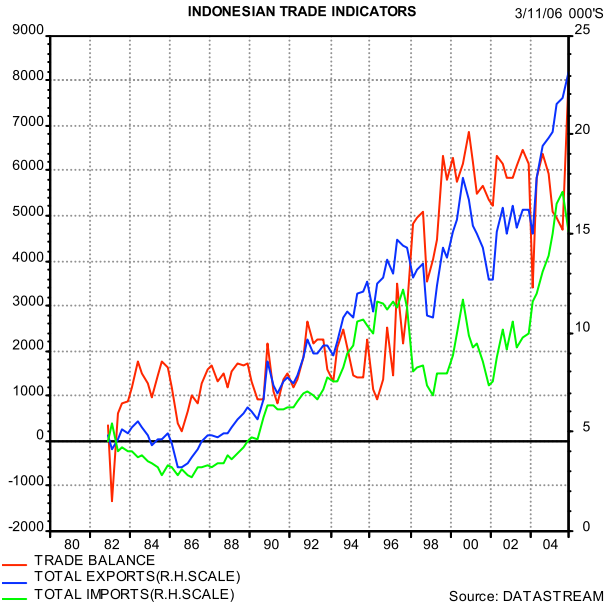


FIGURE A.7.15 – Malaysia: Trade Indicators

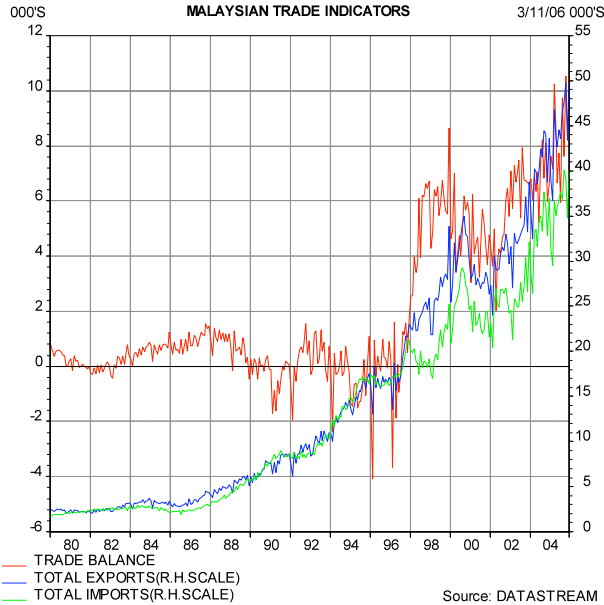


FIGURE A.7.16 – Indonesia: Labour Market

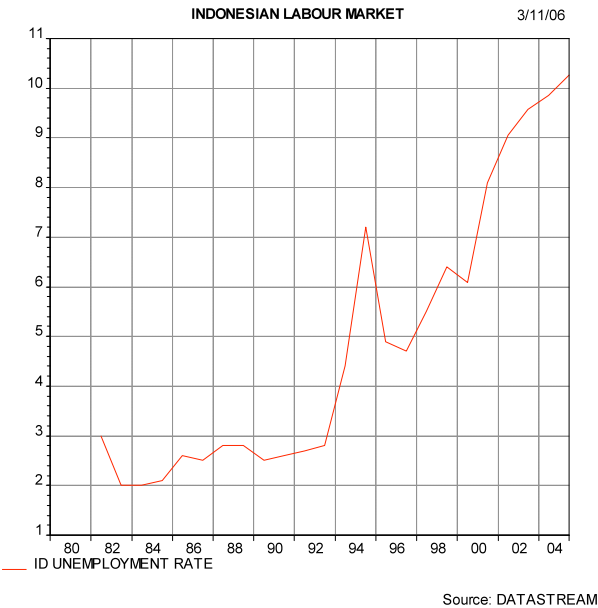


FIGURE A.7.17 – Malaysia: Labour Market

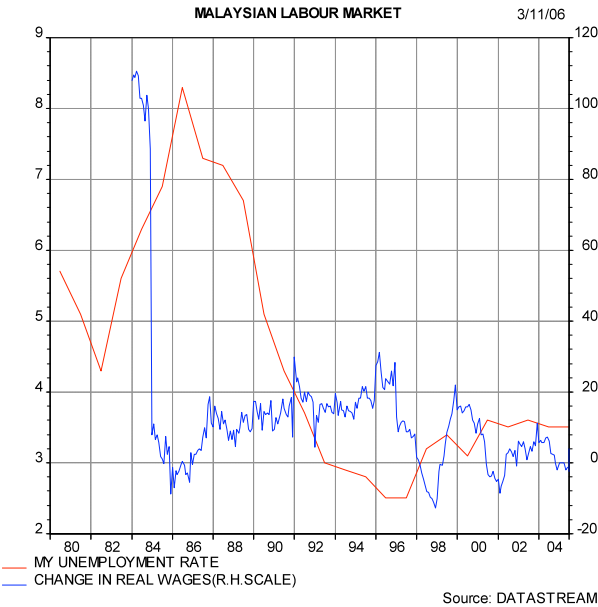


FIGURE A.7.18 – Indonesia: Money Supply

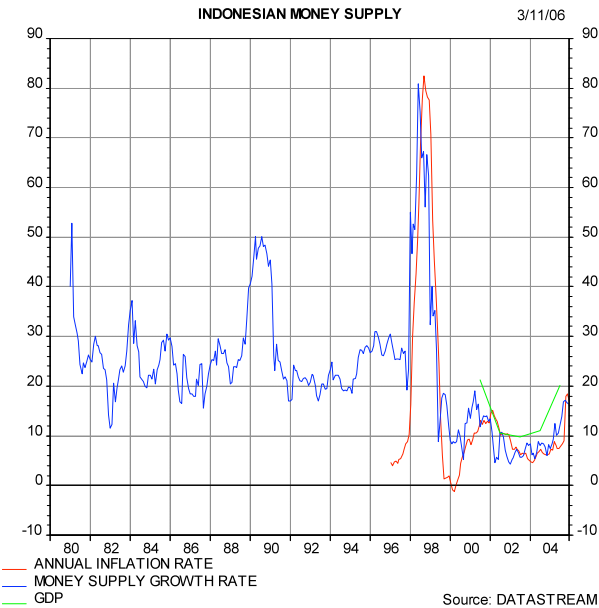


FIGURE A.7.19 – Malaysia: Money Supply

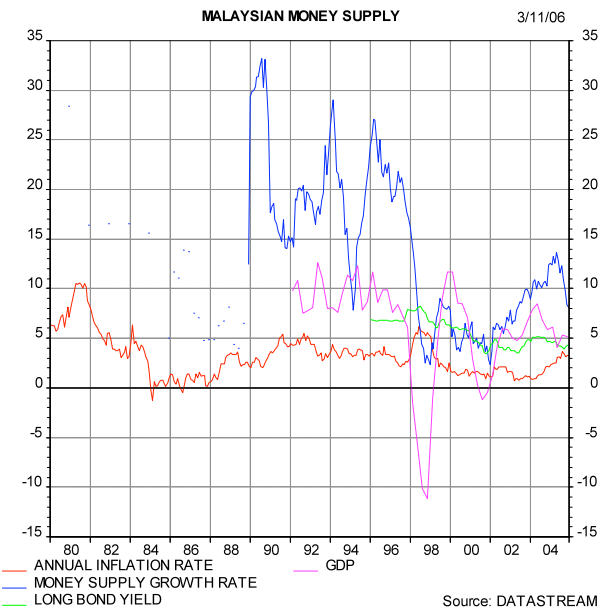


FIGURE A.7.20 – Indonesia: Export Markets

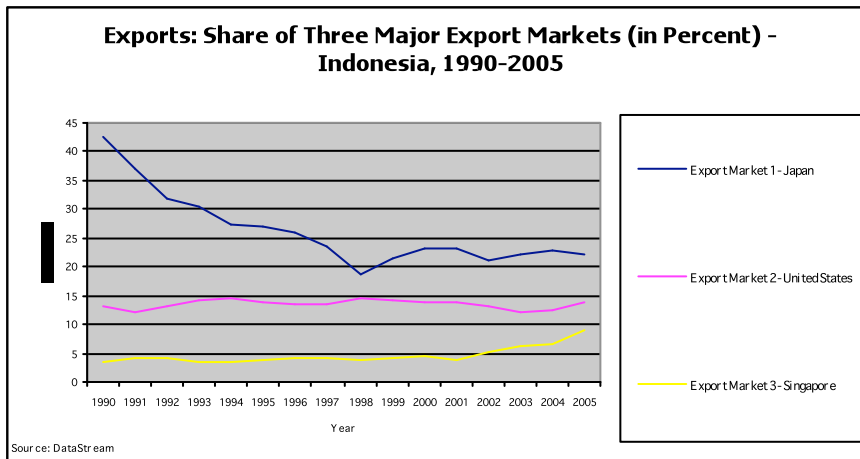


FIGURE A.7.21 – Malaysia: Export Markets

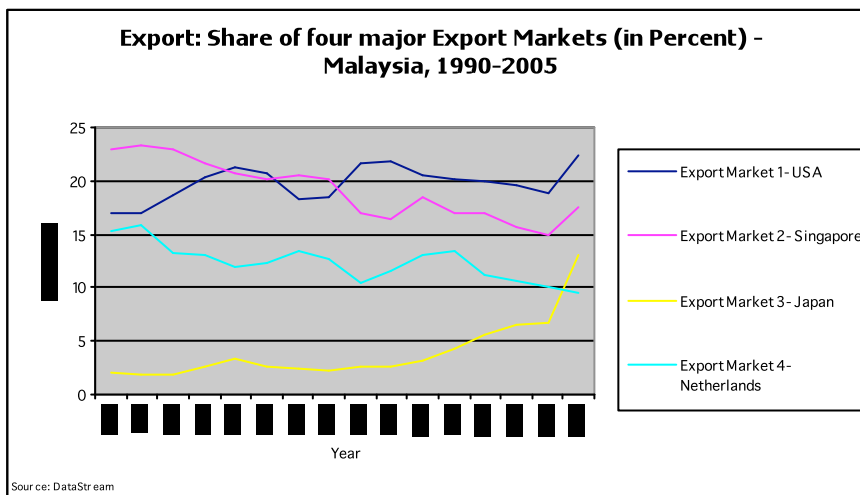


FIGURE A.7.22 – Indonesia: Share of Export Products

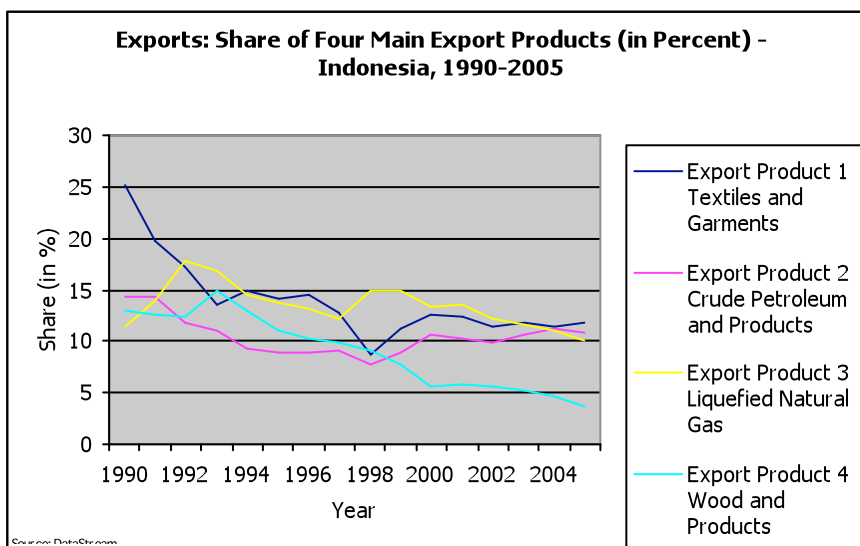


FIGURE A.7.23 – Malaysia: Share of Export Products

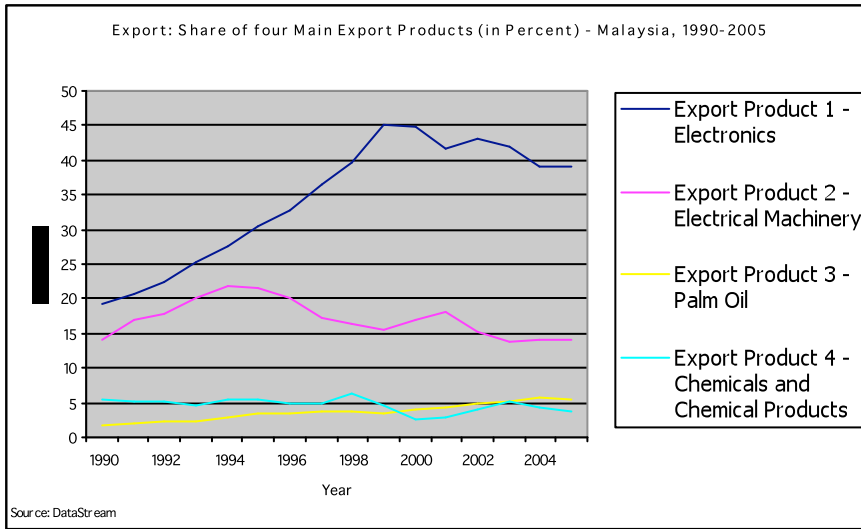


FIGURE A.7.24 – Indonesia: Fund Position

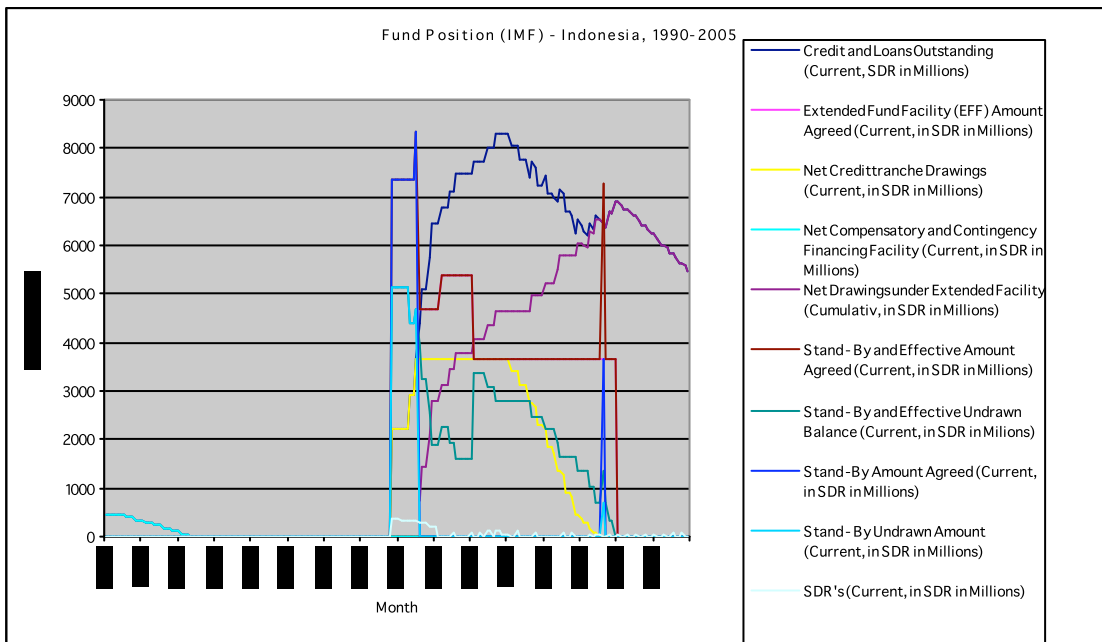


FIGURE A.7.25 – Indonesia: CPI vs. CPI Food

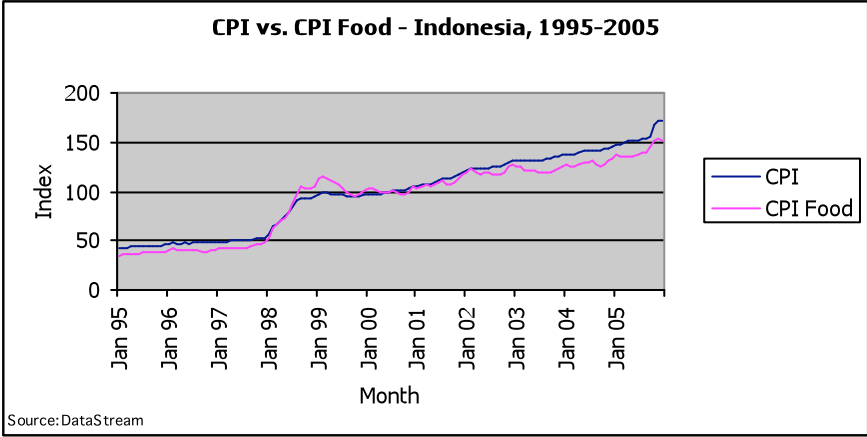


TABLE A.7.1 – Indonesia: Ordered Logistic Regression – ALL (1991-2004)

*1991.

CORRELATION

Observations: 118

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.2237	1.0000			
ROA	0.6377	0.2496	1.0000		
CR	-0.0178	0.2064	0.4954	1.0000	
OM	0.1461	0.1202	0.2625	0.1331	1.0000

OLOGIT

Iteration 0: log likelihood = -189.84468

Iteration 1: log likelihood = -143.63353

Iteration 2: log likelihood = -140.94913

Iteration 3: log likelihood = -140.85815

Iteration 4: log likelihood = -140.85794

Ordered logistic regression

Number of obs = 118

LR chi2(4) = 97.97

Prob > chi2 = 0.0000

Log likelihood = -140.85794

Pseudo R2 = 0.2580

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.2759171	0.1326936	2.08	0.038	0.0158424	0.5359919
ROA	1.718037	0.2182224	7.87	0.000	1.290329	2.145745
CR	-1.020646	0.1819598	-5.61	0.000	-1.377281	-0.6640118
OM	-0.0327685	0.1325209	-0.25	0.805	-0.2925047	0.2269678
/cut1	0.4620041	0.6235678			-0.7601664	1.684175
/cut2	2.116952	0.6563171			0.830594	3.40331
/cut3	3.57298	0.7113561			2.178748	4.967213
/cut4	5.404937	0.8051312			3.826909	6.982965

*1992.

CORRELATION

Observations: 118

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.5170	1.0000			
ROA	0.6808	0.3531	1.0000		
CR	0.0080	0.0684	0.4868	1.0000	
OM	0.2151	0.2452	0.1978	0.0770	1.0000

OLOGIT

Iteration 0: log likelihood = -189.84468

Iteration 1: log likelihood = -129.24801

Iteration 2: log likelihood = -124.36652

Iteration 3: log likelihood = -124.0102

Iteration 4: log likelihood = -124.00695

Ordered logistic regression
 Number of obs = 118
 LR chi2(4) = 131.68
 Prob > chi2 = 0.0000
 Log likelihood = -124.00695
 Pseudo R2 = 0.3468

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.6801349	0.1569086	4.33	0.000	0.3725997	0.9876701
ROA	1.933328	0.2462763	7.85	0.000	1.450635	2.416021
CR	-1.151877	0.2022934	-5.69	0.000	-1.548365	-0.7553891
OM	0.0780065	0.1360506	0.57	0.566	-0.1886477	0.3446608
/cut1	1.804046	0.6707942			0.4893135	3.118778
/cut2	3.813337	0.7329501			2.376781	5.249893
/cut3	5.457167	0.80062			3.88798	7.026353
/cut4	7.666561	0.9660598			5.773119	9.560003

*1993.

CORRELATION
 Observations: 118

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.6205	1.0000			
ROA	0.6248	0.4609	1.0000		
CR	0.1072	0.1762	0.5385	1.0000	
OM	0.0857	-0.0265	0.1461	-0.0825	1.0000

OLOGIT

Iteration 0: log likelihood = -189.84468
 Iteration 1: log likelihood = -142.66053
 Iteration 2: log likelihood = -139.55838
 Iteration 3: log likelihood = -139.44676
 Iteration 4: log likelihood = -139.44651

Ordered logistic regression
 Number of obs = 118
 LR chi2(4) = 100.80
 Prob > chi2 = 0.0000
 Log likelihood = -139.44651
 Pseudo R2 = 0.2655

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.7602282	0.1511062	5.03	0.000	0.4640654	1.056391
ROA	1.256494	0.2049384	6.13	0.000	0.8548223	1.658166
CR	-0.5874147	0.1721057	-3.41	0.001	-0.9247356	-0.2500938
OM	-0.0308978	0.1330605	-0.23	0.816	-0.2916916	0.229896
/cut1	1.726825	0.697164			0.3604081	3.093241
/cut2	3.517602	0.7660068			2.016257	5.018948
/cut3	5.091996	0.8382901			3.448978	6.735015
/cut4	6.808585	0.9167943			5.011701	8.605469

*1994.

CORRELATION

Observations: 118

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.5385	1.0000			
ROA	0.6075	0.4005	1.0000		
CR	0.0857	0.1159	0.4307	1.0000	
OM	0.2970	0.2064	0.1849	0.1676	1.0000

OLOGIT

Iteration 0: log likelihood = -189.84468

Iteration 1: log likelihood = -146.41783

Iteration 2: log likelihood = -144.15211

Iteration 3: log likelihood = -144.08686

Iteration 4: log likelihood = -144.08676

Ordered logistic regression

Number of obs = 118

LR chi2(4) = 91.52

Prob > chi2 = 0.0000

Log likelihood = -144.08676

Pseudo R2 = 0.2410

	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
ROE	0.6182116	0.149375	4.14	0.000	0.325442	0.9109812
PER	1.110177	0.1852015	5.99	0.000	0.7471884	1.473165
ROA	1.110177	0.1852015	5.99	0.000	0.7471884	1.473165
CR	-0.4257477	0.1541668	-2.76	0.006	-0.7279092	-0.1235863
OM	0.3360643	0.1319661	2.55	0.011	0.0774156	0.5947131
/cut1	2.646779	0.6861203			1.302008	3.99155
/cut2	4.309064	0.7569514			2.825467	5.792662
/cut3	5.604906	0.8041149			4.02887	7.180942
/cut4	7.270859	0.8990997			5.508656	9.033062

*1995.

CORRELATION

Observations: 117

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.4533	1.0000			
ROA	0.5496	0.3194	1.0000		
CR	0.1897	0.1633	0.5743	1.0000	
OM	0.4269	0.3259	0.3267	0.2563	1.0000

OLOGIT

Iteration 0: log likelihood = -188.23517

Iteration 1: log likelihood = -152.12224

Iteration 2: log likelihood = -150.51173

Iteration 3: log likelihood = -150.48341

Iteration 4: log likelihood = -150.48339

Ordered logistic regression
 Number of obs = 117
 LR chi2(4) = 75.50
 Prob > chi2 = 0.0000
 Log likelihood = -150.48339
 Pseudo R2 = 0.2006

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.4410928	0.1387231	3.18	0.001	0.1692006	0.7129851
ROA	1.001108	0.1825231	5.48	0.000	0.6433691	1.358846
CR	-0.4013886	0.158502	-2.53	0.011	-0.7120468	-0.0907305
OM	0.4525265	0.1399348	3.23	0.001	0.1782592	0.7267937
/cut1	2.46456	0.6381893			1.213732	3.715388
/cut2	3.99256	0.7027377			2.61522	5.369901
/cut3	5.181596	0.7473776			3.716763	6.646429
/cut4	6.674376	0.8269753			5.053534	8.295218

*1996.

CORRELATION

Observations: 118

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.5946	1.0000			
ROA	0.6205	0.3789	1.0000		
CR	0.1762	0.1719	0.5170	1.0000	
OM	0.5515	0.4609	0.4566	0.2754	1.0000

OLOGIT

Iteration 0: log likelihood = -189.84468

Iteration 1: log likelihood = -139.28363

Iteration 2: log likelihood = -136.01317

Iteration 3: log likelihood = -135.86777

Iteration 4: log likelihood = -135.86712

Ordered logistic regression

Number of obs = 118

LR chi2(4) = 107.96

Prob > chi2 = 0.0000

Log likelihood = -135.86712

Pseudo R2 = 0.2843

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.7233426	0.1596827	4.53	0.000	0.4103703	1.036315
ROA	1.059218	0.1879931	5.63	0.000	0.6907584	1.427678
CR	-0.4380295	0.1595997	-2.74	0.006	-0.7508392	-0.1252197
OM	0.5017932	0.1512898	3.32	0.001	0.2052706	0.7983158
/cut1	3.01858	0.6326332			1.778642	4.258518
/cut2	5.01324	0.7504267			3.542431	6.484049
/cut3	6.404228	0.814616			4.80761	8.00846
/cut4	8.08366	0.915087			6.290122	9.877198

*1997.

CORRELATION

Observations: 118

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.7369	1.0000			
ROA	0.6722	0.4609	1.0000		
CR	0.2496	0.1461	0.5213	1.0000	
OM	0.2107	0.1806	0.2668	0.2237	1.0000

OLOGIT

Iteration 0: log likelihood = -189.84468

Iteration 1: log likelihood = -134.06147

Iteration 2: log likelihood = -128.51122

Iteration 3: log likelihood = -128.01256

Iteration 4: log likelihood = -128.00518

Iteration 5: log likelihood = -128.00517

Ordered logistic regression

Number of obs = 118

LR chi2(4) = 123.68

Prob > chi2 = 0.0000

Log likelihood = -128.00517

Pseudo R2 = 0.3257

	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
ROE	1.183275	0.1912811	6.19	0.000	0.8083708	1.558179
PER	1.075586	0.1954408	5.50	0.000	0.6925294	1.458643
CR	-0.143343	0.1493137	-0.96	0.337	-0.4359924	0.1493065
OM	0.0032987	0.1348339	0.02	0.980	-0.2609709	0.2675683
/cut1	3.318204	0.6719083			2.001288	4.63512
/cut2	5.137122	0.7543075			3.658707	6.615538
/cut3	7.218705	0.9301784			5.395589	9.041822
/cut4	9.381176	1.098799			7.227569	11.53478

*1998.

CORRELATION

Observations: 118

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.6463	1.0000			
ROA	0.8404	0.5773	1.0000		
CR	0.5946	0.3401	0.6636	1.0000	
OM	0.4350	0.3315	0.5385	0.3401	1.0000

OLOGIT

Iteration 0: log likelihood = -189.84468

Iteration 1: log likelihood = -123.11904

Iteration 2: log likelihood = -113.0572

Iteration 3: log likelihood = -111.26788

Iteration 4: log likelihood = -111.17668

Iteration 5: log likelihood = -111.17636

Ordered logistic regression
 Number of obs = 118
 LR chi2(4) = 157.34
 Prob > chi2 = 0.0000
 Log likelihood = -111.17636
 Pseudo R2 = 0.4144

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.7069133	0.1994928	3.54	0.000	0.3159145	1.097912
ROA	1.903577	0.2916676	6.53	0.000	1.331919	2.475235
CR	0.2675004	0.1784308	1.50	0.134	-0.0822175	0.6172183
OM	-0.0723874	0.1559069	-0.46	0.642	-0.3779594	0.2331845
/cut1	4.890342	0.7776595			3.366157	6.414526
/cut2	6.859306	0.8659663			5.162044	8.556569
/cut3	9.352503	1.132886			7.132087	11.57292
/cut4	12.5267	1.477435			9.630982	15.42242

*1999.

CORRELATION
 Observations: 118

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.6679	1.0000			
ROA	0.7887	0.7369	1.0000		
CR	0.4911	0.3703	0.5903	1.0000	
OM	0.4523	0.4307	0.4695	0.2841	1.0000

OLOGIT

Iteration 0: log likelihood = -189.84468
 Iteration 1: log likelihood = -136.24222
 Iteration 2: log likelihood = -130.55417
 Iteration 3: log likelihood = -130.0504
 Iteration 4: log likelihood = -130.04377
 Iteration 5: log likelihood = -130.04377

Ordered logistic regression
 Number of obs = 118
 LR chi2(4) = 119.60
 Prob > chi2 = 0.0000
 Log likelihood = -130.04377
 Pseudo R2 = 0.3150

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.532758	0.2010734	2.65	0.008	0.1386614	0.9268546
ROA	1.388878	0.2549618	5.45	0.000	0.8891616	1.888593
CR	-0.0247116	0.16357	-0.15	0.880	-0.345303	0.2958797
OM	0.1389099	0.144587	0.96	0.337	-0.1444754	0.4222951
/cut1	2.998291	0.5852514			1.851219	4.145362
/cut2	4.964531	0.7079645			3.756946	6.352116
/cut3	7.046234	0.8863314			5.309057	8.783412
/cut4	9.078911	1.022047			7.075736	11.08209

*2000.

CORRELATION

Observations: 118

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.7585	1.0000			
ROA	0.6636	0.5040	1.0000		
CR	0.4393	0.2323	0.6550	1.0000	
OM	0.3358	0.2582	0.4005	0.3789	1.0000

OLOGIT

Iteration 0: log likelihood = -189.84468

Iteration 1: log likelihood = -134.92021

Iteration 2: log likelihood = -129.0107

Iteration 3: log likelihood = -128.40382

Iteration 4: log likelihood = -128.39176

Iteration 5: log likelihood = -128.39175

Ordered logistic regression

Number of obs = 118

LR chi2(4) = 122.91

Prob > chi2 = 0.0000

Log likelihood = -128.39175

Pseudo R2 = 0.3237

	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
ROE	1.212402	0.1923207	6.30	0.000	0.8354607	1.589344
PER	0.8601083	0.2220403	3.87	0.000	0.4349172	1.295299
ROA	0.1194567	0.1695778	0.70	0.481	-0.2129096	0.451823
CR	0.0781269	0.1366178	0.57	0.567	-0.1896391	0.3458929
OM						
/cut1	3.71962	0.6480568			2.449452	4.989788
/cut2	5.552624	0.7454235			4.09162	7.013627
/cut3	7.795413	0.9701084			5.894036	9.696791
/cut4	9.955473	1.138304			7.724437	12.18651

*2001.

CORRELATION

Observations: 118

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.6824	1.0000			
ROA	0.4480	0.4343	1.0000		
CR	0.2970	0.2298	0.5256	1.0000	
OM	0.4307	0.3038	0.3617	0.2798	1.0000

OLOGIT

Iteration 0: log likelihood = -189.84468

Iteration 1: log likelihood = -147.20228

Iteration 2: log likelihood = -144.03332

Iteration 3: log likelihood = -143.89276

Iteration 4: log likelihood = -143.89225

Ordered logistic regression
 Number of obs = 118
 LR chi2(4) = 91.90
 Prob > chi2 = 0.0000
 Log likelihood = -143.89225
 Pseudo R2 = 0.2421

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	1.144118	0.1780489	6.43	0.000	0.7951485	1.493087
ROA	0.2142614	0.1792366	1.20	0.232	-0.137036	0.5655588
CR	0.1037222	0.1534094	0.68	0.499	-0.1969546	0.4043991
OM	0.4451955	0.1435573	3.10	0.002	0.1638284	0.7265626
/cut1	3.225374	0.6313576			1.987936	4.462813
/cut2	5.143506	0.7662632			3.641658	6.645354
/cut3	6.657173	0.8611539			4.969342	8.345003
/cut4	8.192232	0.9438108			6.342397	10.04207

 *2002.

CORRELATION
 Observations: 118

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.6998	1.0000			
ROA	0.7024	0.5214	1.0000		
CR	0.2452	0.1210	0.4997	1.0000	
OM	0.3358	0.1297	0.4048	0.2366	1.0000

OLOGIT
 Iteration 0: log likelihood = -189.84468
 Iteration 1: log likelihood = -132.56459
 Iteration 2: log likelihood = -126.25487
 Iteration 3: log likelihood = -125.62971
 Iteration 4: log likelihood = -125.61943
 Iteration 5: log likelihood = -125.61942

Ordered logistic regression
 Number of obs = 118
 LR chi2(4) = 128.45
 Prob > chi2 = 0.0000
 Log likelihood = -125.61942
 Pseudo R2 = 0.3383

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	1.201889	0.1966187	6.11	0.000	0.8165233	1.587254
ROA	1.062745	0.2165838	4.91	0.000	0.6382483	1.487241
CR	-0.1172955	0.1502319	-0.78	0.435	-0.4117446	0.1771536
OM	0.2062951	0.1421698	1.45	0.147	-0.0723526	0.4849428
/cut1	3.807324	0.7053112			2.424939	5.189708
/cut2	6.220799	0.8915855			4.473324	7.968274
/cut3	8.272529	1.046359			6.221703	10.32336
/cut4	10.07792	1.132289			7.858673	12.29717

*2003.

CORRELATION

Observations: 118

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.6650	1.0000			
ROA	0.5428	0.4822	1.0000		
CR	0.0080	-0.0139	0.4393	1.0000	
OM	0.4048	0.3299	0.3574	-0.0178	1.0000

OLOGIT

Iteration 0: log likelihood = -189.84468

Iteration 1: log likelihood = -147.54798

Iteration 2: log likelihood = -145.04024

Iteration 3: log likelihood = -144.95521

Iteration 4: log likelihood = -144.955

Ordered logistic regression

Number of obs = 118

LR chi2(4) = 89.78

Prob > chi2 = 0.0000

Log likelihood = -144.955

Pseudo R2 = 0.2365

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.9215654	0.1806767	5.10	0.000	0.5674456	1.275685
ROA	0.5880025	0.186812	3.15	0.002	0.2218578	0.9541472
CR	-0.2081486	0.152759	-1.36	0.173	-0.5075507	0.0912535
OM	0.3048631	0.1395551	2.18	0.029	0.0313401	0.578386
/cut1	2.451447	0.6656694			1.146759	3.756135
/cut2	4.313669	0.7677218			2.808962	5.818376
/cut3	5.762207	0.8416185			4.112665	7.411749
/cut4	7.221079	0.8997753			5.457552	8.984606

*2004.

CORRELATION

Observations: 118

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.7477	1.0000			
ROA	0.4911	0.4561	1.0000		
CR	0.1892	0.1645	0.5213	1.0000	
OM	0.4048	0.3734	0.2452	-0.0351	1.0000

OLOGIT

Iteration 0: log likelihood = -189.84468

Iteration 1: log likelihood = -140.71012

Iteration 2: log likelihood = -136.48795

Iteration 3: log likelihood = -136.18891

Iteration 4: log likelihood = -136.18667

Iteration 5: log likelihood = -136.18667

Ordered logistic regression
 Number of obs = 118
 LR chi2(4) = 107.32
 Prob > chi2 = 0.0000
 Log likelihood = -136.18667
 Pseudo R2 = 0.2826

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	1.314705	0.19321	6.80	0.000	0.9360205	1.69339
ROA	0.4629137	0.1737407	2.66	0.008	0.1223882	0.8034391
CR	0.0042165	0.148293	0.03	0.977	-0.2864324	0.2948654
OM	0.2984955	0.1414786	2.11	0.035	0.0212026	0.5757884
/cut1	3.49664	0.6903805			2.143523	4.849765
/cut2	5.578741	0.8321891			3.94768	7.209801
/cut3	7.41309	0.9700069			5.511911	9.314268
/cut4	9.047543	1.0526			6.984484	11.1106

TABLE A.7.2 – Indonesia: Ordered Logistic Regression – EX-FINANCE (1991-2004)

 *1991.

CORRELATION
 Observations: 99

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.1274	1.0000			
ROA	0.6071	0.2345	1.0000		
CR	-0.1788	0.1733	0.3876	1.0000	
OM	0.1376	0.1172	0.1988	0.1886	1.0000

OLOGIT
 Iteration 0: log likelihood = -159.31394
 Iteration 1: log likelihood = -117.34694
 Iteration 2: log likelihood = -114.72595
 Iteration 3: log likelihood = -114.60963
 Iteration 4: log likelihood = -114.60928

Ordered logistic regression
 Number of obs = 99
 LR chi2(4) = 89.41
 Prob > chi2 = 0.0000
 Log likelihood = -114.60928
 Pseudo R2 = 0.2806

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.1626106	0.1455989	1.12	0.264	-0.1227579	0.4479791
ROA	1.740063	0.2422009	7.18	0.000	1.265358	2.214768
CR	-1.219662	0.2091773	-5.83	0.000	-1.629642	-0.8096822
OM	0.2353915	0.1441877	1.63	0.103	-0.0472111	0.5179941
/cut1	0.2723022	0.7092919			-1.117884	1.662489
/cut2	2.037232	0.7510722			0.5651579	3.509307
/cut3	3.558848	0.8094374			1.97238	5.145316
/cut4	5.423605	0.9081526			3.643659	7.203552

 *1992.

CORRELATION
 Observations: 99

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.5050	1.0000			
ROA	0.7499	0.4336	1.0000		
CR	-0.0461	0.0763	0.3264	1.0000	
OM	0.0968	0.2294	0.0661	0.0202	1.0000

OLOGIT

Iteration 0: log likelihood = -159.31394
 Iteration 1: log likelihood = -108.12223
 Iteration 2: log likelihood = -103.62601
 Iteration 3: log likelihood = -103.30491
 Iteration 4: log likelihood = -103.3021

Ordered logistic regression

Number of obs = 99
 LR chi2(4) = 112.02
 Prob > chi2 = 0.0000
 Log likelihood = -103.3021
 Pseudo R2 = 0.3516

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.5265673	0.1725837	3.05	0.002	0.1883095	0.8648252
ROA	1.817118	0.2430186	7.48	0.000	1.340811	2.293426
CR	-0.8399912	0.1790626	-4.69	0.000	-1.190947	-0.4890349
OM	0.0159817	0.1459088	0.11	0.913	-0.2699943	0.3019578
/cut1	1.67842	0.7653526			0.1783567	3.178484
/cut2	3.811515	0.8343247			2.176269	5.446762
/cut3	5.571837	0.9172292			3.7741	7.369573
/cut4	7.665361	1.075461			5.557495	9.773227

 *1993.

CORRELATION

Observations: 99

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.6377	1.0000			
ROA	0.7346	0.5764	1.0000		
CR	0.0865	0.1580	0.3825	1.0000	
OM	0.2549	0.2141	0.2907	0.2345	1.0000

OLOGIT

Iteration 0: log likelihood = -159.31394
 Iteration 1: log likelihood = -114.35625
 Iteration 2: log likelihood = -110.83015
 Iteration 3: log likelihood = -110.65142
 Iteration 4: log likelihood = -110.65055

Ordered logistic regression

Number of obs = 99
 LR chi2(4) = 97.33
 Prob > chi2 = 0.0000
 Log likelihood = -110.65055
 Pseudo R2 = 0.3055

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.6339759	0.1770579	3.58	0.000	0.2869487	0.981003
ROA	1.322152	0.2218676	5.96	0.000	0.8872998	1.757005
CR	-0.4261503	0.162577	-2.62	0.009	-0.7447955	-0.1075052
OM	0.17798	0.1499169	1.19	0.235	-0.1158517	0.4718117
/cut1	2.380057	0.678035			1.051132	3.708981
/cut2	4.39168	0.7863115			2.850538	5.932822
/cut3	6.041936	0.8794961			4.318156	7.765717
/cut4	7.812436	0.9922761			5.867611	9.757262

*1994.

CORRELATION
Observations: 99

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.4999	1.0000			
ROA	0.7806	0.4897	1.0000		
CR	0.0968	0.1121	0.3213	1.0000	
OM	0.2549	0.1682	0.2243	0.2754	1.0000

OLOGIT

Iteration 0: log likelihood = -159.31394
Iteration 1: log likelihood = -112.21767
Iteration 2: log likelihood = -108.30217
Iteration 3: log likelihood = -108.06304
Iteration 4: log likelihood = -108.0615

Ordered logistic regression

Number of obs = 99
LR chi2(4) = 102.50
Prob > chi2 = 0.0000
Log likelihood = -108.0615
Pseudo R2 = 0.3217

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.3375171	0.1628247	2.07	0.038	0.0183866	0.6566477
ROA	1.631427	0.2285929	7.14	0.000	1.183393	2.079461
CR	-0.4890778	0.175694	-2.78	0.005	-0.8334316	-0.144724
OM	0.347477	0.1554994	2.23	0.025	0.0427038	0.6522502
/cut1	2.724543	0.7269267			1.299793	4.149293
/cut2	4.661658	0.8328934			3.029217	6.294099
/cut3	6.321305	0.9249833			4.508372	8.134239
/cut4	8.339757	1.069823			6.242942	10.43657

 *1995.

CORRELATION
 Observations: 99

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.4693	1.0000			
ROA	0.6734	0.4080	1.0000		
CR	0.1376	0.1223	0.3876	1.0000	
OM	0.4080	0.3111	0.3978	0.2856	1.0000

OLOGIT
 Iteration 0: log likelihood = -159.31394
 Iteration 1: log likelihood = -122.67037
 Iteration 2: log likelihood = -120.60241
 Iteration 3: log likelihood = -120.54163
 Iteration 4: log likelihood = -120.54152

Ordered logistic regression
 Number of obs = 99
 LR chi2(4) = 77.54
 Prob > chi2 = 0.0000
 Log likelihood = -120.54152
 Pseudo R2 = 0.2434

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.4003075	0.1571586	2.55	0.011	0.0922822	0.7083328
ROA	1.183149	0.1989499	5.95	0.000	0.793214	1.573083
CR	-0.3238316	0.1576009	-2.05	0.040	-0.6327237	-0.0149394
OM	0.3109474	0.1517702	2.05	0.040	0.0134833	0.6084115
/cut1	2.454668	0.6873335			1.107519	3.801817
/cut2	4.188249	0.7814451			2.656644	5.719853
/cut3	5.485241	0.8352421			3.848197	7.122286
/cut4	7.087784	0.9255563			5.273727	8.901841

 *1996.

CORRELATION
 Observations: 99

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.5918	1.0000			
ROA	0.7346	0.4642	1.0000		
CR	0.1784	0.1886	0.3672	1.0000	
OM	0.5254	0.4234	0.4999	0.2703	1.0000

OLOGIT
 Iteration 0: log likelihood = -159.31394
 Iteration 1: log likelihood = -113.97218
 Iteration 2: log likelihood = -110.55057
 Iteration 3: log likelihood = -110.35995
 Iteration 4: log likelihood = -110.35866

Ordered logistic regression
 Number of obs = 99
 LR chi2(4) = 97.91
 Prob > chi2 = 0.0000
 Log likelihood = -110.35866
 Pseudo R2 = 0.3073

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.620327	0.1783941	3.48	0.001	0.270681	0.9699731
ROA	1.217013	0.2111033	5.77	0.000	0.8032581	1.630768
CR	-0.2930734	0.1545423	-1.90	0.058	-0.5959708	0.009824
OM	0.3729374	0.1680339	2.22	0.026	0.043597	0.7022778
/cut1	3.038546	0.6805889			1.704616	4.372476
/cut2	5.094753	0.8227294			3.482233	6.707273
/cut3	6.592643	0.9052708			4.818345	8.366941
/cut4	8.425692	1.034481			6.398147	10.45324

 *1997.

CORRELATION
 Observations: 99

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.7091	1.0000			
ROA	0.8673	0.6326	1.0000		
CR	0.4489	0.3264	0.4795	1.0000	
OM	0.1988	0.1376	0.2754	0.1988	1.0000

OLOGIT
 Iteration 0: log likelihood = -159.31394
 Iteration 1: log likelihood = -96.8644
 Iteration 2: log likelihood = -86.742604
 Iteration 3: log likelihood = -84.812479
 Iteration 4: log likelihood = -84.706019
 Iteration 5: log likelihood = -84.70555

Ordered logistic regression
 Number of obs = 99
 LR chi2(4) = 149.22
 Prob > chi2 = 0.0000
 Log likelihood = -84.70555
 Pseudo R2 = 0.4683

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.5933208	0.225615	2.63	0.009	0.1511235	1.035518
ROA	2.325782	0.3246138	7.16	0.000	1.689551	2.962013
CR	0.1600226	0.1672425	0.96	0.339	-0.1677667	0.4878119
OM	-0.114626	0.1612002	-0.71	0.477	-0.4305725	0.2013206
/cut1	4.874688	0.8593966			3.190302	6.559074
/cut2	7.291965	1.024721			5.283549	9.30038
/cut3	10.06403	1.32719			7.462786	12.66527
/cut4	13.27677	1.64494			10.05275	16.50079

 *1998.

CORRELATION
 Observations: 99

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.6428	1.0000			
ROA	0.9184	0.6326	1.0000		
CR	0.6479	0.3315	0.6428	1.0000	
OM	0.3570	0.3315	0.4336	0.2396	1.0000

OLOGIT

Iteration 0: log likelihood = -159.31394
 Iteration 1: log likelihood = -88.592694
 Iteration 2: log likelihood = -74.823077
 Iteration 3: log likelihood = -71.185291
 Iteration 4: log likelihood = -70.797781
 Iteration 5: log likelihood = -70.791331
 Iteration 6: log likelihood = -70.791329

Ordered logistic regression
 Number of obs = 99
 LR chi2(4) = 177.05
 Prob > chi2 = 0.0000
 Log likelihood = -70.791329
 Pseudo R2 = 0.5556

	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
ROE	0.5511384	0.2374897	2.32	0.020	0.0856672	1.01661
PER	2.931933	0.4063152	7.22	0.000	2.13557	3.728296
ROA	0.4067313	0.2154252	1.89	0.059	-0.0154943	0.8289569
CR	-0.225819	0.1795954	-1.26	0.209	-0.5778196	0.1261816
OM						
/cut1	5.896683	0.9771329			3.981537	7.811828
/cut2	8.987427	1.203052			6.629487	11.34537
/cut3	12.54862	1.634247			9.345555	15.75168
/cut4	16.39905	2.090774			12.30121	20.49689

 *1999.

CORRELATION
 Observations: 99

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.6683	1.0000			
ROA	0.8010	0.7806	1.0000		
CR	0.4029	0.3213	0.4999	1.0000	
OM	0.3978	0.4080	0.4387	0.2447	1.0000

OLOGIT

Iteration 0: log likelihood = -159.31394
 Iteration 1: log likelihood = -113.21492
 Iteration 2: log likelihood = -107.86113
 Iteration 3: log likelihood = -107.34269
 Iteration 4: log likelihood = -107.33457
 Iteration 5: log likelihood = -107.33456

Ordered logistic regression

Number of obs = 99
 LR chi2(4) = 103.96
 Prob > chi2 = 0.0000
 Log likelihood = -107.33456
 Pseudo R2 = 0.3263

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.4362121	0.2346346	1.86	0.063	-0.0236634	0.8960875
ROA	1.626148	0.2917618	5.57	0.000	1.054305	2.19799
CR	-0.1024438	0.1660823	-0.62	0.537	-0.4279591	0.2230716
OM	0.0207617	0.1535876	0.14	0.892	-0.2802644	0.3217877
/cut1	2.699077	0.634693			1.455102	3.943052
/cut2	4.777427	0.7766376			3.255246	6.299609
/cut3	6.934515	0.975679			5.02222	8.846811
/cut4	8.966789	1.116509			6.778472	11.15511

 *2000.

CORRELATION

Observations: 99

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.7040	1.0000			
ROA	0.7704	0.6122	1.0000		
CR	0.5254	0.2958	0.6275	1.0000	
OM	0.2549	0.2447	0.3876	0.3264	1.0000

OLOGIT

Iteration 0: log likelihood = -159.31394
 Iteration 1: log likelihood = -111.24084
 Iteration 2: log likelihood = -105.36515
 Iteration 3: log likelihood = -104.62932
 Iteration 4: log likelihood = -104.60882
 Iteration 5: log likelihood = -104.6088

Ordered logistic regression

Number of obs = 99
 LR chi2(4) = 109.41
 Prob > chi2 = 0.0000
 Log likelihood = -104.6088
 Pseudo R2 = 0.3434

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.7266356	0.1933059	3.76	0.000	0.347763	1.105508
ROA	1.450243	0.2853489	5.08	0.000	0.8909691	2.009516
CR	0.2006715	0.188313	1.07	0.287	-0.1684152	0.5697582
OM	-0.1543192	0.1492392	-1.03	0.301	-0.4468226	0.1381843
/cut1	3.383963	0.6935146			2.024699	4.743227
/cut2	5.331282	0.8073875			3.748832	6.913733
/cut3	7.789965	1.090091			5.653425	9.926504
/cut4	10.0109	1.269706			7.522319	12.49947

*2001.

CORRELATION

Observations: 99

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.7193	1.0000			
ROA	0.5254	0.4795	1.0000		
CR	0.3009	0.2805	0.4999	1.0000	
OM	0.4693	0.2958	0.3570	0.3009	1.0000

OLOGIT

Iteration 0: log likelihood = -159.31394

Iteration 1: log likelihood = -117.15762

Iteration 2: log likelihood = -113.54434

Iteration 3: log likelihood = -113.32954

Iteration 4: log likelihood = -113.32832

Iteration 5: log likelihood = -113.32832

Ordered logistic regression

Number of obs = 99

LR chi2(4) = 91.97

Prob > chi2 = 0.0000

Log likelihood = -113.32832

Pseudo R2 = 0.2886

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	1.244711	0.2073866	6.00	0.000	0.8382413	1.651182
ROA	0.3437566	0.1958646	1.76	0.079	-0.0401309	0.7276442
CR	-0.0071613	0.1648343	-0.04	0.965	-0.3302306	0.3159081
OM	0.5616675	0.1611054	3.49	0.000	0.2459068	0.8774282
/cut1	3.678551	0.7232388			2.26103	5.096073
/cut2	5.679324	0.8752149			3.963935	7.394714
/cut3	7.38815	0.9978563			5.432387	9.343912
/cut4	9.18192	1.128833			6.969447	11.39439

 *2002.

CORRELATION
 Observations: 99

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.7040	1.0000			
ROA	0.7091	0.5509	1.0000		
CR	0.1529	0.0100	0.4182	1.0000	
OM	0.2907	0.0406	0.4029	0.2601	1.0000

OLOGIT

Iteration 0: log likelihood = -159.31394
 Iteration 1: log likelihood = -110.04755
 Iteration 2: log likelihood = -104.28801
 Iteration 3: log likelihood = -103.6102
 Iteration 4: log likelihood = -103.59448
 Iteration 5: log likelihood = -103.59447

Ordered logistic regression

Number of obs = 99
 LR chi2(4) = 111.44
 Prob > chi2 = 0.0000
 Log likelihood = -103.59447
 Pseudo R2 = 0.3497

	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
ROE	1.205287	0.2231062	5.40	0.000	0.7680072	1.642567
PER	1.131111	0.2431032	4.65	0.000	0.6546371	1.607584
CR	-0.091398	0.1663683	-0.55	0.583	-0.4174739	0.2346779
OM	0.198396	0.1580858	1.25	0.209	-0.1114465	0.5082385
/cut1	3.919606	0.8196261			2.313169	5.526044
/cut2	6.582393	1.043262			4.537638	8.627149
/cut3	8.655937	1.205455			6.293288	11.01859
/cut4	10.38834	1.291819			7.856417	12.92025

 *2003.

CORRELATION
 Observations: 99

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.6989	1.0000			
ROA	0.6989	0.6020	1.0000		
CR	0.0763	0.0610	0.3213	1.0000	
OM	0.3672	0.2805	0.5458	0.1529	1.0000

OLOGIT

Iteration 0: log likelihood = -159.31394
 Iteration 1: log likelihood = -115.88316
 Iteration 2: log likelihood = -111.94525
 Iteration 3: log likelihood = -111.68449
 Iteration 4: log likelihood = -111.68247
 Iteration 5: log likelihood = -111.68247

Ordered logistic regression

Number of obs = 99
 LR chi2(4) = 95.26
 Prob > chi2 = 0.0000
 Log likelihood = -111.68247
 Pseudo R2 = 0.2990

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.8485244	0.2004675	4.23	0.000	0.4556154	1.241433
ROA	1.116614	0.2463787	4.53	0.000	0.6337208	1.599508
CR	-0.1865535	0.1611051	-1.16	0.247	-0.5023137	0.1292066
OM	0.046307	0.1659569	0.28	0.780	-0.2789625	0.3715766
/cut1	2.701776	0.7275014			1.2759	4.127653
/cut2	4.876436	0.8829082			3.145967	6.606904
/cut3	6.692677	1.01331			4.706627	8.678728
/cut4	8.354366	1.095515			6.207196	10.50154

 *2004.

CORRELATION

Observations: 99

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.7551	1.0000			
ROA	0.7295	0.6632	1.0000		
CR	0.3366	0.3162	0.4489	1.0000	
OM	0.4285	0.3876	0.3927	0.1325	1.0000

OLOGIT

Iteration 0: log likelihood = -159.31394
 Iteration 1: log likelihood = -109.90815
 Iteration 2: log likelihood = -103.70547
 Iteration 3: log likelihood = -102.94026
 Iteration 4: log likelihood = -102.92197
 Iteration 5: log likelihood = -102.92195

Ordered logistic regression

Number of obs = 99
 LR chi2(4) = 112.78
 Prob > chi2 = 0.0000
 Log likelihood = -102.92195
 Pseudo R2 = 0.3540

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	1.007329	0.2357984	4.27	0.000	0.5451722	1.469485
ROA	1.144286	0.2579115	4.44	0.000	0.6387891	1.649784
CR	0.0681367	0.1535151	0.44	0.657	-0.2327473	0.3690208
OM	0.3057958	0.1572009	1.59	0.052	-0.0023123	0.6139039
/cut1	4.29445	0.780098			2.765486	5.823414
/cut2	6.792918	1.002186			4.82867	8.757167
/cut3	9.101119	1.231231			6.687951	11.51429
/cut4	10.97633	1.238288			8.333731	13.61892

TABLE A.7.3 – Malaysia: Ordered Logistic Regression – ALL (1991-2004)

*1991.

CORRELATION

Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.7214	1.0000			
ROA	0.8143	0.6286	1.0000		
CR	0.3779	0.4986	0.6379	1.0000	
OM	0.4057	0.3871	0.4800	0.4707	1.0000

OLOGIT

Iteration 0: log likelihood = -83.54239

Iteration 1: log likelihood = -50.454741

Iteration 2: log likelihood = -45.754682

Iteration 3: log likelihood = -44.922857

Iteration 4: log likelihood = -44.87906

Iteration 5: log likelihood = -44.878886

Ordered logistic regression

Number of observations = 52

LR chi2(4) = 77.33

Prob > chi2 = 0.0000

Log likelihood = -44.878886

Pseudo R2 = 0.4628

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	1.087247	0.2927437	3.71	0.000	0.5134793	1.661014
ROA	2.286608	0.4670599	4.90	0.000	1.371187	3.202028
CR	-0.8773881	0.3035825	-2.89	0.004	-1.472399	-0.2823773
OM	0.1437284	0.2381253	0.60	0.546	-0.3229885	0.6104454
/cut1	3.962656	1.021671			1.960217	5.965094
/cut2	6.89751	1.402637			4.148391	9.646628
/cut3	9.416371	1.720362			6.044524	12.78822
/cut4	11.82896	1.992214			7.924288	15.73362

*1992.

CORRELATION

Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.3463	1.0000			
ROA	0.6193	-0.0864	1.0000		
CR	0.2664	-0.0121	0.5264	1.0000	
OM	0.2107	-0.1421	0.2200	0.0529	1.0000

OLOGIT

Iteration 0: log likelihood = -83.54239
 Iteration 1: log likelihood = -68.870142
 Iteration 2: log likelihood = -68.315055
 Iteration 3: log likelihood = -68.305205
 Iteration 4: log likelihood = -68.305201

Ordered logistic regression
 Number of obs = 52
 LR chi2(4) = 30.47
 Prob > chi2 = 0.0000
 Log likelihood = -68.305201
 Pseudo R2 = 0.1824

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	-0.4126447	0.1905457	-2.17	0.030	-0.7861074	-0.0391821
ROA	1.068087	0.2643428	4.04	0.000	0.5499846	1.586189
CR	-0.1278196	0.2176347	-0.59	0.557	-0.5543757	0.2987365
OM	0.0408244	0.1829185	0.22	0.823	-0.3176893	0.3993382
/cut1	-0.368461	1.11248			-2.548881	1.811959
/cut2	1.112251	1.128825			-1.100206	3.324708
/cut3	2.340788	1.158673			0.0698301	4.611746
/cut4	3.605153	1.227321			1.199648	6.010658

 *1993.

CORRELATION
 Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.4336	1.0000			
ROA	0.6471	0.1643	1.0000		
CR	0.1829	-0.0121	0.5543	1.0000	
OM	0.2293	0.2571	0.0621	-0.1793	1.0000

OLOGIT

Iteration 0: log likelihood = -83.54239
 Iteration 1: log likelihood = -63.270883
 Iteration 2: log likelihood = -62.068022
 Iteration 3: log likelihood = -62.027812
 Iteration 4: log likelihood = -62.027722

Ordered logistic regression
 Number of obs = 52
 LR chi2(4) = 43.03
 Prob > chi2 = 0.0000
 Log likelihood = -62.027722
 Pseudo R2 = 0.2575

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.5902564	0.2060741	2.86	0.004	0.1863587	0.9941541
ROA	1.372342	0.2894268	4.74	0.000	0.8050758	1.939608
CR	-0.3538622	0.2399155	-1.47	0.140	-.824088	0.1163636
OM	0.1406452	0.202806	0.69	0.488	-.2568472	0.5381377
/cut1	2.959888	1.11746			0.7697059	5.15007
/cut2	4.721097	1.231497			2.307407	7.134787
/cut3	6.024729	1.317151			3.443162	8.606297
/cut4	7.510243	1.4524			4.663591	10.3569

*1994.

CORRELATION

Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.5821	1.0000			
ROA	0.6379	0.2014	1.0000		
CR	0.0807	-0.0307	0.4243	1.0000	
OM	0.4243	0.2943	0.1829	-0.1886	1.0000

OLOGIT

Iteration 0: log likelihood = -83.54239

Iteration 1: log likelihood = -57.984961

Iteration 2: log likelihood = -55.898128

Iteration 3: log likelihood = -55.766574

Iteration 4: log likelihood = -55.765756

Ordered logistic regression

Number of obs = 52

LR chi2(4) = 55.55

Prob > chi2 = 0.0000

Log likelihood = -55.765756

Pseudo R2 = 0.3325

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.9009135	0.2284811	3.94	0.000	0.4530987	1.348728
ROA	1.318362	0.2856418	4.62	0.000	0.7585138	1.878209
CR	-0.2896421	0.2347628	-1.23	0.217	-0.7497687	0.1704844
OM	0.4339304	0.2137795	2.03	0.042	0.0149303	0.8529304
/cut1	4.326901	1.238924			1.898655	6.755147
/cut2	6.271838	1.366125			3.594282	8.949394
/cut3	7.966036	1.533601			4.960232	10.97184
/cut4	9.802547	1.725604			6.420425	13.18467

*1995.

CORRELATION

Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.4243	1.0000			
ROA	0.5821	0.1086	1.0000		
CR	-0.0214	0.0250	0.4243	1.0000	
OM	0.4150	0.3964	0.1550	-0.3371	1.0000

OLOGIT

Iteration 0: log likelihood = -83.54239

Iteration 1: log likelihood = -63.545108

Iteration 2: log likelihood = -62.388656

Iteration 3: log likelihood = -62.347822

Iteration 4: log likelihood = -62.347732

Ordered logistic regression

Number of obs = 52

LR chi2(4) = 42.39

Prob > chi2 = 0.0000

Log likelihood = -62.347732

Pseudo R2 = 0.2537

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.5948216	0.2240163	2.66	0.008	0.1557578	1.033885
ROA	1.320695	0.2816714	4.69	0.000	0.7686296	1.872761
CR	-0.6757171	0.2713768	-2.49	0.013	-1.207606	-0.1438284
OM	0.1942809	0.2202536	0.88	0.378	-0.2374083	0.6259701
/cut1	1.895597	1.085514			-0.2319718	4.023167
/cut2	3.631862	1.173245			1.332345	5.931379
/cut3	5.023522	1.278534			2.517641	7.529402
/cut4	6.505571	1.385841			3.789372	9.221769

*1996.

CORRELATION

Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.1457	1.0000			
ROA	0.6379	0.0529	1.0000		
CR	0.2107	0.1179	0.5264	1.0000	
OM	-0.0029	0.3036	-0.0307	-0.0679	1.0000

OLOGIT

Iteration 0: log likelihood = -83.54239

Iteration 1: log likelihood = -68.849344

Iteration 2: log likelihood = -68.232067

Iteration 3: log likelihood = -68.223477

Iteration 4: log likelihood = -68.223474

Ordered logistic regression
 Number of obs = 52
 LR chi2(4) = 30.64
 Prob > chi2 = 0.0000
 Log likelihood = -68.223474
 Pseudo R2 = 0.1834

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.345317	0.2087456	1.65	0.098	-0.0638168	0.7544508
ROA	1.239985	0.2645746	4.69	0.000	0.7214286	1.758542
CR	-0.3397578	0.2326995	-1.46	0.144	-0.7958404	0.1163248
OM	-0.1374773	0.1981826	-0.69	0.488	-0.525908	0.2509535
/cut1	1.372107	0.9804884			-0.5496145	3.29383
/cut2	2.738138	1.009001			0.7605327	4.715744
/cut3	3.922805	1.08898			1.788445	6.057166
/cut4	5.284019	1.203258			2.925677	7.64236

 *1997.

CORRELATION
 Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.0529	1.0000			
ROA	0.7029	0.0343	1.0000		
CR	0.1829	0.1550	0.5821	1.0000	
OM	0.3221	-0.1143	0.1643	-0.0400	1.0000

OLOGIT
 Iteration 0: log likelihood = -83.54239
 Iteration 1: log likelihood = -61.908728
 Iteration 2: log likelihood = -60.241778
 Iteration 3: log likelihood = -60.138033
 Iteration 4: log likelihood = -60.137392

Ordered logistic regression
 Number of obs = 52
 LR chi2(4) = 46.81
 Prob > chi2 = 0.0000
 Log likelihood = -60.137392
 Pseudo R2 = 0.2802

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.2031933	0.1905931	1.07	0.286	-0.1703622	0.5767489
ROA	1.854769	0.3596396	5.16	0.000	1.149888	2.559649
CR	-0.6920189	0.2650761	-2.61	0.009	-1.211559	-0.1724792
OM	0.2332499	0.2056856	1.13	0.257	-0.1698865	0.6363863
/cut1	2.20606	1.096302			0.0573482	4.354772
/cut2	4.131293	1.222918			1.734418	6.528168
/cut3	5.776676	1.373851			3.083977	8.469374
/cut4	7.268049	1.47766			4.371889	10.16421

*1998.

CORRELATION

Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.8050	1.0000			
ROA	0.8979	0.7771	1.0000		
CR	0.1829	0.1179	0.2293	1.0000	
OM	0.6471	0.6379	0.7400	0.0343	1.0000

OLOGIT

Iteration 0: log likelihood = -83.54239

Iteration 1: log likelihood = -48.96686

Iteration 2: log likelihood = -43.473012

Iteration 3: log likelihood = -42.291219

Iteration 4: log likelihood = -42.209211

Iteration 5: log likelihood = -42.208668

Ordered logistic regression

Number of obs = 52

LR chi2(4) = 82.67

Prob > chi2 = 0.0000

Log likelihood = -42.208668

Pseudo R2 = 0.4948

	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.9929323	0.3652946	2.72	0.007	0.2769679	1.708897
ROA	2.396607	0.5249045	4.57	0.000	1.367813	3.425401
CR	-0.1706732	0.2350314	-0.73	0.468	-0.6313264	0.28998
OM	-0.3854317	0.340827	-1.13	0.258	-1.05344	0.2825769
/cut1	3.97167	1.101651			1.812473	6.130867
/cut2	7.284938	1.496157			4.352525	10.21735
/cut3	10.02844	1.91905			6.267166	13.7897
/cut4	12.67398	2.256978			8.250388	17.09758

*1999.

CORRELATION

Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.7864	1.0000			
ROA	0.7864	0.6657	1.0000		
CR	0.3221	0.3500	0.3314	1.0000	
OM	0.2757	0.3500	0.3871	0.2014	1.0000

OLOGIT

Iteration 0: log likelihood = -83.54239
 Iteration 1: log likelihood = -53.636052
 Iteration 2: log likelihood = -49.989205
 Iteration 3: log likelihood = -49.513957
 Iteration 4: log likelihood = -49.500069
 Iteration 5: log likelihood = -49.500051

Ordered logistic regression

Number of obs = 52
 LR chi2(4) = 68.08
 Prob > chi2 = 0.0000
 Log likelihood = -49.500051
 Pseudo R2 = 0.4075

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	1.277968	0.3244964	3.94	0.000	0.641967	1.91397
ROA	1.326657	0.3422171	3.88	0.000	0.6559233	1.99739
CR	0.0352515	0.2194414	0.16	0.872	-0.3948457	0.4653486
OM	-0.2974031	0.2413441	-1.23	0.218	-0.7704289	0.1756227
/cut1	3.539909	1.008507			1.563271	5.516547
/cut2	6.386636	1.350581			3.739547	9.033725
/cut3	8.285347	1.521944			5.302391	11.2683
/cut4	10.25785	1.710905			6.904533	13.61116

*2000.

CORRELATION

Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.4336	1.0000			
ROA	0.5636	0.3871	1.0000		
CR	-0.0493	0.1364	0.2850	1.0000	
OM	-0.0679	0.1921	0.2664	0.0900	1.0000

OLOGIT

Iteration 0: log likelihood = -83.54239
 Iteration 1: log likelihood = -67.685242
 Iteration 2: log likelihood = -66.981528
 Iteration 3: log likelihood = -66.965949
 Iteration 4: log likelihood = -66.965934

Ordered logistic regression

Number of obs = 52
 LR chi2(4) = 33.15
 Prob > chi2 = 0.0000
 Log likelihood = -66.965934
 Pseudo R2 = 0.1984

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.5181632	0.2091554	2.48	0.013	0.1082261	0.9281002
ROA	1.031799	0.2516538	4.10	0.000	0.5385663	1.525031
CR	-0.310303	0.1948655	-1.59	0.111	-0.6922324	0.0716264
OM	-0.3855855	0.1972347	-1.95	0.051	-0.7721584	0.0009874
/cut1	0.4538337	1.01119			-1.528061	2.435729
/cut2	2.056991	1.109439			-0.1174694	4.231452
/cut3	3.269848	1.146331			1.023081	5.516615
/cut4	4.54356	1.195417			2.200585	6.886534

*2001.

CORRELATION

Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.5079	1.0000			
ROA	0.8421	0.5171	1.0000		
CR	0.0714	0.2293	0.2107	1.0000	
OM	0.2107	0.2943	0.2757	0.2107	1.0000

OLOGIT

Iteration 0: log likelihood = -83.54239

Iteration 1: log likelihood = -54.762557

Iteration 2: log likelihood = -51.278563

Iteration 3: log likelihood = -50.84916

Iteration 4: log likelihood = -50.839035

Iteration 5: log likelihood = -50.839028

Ordered logistic regression

Number of obs = 52

LR chi2(4) = 65.41

Prob > chi2 = 0.0000

Log likelihood = -50.839028

Pseudo R2 = 0.3915

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.1755474	0.2582694	0.68	0.497	-0.3306513	0.6817461
ROA	2.186216	0.3919779	5.58	0.000	1.417954	2.954479
CR	-0.392275	0.2092027	-1.88	0.061	-0.8023048	0.0177548
OM	-0.0488245	0.2140925	-0.23	0.820	-0.4684382	0.3707891
/cut1	2.416083	0.9632662			0.5281159	4.30405
/cut2	4.821442	1.184406			2.500049	7.142835
/cut3	7.010185	1.431947			4.20362	9.81675
/cut4	9.057836	1.622658			5.877485	12.23819

*2002.

CORRELATION

Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.5357	1.0000			
ROA	0.7214	0.4150	1.0000		
CR	0.1829	0.2571	0.2757	1.0000	
OM	0.0343	0.1364	0.2479	0.2293	1.0000

OLOGIT

Iteration 0: log likelihood = -83.54239

Iteration 1: log likelihood = -61.264074

Iteration 2: log likelihood = -59.645649

Iteration 3: log likelihood = -59.557165

Iteration 4: log likelihood = -59.556763

Ordered logistic regression

Number of obs = 52

LR chi2(4) = 47.97

Prob > chi2 = 0.0000

Log likelihood = -59.556763

Pseudo R2 = 0.2871

	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
ROE	0.6022111	0.2321277	2.59	0.009	0.1472492	1.057173
PER	1.413471	0.3032105	4.66	0.000	0.8191891	2.007753
ROA	1.413471	0.3032105	4.66	0.000	0.8191891	2.007753
CR	-0.2050001	0.2069697	-0.99	0.322	-0.6106532	0.2006529
OM	-0.3358938	0.2030421	-1.65	0.098	-0.7338491	0.0620615
/cut1	1.935035				0.0795365	3.790534
/cut2	3.830352				1.711689	5.949016
/cut3	5.405567				3.031612	7.779523
/cut4	6.955322				4.358374	9.552271

*2003.

CORRELATION

Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.3407	1.0000			
ROA	0.6193	0.3036	1.0000		
CR	0.1364	0.1457	0.3407	1.0000	
OM	-0.0493	0.0900	0.1550	0.3593	1.0000

OLOGIT

Iteration 0: log likelihood = -83.54239

Iteration 1: log likelihood = -69.16155

Iteration 2: log likelihood = -68.637128

Iteration 3: log likelihood = -68.629974

Iteration 4: log likelihood = -68.629972

Ordered logistic regression

Number of obs = 52

LR chi2(4) = 29.82

Prob > chi2 = 0.0000

Log likelihood = -68.629972

Pseudo R2 = 0.1785

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.2529327	0.1968906	1.28	0.199	-0.1329659	0.6388313
ROA	1.119064	0.2631532	4.25	0.000	0.6032934	1.634835
CR	-0.2989693	0.2286401	-1.31	0.191	-0.7470956	0.149157
OM	-0.180663	0.1909358	-0.95	0.344	-0.5548903	0.1935643
/cut1	0.7252028	0.8698128			-0.9795989	2.430004
/cut2	2.095679	0.911855			0.3084756	3.882882
/cut3	3.271558	0.97629			1.358065	5.185052
/cut4	4.602227	1.06482			2.515218	6.689236

*2004.

CORRELATION

Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.1364	1.0000			
ROA	0.6286	0.0529	1.0000		
CR	0.0714	-0.0586	0.4057	1.0000	
OM	0.2943	0.0714	0.2571	0.2479	1.0000

OLOGIT

Iteration 0: log likelihood = -83.54239

Iteration 1: log likelihood = -67.336407

Iteration 2: log likelihood = -66.793573

Iteration 3: log likelihood = -66.784949

Iteration 4: log likelihood = -66.784945

Ordered logistic regression

Number of obs = 52

LR chi2(4) = 33.51

Prob > chi2 = 0.0000

Log likelihood = -66.784945

Pseudo R2 = 0.2006

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.1065755	0.1866463	0.57	0.568	-0.2592446	0.4723955
ROA	1.226751	0.2715285	4.52	0.000	0.6945653	1.758937
CR	-0.5027154	0.2415021	-2.08	0.037	-0.9760508	-0.0293799
OM	0.354103	0.1959602	1.81	0.071	-0.0299719	0.738178
/cut1	1.56375	1.027488			-0.4500886	3.577589
/cut2	2.941873	1.112407			0.7615962	5.12215
/cut3	4.09059	1.168267			1.800829	6.380352
/cut4	5.492322	1.244204			3.053726	7.930917

TABLE A.7.4 – Malaysia: Ordered Logistic Regression – EX-FINANCE (1991-2004)

 *1991.

CORRELATION
 Observations: 45

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.7222	1.0000			
ROA	0.9000	0.6556	1.0000		
CR	0.3778	0.5333	0.4667	1.0000	
OM	0.2889	0.2889	0.5000	0.3778	1.0000

OLOGIT

Iteration 0: log likelihood = -72.424706
 Iteration 1: log likelihood = -37.773112
 Iteration 2: log likelihood = -30.625568
 Iteration 3: log likelihood = -28.177769
 Iteration 4: log likelihood = -27.690509
 Iteration 5: log likelihood = -27.660875
 Iteration 6: log likelihood = -27.660717

Ordered logistic regression
 Number of obs = 45
 LR chi2(4) = 89.53
 Prob > chi2 = 0.0000
 Log likelihood = -27.660717
 Pseudo R2 = 0.6181

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	1.439262	0.4761325	3.02	0.003	0.5060595	2.372465
ROA	4.248244	0.9461818	4.49	0.000	2.393762	6.102726
CR	-0.8408452	0.4270332	-1.97	0.049	-1.677815	-0.0038755
OM	-1.105301	0.408165	-2.71	0.007	-1.90529	-0.3053128
/cut1	4.907107	1.270636			2.416707	7.397507
/cut2	8.875912	2.044778			4.868222	12.8836
/cut3	13.12572	2.770854			7.694946	18.55649
/cut4	17.80482	3.649647			10.65164	24.958

 *1992.

CORRELATION
 Observations: 45

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.3000	1.0000			
ROA	0.8000	-0.1000	1.0000		
CR	0.2556	-0.0111	0.4333	1.0000	
OM	0.0889	-0.0667	0.1222	0.0222	1.0000

OLOGIT

Iteration 0: log likelihood = -72.424706
 Iteration 1: log likelihood = -49.504088
 Iteration 2: log likelihood = -47.304816
 Iteration 3: log likelihood = -47.113224
 Iteration 4: log likelihood = -47.111108
 Iteration 5: log likelihood = -47.111108

Ordered logistic regression

Number of obs = 45
 LR chi2(4) = 50.63
 Prob > chi2 = 0.0000
 Log likelihood = -47.111108
 Pseudo R2 = 0.3495

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	-0.5348325	0.2398727	-2.23	0.026	1.004974	-0.0646906
ROA	2.028634	0.3890559	5.21	0.000	1.266098	2.791169
CR	-0.3326685	0.249	-1.34	0.182	-0.8206995	0.1553625
OM	-0.1218041	0.2199702	-0.55	0.580	-0.5529378	0.3093295
/cut1	.2460708	1.326231			-2.353294	2.845435
/cut2	2.250962	1.357773			-0.4102248	4.912148
/cut3	4.038026	1.456531			1.183277	6.892775
/cut4	6.23119	1.656884			2.983758	9.478622

 *1993.

CORRELATION

Observations: 45

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.4222	1.0000			
ROA	0.7889	0.3333	1.0000		
CR	0.1889	0.1222	0.3889	1.0000	
OM	0.1889	0.2111	0.1667	-0.1444	1.0000

OLOGIT

Iteration 0: log likelihood = -72.424706
 Iteration 1: log likelihood = -48.520564
 Iteration 2: log likelihood = -46.02249
 Iteration 3: log likelihood = -45.792913
 Iteration 4: log likelihood = -45.789879
 Iteration 5: log likelihood = -45.789879

Ordered logistic regression

Number of obs = 45
 LR chi2(4) = 53.27
 Prob > chi2 = 0.0000
 Log likelihood = -45.789879
 Pseudo R2 = 0.3678

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.523246	0.2418555	2.16	0.031	0.0492179	0.9972741
ROA	2.068845	0.4001639	5.17	0.000	1.284538	2.853152
CR	-0.3612123	0.2627536	-1.37	0.169	-0.8761999	0.1537754
OM	-0.1091413	0.2293356	-0.48	0.634	-0.5586307	0.3403481
/cut1	3.350269	1.2612			0.8783617	5.822176
/cut2	5.712835	1.473176			2.825464	8.600207
/cut3	7.623708	1.656156			4.377701	10.86971
/cut4	9.618957	1.877173			5.939766	12.29815

*1994.

CORRELATION
Observations: 45

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.5333	1.0000			
ROA	0.8333	0.4333	1.0000		
CR	0.1556	0.0222	0.1889	1.0000	
OM	0.3556	0.1889	0.3333	-0.1333	1.0000

OLOGIT

Iteration 0: log likelihood = -72.424706
Iteration 1: log likelihood = -47.622023
Iteration 2: log likelihood = -44.611698
Iteration 3: log likelihood = -44.274443
Iteration 4: log likelihood = -44.267502
Iteration 5: log likelihood = -44.267498

Ordered logistic regression

Number of obs = 45
LR chi2(4) = 56.31
Prob > chi2 = 0.0000
Log likelihood = -44.267498
Pseudo R2 = 0.3888

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.5311722	0.2433024	2.18	0.029	0.0543083	1.008036
ROA	1.844891	0.3756513	4.91	0.000	1.108628	2.581154
CR	0.0197852	0.2198777	0.09	0.928	-0.4111672	0.4507376
OM	0.1962356	0.2334406	0.84	0.401	-0.2622995	0.6537707
/cut1	4.461228	1.312012			1.889732	7.032724
/cut2	6.657366	1.472698			3.770931	9.5438
/cut3	8.823197	1.768058			5.3357867	12.28853
/cut4	11.214	2.10892			7.080592	15.3474

 *1995.

CORRELATION
 Observations: 45

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.2667	1.0000			
ROA	0.8111	0.2667	1.0000		
CR	0.0444	0.0556	0.2111	1.0000	
OM	0.3333	0.2778	0.2667	-0.2889	1.0000

OLOGIT

Iteration 0: log likelihood = -72.424706
 Iteration 1: log likelihood = -50.265301
 Iteration 2: log likelihood = -47.765471
 Iteration 3: log likelihood = -47.536338
 Iteration 4: log likelihood = -47.533241
 Iteration 5: log likelihood = -47.53324

Ordered logistic regression

Number of obs = 45
 LR chi2(4) = 49.78
 Prob > chi2 = 0.0000
 Log likelihood = -47.53324
 Pseudo R2 = 0.3437

	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
ROE	0.0144682	0.22422	0.06	0.949	-0.4249949	0.4539313
PER	1.947102	0.376611	5.17	0.000	1.208958	2.685246
CR	-0.2841876	0.2411837	-1.18	0.239	-0.756899	0.1885238
OM	0.2155341	0.2287421	0.94	0.346	-0.2327923	0.6638605
/cut1	2.652117	1.188921			0.3218746	4.982359
/cut2	4.63568	1.314526			2.059256	7.212104
/cut3	6.603814	1.573126			3.520545	9.687084
/cut4	8.817526	1.812039			5.265995	12.36906

 *1996.

CORRELATION
 Observations: 45

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.0333	1.0000			
ROA	0.8333	0.1667	1.0000		
CR	0.3111	0.2889	0.4889	1.0000	
OM	-0.0333	0.2000	0.1111	0.0889	1.0000

OLOGIT

Iteration 0: log likelihood = -72.424706
 Iteration 1: log likelihood = -48.155605
 Iteration 2: log likelihood = -45.318426
 Iteration 3: log likelihood = -44.982346
 Iteration 4: log likelihood = -44.975592
 Iteration 5: log likelihood = -44.975589

Ordered logistic regression

Number of obs = 45
 LR chi2(4) = 54.90
 Prob > chi2 = 0.0000
 Log likelihood = -44.975589
 Pseudo R2 = 0.3790

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	-0.1695568	0.2364174	-0.72	0.473	-0.6329263	0.2938128
ROA	2.353257	0.4403728	5.34	0.000	1.490143	3.216372
CR	-0.2568757	0.2622206	-0.98	0.327	-0.7708186	0.2570671
OM	-0.2653741	0.215604	-1.23	0.218	-0.6879503	0.157202
/cut1	1.778984	1.05401			-0.2868381	3.844806
/cut2	3.930579	1.181569			1.614747	6.246411
/cut3	6.113086	1.433746			3.302995	8.923177
/cut4	8.491126	1.708399			5.142725	11.83953

 *1997.

CORRELATION

Observations: 45

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.1556	1.0000			
ROA	0.8333	0.0889	1.0000		
CR	0.2000	0.2667	0.3778	1.0000	
OM	0.1667	-0.1000	0.2111	-0.0778	1.0000

OLOGIT

Iteration 0: log likelihood = -72.424706
 Iteration 1: log likelihood = -47.539087
 Iteration 2: log likelihood = -44.929864
 Iteration 3: log likelihood = -44.67862
 Iteration 4: log likelihood = -44.674899
 Iteration 5: log likelihood = -44.674898

Ordered logistic regression

Number of obs = 45
 LR chi2(4) = 55.50
 Prob > chi2 = 0.0000
 Log likelihood = -44.674898
 Pseudo R2 = 0.3832

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.3062134	0.2250007	1.36	0.174	-0.1347798	0.7472066
ROA	2.357101	0.4410334	5.34	0.000	1.492691	3.221511
CR	-0.5686194	0.2596698	-2.19	0.029	-1.077563	-0.0596759
OM	-0.2276562	0.2482554	-0.92	0.359	-0.7142279	0.2589155
/cut1	2.600008	1.21947			0.2098912	4.990124
/cut2	4.836121	1.348108			2.193878	7.478363
/cut3	6.781562	1.569592			3.705218	9.857905
/cut4	8.981753	1.784656			5.483892	12.47961

* 1998.

CORRELATION
Observations: 45

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.7667	1.0000			
ROA	0.9000	0.8000	1.0000		
CR	0.0667	0.0222	0.1222	1.0000	
OM	0.5889	0.6778	0.6667	-0.0889	1.0000

OLOGIT

Iteration 0: log likelihood = -72.424706
Iteration 1: log likelihood = -43.554535
Iteration 2: log likelihood = -38.949719
Iteration 3: log likelihood = -38.109831
Iteration 4: log likelihood = -38.071914
Iteration 5: log likelihood = -38.071812

Ordered logistic regression

Number of obs = 45
LR chi2(4) = 68.71
Prob > chi2 = 0.0000
Log likelihood = -38.071812
Pseudo R2 = 0.4743

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.4263413	0.4163749	1.02	0.306	-0.3897385	1.242421
ROA	2.683251	0.579689	4.63	0.000	1.547081	3.81942
CR	-0.1805392	0.2367851	-0.76	0.446	-0.6446295	0.2835512
OM	-0.3406553	0.346275	-0.98	0.325	-1.019342	0.3380312
/cut1	3.485248	1.126066			1.278198	5.692297
/cut2	6.36448	1.510993			3.402988	9.325972
/cut3	9.218724	1.901077			5.492682	12.94477
/cut4	11.8937	2.188983			7.603374	16.18403

 *1999.

CORRELATION
 Observations: 45

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.7556	1.0000			
ROA	0.7778	0.6222	1.0000		
CR	0.3111	0.2778	0.2667	1.0000	
OM	0.2556	0.2778	0.3333	0.0333	1.0000

OLOGIT

Iteration 0: log likelihood = -72.424706
 Iteration 1: log likelihood = -47.913987
 Iteration 2: log likelihood = -44.822644
 Iteration 3: log likelihood = -44.455067
 Iteration 4: log likelihood = -44.446204
 Iteration 5: log likelihood = -44.446197

Ordered logistic regression

Number of obs = 45
 LR chi2(4) = 55.96
 Prob > chi2 = 0.0000
 Log likelihood = -44.446197
 Pseudo R2 = 0.3863

	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
ROE	0.9715909	0.3210134	3.03	0.002	0.3424162	1.600766
PER	1.447209	0.3991775	3.63	0.000	0.6648357	2.229583
ROA	0.1372572	0.2186073	0.63	0.530	-0.2912053	0.567197
CR	0.1372572	0.2186073	0.63	0.530	-0.2912053	0.567197
OM	-0.0497512	0.2256354	-0.22	0.825	-0.4919884	0.39224861
/cut1	4.059888	1.152848			1.800348	6.319428
/cut2	6.809279	1.496783			3.875637	9.74292
/cut3	8.984946	1.764693			5.526212	12.44368
/cut4	10.95642	1.974084			7.087286	14.82555

 *2000.

CORRELATION
 Observations: 45

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.4556	1.0000			
ROA	0.6333	0.3889	1.0000		
CR	-0.0111	0.0556	0.2222	1.0000	
OM	0.0111	0.0222	0.2333	-0.0111	1.0000

OLOGIT

Iteration 0: log likelihood = -72.424706
 Iteration 1: log likelihood = -58.090823
 Iteration 2: log likelihood = -57.230269
 Iteration 3: log likelihood = -57.198234
 Iteration 4: log likelihood = -57.198161

Ordered logistic regression

Number of obs = 45
 LR chi2(4) = 30.45
 Prob > chi2 = 0.0000
 Log likelihood = -57.198161
 Pseudo R2 = 0.2102

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.3636115	0.2247357	1.62	0.106	-0.0768624	0.8050854
ROA	1.203659	0.2905227	4.14	0.000	0.6342451	1.773073
CR	-0.2303226	0.2068687	-1.11	0.266	-0.6357778	0.1751327
OM	-0.1532782	0.2014362	-0.76	0.447	-0.5480858	0.2415295
/cut1	1.357076	1.18039			-0.9564452	3.670598
/cut2	3.086034	1.319594			0.4996778	5.672391
/cut3	4.415832	1.37748			1.716021	7.115644
/cut4	5.825771	1.456093			2.971882	8.67966

 *2001.

CORRELATION

Observations: 45

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.4333	1.0000			
ROA	0.7778	0.4444	1.0000		
CR	0.0222	0.1778	0.1000	1.0000	
OM	0.2111	0.2111	0.2111	-0.0333	1.0000

OLOGIT

Iteration 0: log likelihood = -72.424706
 Iteration 1: log likelihood = -51.4333
 Iteration 2: log likelihood = -49.324918
 Iteration 3: log likelihood = -49.165291
 Iteration 4: log likelihood = -49.163748

Ordered logistic regression

Number of obs = 45
 LR chi2(4) = 46.52
 Prob > chi2 = 0.0000
 Log likelihood = -49.163748
 Pseudo R2 = 0.3212

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	-0.0118194	0.2578498	-0.05	0.963	-0.5171958	0.493557
ROA	1.86215	0.366409	5.08	0.000	1.144001	2.580298
CR	-0.1761213	0.2155805	-0.82	0.414	-0.5986513	0.2464087
OM	0.1943574	0.2113851	0.92	0.358	-0.2199498	0.6086646
/cut1	2.873054	1.157334			0.6047207	5.141387
/cut2	5.006648	1.360128			2.340847	7.672449
/cut3	6.841374	1.534864			3.833095	9.849653
/cut4	8.669463	1.703123			5.331403	12.00752

*2002.

CORRELATION
Observations: 45

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.4889	1.0000			
ROA	0.7444	0.3111	1.0000		
CR	0.1667	0.3444	0.1778	1.0000	
OM	-0.0111	0.0222	0.1778	0.1222	1.0000

OLOGIT

Iteration 0: log likelihood = -72.424706
Iteration 1: log likelihood = -52.230749
Iteration 2: log likelihood = -50.178863
Iteration 3: log likelihood = -49.99735
Iteration 4: log likelihood = -49.99488
Iteration 5: log likelihood = -49.994879

Ordered logistic regression

Number of obs = 45
LR chi2(4) = 44.86
Prob > chi2 = 0.0000
Log likelihood = -49.994879
Pseudo R2 = 0.3097

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.6591613	0.2458089	2.68	0.007	0.1773847	1.140938
ROA	1.587385	0.3405761	4.66	0.000	0.9198677	2.254901
CR	-0.2087255	0.220549	-0.95	0.344	-0.6409937	0.2235426
OM	-0.2445762	0.2161882	-1.13	0.258	-0.6682972	0.1791448
/cut1	2.577313	1.102819			0.4158274	4.738799
/cut2	4.610172	1.3285			2.006359	7.213985
/cut3	6.610345	1.559006			3.55475	9.66594
/cut4	8.404402	1.685365			5.101147	11.70766

 *2003.

CORRELATION
 Observations: 45

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.3556	1.0000			
ROA	0.6556	0.2111	1.0000		
CR	0.2222	0.2889	0.3667	1.0000	
OM	-0.1222	0.0667	0.0667	0.1667	1.0000

OLOGIT

Iteration 0: log likelihood = -72.424706
 Iteration 1: log likelihood = -56.68935
 Iteration 2: log likelihood = -55.799747
 Iteration 3: log likelihood = -55.774815
 Iteration 4: log likelihood = -55.774782

Ordered logistic regression

Number of obs = 45
 LR chi2(4) = 33.30
 Prob > chi2 = 0.0000
 Log likelihood = -55.774782
 Pseudo R2 = 0.2299

	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
ROE	0.5234614	0.2361649	2.22	0.027	0.0605868	0.986336
PER	1.362948	0.3215234	4.24	0.000	0.732774	1.993122
ROA	-0.4016976	0.2817104	-1.43	0.154	-0.9538399	0.1504447
CR	-0.2241981	0.2013195	-1.11	0.265	-0.6187771	0.1703808
OM						
/cut1	1.599992	1.043894			-0.4460029	3.645988
/cut2	3.200367	1.145758			0.9547231	5.44601
/cut3	4.58198	1.256095			2.120078	7.043882
/cut4	6.17362	1.382536			3.469642	8.889083

 *2004.

CORRELATION
 Observations: 45

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.2444	1.0000			
ROA	0.6778	0.1667	1.0000		
CR	0.1111	0.0222	0.3222	1.0000	
OM	0.4222	0.0444	0.2667	0.2889	1.0000

OLOGIT

Iteration 0: log likelihood = -72.424706
 Iteration 1: log likelihood = -54.754828
 Iteration 2: log likelihood = -53.782198
 Iteration 3: log likelihood = -53.746972
 Iteration 4: log likelihood = -53.746902

Ordered logistic regression

Number of obs = 45
 LR chi2(4) = 37.36
 Prob > chi2 = 0.0000
 Log likelihood = -53.746902
 Pseudo R2 = 0.2579

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
PER	0.2470338	0.2153816	1.15	0.251	-0.1751063	0.6691739
ROA	1.2861	0.2953228	4.35	0.000	0.7072777	1.864922
CR	-0.3887255	0.2457407	-1.58	0.114	-0.8703685	0.0929175
OM	0.6333515	0.2252061	2.81	0.005	0.1919558	1.074747
/cut1	3.078209	1.180319			0.7648256	5.391593
/cut2	4.677201	1.319237			2.091544	7.262859
/cut3	5.993169	1.423385			3.203386	8.782952
/cut4	7.724913	1.569221			4.649296	10.80053

TABLE A.7.5 – Indonesia: Quantile Regression (1991-2004)

 *1991.

CORRELATION
 Observations: 87

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.2617	1.0000			
ROA	0.4420	-0.1012	1.0000		
CR	-0.0452	0.0442	0.8202	1.0000	
OM	0.1651	-0.1360	0.0527	-0.0387	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 87
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.4496
 0.50 Pseudo R2 = 0.4239
 0.90 Pseudo R2 = 0.5270

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	-0.0158697	0.0887281	-0.18	0.858	-0.1923782	0.1606387
ROA	0.7979164	0.0866234	9.21	0.000	0.6255948	0.970238
CR	-0.5009016	0.2066595	-2.42	0.018	-0.9120131	-0.0897901
OM	0.0125288	0.0557427	0.22	0.823	-0.0983611	0.1234187
Constant	3.234343	1.987799	1.63	0.108	-0.7200223	7.188707
q50						
PER	-0.027283	0.0585136	-0.47	0.642	-0.1436851	0.0891192
ROA	0.8280947	0.161549	5.13	0.000	0.5067223	1.149467
CR	-0.5388056	0.2344943	-2.30	0.024	-1.005289	-0.0723218
OM	0.0641853	0.0650699	0.99	0.327	-0.0652593	0.19363
Constant	5.586569	2.153652	2.59	0.011	1.30227	9.870868
Q90						
PER	-0.1247171	0.1571146	-0.79	0.430	-0.4372681	0.1878339
ROA	1.34094	0.2424545	5.53	0.000	0.8586204	1.823259
CR	-0.4741779	0.3117489	-1.52	0.132	-1.094346	0.14599
OM	-0.0323708	0.1274928	-0.25	0.800	-0.2859946	0.221253
Constant	10.16028	2.962611	3.43	0.001	4.266704	16.05386

 *1992.

CORRELATION
 Observations: 98

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.3115	1.0000			
ROA	0.8430	-0.2649	1.0000		
CR	-0.0918	0.0511	0.1654	1.0000	
OM	0.1127	-0.1533	0.1242	0.0822	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 98
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.5193
 0.50 Pseudo R2 = 0.5115
 0.90 Pseudo R2 = 0.5519

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	-0.0137523	0.0311403	-0.44	0.660	-0.0755907	0.0480862
ROA	0.777631	0.0777751	10.00	0.000	0.623185	0.932077
CR	-0.7224531	0.2759215	-2.62	0.010	-1.270379	-0.1745277
OM	0.0070892	0.0350876	0.20	0.840	-0.0625878	0.0767662
Constant	3.05022	0.9511519	3.21	0.002	1.161421	4.939019
q50						
PER	-0.0146564	0.026437	-0.55	0.581	-0.0671552	0.0378423
ROA	0.8792258	0.1264535	6.95	0.000	0.6281142	1.130337
CR	-1.126217	0.3954427	-2.85	0.005	-1.911487	-0.3409458
OM	0.020482	0.0530639	0.39	0.700	-0.0848924	0.1258563
Constant	5.886144	1.548554	3.80	0.000	2.811023	8.961266
Q90						
PER	-0.0255845	0.0468696	-0.55	0.586	-0.1186582	0.0674892
ROA	1.56058	0.347032	4.50	0.000	0.8714433	2.249717
CR	-1.08715	0.6593119	-1.65	0.103	-2.396413	0.2221128
OM	0.0620999	0.1164704	0.53	0.595	-0.1691873	0.293387
Constant	5.380959	3.482006	1.55	0.126	-1.533616	12.29553

 *1993.

CORRELATION
 Observations: 98

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.0935	1.0000			
ROA	0.7742	-0.1561	1.0000		
CR	-0.0065	-0.0231	0.1370	1.0000	
OM	0.1063	-0.0109	0.0472	-0.2366	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 98
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.4732
 0.50 Pseudo R2 = 0.4822
 0.90 Pseudo R2 = 0.4427

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	0.0068024	0.0897749	0.08	0.940	-0.1714728	0.1850775
ROA	1.142675	0.254837	4.48	0.000	0.6366193	1.648731
CR	-0.9294809	0.7869066	-1.18	0.241	-2.492121	0.6331597
OM	0.1477042	0.1364316	1.08	0.282	-0.123222	0.4186304
Constant	-4.929771	7.853315	-0.63	0.532	-20.5249	10.66536
q50						
PER	-0.0037447	0.0306288	-0.12	0.903	-0.0645676	0.0570781
ROA	1.103647	0.1004988	10.98	0.000	0.904076	1.303217
CR	-0.705439	0.5299879	-1.33	0.186	-1.75789	0.347012
OM	0.0852409	0.0371446	2.29	0.024	0.0114791	0.1590027
Constant	1.506641	1.822262	0.83	0.410	-2.11201	5.125291
Q90						
PER	-0.0071596	0.062574	-0.11	0.909	-0.1314192	0.1170999
ROA	1.546076	0.3907848	3.96	0.000	0.7700553	2.322098
CR	-1.15182	0.8386874	-1.37	0.173	-2.817287	0.5136469
OM	0.0079584	0.1101241	0.07	0.943	-0.2107263	0.226643
Constant	5.166477	5.250608	0.98	0.328	-5.260191	15.59314

 *1994.

CORRELATION
 Observations: 98

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.2359	1.0000			
ROA	0.8787	-0.1988	1.0000		
CR	0.0894	-0.0379	0.0578	1.0000	
OM	0.1316	-0.1820	0.1438	0.0852	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 98
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.4952
 0.50 Pseudo R2 = 0.4969
 0.90 Pseudo R2 = 0.6317

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	-0.011509	0.0096936	-1.19	0.238	-0.0307586	0.0077405
ROA	0.8452996	0.1576815	5.36	0.000	0.5321754	1.158424
CR	-0.5178399	0.5196055	-1.00	0.322	-1.549673	0.5139936
OM	-0.0247079	0.084079	-0.29	0.770	-0.1916722	0.1422564
Constant	1.684571	1.659911	1.01	0.313	-1.611684	4.980826
q50						
PER	-0.0144947	0.0103873	-1.40	0.166	-0.0351218	0.0061325
ROA	1.053884	0.1268482	8.31	0.000	0.8019884	1.305779
CR	-0.7064899	0.7638534	-0.92	0.357	-2.223351	0.8103716
OM	-0.013572	0.0425365	-0.32	0.750	-0.0980411	0.0708971
Constant	4.078982	1.7143	2.38	0.019	0.6747212	7.483242
Q90						
PER	-0.0130712	0.0262417	-0.50	0.620	-0.0651821	0.0390397
ROA	1.73161	0.3662361	4.73	0.000	1.004337	2.458882
CR	0.8082198	1.049815	0.77	0.443	-1.276505	2.892944
OM	0.0040799	0.1009708	0.04	0.968	-0.196428	0.2045879
Constant	1.666022	2.897186	0.58	0.567	-4.087215	7.419259

 *1995.

CORRELATION
 Observations: 99

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.0287	1.0000			
ROA	0.7245	-0.1345	1.0000		
CR	0.1284	-0.0793	0.2545	1.0000	
OM	0.1896	-0.1686	0.2281	0.0284	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 99
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.2755
 0.50 Pseudo R2 = 0.3746
 0.90 Pseudo R2 = 0.5447

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	-0.0063682	0.0732909	-0.09	0.931	-0.1518889	0.1391525
ROA	1.141715	0.5563995	2.05	0.043	0.0369705	2.246459
CR	-2.47549	2.007307	-1.23	0.221	6.461044	1.510065
OM	0.0308001	0.265551	0.12	0.908	-0.4964577	0.5580579
Constant	1.75334	11.31535	0.15	0.877	-20.71356	24.22024
q50						
PER	-0.0109907	0.0186697	-0.59	0.557	-0.480598	0.260785
ROA	1.219554	0.2572625	4.74	0.000	0.7087529	1.730354
CR	-1.531479	0.9598325	-1.60	0.114	-3.437249	0.3742905
OM	0.0033087	0.0593572	0.06	0.956	-0.1145464	0.1211639
Constant	4.152521	2.365499	1.76	0.082	-0.5442329	8.849275
Q90						
PER	-0.0191018	0.0234405	-0.81	0.417	-0.0656435	0.02744
ROA	1.548177	0.3240089	4.78	0.000	0.9048499	2.191504
CR	-0.7314109	1.793308	-0.41	0.684	-4.292067	2.829245
OM	0.0725137	0.1227187	0.59	0.556	-0.1711473	0.3161746
Constant	6.42102	2.971643	2.16	0.033	0.5207521	12.32129

 *1996.

CORRELATION
 Observations: 95

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.1849	1.0000			
ROA	0.5338	-0.1705	1.0000		
CR	0.0874	-0.0328	0.1610	1.0000	
OM	0.1385	-0.1275	0.0649	0.0849	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 95
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.0943
 0.50 Pseudo R2 = 0.3226
 0.90 Pseudo R2 = 0.5398

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	-0.0130261	0.0447899	-0.29	0.772	-0.102009	0.0759568
ROA	0.0766606	0.6522722	0.12	0.907	-1.219192	1.372513
CR	0.4404104	2.006255	0.22	0.827	-3.545365	4.426186
OM	0.0252134	0.2382545	0.11	0.916	-0.4481209	0.4985476
Constant	1.175239	6.560711	0.18	0.858	-11.85876	14.20924
q50						
PER	-0.0264303	0.0203947	-1.30	0.198	-0.0669479	0.140872
ROA	1.10315	0.2771368	3.98	0.000	0.5525696	1.653731
CR	-0.3898602	0.7705484	-0.51	0.614	-1.920689	1.140969
OM	0.0042398	0.101516	0.04	0.967	-0.1974393	0.205919
Constant	4.200651	2.379657	1.77	0.081	-0.5269536	8.928256
Q90						
PER	-0.0235073	0.0217859	-1.08	0.283	-0.0667888	0.0197742
ROA	1.697861	0.3489703	4.87	0.000	1.004571	2.391152
CR	0.5156717	1.452473	0.36	0.723	-2.369919	3.401262
OM	-0.0197103	0.093705	-0.21	0.834	-0.2058717	0.1664511
Constant	5.455187	3.40044	1.60	0.112	-1.30038	12.21075

 *1997.

CORRELATION
 Observations: 91

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.0903	1.0000			
ROA	0.4342	0.0789	1.0000		
CR	0.1274	-0.0452	0.3993	1.0000	
OM	0.0376	-0.0411	0.1180	-0.0389	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 91
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.1325
 0.50 Pseudo R2 = 0.1808
 0.90 Pseudo R2 = 0.2371

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	0.6410945	1.197047	0.54	0.594	-1.738557	3.020746
ROA	5.788514	6.329198	0.91	0.363	-6.793515	18.37054
CR	-4.522945	10.42133	-0.43	0.665	-25.23987	16.19398
OM	0.015829	2.063519	0.01	0.994	-4.086311	4.117969
Constant	-115.7812	193.1159	-0.60	0.550	-499.6829	268.1204
q50						
PER	0.0556351	0.073619	0.76	0.452	-0.0907146	0.2019847
ROA	2.833436	0.5122787	5.53	0.000	1.81506	3.851812
CR	-2.216624	2.359703	-0.94	0.350	-6.907558	2.474311
OM	-0.0076333	0.1401406	-0.05	0.957	-0.2862236	0.270957
Constant	-6.067991	4.149158	-1.46	0.147	-14.31624	2.180261
Q90						
PER	-0.0217031	0.1759827	-0.12	0.902	-0.3715451	0.3281388
ROA	3.259906	2.257263	1.44	0.152	-1.227384	7.747196
CR	-0.3151284	5.09817	-0.06	0.951	-10.44996	9.819699
OM	-0.0139727	0.3956726	-0.04	0.972	-0.8005438	0.7725983
Constant	2.725727	29.24386	0.09	0.926	-55.40915	60.8606

 *1998.

CORRELATION
 Observations: 83

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.0424	1.0000			
ROA	0.1223	0.1223	1.0000		
CR	0.0334	0.0380	0.3153	1.0000	
OM	-0.0285	-0.0246	-0.1126	-0.0076	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 83
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.0462
 0.50 Pseudo R2 = 0.0602
 0.90 Pseudo R2 = 0.0703

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	1.706846	2.320077	0.74	0.464	-2.912072	6.325764
ROA	0.6818995	5.728897	0.12	0.906	-10.72346	12.08726
CR	16.14812	38.35764	0.42	0.675	-60.21607	92.51232
OM	-0.4057572	4.498131	-0.09	0.928	-9.360849	8.549334
Constant	-141.4442	167.2526	-0.85	0.400	-474.4185	191.5301
q50						
PER	0.0234033	0.3022027	0.08	0.938	-0.578236	0.6250427
ROA	1.716099	0.8212571	2.09	0.040	0.081102	3.351096
CR	1.424734	5.798686	0.25	0.807	-10.11956	12.96903
OM	-0.4502444	0.3684723	-1.22	0.225	-1.183816	0.2833276
Constant	-3.400001	13.47943	-0.25	0.802	-30.23548	23.43547
Q90						
PER	-0.4499254	0.3136929	-1.43	0.155	-1.07444	0.1745892
ROA	0.7633555	0.8632879	0.88	0.379	-0.9553186	2.48203
CR	4.986147	4.705119	1.06	0.293	-4.381027	14.35332
OM	-0.4832769	0.314352	-1.54	0.128	-1.109104	0.1425499
Constant	27.12549	9.852604	2.75	0.007	7.510463	46.74052

 *1999.

CORRELATION
 Observations: 90

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.0098	1.0000			
ROA	0.4048	-0.0254	1.0000		
CR	0.0555	-0.0324	0.2088	1.0000	
OM	-0.0454	-0.0049	-0.0949	-0.0466	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 83
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.1063
 0.50 Pseudo R2 = 0.1538
 0.90 Pseudo R2 = 0.0997

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	0.0310103	0.1197875	0.26	0.796	-0.2071594	0.2691801
ROA	2.194591	1.578938	1.39	0.168	-0.9447609	5.333942
CR	1.526799	8.868953	0.17	0.864	-16.10705	19.16065
OM	0.0009822	1.131585	0.00	0.999	-2.248913	2.250877
Constant	-63.11658	66.06625	-0.96	0.342	-194.474	68.24081
q50						
PER	-0.0008149	0.006475	-0.13	0.900	-0.0136891	0.0120592
ROA	1.326911	0.2982866	4.45	0.000	0.7338376	1.919985
CR	-0.6557544	0.6829697	-0.96	0.340	-2.013681	0.7021723
OM	-0.019812	0.0528138	-0.38	0.708	-0.12482	0.085196
Constant	2.791569	2.718978	1.03	0.307	-2.614488	8.197627
Q90						
PER	-0.0076141	0.0238747	-0.32	0.751	-0.0550834	0.398552
ROA	3.307377	1.686903	1.96	0.053	-0.0466389	6.661392
CR	-2.130684	2.972961	-0.72	0.476	-8.041727	3.780359
OM	-0.021824	0.4864542	-0.04	0.964	-0.9890252	0.9453772
Constant	14.81231	19.65473	0.75	0.453	-24.26655	53.89118

 *2000.

CORRELATION
 Observations: 87

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.0355	1.0000			
ROA	0.1624	0.0372	1.0000		
CR	0.1163	0.1045	0.3809	1.0000	
OM	0.1365	-0.1677	0.1900	0.1614	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 87
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.0439
 0.50 Pseudo R2 = 0.0933
 0.90 Pseudo R2 = 0.0820

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	0.104519	1.172834	0.09	0.929	-2.228622	2.43766
ROA	2.549063	4.161391	0.61	0.542	-5.72927	10.8274
CR	0.1745472	22.72077	0.01	0.994	-45.0243	45.3734
OM	2.417407	11.60265	0.21	0.835	-20.66397	25.49878
Constant	-128.9673	434.1268	-0.30	0.767	-992.5839	734.6492
q50						
PER	0.0003304	0.0310066	0.01	0.992	-0.0613516	0.0620125
ROA	1.268453	0.3046129	4.16	0.000	0.6624806	1.874425
CR	-0.2269411	0.7220281	-0.31	0.754	-1.663285	1.209403
OM	0.0290287	0.2322944	0.12	0.901	-0.4330789	0.4911363
Constant	-1.141959	3.745719	-0.30	0.761	-8.593388	6.30947
Q90						
PER	-0.0188752	0.695016	-0.27	0.787	-0.1571361	0.1193857
ROA	0.9253148	0.37239	2.48	0.015	0.1845125	1.666117
CR	-0.2125821	1.187519	-0.18	0.858	-2.574936	2.149772
OM	-0.4898163	0.4556483	-1.07	0.286	-1.396246	0.4166133
Constant	22.38047	18.18911	1.23	0.222	-13.80347	58.5644

 *2001.

CORRELATION
 Observations: 86

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.0396	1.0000			
ROA	-0.1393	0.0282	1.0000		
CR	0.1014	0.0556	0.2177	1.0000	
OM	0.1786	-0.2391	0.1556	0.2764	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 86
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.1045
 0.50 Pseudo R2 = 0.1059
 0.90 Pseudo R2 = 0.1386

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	0.1499211	0.4864029	0.31	0.759	-0.8178681	1.11771
ROA	1.197857	0.6112193	1.96	0.053	-0.0182773	2.413992
CR	0.5251431	2.758226	0.19	0.849	-4.962861	6.013147
OM	0.5361923	2.036637	0.26	0.793	-3.516076	4.58846
Constant	-34.02404	57.03263	-0.60	0.552	-147.5011	79.45301
q50						
PER	-0.0034855	0.0525368	-0.07	0.947	-0.1080172	0.1010462
ROA	0.9534188	0.5014369	1.90	0.061	-0.0442835	1.951121
CR	-0.2854371	0.8517844	-0.34	0.738	-1.980221	1.409347
OM	0.1559167	0.3112522	0.50	0.618	-0.4633776	0.7752109
Constant	1.975372	3.838541	0.51	0.608	-5.66212	9.612865
Q90						
PER	-0.1040955	0.1943044	-0.54	0.594	-0.4907003	0.282092
ROA	-1.167392	1.222326	-0.96	0.342	-3.599437	1.264652
CR	-1.792343	4.72816	-0.38	0.706	-11.1999	7.615212
OM	2.194699	1.334544	1.64	0.104	-0.4606246	4.850023
Constant	25.91519	10.03601	2.58	0.012	5.946676	45.8837

 *2002.

CORRELATION
 Observations: 80

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.0730	1.0000			
ROA	0.7744	-0.0167	1.0000		
CR	-0.0177	0.1472	0.0987	1.0000	
OM	-0.1965	-0.0033	0.0206	0.2451	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 80
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.0650
 0.50 Pseudo R2 = 0.0331
 0.90 Pseudo R2 = 0.3136

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	0.159534	0.2544203	0.63	0.533	-0.3472972	0.6663652
ROA	1.255421	0.7635055	1.64	0.104	-0.2655604	2.776402
CR	-0.4527297	1.622271	-0.28	0.781	-3.684459	2.779
OM	-0.1491045	0.6281644	-0.24	0.813	-1.400472	1.102263
Constant	-6.191306	10.56268	-0.59	0.560	-27.23324	14.85062
q50						
PER	0.0295392	1.384637	0.02	0.983	-2.7288	2.787878
ROA	1.750311	11.54358	0.15	0.880	-21.24568	24.7463
CR	-0.0488126	23.85832	-0.00	0.998	-47.57702	47.47939
OM	-0.0516988	3.425236	-0.02	0.998	-6.875119	6.771722
Constant	-1.403504	47.82781	-0.03	0.977	-96.68138	93.87437
Q90						
PER	-2.412444	7.298949	-0.33	0.742	-16.9527	12.12781
ROA	36.78298	16.88243	2.18	0.032	3.151459	70.41449
CR	-1.401207	57.03272	-0.02	0.980	-115.0162	112.2138
OM	-10.55123	14.86676	-0.71	0.480	-40.16733	19.06487
Constant	235.6599	490.9287	0.48	0.633	-7423203	1213.64

 *2003.

CORRELATION
 Observations: 79

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.0262	1.0000			
ROA	-0.0528	-0.0489	1.0000		
CR	-0.0549	0.1287	0.0408	1.0000	
OM	-0.0385	0.1665	0.2386	-0.0226	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 79
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.1288
 0.50 Pseudo R2 = 0.0745
 0.90 Pseudo R2 = 0.0190

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	0.0266277	0.0738212	0.36	0.719	-0.1204642	0.1737195
ROA	0.9476324	0.2357239	4.02	0.000	0.4779423	1.417323
CR	0.0436958	0.4588753	0.10	0.924	-0.8706332	0.9580247
OM	-0.0098714	0.1919662	-0.05	0.959	-0.3923723	0.3726296
Constant	-2.526655	4.28895	-0.59	0.558	-11.07257	6.019265
q50						
PER	0.0395715	0.0506622	0.78	0.437	-0.0613751	0.1405181
ROA	1.008193	0.1561626	6.46	0.000	0.6970325	1.319354
CR	-0.2672848	0.4399104	-0.61	0.545	-1.143825	0.6092559
OM	0.0276157	0.0492827	0.56	0.577	-0.0705823	0.1258136
Constant	2.727271	1.802991	1.51	0.135	-0.8652661	6.319809
Q90						
PER	-0.1423776	0.6043554	-0.24	0.814	-1.346582	1.061827
ROA	0.8109663	1.809378	0.45	0.655	-2.794298	4.41623
CR	-0.6507845	4.076692	-0.16	0.874	-8.773772	7.472203
OM	-0.3111948	1.960625	-0.16	0.874	-4.217826	3.595436
Constant	29.72342	136.7959	0.22	0.829	-242.8483	302.2952

 *2004.

CORRELATION
 Observations: 79

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.0458	1.0000			
ROA	0.2831	-0.0773	1.0000		
CR	0.0556	0.0965	0.0637	1.0000	
OM	0.0428	0.1349	-0.0680	-0.0520	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 79
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.0877
 0.50 Pseudo R2 = 0.1905
 0.90 Pseudo R2 = 0.4206

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	0.0819574	0.6733856	0.12	0.903	-1.259793	1.423707
ROA	1.53559	1.640084	0.94	0.352	-1.732349	4.80353
CR	1.271709	10.24566	0.12	0.902	-19.14322	21.68664
OM	0.0860181	0.3761866	0.23	0.820	-0.6635501	0.8355863
Constant	-29.87522	82.11506	-0.36	0.717	-193.4931	133.7426
q50						
PER	0.0261952	0.0593892	0.44	0.660	-0.0921403	0.1445306
ROA	1.4372	0.3746962	3.84	0.000	0.6906019	2.183799
CR	-0.2345567	0.663202	-0.35	0.725	-1.556015	1.086902
OM	0.0185046	0.038458	0.48	0.632	-0.0581247	0.0951339
Constant	-2.042442	3.038565	-0.67	0.504	-8.096916	4.012031
Q90						
PER	-0.0025199	0.940042	-0.03	0.979	-0.1898273	0.1847876
ROA	2.445988	0.6610586	3.70	0.000	1.1288	3.763176
CR	-0.5376469	1.708469	-0.31	0.754	-3.941846	2.866553
OM	0.1354293	0.4464136	0.30	0.762	-0.7540692	1.024928
Constant	1.49505	7.386678	0.20	0.840	-13.22323	16.21333

TABLE A.7.6 – Malaysia: Quantile Regression (1991-2004)

*1991.

CORRELATION
Observations: 44

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.1870	1.0000			
ROA	0.7833	-0.1769	1.0000		
CR	-0.0871	0.0183	0.1614	1.0000	
OM	0.0702	0.0700	0.1997	0.4081	1.0000

SQREG
Simultaneous quantile regression
Number of obs = 44
bootstrap(500) SEs
0.10 Pseudo R2 = 0.5080
0.50 Pseudo R2 = 0.5008
0.90 Pseudo R2 = 0.4775

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	0.0467867	0.084401	0.55	0.583	-0.1239304	0.2175039
ROA	0.9300748	0.1391556	6.68	0.000	0.6486061	1.211543
CR	-0.9837039	1.604938	-0.61	0.543	-4.229998	2.26259
OM	-0.0161434	0.0971388	-0.17	0.869	-0.2126252	0.1803384
Constant	-0.1868306	4.389884	-0.04	0.966	-9.066209	8.692548
q50						
PER	-0.1216821	0.1099091	-1.11	0.275	-0.3439943	0.1006301
ROA	0.8049312	0.2127527	3.78	0.001	0.3745982	1.235264
CR	-1.337793	1.942335	-0.69	0.495	-5.266537	2.59095
OM	-0.0168416	0.1077657	-0.16	0.877	-0.2348182	0.201135
Constant	9.498083	5.245261	1.81	0.078	-1.111459	20.10763
Q90						
PER	-0.4100838	0.1530806	-2.68	0.011	-0.7197184	-0.1004491
ROA	0.5384368	0.255882	2.10	0.042	0.0207767	1.055917
CR	-2.232077	1.93284	-1.15	0.255	-6.141614	1.67746
OM	0.0236955	0.1751869	0.14	0.893	-0.3306534	0.3780445
Constant	25.71183	6.199697	4.15	0.000	13.17176	38.25191

 *1992.

CORRELATION
 Observations: 50

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.3395	1.0000			
ROA	0.7658	-0.1954	1.0000		
CR	0.1226	-0.1579	0.3608	1.0000	
OM	0.2420	-0.0832	0.2424	0.3051	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 50
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.4770
 0.50 Pseudo R2 = 0.4562
 0.90 Pseudo R2 = 0.4771

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	0.0107802	0.0760051	0.14	0.888	-0.1423019	0.1638622
ROA	0.9670596	0.1878053	5.15	0.000	0.5888002	1.345319
CR	-0.7944157	0.8657379	-0.92	0.364	-2.538101	0.9492699
OM	0.0889914	0.0813755	1.09	0.280	-0.0749072	0.2528901
Constant	-2.483506	3.200833	-0.78	0.442	-8.930314	3.963302
q50						
PER	-0.0309879	0.1134713	-0.27	0.786	-0.2595307	0.197555
ROA	1.003443	0.1612197	6.22	0.000	0.6787296	1.328156
CR	-0.5551085	1.391195	-0.40	0.692	-3.357119	2.246902
OM	-0.0289388	0.1012294	-0.29	0.776	-0.2328253	0.1749477
Constant	2.829758	4.781049	0.59	0.557	-6.79977	12.45929
Q90						
PER	-0.1882163	0.1152667	-1.63	0.109	-0.4203754	0.0439427
ROA	0.7123107	0.1957938	3.64	0.001	0.3179618	1.10666
CR	-3.785003	1.519546	-2.49	0.016	-6.845526	-0.7244796
OM	0.0625246	0.171732	0.36	0.718	-0.2833614	0.4084106
Constant	20.85016	4.619267	4.51	0.000	11.54648	30.15384

 *1993.

CORRELATION
 Observations: 50

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.3549	1.0000			
ROA	0.7027	-0.1656	1.0000		
CR	0.1136	0.0027	0.4353	1.0000	
OM	0.2613	-0.1831	0.1002	0.0320	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 50
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.5206
 0.50 Pseudo R2 = 0.4181
 0.90 Pseudo R2 = 0.5741

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	-0.0333286	0.0253449	-1.31	0.195	-0.0843759	0.0177187
ROA	0.9962839	0.1070549	9.31	0.000	0.7806642	1.211904
CR	-1.171611	0.8327885	-1.41	0.166	-2.848933	0.5057114
OM	-0.1220494	0.0513817	-2.38	0.022	-0.2255376	-0.0185613
Constant	4.302243	2.000998	2.15	0.037	0.2720275	8.332459
q50						
PER	-0.0361852	0.0615295	-0.59	0.559	-0.1601119	0.0877416
ROA	1.085847	0.1620247	6.70	0.000	0.7595128	1.412182
CR	-1.508232	1.443498	-1.04	0.302	-4.415587	1.399122
OM	-0.0251254	0.1061864	-0.24	0.814	-0.2389957	0.1887449
Constant	4.71035	3.925751	1.20	0.236	-3.196518	12.61722
Q90						
PER	-0.0809412	0.0683072	-1.18	0.242	-2.185189	0.0566365
ROA	0.7751584	0.1544932	5.02	0.000	0.4639932	1.086324
CR	-2.352968	1.52994	-1.54	0.131	-5.434425	0.7284892
OM	0.8086373	0.3992666	2.03	0.049	0.004473	1.612802
Constant	6.795087	7.085916	0.96	0.343	-7.47668	21.06685

 *1994.

CORRELATION
 Observations: 51

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.3347	1.0000			
ROA	0.7065	-0.2422	1.0000		
CR	-0.1916	0.2109	-0.0847	1.0000	
OM	0.4682	-0.2448	0.2464	-0.0570	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 51
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.3474
 0.50 Pseudo R2 = 0.4172
 0.90 Pseudo R2 = 0.5838

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	-0.0543589	0.0609711	-0.89	0.377	-0.1770874	0.0683696
ROA	0.2802527	0.3190204	0.88	0.384	-0.361902	0.9224073
CR	0.1612775	1.005893	0.16	0.873	-1.86348	2.186035
OM	0.0361037	0.1060798	0.34	0.735	-0.1774238	0.2496312
Constant	4.852725	3.46553	1.40	0.168	-2.123026	11.82847
q50						
PER	-0.0034039	0.0730637	-0.05	0.963	-0.1504734	0.1436656
ROA	0.9002654	0.2270685	3.96	0.000	0.4432001	1.357331
CR	-0.1959691	0.9874111	-0.20	0.844	-2.183524	1.791586
OM	0.1894365	0.1244991	1.52	0.135	-0.0611672	0.4400401
Constant	1.875733	4.055699	0.46	0.646	-6.287965	10.03943
Q90						
PER	-0.0148587	0.1267952	-0.12	0.907	-0.2700842	0.2403667
ROA	0.6968922	0.1837853	3.79	0.000	0.3269515	1.066833
CR	-0.5226151	1.201841	-0.43	0.666	-2.941796	1.896566
OM	0.4243428	0.1655986	2.56	0.014	0.0910102	0.7576754
Constant	7.670388	5.357627	1.43	0.159	-3.113956	18.45473

 *1995.

CORRELATION
 Observations: 50

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.3366	1.0000			
ROA	0.6606	-0.2201	1.0000		
CR	0.0512	-0.0037	0.2658	1.0000	
OM	0.3025	-0.5919	0.0780	-0.3595	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 50
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.3523
 0.50 Pseudo R2 = 0.3332
 0.90 Pseudo R2 = 0.3757

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	-0.0905211	0.0847586	-1.07	0.291	-0.2612337	0.0801916
ROA	0.3011917	0.2744727	1.10	0.278	-0.2516247	0.8540081
CR	-0.075276	0.9747661	-0.08	0.939	-2.038556	1.888004
OM	-0.0228058	0.1056252	-0.22	0.830	-0.2355459	0.1899343
Constant	7.446242	4.622537	1.61	0.114	-1.864026	16.75651
q50						
PER	0.0217616	0.1035868	0.21	0.835	-0.186873	0.2303961
ROA	0.7817402	0.2785704	2.81	0.007	0.2206707	1.34281
CR	-0.1416331	1.426136	-0.10	0.921	-3.014018	2.730751
OM	0.1341325	0.11202	1.20	0.237	-0.0914875	0.3597524
Constant	2.798125	4.428089	0.63	0.531	-6.120504	11.71675
Q90						
PER	0.1152332	0.2114734	0.54	0.589	-0.3106961	0.5411625
ROA	0.9255465	0.2544522	3.64	0.001	0.4130534	1.43804
CR	-0.2382566	1.495577	-0.16	0.874	-3.250504	2.773991
OM	0.4763854	0.2916043	1.63	0.109	-0.1109357	1.063707
Constant	1.370173	10.48682	0.13	0.897	-19.75136	22.49171

 *1996.

CORRELATION
 Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.3275	1.0000			
ROA	0.7020	-0.1710	1.0000		
CR	0.1860	0.0619	0.3674	1.0000	
OM	0.1132	-0.1089	0.1170	0.0564	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 52
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.4248
 0.50 Pseudo R2 = 0.3591
 0.90 Pseudo R2 = 0.3620

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	-0.0535423	0.048125	-1.11	0.272	-0.1503572	0.0432726
ROA	0.3981114	0.231338	1.72	0.092	-0.0672806	0.8635035
CR	0.8868946	0.9933746	0.89	0.377	-1.111517	2.885306
OM	0.0589584	0.0700233	0.84	0.404	-0.0819102	0.199827
Constant	2.756899	2.922204	0.94	0.350	-3.121817	8.635615
q50						
PER	-0.0265488	0.988074	-0.27	0.789	-0.2253236	0.1722259
ROA	0.7992038	0.2140607	3.73	0.001	0.3685693	1.229838
CR	-0.8210728	1.079166	-0.76	0.451	-2.992075	1.34993
OM	-0.0077946	0.054819	-0.14	0.887	-0.1175992	0.10201
Constant	8.623063	3.537295	2.44	0.019	1.506944	15.73918
Q90						
PER	-0.1163082	0.1748637	-0.67	0.509	-0.4680886	0.2354721
ROA	0.6524591	0.2029688	3.21	0.002	0.2441385	1.06078
CR	-1.154367	1.118159	-1.03	0.307	-3.403813	1.095079
OM	-0.0287693	0.1078917	-0.27	0.791	-0.2458195	0.1882808
Constant	20.99922	5.455491	3.85	0.000	10.02418	31.97425

 *1997.

CORRELATION
 Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.1759	1.0000			
ROA	0.6580	-0.1118	1.0000		
CR	0.1173	0.0095	0.3939	1.0000	
OM	0.1741	-0.0098	0.1013	0.0287	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 52
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.4390
 0.50 Pseudo R2 = 0.3913
 0.90 Pseudo R2 = 0.2827

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	-0.0001544	0.0905836	-0.00	0.999	-0.1823851	0.1820763
ROA	0.6648176	0.3080491	2.16	0.036	0.0451027	1.284533
CR	1.205091	1.654187	0.73	0.470	-2.122704	4.532887
OM	0.0606229	0.0882367	0.69	0.495	-0.1168864	0.2381323
Constant	-3.662638	2.32197	-1.58	0.121	-8.333839	1.008564
q50						
PER	-0.0007578	0.0458566	-0.02	0.987	-0.0930095	0.0914939
ROA	1.025631	0.1990914	5.15	0.000	0.6251104	1.426151
CR	-1.726603	1.282664	-1.35	0.185	-4.306989	0.8537833
OM	-0.0046866	0.1165213	-0.04	0.968	-0.2390973	0.2297241
Constant	6.118189	2.461015	2.49	0.017	1.167266	11.06911
Q90						
PER	-0.0021589	0.1726149	-0.01	0.990	-0.3494153	0.3450975
ROA	1.878502	0.6540863	2.87	0.006	0.5626498	3.194353
CR	-4.50569	3.475711	-1.30	0.201	-11.49792	2.486539
OM	0.573977	0.286621	2.00	0.051	-0.0026302	1.150584
Constant	9.548947	8.381207	1.14	0.260	-7.311866	26.40976

 *1998.

CORRELATION
 Observations: 52

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.0305	1.0000			
ROA	0.6276	0.1040	1.0000		
CR	0.2039	-0.0709	0.1738	1.0000	
OM	0.3959	0.1264	0.4825	0.0970	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 52
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.1669
 0.50 Pseudo R2 = 0.3041
 0.90 Pseudo R2 = 0.4829

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	-0.0454622	1.183095	-0.04	0.970	-2.425542	2.334618
ROA	1.635452	3.097725	0.53	0.600	-4.596366	7.86727
CR	1.298478	30.61507	0.04	0.966	-60.29111	62.88806
OM	0.1869786	1.335542	0.14	0.889	-2.499785	2.873743
Constant	-19.50818	127.8388	-0.15	0.879	-276.6866	237.6703
q50						
PER	-0.0002485	0.0435735	-0.01	0.995	-0.087907	0.08741
ROA	1.275848	0.3463486	3.68	0.001	0.5790847	1.972612
CR	-1.175978	1.349506	-0.87	0.388	-3.890835	1.538879
OM	0.0111835	0.0907391	0.12	0.902	-0.1713601	0.1937271
Constant	0.6899794	3.001833	0.23	0.819	-5.348929	6.728888
Q90						
PER	0.0013744	0.0577524	0.02	0.981	-0.1148083	0.1175572
ROA	1.646214	0.6143827	2.68	0.010	0.4102358	2.882193
CR	-1.443936	1.757382	-0.82	0.415	-4.979333	2.091462
OM	0.0332407	0.1513632	0.22	0.827	-0.2712627	0.3377441
Constant	5.314446	3.960029	1.34	0.186	-2.652105	13.281

 *1999.

CORRELATION
 Observations: 36

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.3062	1.0000			
ROA	0.7447	-0.2988	1.0000		
CR	-0.0165	-0.1813	0.0281	1.0000	
OM	-0.0217	-0.0767	0.0180	0.1422	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 36
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.5621
 0.50 Pseudo R2 = 0.4785
 0.90 Pseudo R2 = 0.4321

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	-0.0670371	0.0601742	-1.11	0.274	-0.1897633	0.055689
ROA	0.8588792	0.1799057	4.77	0.000	0.491959	1.225799
CR	0.2247465	0.8591785	0.26	0.795	-1.52756	1.977053
OM	0.0198219	0.0527291	0.38	0.710	-0.0877197	0.1273636
Constant	1.548543	3.137014	0.49	0.625	-4.84944	7.946525
q50						
PER	-0.0503356	0.0737996	-0.68	0.500	-0.2008508	0.1001796
ROA	0.8997056	0.2734965	3.29	0.003	0.3419058	1.457505
CR	0.1851345	1.064961	0.17	0.863	-1.986869	2.357138
OM	-0.0376217	0.0778025	-0.48	0.632	-0.193009	0.1210576
Constant	6.556627	3.96213	1.65	0.108	-1.524191	14.63744
Q90						
PER	-0.1448759	0.3230653	-0.45	0.657	-0.8037718	0.5140201
ROA	0.9277215	1.152233	0.81	0.427	-1.422273	3.277716
CR	-0.045789	3.012366	-0.02	0.988	-6.18955	6.097972
OM	-0.10462	0.2117539	-0.05	0.961	-0.4423369	0.421413
Constant	16.42166	9.358414	1.75	0.089	-2.664951	35.50827

 *2000.

CORRELATION
 Observations: 44

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.2328	1.0000			
ROA	0.6924	-0.2318	1.0000		
CR	-0.0638	-0.1296	0.1855	1.0000	
OM	-0.0096	-0.0553	0.1242	0.2215	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 44
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.2762
 0.50 Pseudo R2 = 0.3550
 0.90 Pseudo R2 = 0.4721

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	0.0078052	0.0588567	0.13	0.895	-0.1112438	0.1268541
ROA	1.058766	0.2835004	3.73	0.001	0.4853328	1.6322
CR	-3.807953	2.024923	-1.88	0.068	-7.903746	0.2878399
OM	-0.2341061	0.134152	-1.75	0.089	-0.5054541	0.0372419
Constant	9.146941	6.941506	1.32	0.195	-4.893581	23.18746
q50						
PER	-0.0026894	0.670298	-0.04	0.968	-0.1382699	0.1328911
ROA	1.045255	0.2758682	3.79	0.001	0.4872585	1.603251
CR	-0.6877268	1.238658	-0.56	0.582	3.193149	1.817695
OM	0.0166219	0.0675334	0.25	0.807	-0.1199773	0.1532211
Constant	1.462311	6.001678	0.27	0.786	-10.49723	13.78185
Q90						
PER	-0.0446521	0.1221937	-0.37	0.717	-0.2918122	0.202508
ROA	1.579292	0.3943668	4.00	0.000	0.7816103	2.376974
CR	-0.3063402	1.415579	-0.22	0.830	-3.169619	2.556939
OM	-0.1540183	0.1188745	-1.30	0.203	-0.3944645	0.086428
Constant	13.36504	6.070756	2.20	0.034	1.085772	25.6443

 *2001.

CORRELATION
 Observations: 39

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.3300	1.0000			
ROA	0.7881	-0.3374	1.0000		
CR	-0.1219	-0.1521	0.1129	1.0000	
OM	-0.1531	-0.0396	-0.0874	0.0273	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 39
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.5600
 0.50 Pseudo R2 = 0.5007
 0.90 Pseudo R2 = 0.4670

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	0.0179914	0.0385287	0.47	0.644	-0.0603084	0.962911
ROA	1.01073	0.1740966	5.81	0.000	0.6569232	1.364537
CR	-0.4180188	0.7054421	-0.59	0.557	-1.85165	1.105612
OM	-0.0032182	0.0616828	-0.05	0.959	-0.1285726	0.1221362
Constant	-0.8876494	3.193436	-0.28	0.783	-7.377492	5.602194
q50						
PER	-0.0206485	0.0628982	-0.33	0.745	-0.148473	0.107176
ROA	1.158152	0.1981263	5.85	0.000	0.755108	1.560793
CR	-0.3885447	0.9298872	-0.42	0.679	-2.278303	1.501213
OM	-0.0235821	0.0643316	-0.37	0.716	-0.1543197	0.1071554
Constant	2.33528	5.34854	0.44	0.665	-8.534261	13.20482
Q90						
PER	-0.1354292	0.1236981	-1.09	0.281	-0.386814	0.1159557
ROA	1.651924	0.5411921	3.05	0.004	0.5520898	2.751759
CR	-3.243725	1.556175	-2.08	0.045	-6.406254	-0.0811957
OM	-0.103176	0.1242322	-0.83	0.412	-0.3556463	0.1492943
Constant	18.50657	9.599455	1.93	0.062	-1.001872	38.01501

 *2002.

CORRELATION
 Observations: 39

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.2644	1.0000			
ROA	0.6868	-0.3119	1.0000		
CR	-0.0871	-0.1341	-0.1363	1.0000	
OM	-0.1942	0.1530	-0.1104	0.0665	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 39
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.5197
 0.50 Pseudo R2 = 0.3139
 0.90 Pseudo R2 = 0.3462

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	-0.0232453	0.0337939	-0.69	0.496	-0.0919227	0.0454321
ROA	0.84371	0.1725081	4.89	0.000	0.4931314	1.194289
CR	-0.2852261	0.6706119	-0.43	0.673	-1.648073	1.077621
OM	-0.000763	0.0543437	-0.01	0.989	-0.1112026	0.1096766
Constant	1.061852	2.230858	0.48	0.637	-3.471797	5.5955
q50						
PER	-0.0068351	0.0517904	-0.13	0.896	-0.1120858	0.0984157
ROA	1.036684	0.2987518	3.47	0.001	0.4295476	1.643821
CR	0.2700574	0.9288492	0.29	0.773	-1.617591	2.157706
OM	0.0050327	0.0809202	0.06	0.951	-0.159417	0.1694823
Constant	0.1924754	4.409108	0.04	0.965	-8.767911	9.152861
Q90						
PER	0.0324131	0.1812144	0.18	0.859	-0.3358589	0.4006852
ROA	1.795414	0.7749286	2.32	0.027	0.2205693	3.370258
CR	0.2397151	1.788319	0.13	0.894	-3.394586	3.874016
OM	-0.175952	0.1485666	-1.18	0.244	-0.4778755	0.1259716
Constant	7.53369	10.0338	0.75	0.458	-12.85745	27.92483

 *2003.

CORRELATION
 Observations: 46

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	-0.3061	1.0000			
ROA	0.7623	-0.2794	1.0000		
CR	-0.0431	0.0708	0.1021	1.0000	
OM	0.0430	-0.0779	0.1015	0.2148	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 46
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.6167
 0.50 Pseudo R2 = 0.4033
 0.90 Pseudo R2 = 0.3142

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	-0.0021023	0.0312082	-0.07	0.947	-0.0651286	0.0609241
ROA	0.9260369	0.1416967	6.54	0.000	0.6398746	1.212199
CR	-0.2722797	0.4947561	-0.55	0.585	-1.27146	0.7269005
OM	0.0245094	0.0418304	0.59	0.561	-0.0599689	0.1089876
Constant	-1.150296	1.83937	-0.63	0.535	-4.864979	2.564386
q50						
PER	-0.0050991	0.0299043	-0.17	0.865	-0.0654921	0.0552938
ROA	1.107933	0.2146968	5.16	0.000	0.6743439	1.541522
CR	-3.862191	0.712338	-0.54	0.591	-1.824815	1.052377
OM	0.0090087	0.0579693	0.16	0.877	-0.1080627	0.1260801
Constant	1.348404	2.593864	0.52	0.606	-3.89001	6.586818
Q90						
PER	-0.0226956	0.1504765	-0.15	0.881	-0.3265891	0.2811978
ROA	0.8790437	0.5154235	1.71	0.096	-0.1618751	1.919962
CR	-0.5950326	1.693294	-0.35	0.727	-4.014709	2.824644
OM	-0.0175308	0.1524161	-0.12	0.909	-0.3253413	0.2902798
Constant	10.544	6.19032	1.70	0.096	-1.957602	23.04561

 *2004.

CORRELATION
 Observations: 32

	ROE	PER	ROA	CR	OM
ROE	1.0000				
PER	0.0040	1.0000			
ROA	0.8186	-0.0299	1.0000		
CR	-0.0996	-0.1216	0.1734	1.0000	
OM	-0.1539	-0.2353	-0.0363	0.2651	1.0000

SQREG
 Simultaneous quantile regression
 Number of obs = 32
 bootstrap(500) SEs
 0.10 Pseudo R2 = 0.4018
 0.50 Pseudo R2 = 0.4114
 0.90 Pseudo R2 = 0.6223

ROE	Coeff.	Std. Err.	Z	P>|z|	[95% Conf. Interval]	
q10						
PER	0.336687	0.2102517	1.60	0.121	-0.0947139	0.7680878
ROA	1.221546	0.2734503	4.47	0.000	0.6604721	1.782619
CR	-1.198597	1.245764	-0.96	0.345	-3.754693	1.357499
OM	0.0972455	0.0862984	1.13	0.270	-0.0798243	0.2743152
Constant	-7.550435	6.256172	-1.21	0.238	-20.38704	5.28617
q50						
PER	-0.056939	0.2804201	-0.20	0.841	-0.6323135	0.5184356
ROA	1.135184	0.3273438	3.47	0.002	0.4635298	1.806838
CR	-2.251108	1.605158	-1.40	0.172	-5.544622	1.042405
OM	-0.0739856	0.1021257	-0.72	0.475	-0.2835301	0.135559
Constant	11.61983	7.212324	1.61	0.119	-3.178633	26.4183
Q90						
PER	0.1316961	0.5477262	0.24	0.812	-0.9921452	1.255537
ROA	1.37739	0.3787355	3.64	0.001	0.6002893	2.154491
CR	-2.595066	2.044692	-1.27	0.215	-6.790428	1.600295
OM	0.0311312	0.1471724	0.21	0.834	-0.2708416	0.3331041
Constant	14.66006	11.76546	1.25	0.223	-9.480674	38.80079

Abstract

This dissertation analyses the policies adopted by Indonesia and Malaysia during and shortly after the East Asian Crisis in 1997/98. The authors give a short overview over the long period of growth in East Asia and the factors leading to the Crisis. Furthermore, the dissertation compares in detail the so-called ‚orthodox‘ policies applied by Indonesia vs. the ‚unorthodox‘ policies applied by Malaysia using qualitative analyses e.g. corporate governance, and quantitative analyses e.g. indicator analysis, difference-in-difference analysis, ordered logistic regression and quantile regression of the macroeconomy and on a corporate level.

The goal of this study is to show that countries have at disposal ‚orthodox‘ as well as ‚unorthodox‘ policies in a crisis situation. Furthermore, this dissertation should show that the selection of economic policies should consider the circumstances leading to a crisis and the possible threats and benefits of the various policy choices. This is done by analyzing the policies used during a third-generation crisis on the successful example of Malaysia and the less successful example of Indonesia.

Zusammenfassung

Diese Dissertation analysiert die Wirtschaftspolitiken welche von Indonesien und Malaysia während und kurz nach der Ostasienkrise 1997/98 angewandt wurden. Die Autorin gibt einen kurzen Überblick über die lange Wirtschaftswachstumsphase in Ostasien und den Faktoren welche zur Krise geführt haben. Weiters vergleicht die Dissertation detailliert die sogenannten „orthodoxen“ Wirtschaftspolitiken welche von Indonesien angewandt wurden mit den „unorthodoxen“ Wirtschaftspolitiken welche von Malaysia angewandt wurden unter Anwendung von qualitativen Analysen (zB Corporate Governance) und quantitativen Analysen (zB Indikatoranalyse, difference-in-difference Analyse, Ordered logistische Regression und Quantile Regression) auf makroökonomischer Ebene und auf Unternehmensebene.

Das Ziel dieser Studie ist es zu zeigen, dass Staaten sowohl „orthodoxe“ als auch „unorthodoxe“ Politiken in Krisensituationen zur Verfügung haben. Weiters soll die Dissertation zeigen, dass die Auswahl der Wirtschaftspolitiken die Umstände, welche zu einer Krise führen und die möglichen positiven und negativen Folgen der verschiedenen Wirtschaftspolitikmöglichkeiten, betrachtet werden sollten. Dies wird anhand einer Analyse der angewandten Politiken während einer sog. „third-generation“ Krise des erfolgreichen Beispiels Malaysias und des weniger erfolgreichen Beispiels Indonesiens aufgezeigt.

LEBENS LAUF

Mag. MARION PIRCHER

BERUFLICHE ERFAHRUNG

- Seit April 2008* **Bankprüferin** bei der Österreichischen Nationalbank (OeNB) in Wien/Österreich.
- November 2007 bis März 2008* **Projektmitarbeiterin** beim WIFO (Wirtschaftsforschungsinstitut) der Handelskammer Bozen/Südtirol: Mitarbeit Südtiroler Haushaltspanel (Einkommensstudie der Südtiroler Haushalte im Rahmen einer Panelstudie).
- März 2007bis März 2008* **Didaktische Mitarbeiterin** an der Freien Universität Bozen (Italien): Seit Oktober 2007 Internationale Volkswirtschaftslehre A und B und seit März 2007 Volkswirtschaftslehre IIB (Makroökonomie).
- Juli 2005* Mithilfe bei einer **Umfrage** der Freien Universität Bozen zur Lage der Bergbauern in Südtirol.
- Juni bis September 2002 und Juli bis September 2001* **Schalterangestellte** bei der „Südtiroler Sparkasse AG“, Filiale Meran Obermais (Italien) bzw. Dorf Tirol bei Meran (Italien) (Aufgaben: Schalterdienst, Geldwechsel).
- Juli bis Dezember 2000* Mithilfe bei einer Recherche der „Autonome Region Trentino-Südtirol“ über die Entwicklung und Geschichte des Genossenschaftswesens in Tirol.

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Thema der Dissertation:

„Indonesia, Malaysia and the East-Asian Crisis: An Analysis of Remedies“.

Betreuer: Prof. Kunibert Raffer (Uni Wien) und Prof. Michael Landesmann (Uni Linz und WIIW/Wien).

Sonstiges:

Teilnahme und Vortragende „WIDER Conference on Southern Engines of Global Growth: China, India, Brazil and South Africa“ am 7./8. September 2007 in Helsinki, WIDER-UNU;

Stipendium für die Teilnahme am „European Forum Alpbach: Emergence – Die Entstehung von Neuem“, August 2007 in

Alpbach/Österreich;
Teilnahme am 17.EBS-Symposium „Survival of the Fittest“,
EBS/Schloß Reichartshausen im September 2006;
Teilnahme und Vortrag - Tagung der „Deutsche Gesellschaft
Asienforschung“, Nachwuchsgruppe „Asienforschung“, Juni 2005.

*Oktober 2005 bis
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**Visiting Researcher am Asia-Europe-Institute der University of
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Stipendium der Universität Wien für Kurzfristige Wissenschaftliche
Arbeiten.

*Oktober 1999 bis
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Laureatsstudium der Wirtschafts- und Handelswissenschaften,
Studienzweig Betriebswirtschaftslehre, **Freie Universität
Bozen/Italien** (Abschlussnote 106/110; „Laurea in economia e
commercio“)

Thema der Laureatsarbeit:

*„The East-Asian Crisis: An Analysis of Remedies Applied by Malaysia
and Indonesia“*

Betreuer: Prof. Alfred Steinherr (Freie Universität Bozen, Deutsche
Institut für Wirtschaftsforschung Berlin) und Prof. Yuri Kaniovskiy
(Freie Universität Bozen).

Sonstiges:

Teilnahme am Teilnahme am Harvard World MUN in Heidelberg, März
2003;

Teilnahme an der Studienreise nach Bangalore und Kalkutta (Indien),
Kuala Lumpur (Malaysia) und Hong Kong, März/April 2002;

150-Stunden-Studentenjob beim Advisory Service der Freien
Universität Bozen, Jänner bis Dezember 2001;

Teilnahme am Dr. Keusch Seminar für Rechnungswesen, Universität
St. Gallen, Juni 2000.

*Oktober 1998 bis
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Magisterstudium der Pharmazie, Universität Innsbruck/Österreich.
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Juli 1998

Abschluss der Handelsoberschule „Franz Kafka“, Fachrichtung
Betriebswirtschaftslehre, in Meran (Italien).
Abschlussnote: 52/60, Matura.

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Besuch der Pflichtschule in Meran.

Wien, im August 2008