

Prospects for Monetary Cooperation in Asia: ASEAN+3 and Beyond

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1. Introduction

- Since the financial crisis of 1997-98, the East Asian economies have embarked on various initiatives for regional monetary and financial cooperation.
- These initiatives have included: ASEAN+3 Policy Dialogue and Economic Review; Chiang Mai Initiative; and Asian Bond Market Development.
- Efforts for crisis prevention, management and resolution are important drivers behind such initiatives.
- More fundamentally, rising economic interdependence within the region is a crucial factor.
- What are the key issues for further strengthening regional monetary/financial cooperation? Exchange rate policy coordination? Wider membership?

2. Current States of ASEAN+3 Monetary/Financial Cooperation in East Asia

- Three pillars of regional financial cooperation:
 - (a) Financing arrangement—Chiang Mai Initiative (CMI);
 - (b) Economic surveillance—ASEAN+3 Policy Dialogue and Economic Review;
 - (c) Bond market development—Asian Bond Market Initiative and ABF.

(1) Chiang Mai Initiative

- Early attempts:
 - (a) ASEAN Swap Arrangement (ASA)—Recently expanded
 - (b) AMF proposal (September 1997)—Aborted
 - (c) MFG Cooperative Financing Arrangement—2nd LOD
- CMI—Enhanced ASA combined with bilateral swap arrangements (BSAs) among the +3 countries and between the +3 and the core ASEAN
- 16 conceivable BSAs in place (Table 1)
- For more than 10%, CMI is linked to IMF programs
- CMI is under review in terms of the size, modality, IMF linkages, etc., starting in May 2004.

(2) Policy Dialogue and Surveillance

- Early attempts (Table 2)
 - (a) ASEAN Surveillance Process
 - (b) Central bank process—EMEAP etc.
 - (c) Trans-regional processes—APEC, ASEM

- (d) Manila Framework Group
- ASEAN+3 Economic Review and Policy Dialogue
- Surveillance (due diligence) vs. policy dialogue (information exchange, peer pressure)
- Need to ensure good due diligence and to make ASEAN+3 surveillance effective, like the G-7, WP-3 and OECD processes (EPC, EDRC).

(3) Asian Bond Market Development

- Need to develop Asian currency-denominated bond markets to mobilize regional savings directly for regional investment, to make the financial system “more balanced” and avoid the “double mismatch” problem.
- Central bank process (EMEAP)—Asian Bond Fund-1 does not reduce the “double mismatch,” but ABF-2 will.
- ASEAN+3 process—local currency bonds.
- Need to create incentives for both investors and issuers, to establish national and regional market infrastructure for the secondary market of Asian currency-denominated bonds and to balance the risk of capital account opening.

3. Deepening Economic Interdependence

- East Asian economies have deepened economic interdependence over the last two decades through:
 - (a) Trade and FDI integration;
 - (b) Financial integration;
 - (c) Macroeconomic interdependence
- Deepening economic integration is the most fundamental rationale for regional financial cooperation in East Asia.

(1) Trade and FDI Integration

- The region has embraced multilateral liberalization under GATT/WTO and open regionalism under APEC, and avoided discriminatory trade practices.
- The region has seen market-driven, *de facto* trade integration based on the trade-FDI nexus, with a focus on intra-industry trade
- A rising share of intra-regional trade in East Asia (Table 3a)
- High trade intensity in East Asia in comparison to NAFTA and EU (Table 3b)

(2) Formation of Regional EPAs/FTAs

- The region, including Northeast Asia, has recently shifted to a three-track approach to trade and FDI liberalization: global (WTO) cum trans-regional (APEC), regional (ASEAN+3), and bilateral.
- AFTA has been a relative success.
- Japan-Singapore EPA, and many negotiations are underway: Japan-Korea, China-ASEAN, Japan-Malaysia, Japan-Thailand, Japan-Philippines, etc.
- Need to avoid the “spaghetti bowl” effect and to ensure WTO consistency by making EPAs/FTAs a building block for global liberalization.
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(3) Financial Integration

- Regional financial integration due to financial sector deregulation and capital account liberalization—through syndicated loans, equities and bonds.

- There are relatively strong co-movements of real financial variables within East Asia (Table 4).
- Contagion of currency crises in 1997-98.
- China still maintains capital controls but they are gradually eroded as observed in the recent rise of errors and omissions in the BOP.

(4) Macroeconomic Interdependence

- Patterns of macroeconomic interdependence (Table 5)
 - (a) Japan and Korea have large positive co-movements of real economic activity with each other and with emerging East Asia (EEA), including Korea and ASEAN.
 - (b) ASEAN has large co-movements among themselves.
 - (c) China has no positive correlation with East Asia (EA).
 - (d) US has no positive correlation with EA.
- As China completes economic transition through reforms, liberalization, and market opening, its macroeconomic synchronization with East Asia is expected to rise.
- The next group is India, Australia and New Zealand.

4. Prospects for Further Monetary and Financial Cooperation

(1) Strengthening ASEAN+3 Surveillance

- Nurture mutual trust and develop a good surveillance culture.
- Involve central bank governors in the ASEAN+3 process—ownership by central banks
- Establish an ASEAN+3 Secretariat for effective surveillance and financing—technically competent staff, dedicated to the ASEAN+3 process, to provide objective economic analysis, and to assist liquidity financing with appropriate conditionality.
- Invite the IFIs and the private sector

(2) CMI Review and Going beyond

- CMI review
 - (a) Enlargement of its size due to limited amounts on a bilateral basis
 - (b) Multilateralization to enhance effectiveness and relax the size constraint
 - (c) Reduction of IMF linkages requires effective surveillance
 - (d) Greater use of Asian currencies, particularly the yen
- Going beyond the CMI
 - (a) Pooling of reserves
 - (b) Medium-term financing facility (a la IMF stand-by)
 - (c) Transforming the ASEAN+3 Secretariat into an international organization to help support financing
- Establishing a full-fledged AMF in the near future.

(3) Exchange Rate Policy Coordination

- Exchange rate issues should be part of the enhanced surveillance process, to avoid intra-regional currency misalignment and competitive de-(and re-)valuations. Examples include:
 - (a) Substantial appreciation of the yen in 1995 and the subsequent depreciation.
 - (b) Policy dialogue about the yen, the RMB, the Hong Kong dollar, and the Malaysian ringgit
- Creating a regional common unit of account—Asian Monetary Unit of Account (AMU)

- A G-3 currency basket system as a transition arrangement for emerging East Asia, and a float for Japan.
- After sufficient economic convergence and institution building, the East Asian economies that are ready can move to an Asian Snake.

(4) Deepening and Expansion of ASEAN+3

- A long-term vision, such as the formation of an East Asian economic and monetary union (EMU), and political commitments are needed to deepen integration.
- To further nurture this trend, *de facto* economic integration must proceed, and institutional formalization of *de facto* integration will be needed.
- Once sufficient deepening is achieved, ASEAN+3 may be expanded to include India, Australia, and New Zealand if they so wish.

5. Concluding Remarks

- East Asian economies have been deepening real, financial and macroeconomic interdependence over the last two decades, providing a fundamental rationale for monetary and financial cooperation.
- They have focused on three pillars of regional monetary and financial cooperation:
 - (a) Regional liquidity provision through the CMI;
 - (b) Surveillance through the ASEAN+3 PDER process;
 - (c) Asian bond market initiative
- Exchange rate policy coordination has yet to begin.
- A long-term vision, such as the formation of an East Asian economic and monetary union (EMU), and political commitments are crucial.
- East Asia can deepen monetary/financial policy coordination in three stages, i.e., loose, tight and complete, on a multi-track basis:
 - (a) Loose policy coordination—information exchange, coordination for institution building, and some limited joint action;
 - (b) Tight policy coordination—macroeconomic policy coordination and exchange rate stabilization (a la “snake” or ERM);
 - (c) Complete policy coordination—economic and monetary union with a single currency
- Before moving to the second stage, each economy must strengthen domestic policies and institutions.
- Real side institutional formalization of *de facto* economic integration is key, starting with a region-wide FTA, then a customs union and a common market.
- Immediate policy priorities include: effective ASEAN+3 surveillance; stronger CMI; bond market development; and initiation of loose exchange rate policy coordination.
- Expand membership to include India and Australia once sufficient deepening of ASEAN+3 is achieved.

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Table 1. Progress on BSAs under the Chiang Mai Initiative (as of end-December 2003)

BSAs	Currencies	Conclusion Dates	Size
Japan-South Korea	USD-Won	July 4, 2001	US\$ 7.0 billion ^(a) (1-way)
Japan-Thailand	USD-Baht	July 30, 2001	US\$ 3.0 billion (1-way)
Japan-Philippines	USD-Peso	August 27, 2001	US\$ 3.0 billion (1-way)
Japan-Malaysia	USD-Ringgit	October 5, 2001	US\$ 3.5 billion ^(b) (1-way)
China-Thailand	USD-Baht	December 6, 2001	US\$ 2.0 billion (1-way)
Japan-China	Yen-Renminbi	March 28, 2002	US\$ 3.0 billion ^(c) (2-way)
China-South Korea	Renminbi-Won	June 24, 2002	US\$ 2.0 billion ^(c) (2-way)
South Korea-Thailand	USD-Won or USD-Baht	June 25, 2002	US\$ 1.0 billion (2-way)
South Korea-Malaysia	USD-Won or USD-Ringgit	July 26, 2002	US\$ 1.0 billion (2-way)
South Korea-Philippines	USD-Won or USD-Peso	August 9, 2002	US\$ 1.0 billion (2-way)
China-Malaysia	USD-Ringgit	October 9, 2002	US\$ 1.5 billion (1-way)
Japan-Indonesia	USD-Rupiah	February 17, 2003	US\$ 3.0 billion (1-way)
China-Philippines	Renminbi-Peso	August 29, 2003	US\$ 1.0 billion ^(c) (1-way)
Japan-Singapore	USD-Singapore dollar	November 10, 2003	US\$ 1.0 billion (1-way)
South Korea-Indonesia	USD-Won or USD-Rupiah	December 24, 2003	US\$ 1.0 billion (1-way)
China-Indonesia	USD-Rupiah	December 30, 2003	US\$ 1.0 billion (2-way)

Notes: (a) The amount includes US\$5.0 billion committed (on June 17, 1999) under the New Miyazawa Initiative.

(b) The amount includes US\$2.5 billion committed (on August 18, 1999) under the New Miyazawa Initiative.

(c) The amounts are US dollar equivalents.

Source: Information from Ministry of Finance, Japan

Table 2. Regional Forums for Finance Ministries and Central Banks^(a)

	Finance Ministries and/or Central Banks					Central Banks		
	ASEAN (10)	ASEAN+3 (13)	MFG ^(b) (14)	APEC (21)	ASEM ^(c) (25)	SEANZA (20)	SEACEN (11)	EMEAP (11)
Year Established	1967.8	1999.4	1997.11	1994.3	1997.9	1956	1966.2	1991.2
Japan		○	○	○	○	○		○
China		○	○	○	○	○		○
Korea		○	○	○	○	○	○	○
Hong Kong			○	○		○		○
Taiwan				○			○	
Singapore	○	○	○	○	○	○	○	○
Brunei	○	○	○	○	○			
Cambodia	○	○						
Indonesia	○	○	○	○	○	○	○	○
Laos	○	○						
Malaysia	○	○	○	○	○	○	○	○
Myanmar	○	○					○	
Philippines	○	○	○	○	○	○	○	○
Thailand	○	○	○	○	○	○	○	○
Vietnam	○	○		○	○			
Mongolia						○	○	
Macao						○		
Papua New Guinea				○		○		
Australia, New Zealand			○	○		○		○
Nepal, Sri Lanka						○	○	
Bang., India, Iran, Pak.						○		
USA, Canada			○	○				
Chile, Mexico, Peru				○				
Russia				○				
EU-15					○			

Notes: (a) APEC = Asia-Pacific Economic Cooperation; ASEAN = Association of Southeast Asian Nations; EMEAP = Executives Meeting of East Asia-Pacific Central Banks; MFG = Manila Framework Group; SEACEN = South East Asian Central Banks; SEANZA = South East Asia, New Zealand, Australia.

(b) MFG includes the International Monetary Fund, the World Bank, the Asian Development Bank and the Bank for International Settlements.

(c) ASEM includes the European Commission.

Source: Kuroda and Kawai (2002).

Table 3. Intra-Regional Trade in East Asia, NAFTA and EU

(a) Intra-regional trade share^(a) (in percentage)

Regions	1980	1985	1990	1995	2000	2001
East Asia-10, including Japan ^(c)	33.6	36.2	41.6	50.1	50.1	50.8
Emerging East Asia-9 ^(d)	22.6	26.3	32.8	38.4	39.5	41.0
NIEs-4	8.5	9.5	12.3	14.0	13.6	13.2
ASEAN-4	3.5	4.9	3.9	5.2	7.9	7.9
NAFTA	--	36.6	36.8	41.9	46.5	46.3
European Union-15	52.6	53.8	64.9	64.1	62.1	61.9

(b) Intra-regional trade intensity index^(b)

Regions	1980	1985	1990	1995	2000	2001
East Asia-10, including Japan ^(c)	2.31	2.02	2.08	1.99	2.06	2.22
Emerging East Asia-9 ^(d)	3.02	2.66	2.66	2.19	2.23	2.44
NIEs-4	2.00	1.62	1.56	1.31	1.32	1.41
ASEAN-4	1.58	2.27	1.45	1.28	2.15	2.17
NAFTA	--	1.82	2.06	2.28	2.10	2.12
European Union-15	1.39	1.55	1.45	1.66	1.73	1.67

Note: (a) The intra-regional trade share is defined as: $\{(X_{ij}/X_i) + (X_{ij}/X_j)\}/2$ where X_{ij} represents exports of region i to region j, X_i represents total exports of region i, and X_j represents total exports of the world to region j (or total imports of region j). In the table, the share is defined only for economies within the same region, so that $i=j$.

(b) The trade intensity index is defined as: $(X_{ij}/X_{..})/\{(X_i/X_{..})(X_j/X_{..})\}$ where X_{ij} represents exports of region i to region j, X_i represents total exports of region i, X_j represents total exports of the world to region j (or total imports of region j), and $X_{..}$ represents total world exports. In the table, the index is defined only for economies within the same region, so that $i=j$.

(c) East Asia-10 includes Emerging East Asia-9 and Japan.

(d) Emerging East Asia-9 includes NIE-4 (Korea, Taiwan, Hong Kong, and Singapore), ASEAN-4 (Malaysia, Thailand, Indonesia, and the Philippines) and China.

Source: Kawai (2004a)

Table 4. Cross-Country Correlation Coefficient Matrices for Financial Variables, 1980-2002

(a) Real Money Supply (Annual Growth Rate)

Countries/Areas	Data Sample	USA	EU15	Australia	New Zealand	India	Japan	Korea	China	Taiwan	Hong Kong	Singapore	Malaysia	Thailand	Philippines	Indonesia	Vietnam	Cambodia	Myanmar
USA	1980-2002	1.00																	
EU15	1982-2001	-0.14	1.00																
Australia	1980-2001	0.11	0.37	1.00															
New Zealand	1980-2002	-0.02	0.35	0.41	1.00														
India	1980-2001	0.53	-0.14	0.05	-0.33	1.00													
Japan	1980-2002	0.21	0.42	0.42	0.43	0.01	1.00												
Korea	1980-2002	0.36	0.12	0.07	0.01	0.49	0.22	1.00											
China	1980-2000	0.16	-0.06	-0.13	-0.27	0.19	-0.27	-0.41	1.00										
Taiwan	1980-2002	-0.03	-0.10	-0.06	0.23	0.03	0.34	0.00	0.24	1.00									
Hong Kong	1980-2002	0.19	-0.25	-0.35	-0.05	0.11	0.39	0.32	-0.13	0.53	1.00								
Singapore	1980-2012	0.05	0.18	0.28	-0.08	0.04	0.29	0.12	-0.10	-0.01	0.14	1.00							
Malaysia	1980-2002	-0.25	-0.34	-0.23	-0.21	-0.01	-0.38	-0.18	0.15	-0.04	0.05	-0.19	1.00						
Thailand	1980-2002	-0.30	0.07	0.02	0.10	-0.30	0.22	-0.27	0.13	0.55	0.39	0.11	0.29	1.00					
Philippines	1980-2001	-0.38	-0.06	0.14	0.02	-0.26	0.01	0.03	-0.43	-0.12	-0.01	0.05	0.25	0.25	1.00				
Indonesia	1980-2001	-0.41	0.26	0.27	0.20	-0.43	0.19	-0.54	0.11	0.16	0.00	-0.22	0.26	0.60	0.21	1.00			
Vietnam	1993-2002	0.54	0.59	0.29	-0.12	0.91	0.54	0.78	-0.65	0.08	0.48	0.06	0.05	-0.15	-0.41	-0.38	1.00		
Cambodia	1994-2002	-0.70	-0.27	-0.13	0.43	-0.23	-0.33	-0.41	-0.68	0.33	-0.21	-0.65	0.39	0.16	0.47	0.75	-0.08	1.00	
Myanmar	1980-2000	0.22	-0.29	-0.47	-0.16	0.04	-0.48	-0.02	-0.08	-0.32	0.04	-0.43	0.34	-0.26	-0.12	-0.05	0.46	0.61	1.00

(b) Real Stock Price (Annual Growth Rate)

Countries/Areas	Data Sample	USA	EU15	Australia	New Zealand	India	Japan	Korea	China	Taiwan	Hong Kong	Singapore	Malaysia	Thailand	Philippines	Indonesia	Vietnam	Cambodia	Myanmar
USA	1980-2002	1.00																	
EU15	1980-2001	0.68	1.00																
Australia	1980-2002	0.59	0.48	1.00															
New Zealand	1980-2002	0.34	0.55	0.65	1.00														
India	1980-2001	0.05	0.14	-0.08	-0.02	1.00													
Japan	1980-2002	0.36	0.47	0.40	0.23	-0.08	1.00												
Korea	1980-2002	0.06	0.13	0.13	-0.08	0.09	0.65	1.00											
China	1980-2000								1.00										
Taiwan	1980-2002	0.22	0.26	0.13	-0.05	-0.11	0.59	0.61		1.00									
Hong Kong	1980-2002	0.35	0.13	0.54	-0.11	0.61	0.58	0.51		0.31	1.00								
Singapore	1980-2002	0.36	0.13	0.53	0.19	0.19	0.65	0.68		0.26	0.82	1.00							
Malaysia	1980-2002	-0.06	-0.10	0.36	-0.09	0.44	0.61	0.78		0.35	0.84	0.89	1.00						
Thailand	1980-2002	-0.29	-0.38	-0.13	-0.66	0.62	0.29	0.91		0.24	0.51	0.76	0.84	1.00					
Philippines	1980-2001	0.42	0.34	0.37	0.22	0.19	0.51	0.71		0.42	0.87	0.55	0.86	0.82	1.00				
Indonesia	1980-2001	0.12	-0.17	0.56	-0.49	0.64	0.65	0.70		0.33	0.85	0.83	0.92	0.97	0.77	1.00			
Vietnam	1987-2002																1.00		
Cambodia	1993-2002																	1.00	
Myanmar	1980-2000																		1.00

(c) Real Exchange Rate (Annual Growth Rate)

Countries/Areas	Data Sample	USA	EU15	Australia	New Zealand	India	Japan	Korea	China	Taiwan	Hong Kong	Singapore	Malaysia	Thailand	Philippines	Indonesia	Vietnam	Cambodia	Myanmar
USA	1980-2002	1.00																	
EU15	1980-2001		1.00																
Australia	1980-2002		0.29	1.00															
New Zealand	1980-2002		0.66	0.62	1.00														
India	1980-2001		0.47	0.37	0.58	1.00													
Japan	1980-2002		0.50	0.21	0.51	0.22	1.00												
Korea	1980-2002		0.23	0.69	0.57	0.13	0.49	1.00											
China	1980-2000		0.00	0.19	0.11	0.08	0.00	0.16	1.00										
Taiwan	1980-2002		0.45	0.63	0.51	0.28	0.55	0.67	0.14	1.00									
Hong Kong	1980-2002		0.46	0.26	0.34	0.06	0.08	0.16	0.23	0.42	1.00								
Singapore	1980-2002		0.30	0.60	0.45	0.16	0.25	0.66	0.17	0.58	0.38	1.00							
Malaysia	1980-2002		0.07	0.43	0.25	0.12	0.08	0.66	0.27	0.40	0.07	0.62	1.00						
Thailand	1980-2002		0.45	0.71	0.60	0.19	0.49	0.80	0.20	0.63	0.22	0.78	0.68	1.00					
Philippines	1980-2001		0.17	0.51	0.45	0.10	0.26	0.74	0.10	0.57	0.43	0.53	0.64	0.59	1.00				
Indonesia	1980-2001		-0.10	0.45	0.32	0.09	0.17	0.70	0.07	0.41	0.06	0.46	0.57	0.58	0.71	1.00			
Vietnam	1987-2002		0.18	-0.24	0.16	0.23	0.28	-0.20	-0.15	-0.22	-0.23	-0.10	0.20	-0.01	0.04	-0.07	1.00		
Cambodia	1993-2002		0.59	0.60	0.76	0.49	0.48	0.76	0.26	0.62	-0.09	0.75	0.76	0.78	0.73	0.56	0.48	1.00	
Myanmar	1980-2000		0.45	0.24	0.28	0.04	0.24	0.22	0.45	0.21	0.61	0.18	0.04	0.22	0.23	-0.15	-0.46	-0.07	1.00

Source : Computed from IMF, International Financial Statistics; ADB, Key Indicators.

Adapted from : Kawai and Motonishi (2004).

Table 5. Cross-Country Correlation Coefficient Matrices for Real Sector Macroeconomic Variables, 1980-2002

(a) Real GDP (Annual Growth Rate)

Countries/Areas	Data Sample	USA	EU15	Austra- lia	New Zealand	India	Japan	Korea	China	Taiwan	Hong Kong	Singa- pore	Malay- sia	Thai- land	Philip- pines	Indo- nesia	Vietnam	Cambo- dia	Myan- mar	
USA	1980-2002	1.00																		
EU15	1980-2002	0.42	1.00																	
Australia	1980-2002	0.69	0.27	1.00																
New Zealand	1980-2002	0.52	-0.11	0.41	1.00															
India	1980-2001	0.29	0.21	0.33	0.28	1.00														
Japan	1980-2002	0.03	0.35	-0.02	-0.19	0.08	1.00													
Korea	1980-2002	0.17	0.19	-0.16	0.32	-0.01	0.43	1.00												
China	1980-2000	0.33	-0.13	0.22	0.25	-0.04	-0.16	0.12	1.00											
Taiwan	1980-2002	0.46	0.23	0.13	0.35	-0.07	0.46	0.38	0.24	1.00										
Hong Kong	1980-2002	0.12	-0.04	-0.08	0.46	-0.08	0.43	0.50	0.11	0.68	1.00									
Singapore	1980-2002	0.11	0.00	-0.02	0.23	0.19	0.37	0.34	-0.19	0.47	0.55	1.00								
Malaysia	1980-2002	-0.04	-0.04	-0.18	0.13	0.07	0.41	0.52	-0.04	0.35	0.55	0.86	1.00							
Thailand	1980-2002	-0.10	0.05	-0.15	0.11	0.14	0.63	0.71	0.06	0.35	0.50	0.55	0.73	1.00						
Philippines	1980-2001	-0.28	0.11	-0.19	0.10	0.41	0.07	0.09	-0.54	-0.03	0.19	0.44	0.38	0.24	1.00					
Indonesia	1980-2001	-0.13	-0.19	-0.18	0.20	0.02	0.49	0.54	0.04	0.29	0.66	0.56	0.82	0.80	0.25	1.00				
Brunei	1980-2001	0.01	0.40	-0.19	-0.11	-0.20	-0.04	0.32	0.29	-0.01	-0.17	0.01	0.19	0.14	0.02	-0.02				
Vietnam	1986-2002	0.19	-0.06	0.04	0.04	-0.05	-0.34	0.21	0.36	-0.18	-0.28	0.09	0.22	0.01	-0.05	-0.04	1.00			
Cambodia	1988-2002	0.19	0.23	-0.02	0.23	0.14	-0.05	0.41	0.45	0.19	0.46	0.15	0.24	0.10	0.14	0.11	0.17	1.00		
Myanmar	1980-2000	-0.03	-0.42	0.02	0.02	-0.08	-0.65	-0.34	-0.09	-0.44	-0.27	-0.01	0.00	-0.35	-0.11	-0.06	0.18	-0.20	1.00	

(b) Real Personal Consumption (Annual Growth Rate)

Countries/Areas	Data Sample	USA	EU15	Austra- lia	New Zealand	India	Japan	Korea	China	Taiwan	Hong Kong	Singa- pore	Malay- sia	Thai- land	Philip- pines	Indo- nesia	Vietnam	Cambo- dia	Myan- mar	
USA	1980-2002	1.00																		
EU15	1980-2002	0.32	1.00																	
Australia	1980-2002	0.11	0.20	1.00																
New Zealand	1980-2002	0.64	0.09	0.15	1.00															
India	1980-2001	0.11	-0.06	-0.03	0.19	1.00														
Japan	1980-2002	-0.11	0.25	-0.15	-0.29	-0.08	1.00													
Korea	1980-2002	0.04	0.05	-0.15	0.15	-0.20	0.49	1.00												
China	1980-2001	0.14	-0.41	-0.35	0.10	0.06	-0.31	-0.06	1.00											
Taiwan	1980-2002	0.24	0.42	-0.15	0.00	-0.11	0.58	0.20	-0.28	1.00										
Hong Kong	1980-2002	-0.35	-0.12	-0.54	-0.27	-0.01	0.38	0.40	0.12	0.38	1.00									
Singapore	1980-2002	-0.13	0.08	-0.21	-0.04	0.09	0.22	0.51	-0.13	0.43	0.65	1.00								
Malaysia	1980-2002	-0.31	-0.16	0.07	-0.11	0.12	0.23	0.54	-0.12	0.21	0.36	0.62	1.00							
Thailand	1980-2002	-0.22	-0.05	-0.23	-0.01	0.00	0.55	0.81	-0.15	0.36	0.55	0.65	0.71	1.00						
Philippines	1980-2002	-0.33	0.18	0.18	0.01	0.27	0.06	-0.04	-0.49	0.15	0.09	0.40	0.31	0.26	1.00					
Indonesia	1980-2002	-0.50	-0.54	-0.11	-0.02	-0.03	-0.01	0.34	-0.07	-0.19	0.38	0.25	0.49	0.50	0.22	1.00				
Vietnam	1996-2002	-0.59	-0.77	-0.32	0.61	0.22	0.66	0.02	0.29	0.08	0.02	-0.28	0.09	0.16	0.79	0.50	1.00			
Cambodia	1989-2002	0.39	-0.03	0.13	0.43	0.27	-0.37	-0.29	0.60	-0.13	-0.43	-0.34	-0.33	-0.27	-0.31	-0.18	0.06	1.00		
Myanmar	1980-2000	-0.05	-0.58	0.13	0.03	-0.07	-0.50	-0.09	0.23	-0.61	-0.17	-0.21	-0.06	-0.12	-0.34	0.38	-0.66	0.39	1.00	

(c) Real Gross Fixed Capital Formation (Annual Growth Rate)

Countries/Areas	Data Sample	USA	EU15	Austra- lia	New Zealand	India	Japan	Korea	China	Taiwan	Hong Kong	Singa- pore	Malay- sia	Thai- land	Philip- pines	Indo- nesia	Vietnam	Cambo- dia	Myan- mar	
USA	1980-2002	1.00																		
EU15	1980-2002	0.26	1.00																	
Australia	1980-2002	0.36	0.07	1.00																
New Zealand	1980-2002	0.32	-0.34	0.49	1.00															
India	1980-2001	0.09	-0.03	0.06	-0.06	1.00														
Japan	1980-2002	-0.01	0.54	-0.04	-0.16	0.20	1.00													
Korea	1980-2002	-0.10	0.11	-0.41	0.07	-0.06	0.49	1.00												
China	1980-2000	0.13	-0.35	-0.21	-0.19	0.02	-0.38	-0.09	1.00											
Taiwan	1980-2002	0.10	0.25	0.09	-0.13	-0.09	0.26	0.09	0.06	1.00										
Hong Kong	1980-2002	-0.22	-0.03	0.00	-0.02	0.01	0.34	0.11	-0.09	0.43	1.00									
Singapore	1980-2002	-0.13	-0.26	-0.17	0.19	0.16	0.05	0.17	-0.18	0.30	0.44	1.00								
Malaysia	1980-2002	-0.31	-0.21	-0.11	0.22	-0.11	0.28	0.52	-0.23	0.23	0.54	0.66	1.00							
Thailand	1980-2002	-0.26	-0.06	-0.22	0.14	-0.03	0.45	0.79	-0.12	0.16	0.36	0.26	0.75	1.00						
Philippines	1980-2002	-0.28	0.14	-0.08	0.15	0.08	0.11	0.19	-0.39	0.27	0.32	0.34	0.43	0.32	1.00					
Indonesia	1980-2002	-0.45	-0.20	-0.23	0.14	0.00	0.40	0.55	-0.21	0.09	0.69	0.48	0.81	0.70	0.39	1.00				
Vietnam	1996-2002	-0.06	-0.27	-0.11	-0.14	0.45	0.18	-0.21	0.05	-0.02	0.67	0.39	-0.07	-0.15	0.24	0.28	1.00			
Cambodia	1989-2002	-0.02	-0.05	0.28	0.11	-0.58	-0.25	0.01	-0.02	0.19	-0.12	-0.10	0.19	0.02	-0.16	0.04	-0.56	1.00		
Myanmar	1980-2000	0.03	-0.15	-0.09	0.31	-0.04	-0.31	0.01	-0.36	-0.29	-0.02	0.31	0.10	-0.10	0.20	0.03	0.57	-0.44	1.00	

Source : Computed from IMF, International Financial Statistics; ADB, Key Indicators.
Adapted from : Kawai and Motonishi (2004).