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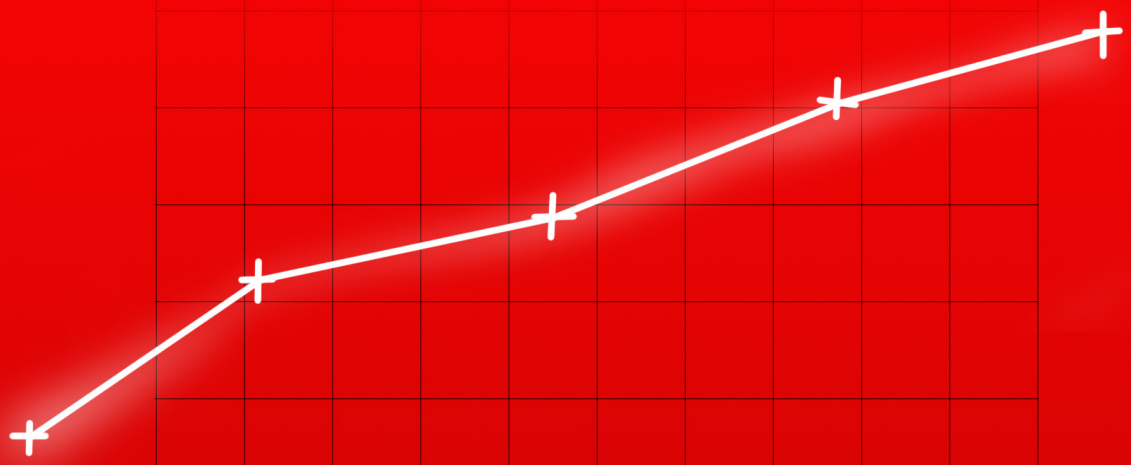

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Contents

Abbreviations and Acronyms

ABMI	Asian Bond Markets Initiative
ADB	Asian Development Bank
AEM	Asia Economic Monitor
AMRO	ASEAN+3 Macroeconomic Research Office
AMU	Asian Monetary Unit
ARIC	Asia Regional Integration Center
ASEAN	Association of Southeast Asian Nations
ASEAN+3	ASEAN plus People's Republic of China, Japan, Republic of Korea
ASEAN-4	Indonesia, Malaysia, Philippines, Thailand
ASEAN-5	Indonesia, Malaysia, Philippines, Thailand, Singapore
BIS	Bank for International Settlements
bps	basis points
CMI	Chiang Mai Initiative
CMIM	Chiang Mai Initiative Multilateralization
EMS	European Monetary System
ERM	Exchange Rate Mechanism
ERPD	economic review and policy dialogue
EU	European Union
FY	fiscal year
G20	Group of Twenty Finance Ministers and Central Bank Governments
G3	US, eurozone, Japan
G7	Canada, France, Germany, Italy, Japan, United Kingdom, United States
GDP	gross domestic product
IMF	International Monetary Fund
IT	information technology
JCI	Jakarta Composite Index
KLCI	Kuala Lumpur Composite Index
KOSPI	Korean Stock Price Index
Lao PDR	Lao People's Democratic Republic
LIBOR	London Interbank Offered Rate
MSCI	Morgan Stanley Capital International
m-o-m	month-on-month
NIE	newly industrialized economy
OCA	optimum currency area
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
OREI	Office of Regional Economic Integration
PCOMP	Philippine Composite Index
PRC	People's Republic of China
PMI	purchasing managers index
QE2	second round of quantitative easing
q-o-q	quarter-on-quarter
repo	reverse repurchase
saar	seasonally adjusted annualized rate
SBI	Sertifikat Bank Indonesia
SET	Stock Exchange of Thailand
STI	Straits Times Index
SVAR	structural vector autoregression
TED	treasury bill and eurodollar futures contract
TWSE	Taipei,China's stock exchange index
US	United States
VAR	vector autoregression
VIX	Chicago Board Options Exchange Volatility Index
VNINDEX	Ho Chi Minh Stock Index
WB	World Bank
y-o-y	year-on-year

Note: Unless otherwise indicated "$" refers to US dollars

Emerging East Asia— **A Regional Economic Update**

Highlights

Recent Economic Performance

- Robust recovery was the norm across most of emerging East Asia in 2010, though moderating somewhat in the second half as stimulus was withdrawn; domestic demand continued to drive economic growth but at a slower pace.

- Inflation edged up on strong economic performance across the region.

- Balance of payments remained in surplus throughout the region amid healthy current account surpluses and continued capital inflows.

- Most emerging East Asian stock markets recovered dramatically in the second half following the region's rapid economic turnaround.

- Almost all of the region's currencies appreciated as capital continued to return to the region.

- Bond yield curves flattened in several emerging East Asian markets as monetary policies normalized, and yield curves in other economies shifted downward.

- Across the region, authorities continue to normalize macroeconomic policy and have begun introducing measures to manage capital flows.

- Fiscal consolidation continues across much of emerging East Asia, even as several governments continue spending to address structural reforms and ensure long-term growth.

- Financial vulnerability in emerging East Asia remains low as most economies maintain healthy fiscal balances and have low external debt; banking systems across the region should remain healthy, with strong capitalization, profitability, and low levels of nonperforming assets.

Outlook and Risks

- The external economic environment for emerging East Asia has weakened as the US economy continues to struggle and doubts remain over the sustainability of the eurozone recovery.

- With stimulus being withdrawn and the recovery intact, growth in 2011 should moderate as the post-recovery phase kicks in; economic growth is forecast at 8.8% for 2010, tapering to 7.3% in 2011.

- The economic outlook is subject to four major risks: (i) persistent weak growth in advanced economies; (ii) destabilizing capital flows; (iii) inflation and asset price bubbles in some economies; and (iv) protectionism.

Policy Issues

- With the V-shaped recovery in hand, many emerging East Asian economies now face the challenge of managing strong growth and capital flows amid a weaker external environment.

- Continued robust growth in many emerging East Asia economies suggests authorities are on track in normalizing macroeconomic policy.

- A "money first with somewhat faster appreciation" strategy for withdrawing stimulus seems appropriate for many emerging East Asian economies to both sustain economic growth, while helping rebalance the region's sources of growth.

- Mitigating the negative effects of surging capital flows will require an appropriate mix of sound macroeconomic management, flexible exchange rates, resilient financial systems, and—in some cases—temporary and targeted capital controls.

- Deeper and more comprehensive structural reforms are needed to improve productivity growth and to build an environment more conducive for private consumption and business investment.

Exchange Rate Cooperation: Is East Asia Ready?

- Regional exchange rate cooperation—if handled wisely—can ensure intra-regional exchange rate stability while allowing inter-regional flexibility, thus helping promote intra-regional trade and investment, and rebalance the region's sources of growth.

- Following the 2007/08 global financial crisis, intra-regional exchange rates have shown greater dispersion, potentially affecting the further expansion of intra-regional trade.

- Rapidly growing interdependencies in trade and finance in the region and increasing importance of spillover and contagion effects make regional exchange rate cooperation essential.

- Regional dialogue leading to agreements on stabilizing exchange rates; pegging currencies to a basket of currencies or to each other; or adopting a common currency and forming a monetary union are three options for achieving cooperative exchange rate objectives.

- For East Asia, cooperation needs to be "institution-lite" rather than based on the full range of institutions—a realistic short-term objective would be to reduce intra-regional exchange rate variability, while allowing exchange rates to respond to shocks outside the region.

- The region could start by adopting informal reference or monitoring zones for regional exchange rates to gradually reduce intra-regional exchange rate variability over time—the reference currency should come from outside the region and monitoring zones be wide enough to allow for some intra-regional flexibility.

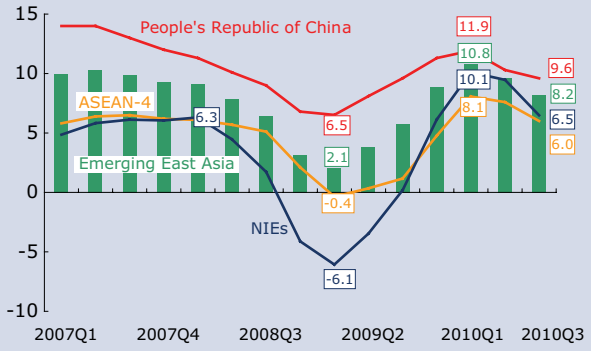
Recent Economic Performance

Growth and Inflation

Robust recovery was the norm across most of emerging East Asia in 2010, though moderating somewhat in the second half as stimulus was withdrawn.

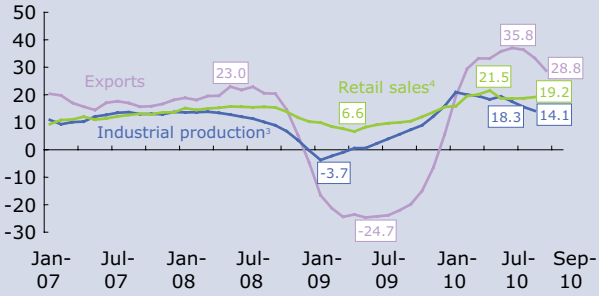
Emerging East Asian economies continued to post strong growth in the third quarter of 2010, driven by domestic demand. But the weaker external environment and phasing out of policy stimulus slowed demand, which began to appear in the second quarter. Combined gross domestic product (GDP) growth of the 10 largest economies in emerging East Asia[1] eased slightly, but with a robust 8.2% year-on-year[2] growth in the third quarter, down from the 10.2% expansion in the first half of 2010 **(Figure 1)**. Growth in the People's Republic of China (PRC) is beginning to ease, still robust at 9.6% in the third quarter, but a good sign nonetheless. Aggregate GDP growth in the four middle-income economies of the Association of Southeast Asian Nations (ASEAN-4)[3] declined to 6.0% in the third quarter from a strong 7.8% first half growth. The four newly-industrialized economies (NIEs)[4] expanded 6.5% in the third quarter, after growing 9.8% in the first half. Singapore, the region's fastest growing economy, moderated to 10.6% in the third quarter, after two quarters of rapid growth. With exports, retail sales, and industrial production slowing, growth is expected to continue to moderate in the fourth quarter **(Figure 2)**.

Figure 1: Regional GDP Growth[1]—Emerging East Asia[2] (y-o-y, %)



y-o-y = year-on-year.
ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand; GDP = gross domestic product; NIEs = Hong Kong, China; Republic of Korea; Singapore; and Taipei,China.
[1]Weighted by gross national income (atlas method, current $). [2]Includes ASEAN-4, NIEs, Viet Nam, and People's Republic of China.
Source: OREI staff calculations based on national sources.

Figure 2: Merchandise Export, Industrial Production, and Retail Sales Growth[1]—Emerging East Asia[2] (y-o-y, %)



y-o-y = year-on-year.
Note: Exports in $ value; industrial production and retail sales in local currency.
[1]3-month moving average. [2]Includes People's Republic of China; NIEs (Hong Kong, China; Republic of Korea; Singapore; and Taipei,China); and ASEAN-4 (Indonesia, Malaysia, Philippines, and Thailand); and Viet Nam. [3]Does not include Hong Kong, China for which monthly data unavailable. [4]Does not include Malaysia and Philippines for which monthly data unavailable. Data on industrial production and retail sales until Aug 2010.
Source: OREI staff calculations based on CEIC data.

[1]The 10 largest emerging East Asian economies are the People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei,China; Thailand; and Viet Nam.

[2]All growth figures are year-on-year unless otherwise indicated.

[3]Indonesia, Malaysia, Philippines, and Thailand.

[4]Hong Kong, China; Republic of Korea; Singapore; and Taipei,China.

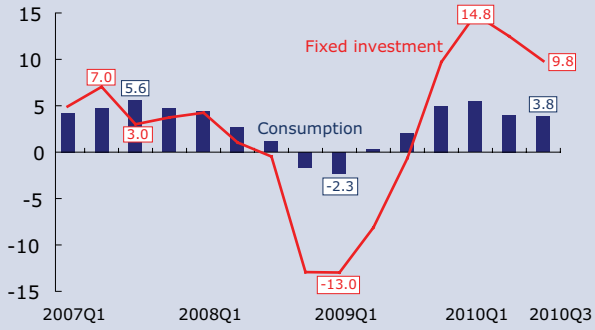
Domestic demand continues to drive economic growth in the region but at a slower pace.

In the third quarter, domestic demand remained the largest contributor to GDP growth in most of ASEAN-4 and NIEs **(Figure 3)**. Investment eased, but still grew at a healthy pace, as the impact of fiscal and monetary stimulus waned, and contribution from inventories restocking grew smaller. Fixed investment growth in the NIEs slowed further to 9.8% in the third quarter from the previous quarter's 12.5% **(Figure 4)**. In the ASEAN-4, investment growth fell for the first time this year—to 9.7% in the third quarter **(Figure 5)**. The steady growth in consumption in ASEAN-4 and the NIEs benefited from generally stable consumer confidence throughout the year **(Figure 6)**. In the PRC, private consumption, proxied by retail sales, remained strong as well **(Figure 7)**.

Robust growth continued in the PRC, though tempered somewhat by fading impact of stimulus.

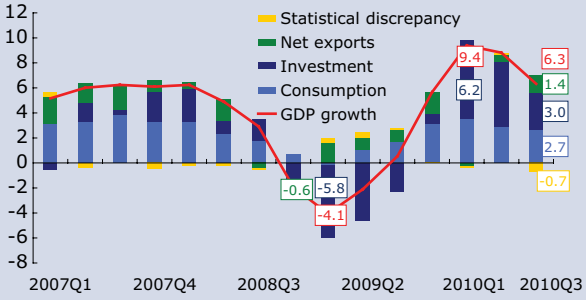
PRC's GDP grew 10.6% in the first three quarters—well above the 8.1% growth in the same period of 2009. However, it eased to 9.6% in the third quarter. The weaker growth was likely due to slower investment. Fixed asset investment is moderating but still growing at a rapid 24.4% in October **(Figure 8)**. The surge in real-estate investment has not offset the significant slowdown in government-led investment. Growth in industrial output eased with fewer infrastructure start-ups and the government's efforts to reduce energy consumption **(Figure 9)**. Private consumption and exports were probably behind growth in the third quarter. Retail sales grew steadily in the third quarter as real incomes rose from more new jobs than expected and increased salaries

Figure 4: Domestic Demand Growth—NIEs[1]
(y-o-y, %)



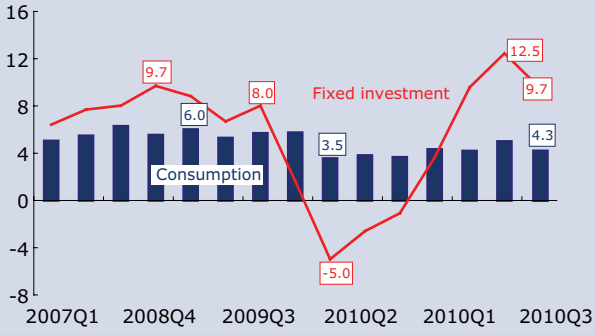
y-o-y = year-on-year.
[1]Includes Hong Kong, China; Republic of Korea; Singapore; and Taipei,China.
Source: OREI staff calculations based on CEIC data.

Figure 3: Contributions to GDP Growth—Emerging East Asia ex PRC[1] (y-o-y, %)



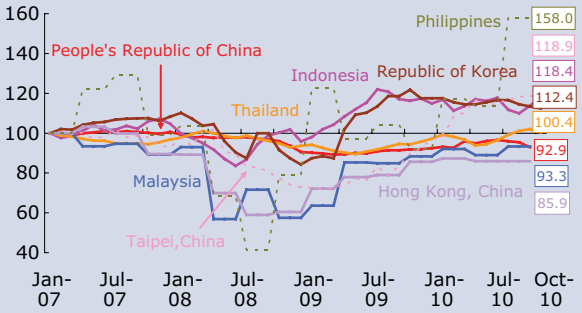
GDP = gross domestic product, PRC = People's Republic of China, y-o-y = year-on-year.
[1]Includes ASEAN-4 (Indonesia, Malaysia, Philippines, and Thailand) plus NIEs (Hong Kong, China; Republic of Korea; Singapore; and Taipei,China).
Source: OREI staff calculations based on CEIC data.

Figure 5: Domestic Demand Growth—ASEAN-4[1]
(y-o-y, %)



y-o-y = year-on-year.
[1]Includes Indonesia, Malaysia, Philippines, and Thailand.
Source: OREI staff calculations based on CEIC data.

Figure 6: Consumer Confidence Indexes—Selected Economies (Jan 2007 = 100)



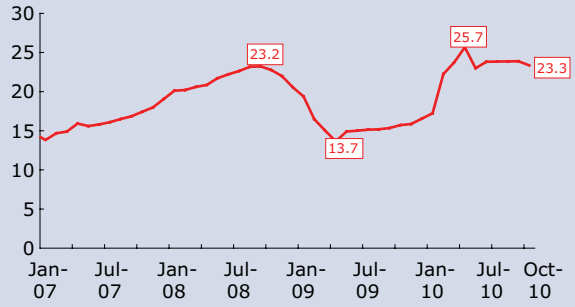
Note: For Hong Kong, China; Malaysia; and Philippines data are quarterly.
Source: National Bureau of Statistics (People's Republic of China); Chinese University of Hong Kong (Hong Kong, China); Bank Indonesia (Indonesia); Korea National Statistical Office and Bank of Korea (Republic of Korea); Malaysia Institute of Economic Research (Malaysia); Bangko Sentral ng Pilipinas (Philippines); CEIC (Taipei,China); and The University of the Thai Chamber of Commerce (Thailand).

and pensions. Net exports turned positive in the second quarter for the first time since the onset of the global recession, and continued to contribute to growth in the third quarter. Merchandise trade surplus in the third quarter rose 70.9% compared with the same period of 2009 as rising exports to other Asian economies compensated for slowing shipments to Europe and US.

Growth in the export-driven NIEs moderated in the third quarter on weaker external demand.

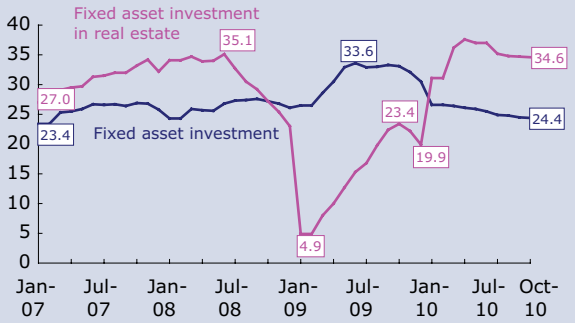
Economic growth in the NIEs slowed in the third quarter as weaker external demand pulled down export growth **(Figures 10, 11)**. While powering growth in the third quarter, investment tempered as inventory accumulation was almost zero **(Figure 12)**. Singapore grew fastest in the third quarter at 10.6%, down from the stunning 18.2% growth in the first half. This more rational growth rate was due to slowing manufacturing growth—particularly the volatile biomedical sector—and weaker construction. GDP growth in the Republic of Korea (Korea) slowed to 4.4% in the third quarter from the 7.6% first half growth

Figure 7: Retail Sales Growth[1]—People's Republic of China (y-o-y, %)



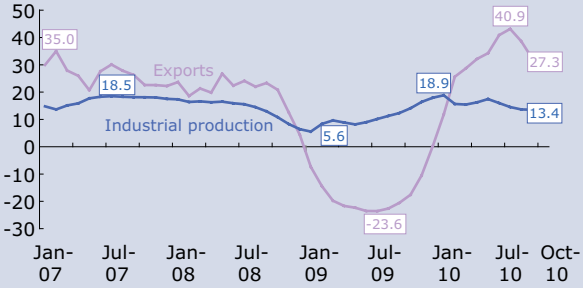
y-o-y = year-on-year.
[1]3-month moving average.
Source: OREI staff calculations based on CEIC data.

Figure 8: Fixed Asset Investment—People's Republic of China (nominal, year-to-date, y-o-y, %)



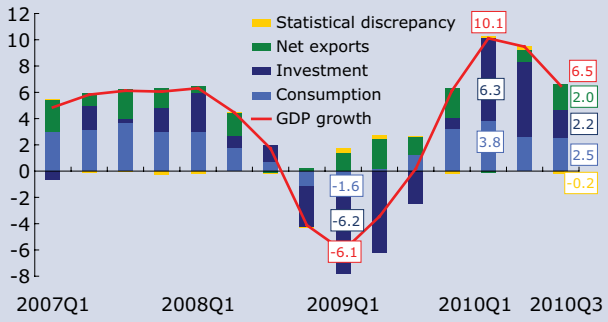
y-o-y = year-on-year.
Source: CEIC.

Figure 9: Merchandise Export and Industrial Production Growth[1]—People's Republic of China (y-o-y, %)



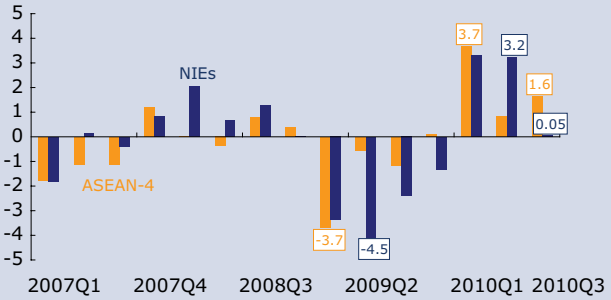
y-o-y = year-on-year.
Note: Exports in $ value; industrial production in local currency.
[1]3-month moving average.
Source: OREI staff calculations based on CEIC data.

Figure 10: Contributions to GDP Growth—NIEs[1] (y-o-y, %, percentage points)



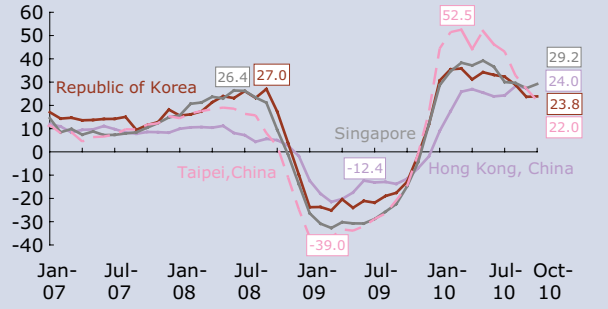
GDP = gross domestic product, y-o-y = year-on-year.
[1]Includes Hong Kong, China; Republic of Korea; Singapore; and Taipei,China.
Source: OREI staff calculations based on CEIC data.

Figure 12: Contribution of Changes in Inventories to GDP Growth—ASEAN-4 and NIEs (y-o-y, %, percentage points)



ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand; GDP = gross domestic product; NIEs = Hong Kong, China; Republic of Korea; Singapore; and Taipei,China; y-o-y = year-on-year.
Source: OREI staff calculations based on CEIC data.

Figure 11: Merchandise Export Growth[1]**—NIEs** ($ value, y-o-y, %)



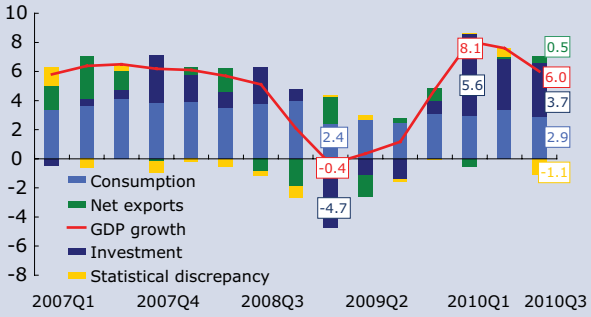
NIEs = Hong Kong, China; Republic of Korea; Singapore; and Taipei,China; y-o-y = year-on-year.
[1]3-month moving average.
Source: OREI staff calculations based on CEIC data.

due to moderating private and government consumption. After posting 13.2% growth in the first half, Taipei,China's GDP grew 9.8% in the third quarter as strong private consumption was offset by decelerating investments and net exports. Growth in Hong Kong, China moderated only slightly—to 6.8% in the third quarter from 7.2% in the first half. The strong third quarter performance was mainly due to rapid growth in net exports and continued gains in private consumption.

The solid economic expansion in the ASEAN-4 slowed in the third quarter as exports lost momentum.

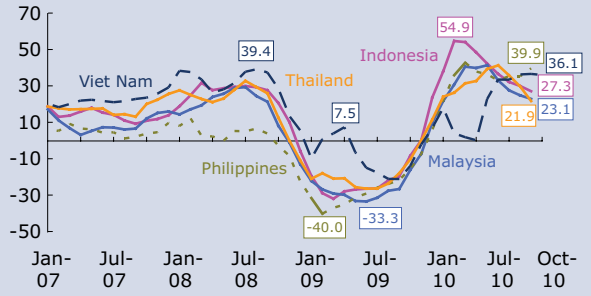
Aggregate GDP growth in the ASEAN-4 fell to 6.0% from 7.8% in the first half **(Figure 13)**. ASEAN-4 exports, not including the Philippines, have been on a downtrend throughout the third quarter **(Figure 14)**. Malaysia and Thailand—being more open economies—were more affected by the slowdown in external demand. Malaysia's GDP expanded 5.3% in the third quarter, down from 9.4% in the first half. Aside from slower export growth, contraction in government spending also dampened growth. In Thailand, GDP growth moderated to 6.7%—after rising 10.7% in the first half—as domestic demand slowed and exports weakened. Indonesia's GDP growth slightly eased to 5.8% in the third quarter from a 5.9% expansion in the first half with private consumption and investments continuing to drive the recovery. The Philippines' economic growth in the third quarter slowed to 6.5%—following a robust 8.0% growth in the first half—due to contraction in government spending and lower investments. Bucking the trend in the ASEAN-4, exports were the main engine of growth for the Philippines in the third quarter.

Figure 13: Contributions to GDP Growth—ASEAN-4[1] (y-o-y, %, percentage points)



GDP = gross domestic product, y-o-y = year-on-year.
[1]Includes Indonesia, Malaysia, Philippines, and Thailand.
Source: OREI staff calculations based on CEIC data.

Figure 14: Merchandise Export Growth[1]**—ASEAN-4 and Viet Nam** ($ value, y-o-y, %)

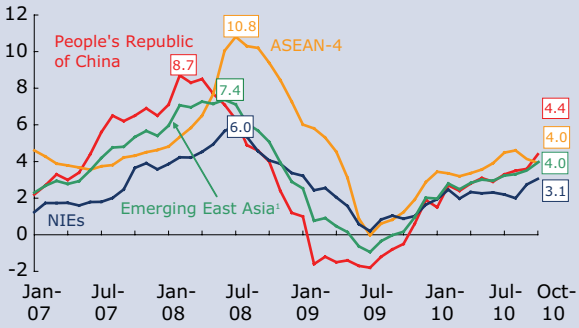


y-o-y = year-on-year.
[1]3-month moving average. Data for Indonesia, Malaysia, Philippines, and Thailand until Sep 2010.
Source: OREI staff calculations based on CEIC data.

Viet Nam's growth gained momentum during 2010, while the other smaller ASEAN economies are expected to show mixed performances.

Viet Nam's economic growth strengthened this year, growing 7.2% in the third quarter, above the 6.2% first half expansion. In Myanmar, economic growth improved to 4.4% in 2009 from 3.6% the previous year boosted by large inflows of foreign direct investment. The Lao People's Democratic Republic (Lao PDR) grew 6.5% in 2009 due to construction related to the Southeast Asian games and higher mineral production. GDP in Brunei Darussalam contracted for the second year in a row, dropping 1.8% in 2009 due to lower oil and gas production. Cambodia's economic growth eased to 0.1% in 2009 after growing 6.7% in 2008.

Figure 15: Regional Headline Inflation (y-o-y, %)



ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand; NIEs = Hong Kong, China; Republic of Korea; Singapore; and Taipei,China; y-o-y = year-on-year.
[1]Includes ASEAN-4, NIEs, People's Republic of China, and Viet Nam. Weighted using gross national income (atlas method, currrent $).
Source: OREI staff calculations based on CEIC data.

Inflation edged up on strong economic performance across the region.

Prices rose 4.0% in emerging East Asia in October, mainly due to higher inflation in PRC, Korea and Singapore **(Figures 15, 16a)**. Viet Nam continued to post the highest inflation rate in the region—11.1% in November **(Figure 16b)**. While headline inflation increased, core inflation for most economies remained steady during the year **(Figures 17a, 17b)**. Except for Thailand, housing prices across the region have started to trend downward in the third quarter following implementation of measures to cool the property sector **(Figures 18a, 18b)**.

Figure 16a: Headline Inflation—NIEs and PRC (y-o-y, %)

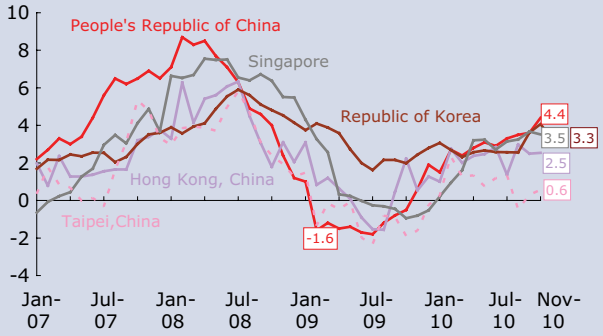
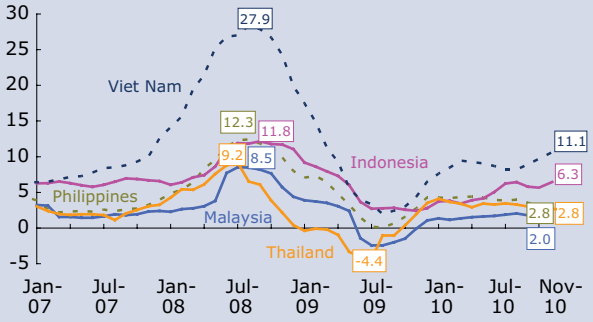


Figure 16b: Headline Inflation—Selected ASEAN Economies (y-o-y, %)



PRC = People's Republic of China, y-o-y = year-on-year.
Source: OREI staff calculations based on CEIC data.

Figure 17a: Core Inflation—NIEs (y-o-y, %)

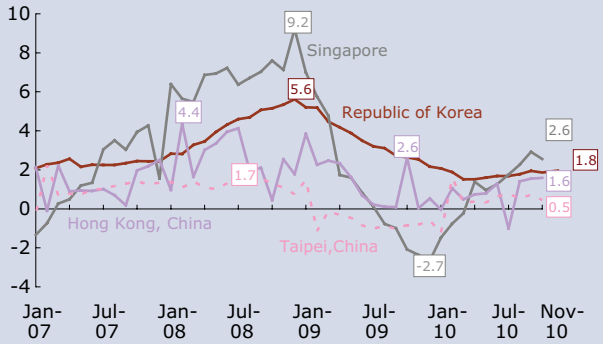
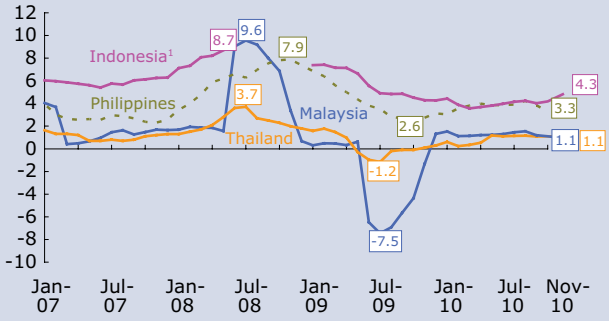


Figure 17b: Core Inflation—ASEAN-4 (y-o-y, %)



y-o-y = year-on-year.
[1]Series break due to unavailability of data.
Note: Official figures, except for Hong Kong, China (excluding food and utilities) and Singapore (excluding food and private transport). Official figures, except for Malaysia (excluding food, fuel, and utilities).
Source: OREI staff calculations based on CEIC data.

Figure 18a: Housing Prices[1]—PRC, Indonesia, Malaysia, and Thailand (y-o-y growth, %)

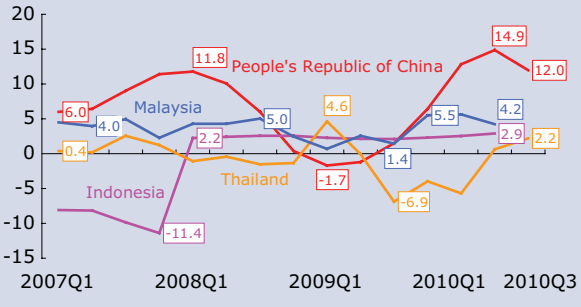
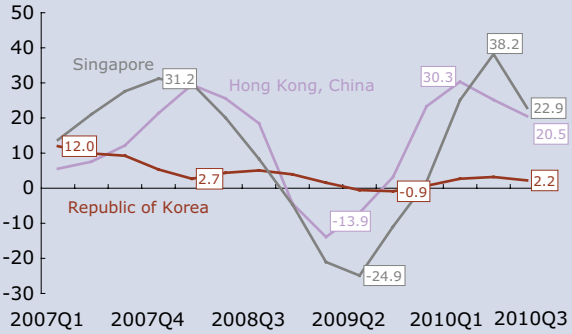


Figure 18b: Housing Prices[2]—NIEs (y-o-y growth, %)[3]



PRC = People's Republic of China, y-o-y = year-on-year.
[1]Data for PRC refers to sales price index for residential buildings; Indonesia refers to residential property price index; Thailand refers to housing price index. [2]Data for Hong Kong, China; and Singapore refer to residential property price index; Republic of Korea refer to housing price index. [3]3-month average for Hong Kong, China; and Republic of Korea.
Source: OREI staff calculations based on CEIC data.

Balance of Payments

Balance of payments remained in surplus across the region amid healthy current account surpluses and continued capital inflows.

Balance of payments across the region remained strong in the first half of the year **(Tables 1a, 1b, 1c)**. The NIEs had an overall balance of payments surplus of 7.7% of GDP though it was considerably below the 14.5% in the second half of 2009. ASEAN-4 likewise had its overall balance of payments surplus narrowing from 4.7% to 3.2% of GDP. While ASEAN-4 and the PRC saw bigger capital and financial account surpluses, inflows in the NIEs were substantially smaller. By October 2010, emerging East Asian economies—except Malaysia and Viet Nam—all drew double-digit annual growth in foreign exchange reserves **(Table 2)**.

In the first half of the year, imports rose faster than exports, leaving narrowing trade surpluses in many emerging East Asian economies.

Trade surplus in the NIEs narrowed in the first half of 2010 even if exports recovered, translating to a lower but nonetheless healthy current account surplus of 6.3% of GDP. In the third quarter, it rebounded however, reaching $20.8 billion—as exports grew faster than imports compared with the same period last year. The ASEAN-4 current account surplus dropped to 4.3% of GDP in the first half of 2010, due to a smaller trade surplus. The trend continued in the third quarter with import growth outpacing exports. The PRC's cumulative trade surplus in the first 9 months of 2010 stood at $120.6 billion, down from a $134.5 billion surplus during the same period last year, as import growth outpaced exports **(Figures 19, 20)**.

Table 1a: Balance of Payments—ASEAN-4 (% of GDP)

	2000–2004 Average	2004H1	2004H2	2005H1	2005H2	2006H1	2006H2	2007H1	2007H2	2008H1	2008H2	2009H1	2009H2	2010H1
Current Account	**4.2**	**2.2**	**4.4**	**1.3**	**3.0**	**4.1**	**6.4**	**5.6**	**6.8**	**4.6**	**3.1**	**7.3**	**5.5**	**4.3**
Net goods balance	8.3	5.8	7.9	3.6	6.4	6.3	8.1	6.9	7.8	5.7	4.7	7.8	7.0	6.1
Net services	-2.1	-1.3	-1.7	-1.4	-1.9	-0.9	-0.8	-0.4	-0.2	-0.4	-0.8	-0.3	-0.6	-0.4
Net income	-3.6	-3.9	-3.6	-3.5	-4.1	-3.3	-3.0	-2.8	-2.7	-2.5	-2.5	-2.0	-2.4	-2.8
Net transfers	1.4	1.4	1.3	1.9	2.3	2.0	2.0	1.9	1.8	1.7	1.7	1.9	1.5	1.4
Capital and Financial Account	**-1.8**	**0.6**	**2.2**	**2.4**	**-2.3**	**2.1**	**-2.1**	**1.3**	**-1.9**	**2.3**	**-6.8**	**-4.6**	**0.1**	**1.2**
Capital account	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Net direct investment	0.9	0.9	1.3	2.7	1.8	1.8	1.4	1.0	0.5	0.4	-0.2	0.3	-0.6	1.0
Net portfolio investment	0.2	1.5	3.0	2.1	0.6	1.9	1.6	4.3	-2.2	0.8	-5.7	-1.2	1.8	2.3
Net other investment	-2.9	-1.9	-2.1	-2.4	-4.8	-1.7	-5.2	-4.0	-0.3	1.0	-0.9	-3.7	-1.2	-2.1
Net errors & omissions	-0.4	0.7	-1.3	-0.6	-0.4	-0.7	-0.8	-0.4	-1.1	0.5	-0.5	0.6	-0.8	-2.3
Overall Balance	**2.0**	**3.4**	**5.4**	**3.1**	**0.4**	**5.6**	**3.5**	**6.5**	**3.8**	**7.4**	**-4.1**	**3.3**	**4.7**	**3.2**

ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand; GDP = gross domestic product.
Source: *International Financial Statistics*, International Monetary Fund; and CEIC.

Table 1b: Balance of Payments—NIEs (% of GDP)

	2000–2004 Average	2004H1	2004H2	2005H1	2005H2	2006H1	2006H2	2007H1	2007H2	2008H1	2008H2	2009H1	2009H2	2010H1
Current Account	**5.2**	**5.5**	**7.4**	**4.9**	**5.6**	**4.3**	**6.4**	**5.8**	**6.6**	**4.3**	**5.7**	**9.6**	**7.5**	**6.3**
Net goods balance	4.7	5.2	6.7	4.7	5.9	4.2	5.5	4.2	5.0	1.6	1.5	6.1	5.2	3.6
Net services	0.5	0.8	0.5	0.5	0.8	0.7	1.0	1.4	1.9	2.1	2.9	2.3	2.1	2.1
Net income	0.6	0.2	0.9	0.4	-0.5	0.3	0.5	0.8	0.3	1.2	1.7	1.6	0.9	1.2
Net transfers	-0.6	-0.8	-0.7	-0.7	-0.6	-0.8	-0.6	-0.7	-0.6	-0.7	-0.4	-0.5	-0.6	-0.7
Capital and Financial Account	**-1.2**	**1.3**	**-3.0**	**0.3**	**-4.4**	**-1.3**	**-3.1**	**-4.3**	**-4.6**	**-1.1**	**-7.4**	**1.0**	**7.1**	**1.6**
Capital account	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	0.0	0.0	0.2	0.4	0.3	0.2
Net direct investment	0.5	-0.5	0.1	1.3	-0.1	0.5	0.2	-0.1	-1.5	-0.9	1.9	-0.2	-0.4	0.2
Net portfolio investment	-2.7	-6.5	-0.4	-4.5	-0.5	-2.8	-5.4	-5.1	-4.5	-4.0	-6.7	-2.0	-2.2	-3.0
Net other investment	1.3	8.4	-2.5	3.9	-3.6	1.2	2.3	1.0	1.4	3.8	-2.8	2.8	9.4	4.1
Net errors & omissions	0.5	0.8	0.7	0.2	0.6	0.0	-0.1	0.6	0.8	-0.3	0.6	0.2	-0.1	-0.2
Overall Balance	**4.5**	**7.5**	**5.1**	**5.4**	**1.8**	**3.0**	**3.1**	**2.2**	**2.8**	**2.9**	**-1.1**	**10.7**	**14.5**	**7.7**

NIEs = Hong Kong, China; Republic of Korea; Singapore; and Taipei,China.
Source: *International Financial Statistics,* International Monetary Fund; CEIC; and national sources.

Table 1c: Balance of Payments—People's Republic of China (% of GDP)

	2000–2004 Average	2004H1	2004H2	2005H1	2005H2	2006H1	2006H2	2007H1	2007H2	2008H1	2008H2	2009H1	2009H2	2010H1
Current Account	**2.4**	**0.9**	**5.7**	**6.8**	**7.4**	**7.7**	**10.6**	**10.8**	**10.4**	**9.6**	**9.6**	**6.2**	**5.8**	**5.0**
Net goods balance	2.9	0.7	4.9	5.5	6.3	6.7	9.0	9.0	9.0	6.7	9.0	5.5	4.6	3.5
Net services	-0.5	-0.7	-0.4	-0.4	-0.4	-0.5	-0.2	-0.2	-0.2	-0.2	-0.3	-0.8	-0.5	-0.5
Net income	-0.9	-0.3	-0.1	0.5	0.5	0.3	0.8	0.9	0.6	1.9	0.1	0.8	0.9	1.1
Net transfers	0.9	1.2	1.2	1.2	1.0	1.1	1.0	1.2	1.1	1.2	0.9	0.7	0.7	0.8
Capital and Financial Account	**2.8**	**7.9**	**4.1**	**3.9**	**1.9**	**3.3**	**-2.1**	**6.0**	**-0.8**	**3.6**	**-2.1**	**2.8**	**3.0**	**3.6**
Capital account	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Net direct investment	3.0	3.6	2.1	2.3	3.6	2.6	1.7	3.4	3.5	2.0	2.1	0.7	0.7	1.5
Net portfolio investment	-0.2	3.3	-0.7	-0.1	-0.3	-2.5	-2.5	-0.3	1.2	1.0	0.9	0.9	0.7	-0.3
Net other investment	0.0	1.0	2.7	1.5	-1.5	3.0	-1.4	2.8	-5.6	0.5	-5.2	1.1	1.6	2.3
Net errors & omissions	0.4	-0.9	1.7	-0.5	2.5	-0.7	2.2	0.9	0.1	0.9	0.3	-0.4	-1.2	-1.5
Overall Balance	**5.6**	**7.9**	**11.4**	**10.1**	**11.8**	**10.3**	**10.6**	**17.7**	**9.7**	**14.1**	**7.8**	**8.6**	**7.5**	**7.0**

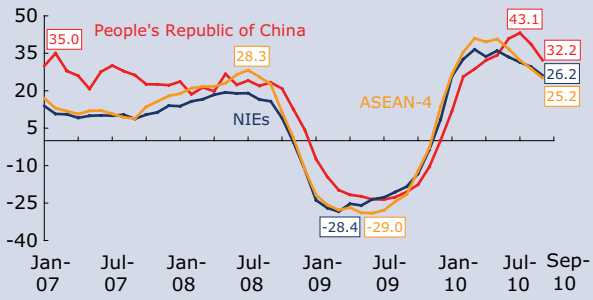
GDP = gross domestic product.
Source: *International Financial Statistics,* International Monetary Fund; and CEIC.

Table 2: Total Reserves (excluding gold)

	Value ($ billion)				% Change (y-o-y)				% Change (m-o-m)			
	Dec-09	Mar-10	Jun-10	Oct-10	Dec-09	Mar-10	Jun-10	Oct-10	Jul-10	Aug-10	Sep-10	Oct-10
Brunei Darussalam	1.4	1.3	1.3	—	80.7	69.8	54.9	—	—	—	—	—
Cambodia	2.9	3.0	3.1	3.2[4]	24.4	27.4	19.3	15.1[4]	1.2	0.4	—	—
China, People's Rep. of	2416.0	2463.5	2471.2	2666.9[4]	23.9	25.9	15.7	16.5[4]	3.4	0.3	4.0	—
Hong Kong, China	255.7	258.8	256.7	266.0[4]	40.1	38.9	24.1	17.3[4]	1.5	0.3	1.8	—
Indonesia	63.6	69.2	73.4	88.7	28.1	31.5	32.6	42.8	3.6	3.1	6.5	6.2
Korea, Republic of	269.9	272.3	274.1	293.3	34.2	32.0	18.3	11.0	4.3	-0.2	1.5	1.2
Lao People's Democratic Republic	0.7	—	—	—	11.8	—	—	—	—	—	—	—
Malaysia	95.4	94.0	93.3	103.8	4.7	7.5	2.4	9.4	0.3	0.2	5.8	4.7
Myanmar	—	—	—	—	—	—	—	—	—	—	—	—
Philippines	38.8	39.6	41.8	50.0	16.8	14.9	20.3	32.0	1.2	1.1	8.2	7.9
Singapore	187.8	197.1	200.0	221.4	7.8	18.6	15.5	20.1	3.5	-0.3	4.0	3.1
Taipei,China	348.2	355.0	362.4	383.8	19.4	18.3	14.1	12.5	2.1	0.5	2.3	0.9
Thailand	135.5	141.1	143.4	166.7	24.7	24.0	21.2	25.8	3.0	2.3	5.2	4.8
Viet Nam	16.4	13.9	—	—	-31.2	-39.8	—	—	—	—	—	—
Emerging East Asia	**3832.3**[1]	**3908.8**[2]	**3920.8**[3]	**4243.7**[5]	**23.3**[1]	**24.9**[2]	**16.4**[3]	**17.1**[5]	**3.1**[5]	**0.4**[5]	**3.5**[6]	**2.7**[7]
Japan	1022.2	1015.3	1019.6	1085.0	1.3	1.9	2.4	5.2	1.5	0.5	3.7	0.7
East Asia	**4854.5**[1]	**4924.1**[2]	**4940.5**[3]	**5328.7**[5]	**17.9**[1]	**19.3**[2]	**13.2**[3]	**11.9**[5]	**2.8**[5]	**0.4**[5]	**3.6**[6]	**1.8**[7]

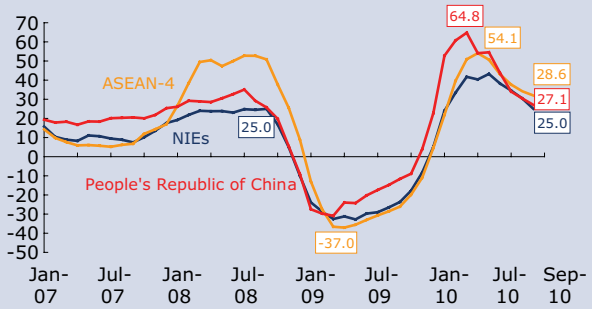
m-o-m = month-on-month, y-o-y = year-on-year, — = data unavailable.
[1]Excludes Myanmar as data unavailable. [2]Excludes Lao People's Democratic Republic and Myanmar as data unavailable. [3]Excludes Lao People's Democratic Republic, Myanmar, and Viet Nam as data unavailable. [4]Data are for most recent month in which data are available. [5]Excludes Brunei Darussalam, Lao People's Democratic Republic, Myanmar, and Viet Nam as data unavailable. [6]Excludes Brunei Darussalam, Cambodia, Lao People's Democratic Republic, Myanmar, and Viet Nam as data unavailable. [7]Excludes Brunei Darussalam; Cambodia; People's Republic of China; Hong Kong, China; Lao People's Democratic Republic; Myanmar; and Viet Nam as data unavailable.
Source: *International Financial Statistics,* International Monetary Fund; CEIC; and national sources.

Figure 19: Merchandise Export Growth[1]— PRC, ASEAN-4, and NIEs ($ value, y-o-y, %)



PRC = People's Republic of China; ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand; NIEs = Hong Kong, China; Republic of Korea; Singapore; and Taipei,China; y-o-y = year-on-year.
[1]3-month moving average.
Source: OREI staff calculations based on CEIC data.

Figure 20: Merchandise Import Growth[1]— PRC, ASEAN-4, and NIEs ($ value, y-o-y, %)



PRC = People's Republic of China; ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand; NIEs = Hong Kong, China; Republic of Korea; Singapore; and Taipei,China; y-o-y = year-on-year.
[1]3-month moving average.
Source: OREI staff calculations based on CEIC data.

Stronger growth, high interest rate differentials, and expectations of further currency appreciation attracted capital inflows.

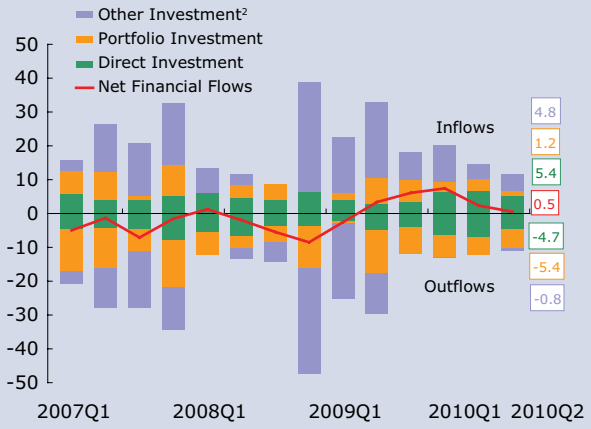
Amid anemic growth in advanced economies, robust performance and higher interest rates in emerging East Asia continued to attract capital flows in the second quarter of 2010. Expectations that the region's currencies will continue appreciating also contributed to the higher inflows. For ASEAN-4, net financial flows in the second quarter were stronger than first quarter levels due to smaller "other investment" outflows **(Figure 21)**. For the NIEs, net financial flows eased as strong inflows of "other investments" were offset by portfolio investment outflows **(Figure 22)**. In contrast, the PRC's capital and financial accounts steadily increased, driven by "other investment" **(Figure 23)**.

Financial Markets and Exchange Rates

Most emerging East Asian stock markets recovered dramatically in the second half of the year following the region's rapid economic turnaround.

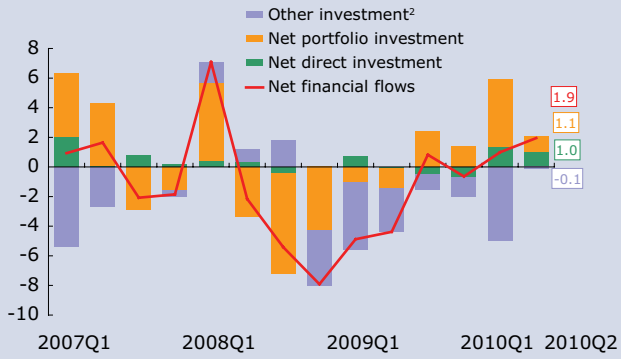
Equity markets in the region rose as robust economic growth and the positive economic outlook attracted increased capital inflows **(Figure 24)**. Recovering from first half losses, stock market in the NIEs gained rapidly during the second half of 2010. The PRC market has declined, but improved vis-à-vis its first half performance. ASEAN-4 bourses soared, with Indonesia (44.3%), Thailand (38.3%), Philippines (35.7%), and Malaysia (17.5%) posting record highs. Markets in advanced economies also recovered, with the Dow Jones Industrial Average and FTSE 100 expanding 6.6%

Figure 22: Financial Account Flows—NIEs[1]
(% of GDP)



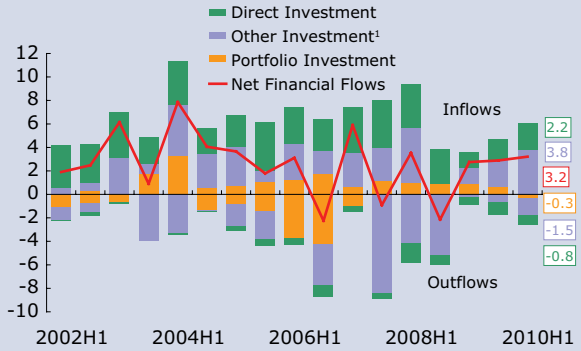
[1]NIEs = Hong Kong, China; Republic of Korea; Singapore; and Taipei,China. [2]"Other investment" includes financial derivatives.
Source: OREI staff calculations based on data from *International Financial Statistics,* International Monetary Fund; and national sources.

Figure 21: Net Financial Flows—ASEAN-4[1]
(% of GDP)



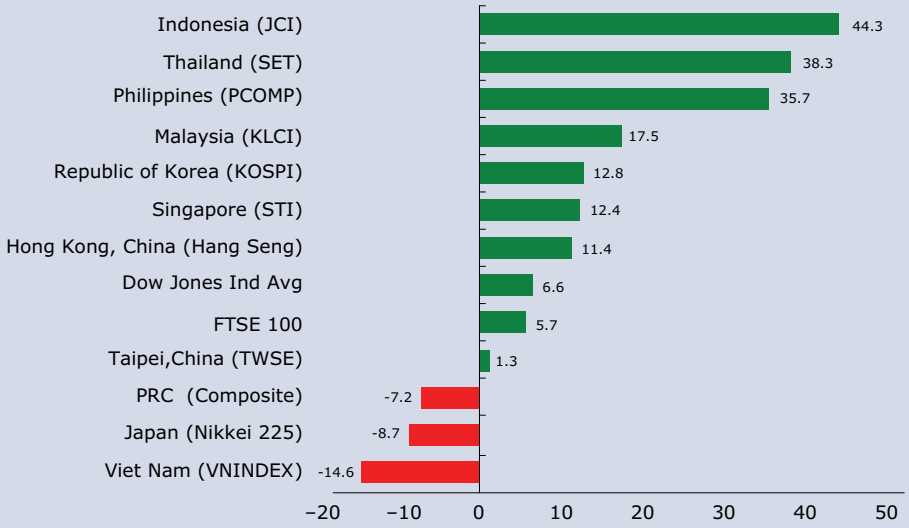
[1]ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand. [2]"Other investment" includes financial derivatives.
Source: OREI staff calculations based on data from *International Financial Statistics,* International Monetary Fund; and national sources.

Figure 23: Financial Account Flows—People's Republic of China (% of GDP)



[1]"Other investment" includes financial derivatives.
Source: OREI staff calculations based on data from national sources.

Figure 24: Stock Price Indexes[1] (4 Jan 2010 to 12 Nov 2010, % change)



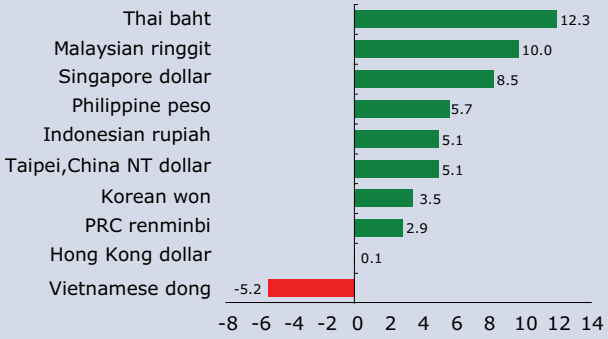
PRC = People's Republic of China.
[1]Closing as of 12 November 2010.
Source: OREI staff calculations based on data from Reuters and Bloomberg.

and 5.7%, respectively. However, the Nikkei 225 declined 8.7% due to a strong yen—although the fall in the index was muted by additional stimulus and quantitative easing in the US.

Almost all of the region's currencies appreciated as capital continued to return to the region.

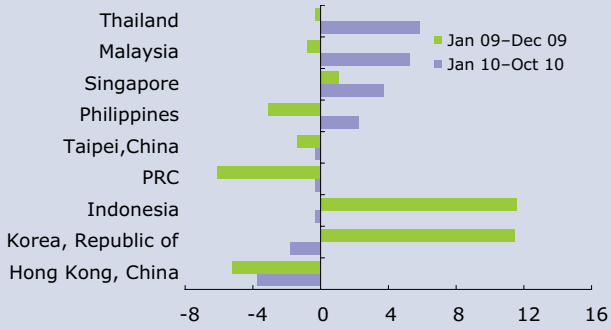
With the exception of the Vietnamese dong, all currencies appreciated against the US dollar as capital inflows were looking for higher returns **(Figure 25)**. The Thai baht and Malaysian ringgit gained the most, appreciating 12.3% and 10.0%, respectively. The Vietnamese dong was devalued by 2.1% in mid-August and further depreciated by 5.2% since. Against a basket of most traded currencies, the region's currencies generally appreciated in both nominal and real effective terms **(Figures 26, 27)**. Thailand appreciated the most in both nominal and real effective exchange rates, while Korea and Hong Kong, China—with its US dollar currency board—depreciated in both nominal and real effective exchange rates.

Figure 25: Exchange Rate vis-à-vis US dollar[1]
(4 Jan 2010 to 10 Nov 2010, % change)



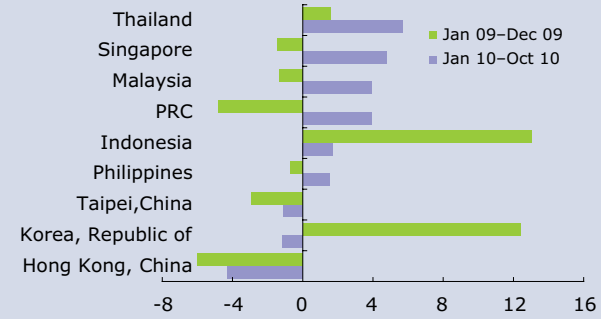
PRC = People's Republic of China.
[1]Latest closing as of 10 Nov 2010, based on local currency value of the US dollar. Negative values indicate depreciation.
Source: OREI staff calculations based on Reuters data.

Figure 26: Change in Nominal Effective Exchange Rate (%)



PRC = People's Republic of China.
Source: OREI staff calculations using data from Bank for International Settlements.

Figure 27: Change in Real Effective Exchange Rate[1] (%)



PRC = People's Republic of China.
[1]Consumer price index-based.
Source: OREI staff calculations using data from Bank for International Settlements.

Bond yield curves flattened in several emerging East Asian markets due to monetary policy normalization, while yield curves in other economies shifted downward due to ample global liquidity.

Tighter monetary policies flattened yield curves during the second half of 2010 **(Figures 28a, 28b, 28c, 28d, 28e, 28f)**. Malaysia, Korea, and Thailand—which have increased policy rates during the past 5 months—saw yields at the lower end of their curves increase and yields for longer maturities decline. Lower yields for longer maturities resulted from markets' lower future inflationary expectations from a tighter monetary

Figure 28a: Benchmark Yields—People's Republic of China (% per annum)

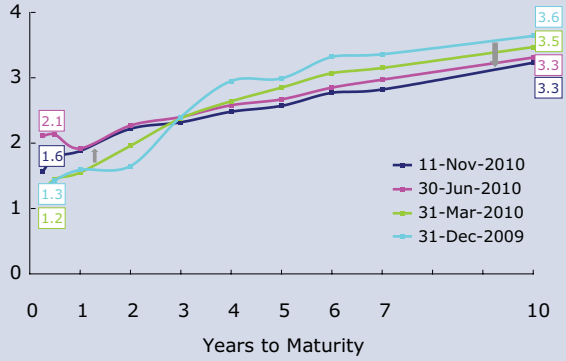


Figure 28b: Benchmark Yields—Hong Kong, China (% per annum)

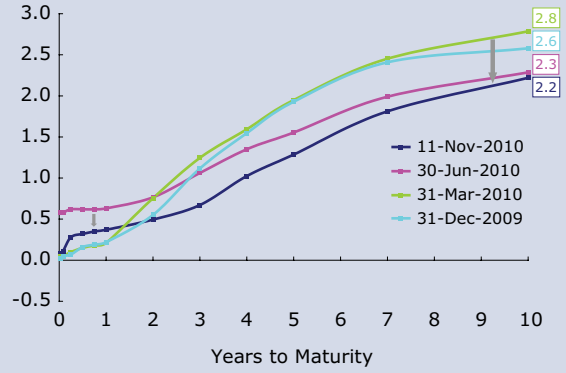


Figure 28c: Benchmark Yields—Republic of Korea (% per annum)

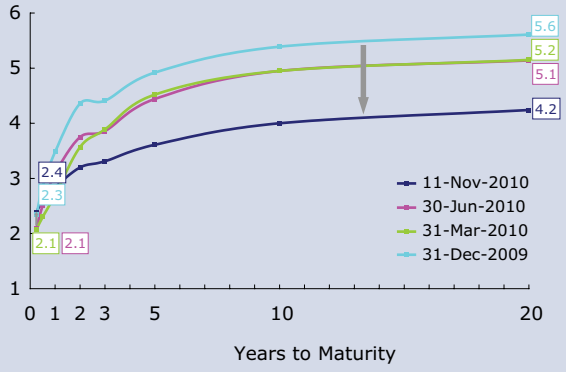


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Figure 28d: Benchmark Yields—Indonesia
(% per annum)

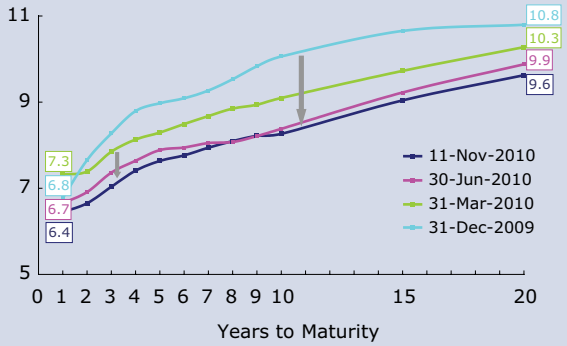


Figure 28e: Benchmark Yields—Malaysia
(% per annum)

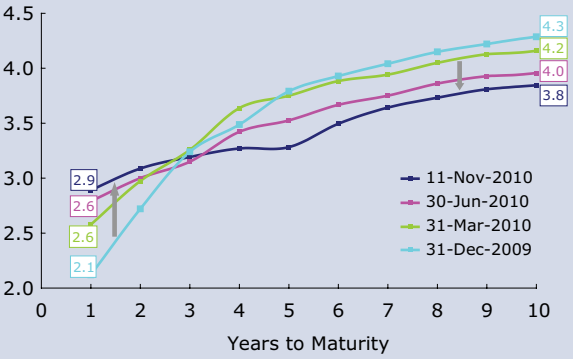
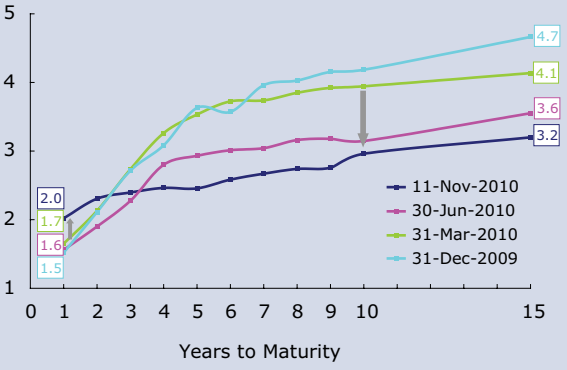


Figure 28f: Benchmark Yields—Thailand
(% per annum)



Source: Bloomberg.

stance. Meanwhile, yield curves for PRC; Hong Kong, China; and Indonesia shifted downward due to lower risk perception for the region as a whole and greater foreign appetite for the region's bonds (see Figure 31).

Monetary and Fiscal Policy

Across the region, authorities continue to normalize macroeconomic policy and have been introducing measures to manage capital inflows.

Despite the sluggish growth in advanced economies, the region's recovery remains strong and intact. With rising inflationary pressures, several economies in the region tightened monetary and fiscal policy. Nonetheless, authorities are cautious in normalizing too quickly given the weakening external environment. A further challenge to policymakers in the region is the widening interest rate differentials between emerging and advanced economies, which adds the risk of volatile currency markets and destabilizing capital flows. This has prompted some economies in the region to impose measures to discourage short-term capital flows and impose stricter prudential requirements on financial institutions.

Policy rates were raised in the PRC, NIEs, Thailand, and Viet Nam to keep inflation in check and dampen rising property prices.

For the first time since December 2007, the People's Bank of China raised its 1-year deposit and lending rates by 25 basis points (bps)—to 2.50% and 5.56%, respectively—amid the robust economic growth that pushed October inflation to a 2-year high **(Figures 29a, 29b)**. Prior to this, the PRC used other quantitative and administrative tools such as bank reserve requirements to manage liquidity—rather than use policy rates. Bank reserve requirement ratios have been raised five times since the start of the year to control credit, particularly in real estate, along with other measures to cool the property market. Among the NIEs, Taipei,China increased its discount rate by 12.5 bps to 1.50% effective

Figure 29a: Policy Rates[1]—ASEAN-4 and Viet Nam (% per annum)

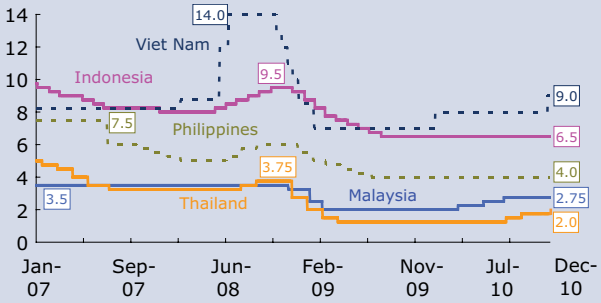
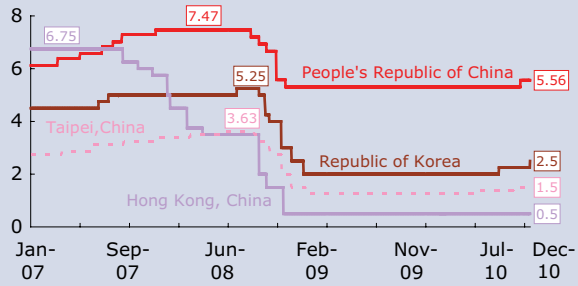


Figure 29b: Policy Rates[2]—People's Republic of China; Hong Kong, China; Republic of Korea; and Taipei,China (% per annum)



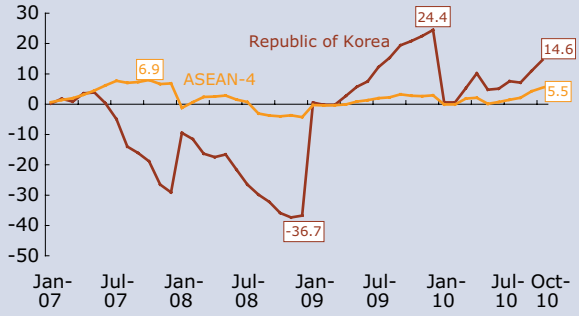
[1]Bank Indonesia (BI) rate (Indonesia), overnight policy rate (Malaysia), reverse repurchase (repo) rate (Philippines), 1-day repo rate (Thailand), and prime rate (Viet Nam). [2]One-year lending rate (People's Republic of China), Hong Kong base rate (Hong Kong, China), Korea base rate (Republic of Korea), and discount rate (Taipei,China).
Source: Bloomberg, Datastream, and State Bank of Viet Nam website.

October, while Korea increased its policy rate from 2.25% to 2.50% to curb rising inflation. The Monetary Authority of Singapore also reiterated its tightening stance by way of a slight increase in the slope of its exchange rate policy band, after re-centering the band in April 2010. Although Hong Kong, China's base rate remains unchanged (as it mimics US Federal Reserve adjustments), the Hong Kong Monetary Authority increased down payment requirements for mortgage applicants to minimize risks of a property market bubble forming. Elsewhere, Thailand raised its 1-day repurchase rate by 25 bps to 2.0% while the State Bank of Viet Nam raised its discount rate by 100 bps to 9.0% to contain high inflation and currency pressures. Other economies have restrained from further policy rate hikes, given continuing moderation in global growth momentum and—perhaps more importantly—to stem excessive capital inflows as foreign investors continue to search for yield.

Across the region, authorities are actively trying to manage capital inflows.

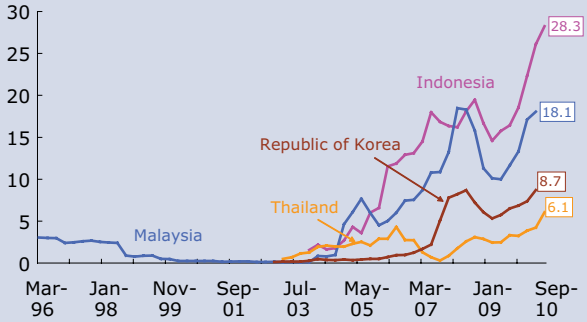
Inflows to the region's equity and debt markets are rising quickly as foreign investors are attracted to the region's strong economic performance, rising currencies, and higher interest rates **(Figures 30, 31)**. Several economies are trying

Figure 30: Net Foreign Portfolio Investment in Equities—Republic of Korea and ASEAN-4[1] ($ billion)



[1]Monthly data excluding Malaysia.
Source: Bloomberg and CEIC.

Figure 31: Foreign Holdings of Local Currency Government Bonds[1] (% of total)



[1]Data for Indonesia and Thailand as of Sep 2010; Malaysia and Republic of Korea as of Jun 2010.
Source: *AsianBondsOnline*.

Table 3: Capital Control Measures[1]—Selected Economies

Economy	New Capital Control Measures
China, People's Republic of	New rules announced (Nov) covering:
	— tighter management of banks' foreign debt quotas
	— regulation of PRC special purpose vehicles overseas
	— tighter control over equity investments by foreign firms
Indonesia	Foreign exchange holding limit by banks capped at 20% of capital (Jul)
	Minimum 1-month holding period required for SBI investors with 1-month maturities (Jul)
Korea, Republic of	Ceilings set on foreign exchange derivatives contracts of domestic and foreign banks (Jun)
	Use of foreign currency bank loans tightened (Jun)
	Regulations tightened on foreign currency liquidity of banks (Jun)
	Plans to impose a withholding bond tax on foreign investors and a bank levy announced (Nov)
Taipei,China	Holding limit of foreign investors for local government bonds and money market products with maturities of one year or less set to a maximum of 30% (Nov)
Thailand	15% tax on interest and capital gains imposed on foreign investors in Thai bonds; 15% withholding tax on those trading Thai bonds (Oct)
	Thai investments abroad and capital outflows encouraged (Sep):
	— Thai firms allowed to invest and lend to affiliate companies abroad
	— Foreign currency deposit limit raised
	— Cross-border property investment cap increased
	— Minimum amount required for mandatory repatriation of export earnings raised

[1]Measures announced and/or imposed in 2010.
PRC = People's Republic of China, SBI = Sertifikat Bank Indonesia.
Source: News articles and government press releases.

to manage these capital inflows, using tighter management of banks' foreign debt quotas and equity investments of foreign firms (PRC); limits on banks' foreign currency asset holdings (Indonesia, Korea); limits on foreign investor ownership of selected domestic securities (Taipei,China); and taxing interest and capital gains for foreign investors holding or trading domestic bonds (Thailand) **(Table 3)**.

Fiscal consolidation continues across much of emerging East Asia, even as several governments continue spending to address structural reforms and ensure long-term growth.

As fiscal stimulus is scaled back across emerging East Asia, the region's economies continue to maintain comfortable fiscal positions. However, as a consequence of fiscal spending, some economies have seen deficits rise from 2009, such as Cambodia; Hong Kong, China; and Indonesia. Fiscal deficits are generally expected to decline from last year's levels as governments reduce stimulus and the economic recovery helps boost revenues. **(Table 4)**. Fiscal consolidation in emerging East Asia is expected to continue in 2011, although at varying speeds as the overall fiscal stance continues to be accommodative. The region's governments should take stock of the effectiveness of fiscal stimulus **(Box 1)**. Hong Kong, China foresees higher operating revenues from duties and taxes to cut by half its fiscal deficit in FY2011. The Philippines is targeting to reduce its budget shortfall by at least half a percentage point—similar to Taipei,China—through rationalizing expenditures and stronger tax administration. Malaysia, on the other hand, aims to reduce its fiscal deficit only slightly in 2011, as opposed to the large 1.4 percentage point reduction in 2010, as the government begins its new medium-term development plan. Indonesia's parliament set a higher deficit target for 2011 than initially proposed to support economic growth, while also cutting some subsidies. Thailand, in

Table 4: Fiscal Balance of Central Government (% of GDP)

	2000–2004 Average	2005	2006	2007	2008	2009[3]	2010[4]	2011[4]
Cambodia	-5.7	-2.5	-2.7	-2.9	-2.8	-5.9	-7.4	—
China, People's Rep. of	-2.2	-1.2	-1.0	0.6	-0.4	-2.8	-2.8	-2.6
Hong Kong, China[1]	-2.4	1.0	4.0	7.7	0.1	0.8	-1.5	-0.7
Indonesia	-1.5	-0.5	-0.9	-1.3	-0.1	-1.6	-2.1	-1.8
Korea, Rep. of	-1.3	-2.5	-2.6	0.4	-2.1	-3.9	-3.0	—
Malaysia	-5.0	-3.6	-3.3	-3.2	-4.8	-7.0	-5.6	-5.4
Philippines	-4.5	-2.7	-1.1	-0.2	-0.9	-3.9	-3.9	-3.2
Singapore	-0.1	0.7	0.0	3.0	0.1	-1.1	-1.1	—
Taipei,China[1]	-2.7	-0.6	-0.3	-0.4	-0.9	-4.5	-3.9	-3.2
Thailand[1]	-1.2	0.2	0.1	-1.1	-0.3	-4.8	-3.8	-4.1
Viet Nam[2]	-4.9	-3.6	-1.2	-5.5	-4.0	-10.6	-8.3	—

Data updated as of 11 Nov 2010, — = unavailable.
[1]Fiscal year. [2]State budget balance for 2000-2004. 2005-2010 figures are from the *Asian Development Outlook 2010,* Asian Development Bank. [3]2009 deficit figures are actual, except for Cambodia; People's Rep. of China; Hong Kong, China; and Republic of Korea. [4]2010/2011 budget estimates and government targets of respective economies, except Cambodia (International Monetary Fund projection), Republic of Korea, and Viet Nam (*Asian Development Outlook 2010* forecasts).
Source: National sources; *Asian Development Outlook* (various issues), ADB; *Article IV Consultations,* International Monetary Fund; and CEIC.

comparison, expects a higher fiscal deficit next year, as social welfare programs initially introduced as stimulus are now integrated in the government budget. Overall, public debt levels in the region remain manageable despite higher government spending in previous years **(Table 5)**.

Financial Vulnerability

Financial vulnerability in emerging East Asia remains low as most economies maintain healthy fiscal balances and have low external debt.

As most of the region's economies have comfortable external and fiscal positions, the financial vulnerability across emerging East Asia remains low **(Table 6)**. Ratings agencies confirm this, with the Philippines upgraded from BB- to BB by Standard and Poor's, Moody's upgrading PRC's rating from A1 to Aa3, and Hong Kong, China's rating from Aa2 to Aa1 **(Figures 32a, 32b, 32c, 32d)**. However, as a consequence of fiscal stimulus, some economies have seen budget deficits rise, such as Viet Nam, Lao PDR, and Cambodia—where fiscal deficits are seen to rise above 7% of GDP. These countries may need some fiscal consolidation when economic conditions allow. Externally, most emerging East Asian economies run current account surpluses. However, the double-digit current account deficits in Cambodia and Lao PDR are worrying. In Lao PDR and Viet Nam, foreign reserve levels are somewhat low, covering about 2 months of imports.

Banking systems across the region should remain healthy, with strong capitalization, profitability, and low levels of nonperforming assets.

Banks across the region are well-capitalized—with risk-weighted capital adequacy ratios well in excess of 10% **(Table 7)**. Bank profits have also generally held up well **(Tables 8, 9)**. However, as the region continues growing and interest rates rise, bank funding costs will rise as well. While that might depress profits, the economic recovery in the region is also expected to reduce nonperforming loans, which will boost bank profits **(Table 10)**. Some economies have seen nonperforming loans ratios decline in 2010.

Table 5: Public and External Debt (% of GDP)

	2000–2004 Average	2004	2005	2006	2007	2008	2009	2010
Public Sector Debt								
China, People's Republic of	19.3	18.5	17.6	16.2	19.6	17.0	17.7	36.0[p]
Hong Kong, China	0.7	2.4	2.2	1.8	1.5	1.3	3.4	4.5[4]
Indonesia[1]	70.8	55.8	46.3	39.0	35.1	33.2	28.6	27.0[p]
Korea, Republic of[1]	20.8	23.7	27.6	30.1	29.7	29.0	32.6	33.1[5]
Lao People's Democratic Rep.	77.6	88.2	79.7	64.6	60.7	55.2	57.2[p]	—
Malaysia[2]	42.1	45.7	43.8	42.2	41.7	41.4	53.3	53.2[5]
Philippines[3]	88.7	95.4	82.2	73.3	63.1	64.3	65.3	64.0[5]
Singapore	96.8	100.7	95.8	89.6	87.9	93.4	110.0	107.5[5]
Taipei,China[1]	28.0	29.6	30.2	29.6	28.8	29.8	33.0	32.9[5]
Thailand	52.9	48.0	46.4	40.3	37.4	38.2	43.8	43.3[5]
Viet Nam	38.5	42.4	44.5	42.9	45.6	43.9	49.0	51.3[5]
External Debt								
Brunei Darussalam	9.6	8.7	7.7	7.0	7.5	7.9	12.2	—
Cambodia	27.2	25.7	24.6	21.5	23.1	19.7	22.0[e]	—
China, People's Republic of	8.1	6.7	6.8	6.0	6.8	5.2	4.4	4.0[5]
Hong Kong, China	128.9	138.6	141.6	153.6	173.1	176.3	182.9	188.2[5]
Indonesia	57.5	42.5	40.5	29.2	26.9	27.0	18.4	17.0[5]
Korea, Republic of	22.3	20.3	19.1	23.1	26.7	26.4	34.4	31.1[5]
Lao People's Democratic Rep.	64.9	59.9	62.7	55.1	58.1	48.9	41.0	—
Malaysia	43.2	44.4	44.7	41.5	39.4	29.0	31.5	29.2[5]
Myanmar	59.5	52.4	42.7	35.7	24.6	18.2	4.2[e]	—
Philippines	78.0	76.9	73.9	60.1	52.5	44.4	40.2	38.1[5]
Singapore	266.6	270.9	261.4	238.3	265.1	259.8	249.6	231.4[5]
Taipei,China	14.1	24.6	22.2	18.3	19.4	15.6	14.8	15.6[5]
Thailand	38.3	26.3	24.8	22.3	17.0	14.3	13.8	12.6[5]
Viet Nam	29.3	33.2	31.7	31.4	35.5	40.6	29.2	30.0[5]

GDP = gross domestic product, e = estimate, p = projection, — = not available.
[1]Central government debt. [2]Federal government debt. [3]National government debt. [4]As of Sep 2010. [5]As of Jun 2010.
Source: *Article IV Consultations,* International Monetary Fund; CEIC (Public Debt); and Joint External Debt Hub database (External Debt).

Credit conditions are expected to become more favorable across the region as private sector confidence returns.

As economic recovery moves toward sustained growth, banks in the region have become more willing to extend credit **(Figures 33a, 33b)**. Bank lending picked up in ASEAN-4 and the NIEs—particularly in Hong Kong, China, where it jumped 25.9% in September. In contrast, growth in bank lending moderated in the PRC, but remains robust at 19.3% in October **(Figure 33c)**. There are concerns that rapid credit expansion in Hong Kong, China and the PRC may be behind the double-digit price increases in housing (see Figures 18a, 18b). To counter this, PRC authorities introduced several measures to cool the property market by increasing down payments on second homes and raising mortgage rates. Similarly, the Hong Kong Monetary Authority also introduced measures to increase down payments on mortgages. These

Table 6: Assessment of Vulnerability (%)

	Inflation Rate (latest available)	**Fiscal Balance/ GDP** (2010)[1]	**Public Sector Debt/ GDP**[2] (latest available)[3]	**Current Acct./ GDP** (latest available)	**External Debt/ GDP**[4] (latest available)	**Short-Term External Debt/ Reserves** (Q210)[5]	**Foreign Reserves** (number of months of imports)[6]	**Foreign Liabilities/ Foreign Assets**[7] (latest available)	**Loans/ Deposits of Banks**[8] (latest available)
Brunei Darussalam	0.2 (Jun10)	17.0	—	35.0 (2009)	12.2	43.7	6.3 (Jun10)	4.9 (Aug10)	60.8 (Aug10)
Cambodia	1.8 (Aug10)	-7.4	—	-10.7 (2009)	22.0	5.1	6.1 (Aug10)	44.2 (Aug10)	76.9 (Aug10)
China, People's Rep. of	4.4 (Oct10)	-2.8	36.0 (2010)	5.0 (H110)	4.0	8.7	24.5 (Sep10)	36.4 (Aug10)	74.0 (Aug10)
Hong Kong, China	2.5 (Sep10)	-1.5	4.5 (Sep10)	1.5 (Q210)	188.2	45.5	7.6 (Sep10)	70.9 (Jul10)	56.9 (Jul10)
Indonesia	6.3 (Nov10)	-2.1	27.0 (2010)	0.7 (Q310)	17.0	47.7	8.5 (Oct10)	55.0 (Jul10)	76.3 (Dec09)
Korea, Rep. of	3.3 (Nov10)	-3.0	33.1 (Jun10)	4.1 (Q210)	31.1	62.4	8.6 (Oct10)	227.6 (Jun10)	120.1 (Jun10)
Lao People's Democratic Republic	8.1 (Sep10)	-7.8	57.2 (2009)	-11.8 (2009)	41.0	18.3	2.5 (Dec09)	46.8 (Dec08)	48.8 (Dec08)
Malaysia	1.8 (Sep10)	-5.6	53.2 (Jun10)	8.7 (Q210)	29.2	22.2	7.9 (Oct10)	98.8 (Aug10)	93.9 (Aug10)
Myanmar	8.0 (Jul10)	-3.7	—	-1.0 (2009)	4.2	9.4	4.7 (Jun07)	—	38.0 (Jan10)
Philippines	2.8 (Oct10)	-3.9	64.0 (Jun10)	5.6 (Q210)	38.1	31.3	11.9 (Oct10)	49.5 (Aug10)	77.7 (Sep10)
Singapore	3.3 (Aug10)	-1.1	107.5 (Jun10)	19.9 (Q210)	231.4	56.5	8.8 (Oct10)	91.6 (Aug10)	80.2 (Aug10)
Taipei,China	0.6 (Oct10)	-3.9	32.9 (Jun10)	10.3 (Q210)	15.6	15.8	19.1 (Oct10)	67.7 (Sep10)	62.1 (Sep10)
Thailand	2.8 (Nov10)	-3.8	43.3 (Jun10)	2.2 (Q210)	12.6	8.9	11.5 (Oct10)	121.2 (Aug10)	96.3 (Aug10)
Viet Nam	11.1 (Nov10)	-8.3	51.3 (2010)	-7.7 (2009)	30.0	45.8	2.0 (Mar10)	95.2 (Mar10)	105.0 (Mar10)

GDP = gross domestic product, — = unavailable.

[1]Balance ratios are 2010 budget estimates and/or government targets for respective economies, except for the following: Latest IMF Article IV consultation estimates for Brunei Darussalam (overall primary balance), Cambodia, and Lao People's Democratic Republic (Lao PDR); and *Asian Development Outlook* estimates for Republic of Korea, Myanmar, and Viet Nam. Figures for Lao PDR and Myanmar are 2009 balances. Overall primary balance (excludes interest and investment income) for Brunei Darussalam and overall balance (including grants) for Lao PDR. Data for Brunei Darussalam is on a calendar year basis; and on a fiscal year basis for Hong Kong, China; Lao PDR; Taipei,China; and Thailand. [2]Central government debt for Indonesia; Republic of Korea; and Taipei,China; federal government debt for Malaysia; and national government debt for the Philippines. [3]Data are projections for People's Republic of China, Indonesia, Lao PDR, and Viet Nam from IMF Article IV Consultation reports. [4]Data as of June 2010, except for Brunei Darussalam, Cambodia, Lao PDR and Myanmar (2009 figures). Data for Cambodia and Myanmar were computed using GDP estimates from the *World Economic Outlook,* International Monetary Fund. [5]Short-term external debt includes loans and credits due and debt securities due within a year as defined in the Joint External Debt Hub. Total reserves data for Myanmar as of Jun 2007. [6]Refers to reserves minus gold over a 12-month moving average of imports (cif). Latest month when data is available. Import data may be earlier, the same, or later than period indicated. [7]Foreign liabilities and assets of banking institutions, deposit money banks, and other depository corporations. [8]Loans to private sector and non-financial institutions; and deposits (demand, time, savings, foreign currency, bond, and money market instruments—when available) of banking institutions, deposit money banks, and other depository corporations of each economy. Source: CEIC; national sources; *Asian Development Outlook 2010 Update,* Asian Development Bank; Joint External Debt Hub, BIS-IMF-OECD-WB; *International Financial Statistics, Direction of Trade Statistics, World Economic Outlook* and *Article IV Consultations,* International Monetary Fund.

Figure 32a: S&P Sovereign Ratings—ASEAN-4 and Viet Nam (long-term foreign currency)

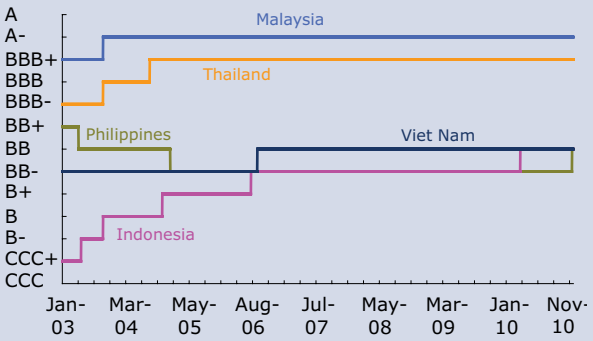
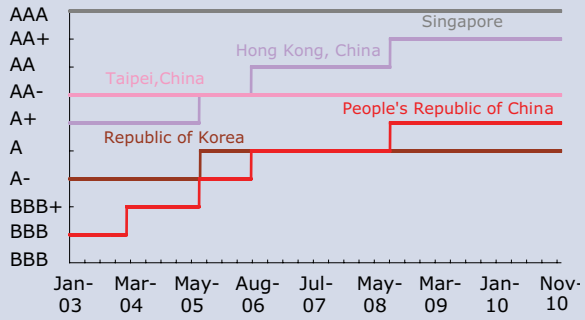


Figure 32b: S&P Sovereign Ratings—PRC and NIEs (long-term foreign currency)



NIEs = newly industrialized economies, PRC = People's Republic of China.
Source: Bloomberg.

Figure 32c: Moody's Sovereign Ratings—ASEAN-4 and Viet Nam (long-term foreign currency)

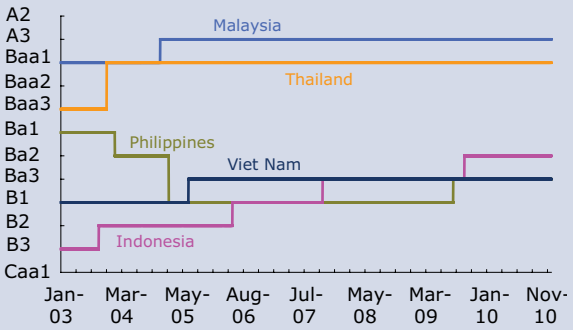


Figure 32d: Moody's Sovereign Ratings— PRC and NIEs (long-term foreign currency)

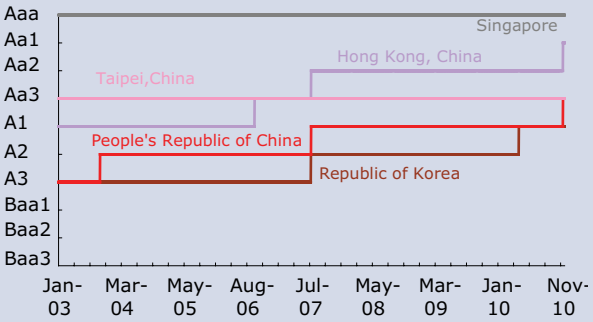


Table 7: Risk-Weighted Capital Adequacy Ratios[1]
(% of risk-weighted assets)

Economy	2000–2004 Average	2005	2006	2007	2008	2009[2]	2010[3]
China, People's Rep. of	-2.3[4]	2.5	4.9	8.4	12.0	11.4	–
Hong Kong, China	16.1	14.8	14.9	13.4	14.7	16.8	16.2
Indonesia	18.7	19.3	21.3	19.3	16.8	17.4	18.1
Korea, Republic of	10.7	12.4	12.3	12.0	12.7	14.6	14.6
Malaysia	13.4	13.6	13.1	12.8	12.2	14.9	14.4
Philippines	17.0	17.7	18.5	15.9	15.7	16.0	16.2
Singapore	17.7	15.8	15.4	13.5	14.7	16.5	–
Taipei,China	10.5	10.3	10.1	10.6	10.8	11.7	11.6
Thailand	13.2	14.2	14.5	15.4	14.1	16.1	16.8

– = unavailable
[1]Based on official risk-adjusted capital adequacy ratios and applied to commercial banks for most economies except Hong Kong, China (covers authorized institutions) and the Philippines (covers universal and commercial banks). Data for the Philippines is on a consolidated, not solo, basis. [2]Data for Singapore as of Sep 2009. [3]Data for Malaysia and Thailand as of Sep 2010; Hong Kong, China; Indonesia; and Republic of Korea as of Jun 2010; Philippines and Taipei,China as of Mar 2010. [4]Average of 2000 and 2002–2004 figures. Figure for 2000 is ratio for state commercial banks.
Source: National sources and *Global Financial Stability Report October 2010,* International Monetary Fund.

Table 8: Rate of Return on Commercial Bank Assets (% per annum)

Economy	2000–2004 Average	2005	2006	2007	2008	2009[1]	2010[2]
China, People's Rep. of	0.2	0.6	0.9	0.9	1.0	0.8	–
Hong Kong, China[3]	1.2	1.7	1.8	1.9	1.8	1.5	1.3
Indonesia	2.2	2.6	2.6	2.8	2.3	2.6	3.0
Korea, Republic of	0.4	1.2	1.1	1.1	0.5	0.4	–
Malaysia	1.3	1.4	1.3	1.5	1.5	1.2	–
Philippines	0.8	1.1	1.3	1.4	0.8	1.2	1.3
Singapore	1.1	1.2	1.4	1.3	1.0	1.1	–
Taipei,China	0.3	0.3	-0.4	0.1	-0.1	0.3	0.5
Thailand	0.7	1.3	0.8	0.2	1.0	0.9	1.1

– = unavailable
[1]Data for Singapore as of Sep 2009. [2]Data for Thailand as of Sep 2010; Hong Kong, China; Indonesia; and Philippines as of Jun 2010; Taipei,China as of Mar 2010. [3]Net interest margin of retail banks. Year-to-date annualized.
Source: National sources and *Global Financial Stability Report October 2010,* International Monetary Fund.

Table 9: Rate of Return on Commercial Bank Equity (% per annum)

Economy	2000–2004 Average	2005	2006	2007	2008	2009[1]	2010[2]
China, People's Rep. of[3]	—	15.1	14.9	16.7	17.1	15.1	–
Hong Kong, China[4]	14.9	16.7	16.7	21.3	13.0	14.4	–
Indonesia[5]	16.2	21.4	22.4	23.2	15.5	18.4	–
Korea, Republic of	7.2	20.3	15.6	16.2	9.0	6.6	–
Malaysia	16.2	16.8	16.2	19.7	18.5	16.1	15.2
Philippines	5.9	9.5	11.5	11.8	7.2	11.4	11.8
Singapore	9.6	11.2	13.7	12.9	10.7	11.0	–
Taipei,China	4.1	4.4	-7.3	2.6	-0.7	4.3	7.3
Thailand	13.3	16.5	10.2	2.8	12.2	10.4	11.9

– = unavailable
[1]Data for Indonesia and Singapore as of Sep 2009. [2]Data for Thailand as of Sep 2010; Philippines as of Jun 2010; Malaysia and Taipei,China as of Mar 2010. [3]Total banking industry, except for 2006, which refers only to four listed state-owned banks. [4]Locally-incorporated banks. [5]After taxes.
Source: National sources and *Global Financial Stability Report October 2010,* International Monetary Fund.

Table 10: Nonperforming Loans (% of commercial bank loans)

Economy	2000–2004 Average	2005	2006	2007	2008	2009[1]	2010[2]
China, People's Rep. of	21.0	8.6	7.1	6.2	2.5	1.6	1.3
Hong Kong, China[3]	4.0	1.4	1.1	0.9	1.2	1.3	1.0
Indonesia	10.2	7.6	6.1	4.1	3.2	3.3	3.0
Korea, Republic of	3.1	1.3	0.9	0.7	1.2	1.2	1.9
Malaysia[3]	8.9	5.6	4.8	3.2	2.2	1.8	2.0
Philippines[3]	14.8	8.5	5.7	4.4	3.5	3.0	3.3
Singapore	5.3	3.8	2.8	1.5	1.7	2.3	–
Taipei,China	5.2	2.2	2.1	1.8	1.5	1.2	1.1
Thailand[3]	13.5	8.3	7.5	7.3	5.3	4.8	4.2

– = unavailable
[1]Data for Singapore as of Sep 2009. [2]Data for Malaysia and Thailand as of Sep 2010; Philippines as of Aug 2010; People's Republic of China; Hong Kong, China; Indonesia; and Republic of Korea as of Jun 2010; Taipei,China as of Mar 2010. [3]Reported nonperforming loans are gross classified loans of retail banks.
Source: National sources and *Global Financial Stability Report October 2010,* International Monetary Fund.

Figure 33a: Bank Lending Growth[1]—ASEAN-4 (y-o-y, %)

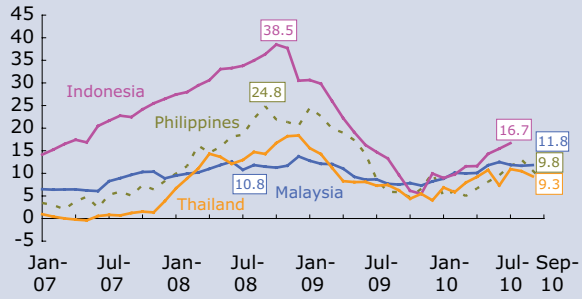


Figure 33b: Bank Lending Growth[2]—NIEs (y-o-y, %)

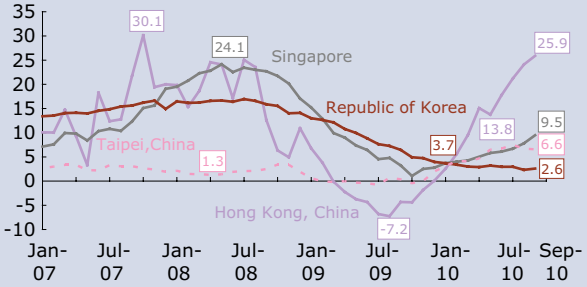
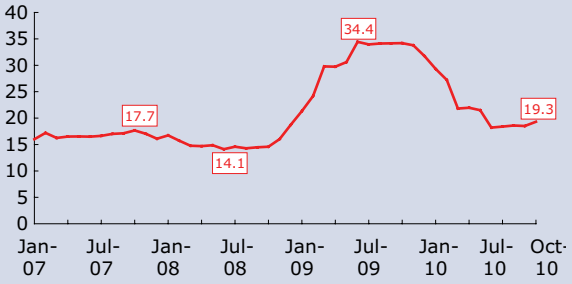


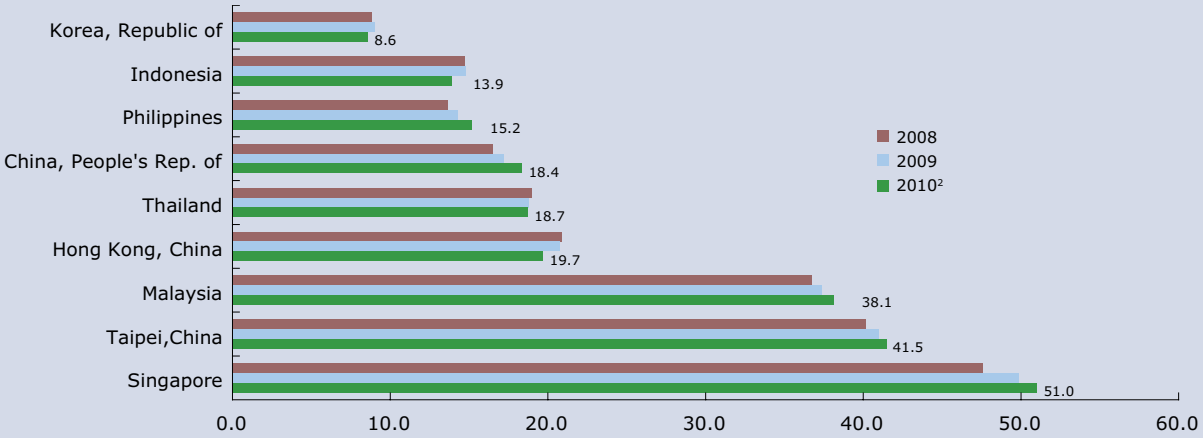
Figure 33c: Bank Lending Growth[3]—People's Republic of China (y-o-y, %)



y-o-y = year-on-year.
NIEs = newly industrialized economies (Hong Kong, China; Republic of Korea; Singapore; and Taipei,China).
[1]Data for Indonesia refers to commercial bank loans; Malaysia to commercial bank loans and advances; Philippines to commercial and universal bank loans net of RRAs (reverse repurchase arrangements), starting in 2007; and Thailand to commercial bank loans. Data for Indonesia until Jul 2010. [2]Data for Hong Kong, China refers to authorized institutions' loans and advances; Republic of Korea to commercial and specialized bank loans; Singapore to domestic banking unit loans and advances; and Taipei,China to domestic bank loans and advances. [3]Data for People's Republic of China refers to financial institution loans.
Source: OREI staff calculations using data from CEIC, Bank of Korea website, and People's Bank of China.

measures have recently moderated housing prices. In Singapore, fast rising home prices are worrying as real estate lending accounts for more than half of total loans in the banking system **(Figure 34)**. Authorities there also introduced measures to reduce speculation in the property market.

Figure 34: Real Estate Loans[1]—PRC, ASEAN-4, and NIEs (percent of total loans)



NIEs = newly industrialized economies, PRC = People's Republic of China.

[1]Data for PRC includes real estate loans of major financial institutions; for Hong Kong, China loans for building, construction, property development, and investment of all authorized institutions; for Indonesia, property loans of commercial and rural banks; for Republic of Korea, real estate, renting and leasing loans of commercial and specialized banks; for Malaysia, sum of loans for purchase of residential and non-residential property, and for purchase of fixed assets other than land and buildings of the banking system; for the Philippines, banking system loans for real estate, renting, and business activities; for Singapore, business loans for building and construction, and housing and bridging loans for consumers of domestic banking units; for Taipei,China, real estate loans of all banks; and for Thailand, loans for real estate activities, renting and business, and loans for land, for provision of dwelling, and for purchase of real estate for others by commercial banks. [2]Data for Hong Kong, China; Indonesia; Malaysia; Singapore; Taipei,China; and Thailand as of Sep 2010; PRC and Republic of Korea as of Jun 2010; Philippines as of Mar 2010.

Source: OREI staff calculations using data from People's Bank of China, Hong Kong Monetary Authority, Bank Indonesia, Bank Negara Malaysia, Bangko Sentral ng Pilipinas (Philippines), Monetary Authority of Singapore, Bank of Thailand, and CEIC.

Box 1: Has Fiscal Policy Worked for ASEAN-5?[1]

This section attempts to answer a simple question: how effective is fiscal policy in stabilizing output in the five charter Association of Southeast Asian Nations (ASEAN) members?[2] It is the counterpart to monetary policy in affecting output and/or inflation. Surprisingly, there has been very little empirical work on the ASEAN-5.[3] Yet judging from the prolific use of discretionary fiscal stimulus during the recent global financial crisis, it would seem that policymakers have unequivocal confidence in its efficacy.

Empirical findings, however, are quite different. Using a Blanchard and Perotti structural vector autoregression (SVAR) model,[4] Tang et al. (2010) find that the overall impact of government spending on output is largely benign—the impact of the fiscal multiplier is far below one and statistically insignificant. This is true in all the ASEAN-5. And in the case of taxes, a consistent pattern of output expansion with fiscal contraction is evident, although the result is statistically significant only in Indonesia and Thailand.

The literature offers several explanations. Being small and highly open economies—Singapore (with a total trade-to-GDP share of 283% in 2009), Malaysia (146%), Thailand (108%), and to a lesser extent the Philippines (51%) and Indonesia (39%)—are very susceptible to fiscal stimulus leaking out through higher imports. Coupled with the adoption of more flexible exchange rates, especially after the 1997/98 Asian financial crisis, the leakage would have been greater. In addition, the combination of low financial depth and largely liberalized interest rates, particularly in the Philippines and Indonesia, facilitates the crowding out effects through greater upward pressure on interest rates. If monetary policy accommodation does not follow, the crowding out effects are even larger.

More important, fiscal credibility that comes from a good track record of budget balances and low public debt is key to policy effectiveness. The lack of fiscal credibility is a major factor for the expansionary fiscal contraction phenomenon observed in many other studies. Among the ASEAN-5, with the exception of Singapore, many have run persistent budget deficits. Their public debt levels may be considered "comfortable" for developed countries, but not for developing countries largely characterized by weak fiscal management and institutions, and a small tax base.[5] The Philippines and Indonesia, well-known for their fiscal weaknesses, are two countries that have faced sovereign debt problems resulting to debt restructuring. Thailand came close in facing the same problem during the Asian financial crisis and Malaysia has shown some weaknesses since.[6] Singapore's

[1]This box is based on a forthcoming paper by H.C. Tang et al. The Impact of Fiscal Policy Effectiveness in Selected ASEAN Countries. *ADB Working Paper Series on Regional Economic Integration*. References cited here can be found in the paper.

[2]Indonesia, Philippines, Malaysia, Singapore, and Thailand.

[3]Jha et al. (2010) is a notable exception. The authors used a sign-restricted VAR on 10 emerging Asian economies including the ASEAN5 studied here. Their results are largely similar to Tang et al.

[4]This is the three-variable model of taxes, government spending, and GDP of Blanchard and Perotti (2002). Quarterly data from 1990 (depending on availability) until end-2009 are used. Results are not shown here but they can be gleaned from the average impulse responses plotted in Figure B1.1.

[5]The 60% public debt-to-GDP rule that applies to countries in the eurozone would suggest that most ASEAN-5 countries are generally safe. (The ratio at end-2009 for Indonesia was 29%; the Philippines, 49%; Malaysia, 55%; Singapore, 110%; and Thailand, 44%). A more conservative and appropriate yardstick used by the International Monetary Fund (IMF) is above 25% for high-debt emerging economies.

[6]Malaysia took more than a decade to reduce its public debt ratio of over 100% since the twin-deficit crisis in the mid-1980s to less than 40%. Nevertheless, despite the good economic years before the global financial crisis, its ratio has stayed above 40%, while its budget deficit has persisted.

headline public debt-to-GDP at over 100% is startling but misleading.[7]

While the Blanchard and Perotti SVAR model only summarizes the dominant influence over time, there may be instances when either government spending or tax reform is more or less effective. To do this, Tang et al. employ a time-varying VAR model.[8] They find that the expansionary impact on output from a positive tax shock in most countries is most prominent during crisis periods **(Figure B1.1)**. This is most obvious in the Philippines—during both the Asian financial crisis and the global financial crisis—and lasted several years. Similar evidence is found in Malaysia, but not as persistent, and in Thailand and Singapore, mostly during the global financial crisis. In Indonesia, the phenomenon was most evident prior to the Asian financial crisis, but has improved due to the fiscal reforms undertaken since.

On the other hand, in terms of the impact on output of a government spending shock, Indonesia's fiscal policy effectiveness appears to have also improved since the Asian financial crisis in tandem with improved macroeconomic management. The Philippines, however, followed the opposite path of deteriorating government spending's impact on output. With weak fiscal credibility, a further rise in public debt and persistent budget deficits since the Asian financial crisis did not encourage market confidence. Similarly, in Malaysia, while the impact on output of a government spending shock was small but largely positive prior to the Asian financial crisis, it has turned somewhat negative since. This may have to do with the introduction of capital controls during the Asian financial crisis and subsequent fiscal weakness. In Thailand and Singapore, there is more evidence that government spending was countercyclical when tried during crisis periods (Singapore's case was most obvious during the global financial crisis, while Thailand's also included the Asian financial crisis). Perhaps the difference in potency is due to the relatively closed Thai economy compared with a very open Singaporean economy.

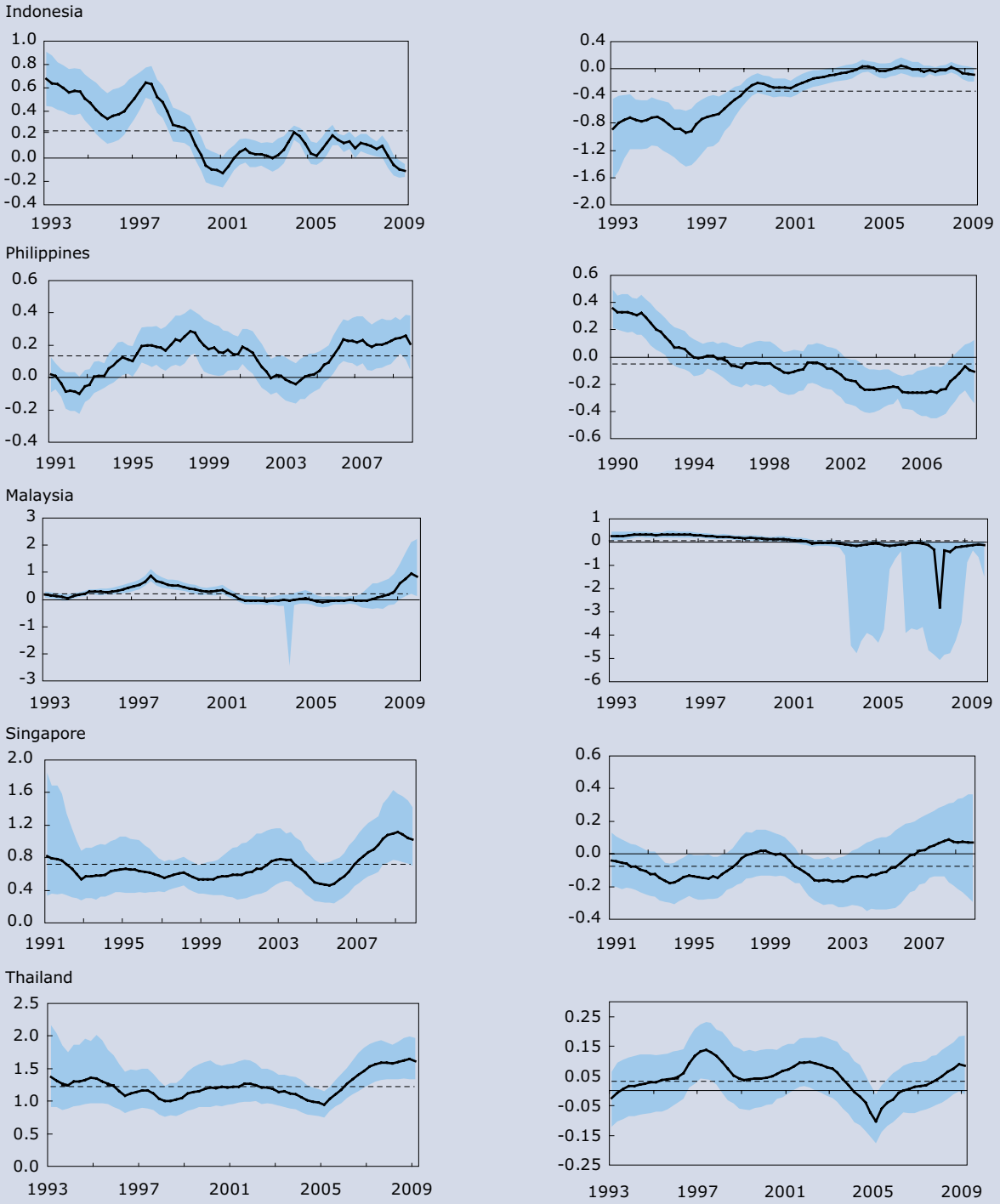
In sum, fiscal spending can be effective at times in some countries. But the evidence is by no means overwhelming and that the multiplier is much less than one. In contrast, tax cuts do not appear to have the same effect. On the contrary, tax hikes seem to boost output especially during crisis periods. Perhaps these actions are interpreted as greater fiscal responsibility and credible efforts which in turn spur consumption and investment. Reduction in government spending may not have the same impact because it is often viewed as essential for development and future economic growth.

[7]Most published debt-to-GDP numbers refer to gross public debt which is also used here. A better gauge is net debt-to-GDP, but this number is not widely available. Singapore's high public debt ratio is influenced by a high proportion of bond issuance that caters for the investment needs of the Central Provident Fund.

[8]The authors follow Primiceri (2005). An intuitive way of thinking about the model is that instead of having one impulse response summarizing the overall result for the whole sample period, with a time-varying VAR, each impulse response can be derived by summarizing the result for every quarter.

Box 1 continued

Figure B1.1: One-Year Cumulative Impulse Response of GDP to Tax (left) and to Government Spending (right) Shocks (%)



Note: Each shock is a positive one unit (percent) shock. The horizontal line in each plot refers to the average one-year cumulative impulse response for the whole period. The error bands are the 95% confidence intervals. The kinked error bands and impulse responses for Malaysia are modeling discrepancies due to draws being very close to unit root.

Economic Outlook, Risks, and Policy Issues

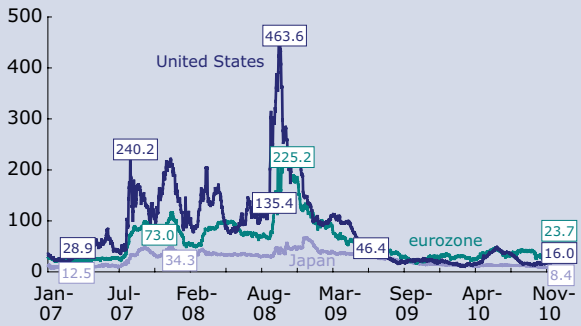
External Economic Environment

The external economic environment for emerging East Asia has weakened as the US economy continues to struggle and doubts remain over the sustainability of the eurozone recovery.

While growth in the United States (US) and Japan picked up in the third quarter of 2010 compared with the first half, the outlook for 2011 is weak and fragile. Growth in the eurozone slowed in the third quarter after a strong second quarter performance. Growth momentum may ease on weak domestic US demand, uncertainty over the sovereign debt crisis in Europe, and deflationary pressures in Japan. The second round of quantitative easing by the US Federal Reserve may help shore up the US recovery, but could also increase risks of asset price bubbles and higher inflation in emerging East Asia. The International Monetary Fund (IMF) forecasts GDP in advanced economies to grow 2.7% in 2010 from a 3.2% decline in 2009, further downgrading its 2011 projection to 2.2%.

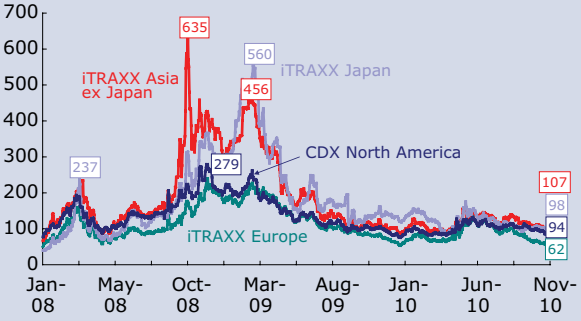
Positively, global financial conditions appear to have stabilized. Financial markets have recovered and have been stable apart from a slight wobble in the middle of the year from the Greek debt crisis.

Figure 35: TED Spreads[1]–G3



[1]Difference between the 3-month LIBOR (London Interbank Offered Rate) and 3-month government debt (e.g. Treasury bills).
Source: OREI staff calculations based on Bloomberg and Datastream data.

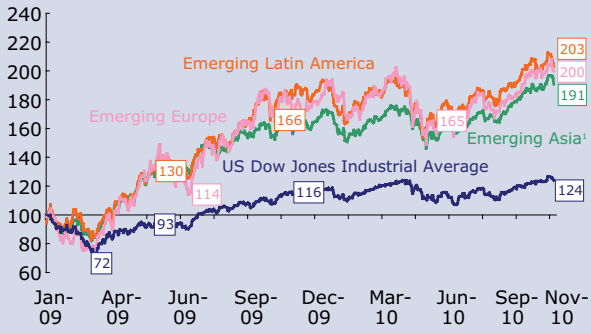
Figure 36: Credit Default Swap Indexes
(investment grade, senior 5-year)



Source: Bloomberg.

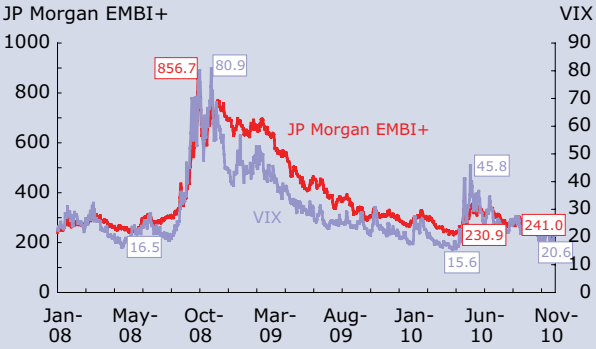
The TED spread—the difference between Treasury bill rates and interbank rates—has returned to historical levels **(Figure 35)**. Similarly, credit default swaps—the cost of insuring against corporate defaults—have also returned to pre-crisis levels **(Figure 36)**. Equity markets have stabilized, and growing strongly in emerging markets **(Figure 37)**. The VIX index—measuring US stock market volatility—has been trending downward after a slight spike in the middle of the year **(Figure 38)**. At the same time, yield curves in mature markets have flattened—though steepening slightly in November—suggesting that economic recovery in advanced economies may be stalling **(Figure 39)**. But as global financial and equity markets normalized, attention has now turned to the high public debt in parts of Europe. Recently, yields for Greek, Irish, Portuguese, and Spanish bonds

Figure 37: MSCI Indexes (2 Jan 2009 = 100)



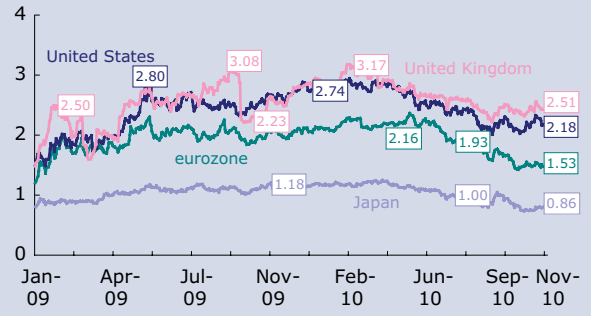
¹Includes People's Republic of China; India; Indonesia; Republic of Korea; Malaysia; Pakistan; Philippines; Taipei,China; and Thailand.
Source: Morgan Stanley Capital International (MSCI) Barra and Datastream.

Figure 38: Equity Market Volatility and Bond Spreads



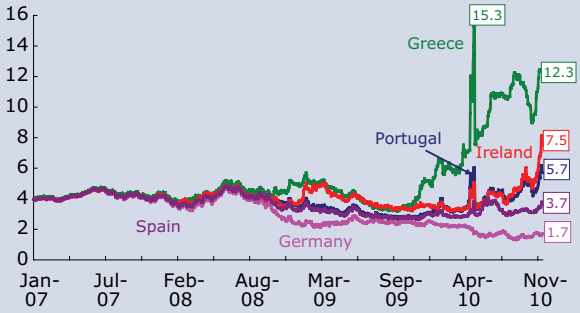
VIX = Chicago Board Options Exchange Volatility Index, JPM EMBI+ = JP Morgan Emerging Markets Bonds Indices Plus.
Source: Bloomberg.

Figure 39: 10-year and 2-year Government Bond Yield Spreads (% per annum)



Source: Datastream.

Figure 40: Sovereign Bond Yields—Selected European economies (%, 5-year)



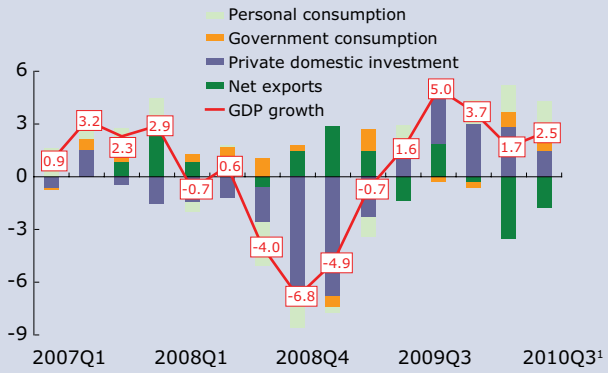
Source: Bloomberg.

have risen on fiscal worries **(Figure 40)**. Ireland has had to accept a bailout from the European Union (EU) and IMF. Heightened scrutiny will likely force these governments to tighten budgets. And consumer spending may be muted as households repair balance sheets.

The US recovery appears weak and will likely be gradual, with continued high unemployment amid waning consumer and business confidence.

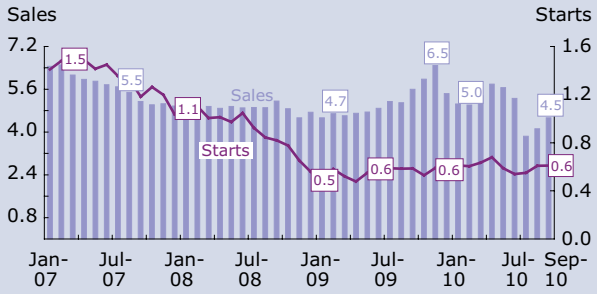
Growth in the US picked up slightly in the third quarter of 2010—to 2.5% (quarter-on-quarter [q-o-q] seasonally adjusted annualized rate [saar]) compared with 1.7% (q-o-q, saar) in the second quarter. Compared with the second quarter, the improved performance was due to higher consumption growth, though partly offset by weaker investment **(Figure 41)**. Moribund housing is taking its toll, as residential fixed investment declined 27.5% (q-o-q, saar) in the third quarter. The housing market is expected to remain a drag on growth as both private housing sales and starts remain depressed **(Figure 42)**. Lingering uncertainty over the foreclosure process may also hamper the recovery. Leading indicators are not much help. Industrial production growth slowed to 5.4% year-on-year in September 2010

Figure 41: Contributions to Growth—US
(seasonally adjusted, annualized, q-o-q, % change)



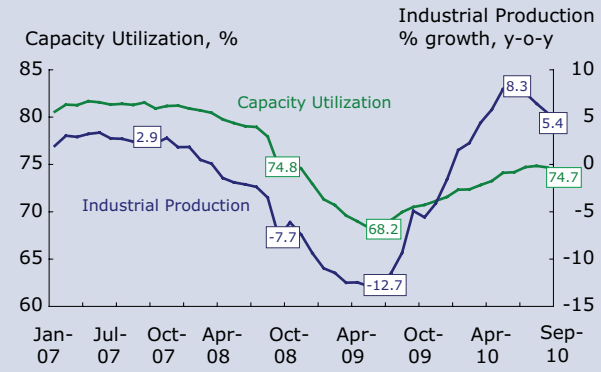
GDP = gross domestic product, q-o-q = quarter-on-quarter, US = United States.
¹Second estimate as of 23 Nov 2010.
Source: US Bureau of Economic Analysis.

Figure 42: Private Housing Starts[1] and Existing Home Sales[2]—US (million units)



US = United States.
¹Seasonally adjusted levels. ²Seasonally adjusted and annualized.
Source: CEIC.

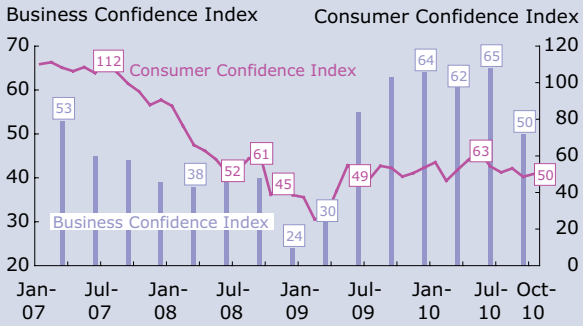
Figure 43: Industrial Production Growth and Capacity Utilization Rate—US



y-o-y = year-on-year.
Source: Board of Governors of the US Federal Reserve System.

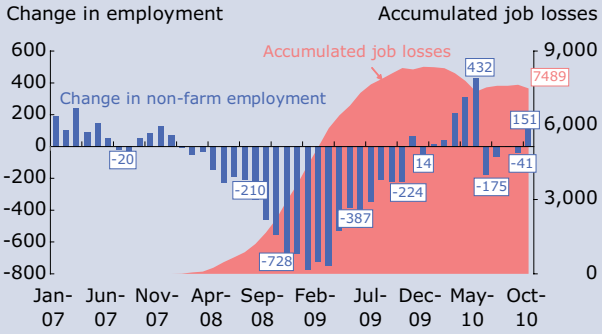
(Figure 43). Business and consumer confidence is down **(Figure 44)**. Pessimism may be due to continued high unemployment and the recent return of job losses **(Figure 45)**. High unemployment and continued housing market weakness suggest US growth will continue to be fragile. In sum, the US economy is expected to grow 2.8% this year, moderating slightly to 2.6% in 2011.

Figure 44: Business and Consumer Confidence Indexes—US



US = United States.
Note: Consumer confidence (1985 = 100). A business confidence index above 50 means there are more positive than negative responses. Consumer confidence index is monthly; business confidence index is quarterly.
Source: Datastream.

Figure 45: Change in Non-Farm Employment and Accumulated Job Losses[1]—US (in thousands)

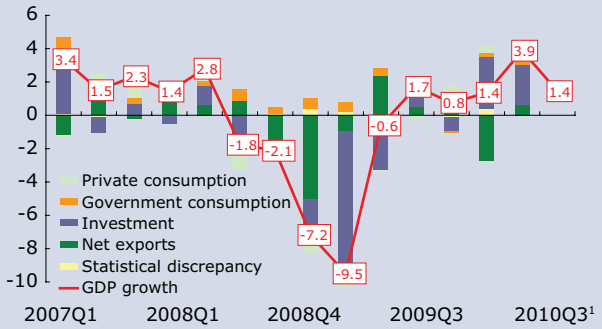


¹Accumulated job losses since December 2007. Preliminary figures for Sep and Oct 2010.
Source: OREI staff calculations based on data from the US Bureau of Labor Statistics.

A second round of quantitative easing (QE2) by the Federal Reserve may help the US economy avoid deflation and a double-dip recession, but could have unintended consequences both in the US and globally.

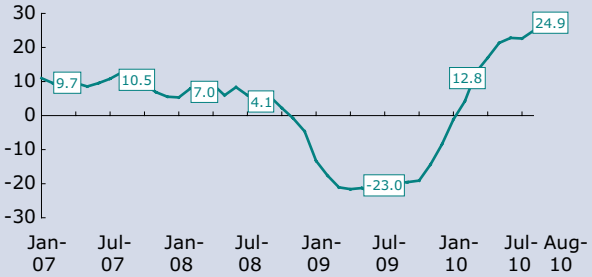
The gloomy outlook for the US economy prompted the Federal Reserve to inaugurate a strategy to purchase $600 billion in longer-dated US Treasuries from November 2010 to June 2011. This should lower both nominal and real long-term interest rates while boosting prices for assets such as equities and corporate bonds. This could invigorate private consumption and investment. And it could further weaken the US dollar and boost US exports. There is some evidence that QE2 is already starting to work, as 10-year Treasury bond yields fell and stock prices rose after QE2 rumors spread through markets—though yields rose again following the 3 November formal announcement. However, QE2 stimulus could be muted: (i) US consumers may not want to borrow while deleveraging household debt; and (ii) banks may not want to lend more with excess reserves. There are plenty of risks with QE2. Commodity prices are rising due to cheap money, which could be inflationary and hurt consumption. Giving investors incentives to seek higher yields in riskier assets could create asset bubbles. Inflationary expectations could accelerate. And abundant liquidity could once again lead to inordinate capital flows—particularly to emerging economies—with possible destabilizing effects.

Figure 46: Contributions to Growth—eurozone
(seasonally adjusted, annualized, q-o-q, % change)



GDP = gross domestic product, q-o-q = quarter-on-quarter.
[1]Eurostat flash estimate.
Source: Eurostat website.

Figure 47: Export Growth[1]—eurozone[2]
(y-o-y, % change)

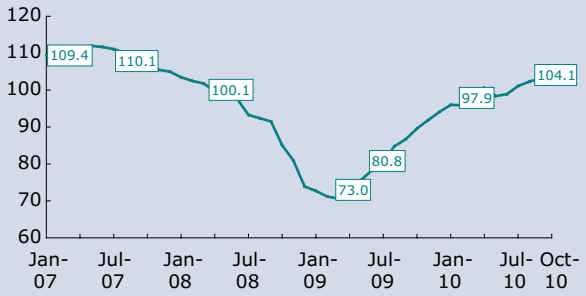


[1]Year-on-year (y-o-y) growth of 3-month moving averages of export values. [2]Refers to Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain.
Source: OREI staff calculations based on Datastream data.

Recovery in the eurozone is slowing due to fiscal tightening and lingering uncertainty over sovereign debt, even if euro depreciation has helped boost exports.

Growth in the eurozone slowed to 1.4% (q-o-q, saar) in the third quarter of 2010 from a robust 3.9% growth (q-o-q, saar) in the second quarter **(Figure 46)**. Leading indicators suggest that recovery will continue. Exports were the bright spot growing 24.9% in August 2010 **(Figure 47)**. However, a recent euro rebound may dampen export growth in the coming months. Confidence remains high in the eurozone with economic sentiment on the rise **(Figure 48)**. This confidence should bring stronger demand with both retail sales and industrial production on the upswing **(Figure 49)**. Following the Greek debt crisis in the middle of 2010, eurozone economies moved to adopt a tighter fiscal stance. This may hurt growth in eurozone economies where recovery remains fragile. And while fears of a Greek debt crisis have mostly faded, the watch has turned toward other indebted members like Ireland, Portugal, and Spain. Ireland had to avail of a bailout package from the EU and IMF. Continued uncertainty may

Figure 48: Economic Sentiment Indicator[1]—eurozone[2]



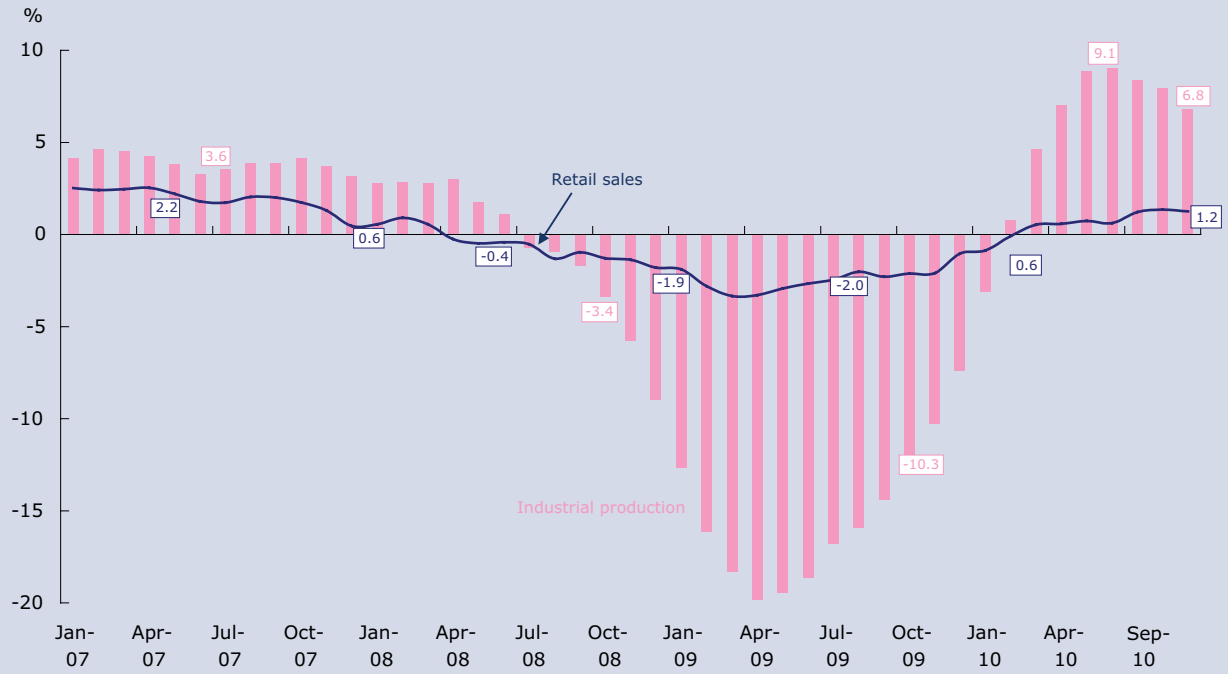
[1]The economic sentiment indicator is a composite index of business and consumer confidence indicators based on surveys of economic assessments and expectations in the eurozone. [2]Refers to Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain.
Source: Datastream.

stifle recovery as well. Growth in the eurozone is forecast at 1.5% for 2010, slowing slightly to 1.4% next year.

The Japanese recovery is expected to slow in 2011, weakened by strong yen appreciation and persistent deflationary pressures.

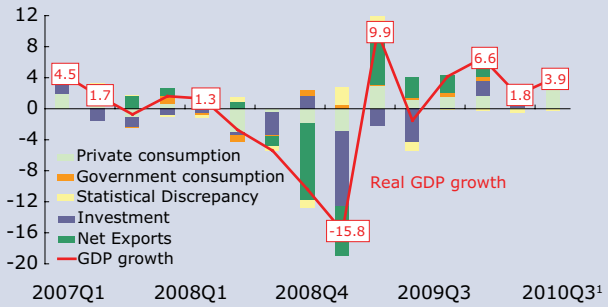
Japan's economy grew 3.9% (q-o-q, saar) in the third quarter of 2010, up from 1.8% growth (q-o-q, saar) in the second quarter—largely due to strong consumer demand ahead of an increase in cigarette taxes and the phasing out of government subsidy for fuel-efficient cars. However, net exports contributed a mere 0.4%

Figure 49: Retail Sales and Industrial Production[1]—eurozone



[1]Working-day adjusted, year-on-year growth rate of 3-month moving averages.
Source: OREI staff calculations based on CEIC data.

Figure 50: Contributions to Growth—Japan
(seasonally adjusted, annualized, q-o-q, % change)

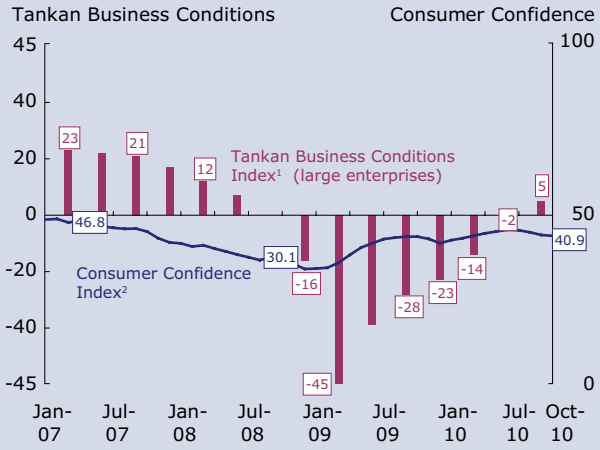


GDP = gross domestic product, q-o-q= quarter-on-quarter.
[1]First preliminary estimates as of 15 Nov 2010.
Source: Cabinet Office, Government of Japan.

Figure 51: Merchandise Export and Industrial Production Growth[1]—Japan (y-o-y, %)

y-o-y = year-on-year.
Note: Exports in $ value; industrial production in local currency.
[1]3-month moving average.
Source: OREI staff calculations based on CEIC data.

Figure 52: Business and Consumer Sentiment Indexes—Japan



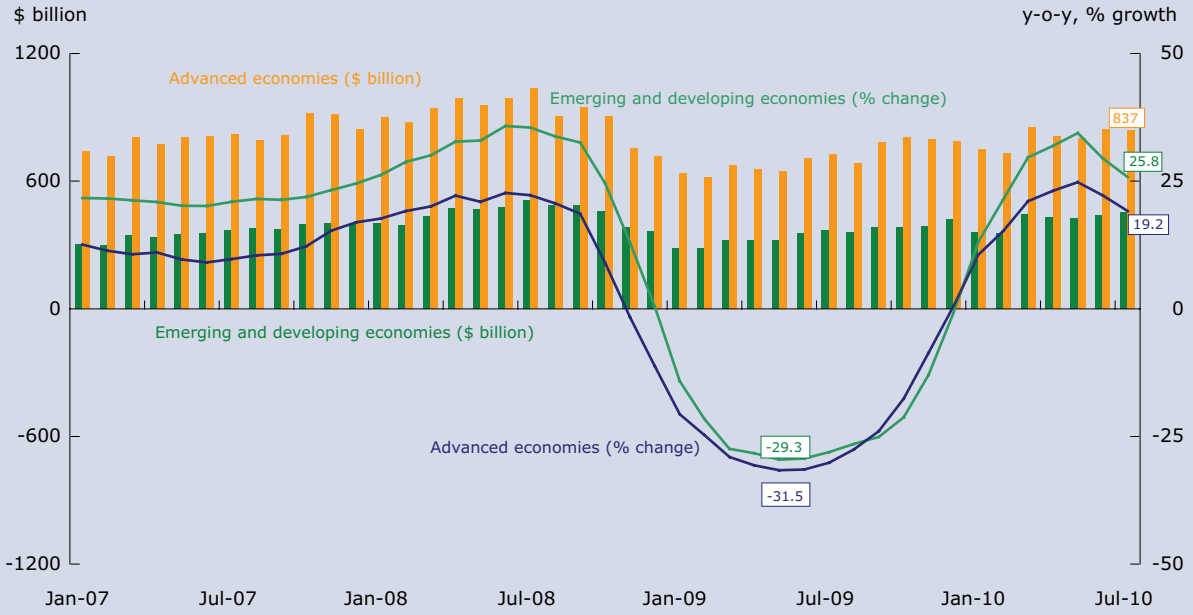
[1]Quarterly survey. A positive figure indicates higher percentage of companies reporting favorable business conditions from those reporting unfavorable conditions. [2]Monthly survey. A figure above 50 indicates positive consumer sentiment, while a number below 50 indicates negative consumer sentiment.
Source: Datastream.

(Figure 50). For the first three quarters of 2010, GDP grew 4.0% compared with the same period of 2009. However, prospects for the remainder of 2010 and into 2011 remain bleak. As some car and cigarette purchases may have been brought forward, consumer spending is expected to weaken in the fourth quarter. Net exports are also likely on the downside, hurt by the rising value of the yen—which appreciated 12.5% against the US dollar thus far this year. Export growth has been trending downward, growing by a relatively low 23.9% in September. Industrial production growth is also down, slowing to 11.6% in September **(Figure 51)**. Domestic demand is likely to remain muted as consumer confidence remains weak. Nonetheless, there has been a slight improvement in business confidence **(Figure 52)**. The economy is expected to grow 3.2% in 2010, slowing to 1.4% in 2011.

The rapid recovery in world trade is moderating, with trade volumes in 2010 returning close to pre-crisis levels.

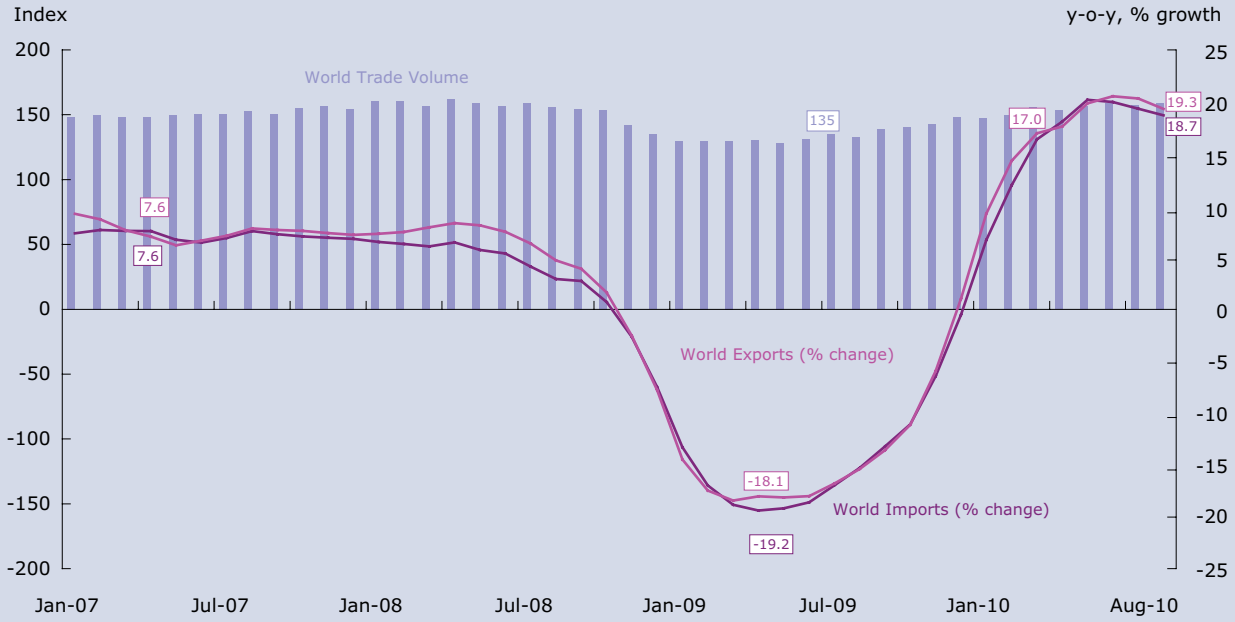
Growth in world trade appears to have peaked following the strong rebound in early 2010. Imports from advanced, emerging, and developing economies have moderated, but remain high **(Figure 53)**. Estimates from the CPB Netherlands Bureau for Economic Policy Analysis also indicate world trade volume is moderating **(Figure 54)**. Demand for high-tech products recovered as companies again invested in information technology (IT) equipment and software as the global economy improved. New IT orders in G3 economies expanded 2.3% in July 2010, while computer and software sales climbed 10.4% in August **(Figures 55, 56)**.

Figure 53: Imports—Advanced Economies; Emerging and Developing Economies
($ billion, % growth)[1]



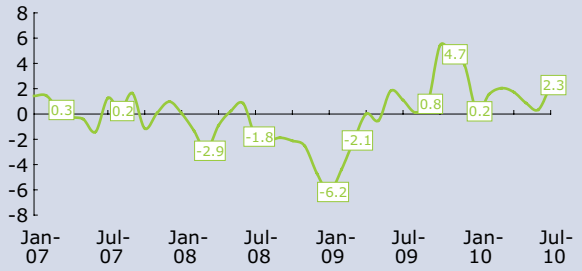
[1]Year-on-year (y-o-y) growth rates of 3-month moving averages.
Source: *International Financial Statistics*, International Monetary Fund.

Figure 54: World Trade Volume (seasonally adjusted index, % growth)[1]



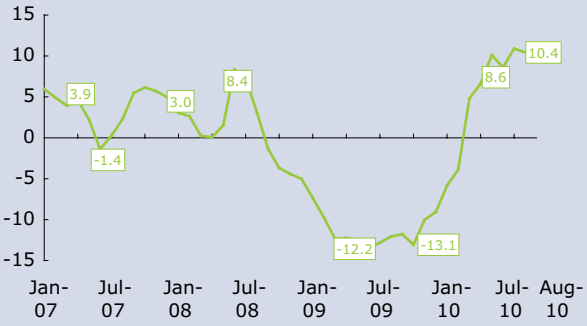
[1]Year-on-year (y-o-y) growth rates of 3-month moving averages.
Source: CPB Netherlands Bureau for Economic Policy Analysis.

Figure 55: New Information Technology Orders[1]—G3[2] (% change)



[1]Seasonally adjusted, 3-month moving average, month-on-month.
[2]eurozone, Japan, and United States.
Source: OREI staff calculations based on national sources.

Figure 56: Computer and Software Sales[1]—G3[2] (y-o-y, % change)



[1]3-month moving average of year-on-year (y-o-y) growth in sales values.
[2]eurozone, Japan, and United States.
Source: Datastream and Eurostat.

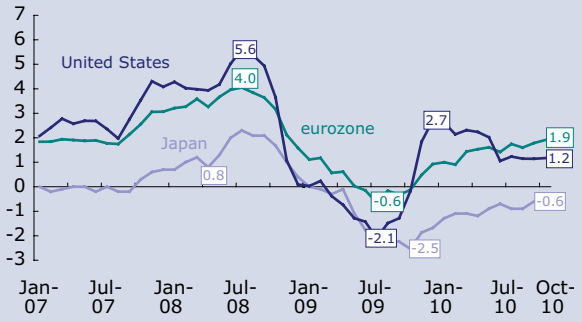
Inflationary pressures in advanced economies should remain low given the weak recovery and continued excess capacity.

While growth has returned to advanced economies, there is little sign inflationary pressures are building—inflation is running below 2% **(Figure 57)**. Inflation will be kept in check by excess capacity in advanced economies. US capacity utilization remains well below pre-crisis levels (see Figure 43). Implied inflation—estimated by the difference between 10-year bond yields and 10-year inflation-linked bond yields—in the US and France—has remained relatively stable, suggesting little increase in inflationary expectations **(Figure 58)**.

With growth in advanced economies likely to be weak in 2011, commodity prices are not expected to return to their high pre-crisis levels.

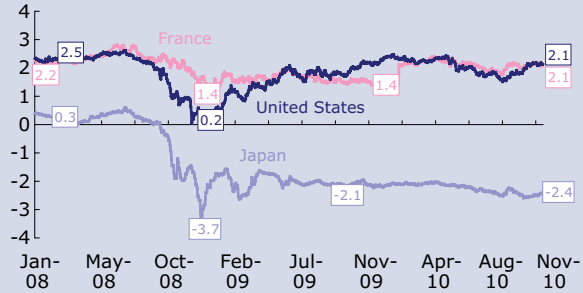
Faster growth in 2010 resulted in higher oil demand, moving crude oil up from $76 at the beginning of the year to around $87 currently. Nevertheless, further increases are likely to be incremental—1-year futures suggest that crude oil prices will marginally increase to $91 **(Figure 59)**. Furthermore, forecasts of higher excess capacity in the Organization of the Petroleum Exporting

Figure 57: Headline Inflation—eurozone[1], Japan, and United States (y-o-y, %)



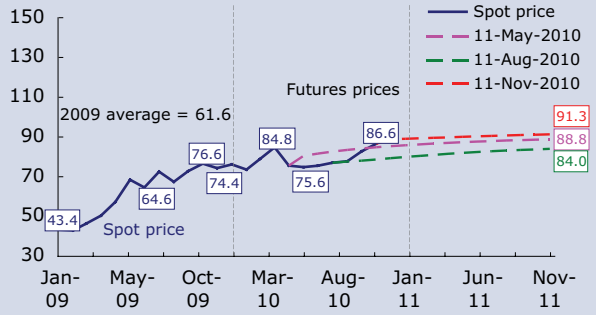
[1]Refers to Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain. Data for Japan is until Sep 2010.
Source: OREI staff calculations using data from CEIC.

Figure 58: Implied Inflation Expectations by Financial Market[1]—France, Japan, and US (percentage points)



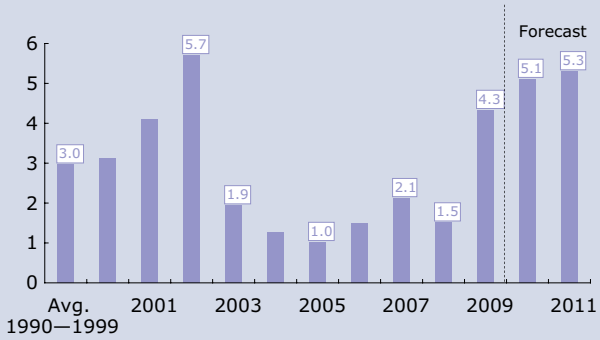
US = United States.
[1]Implied inflation expectation is the difference between yields of 10-year bonds and 10-year inflation-linked bonds.
Source: Bloomberg.

Figure 59: Brent Spot[1] and Futures Prices
($ per barrel)



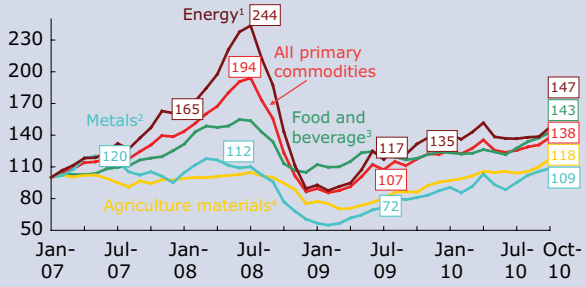
[1]Monthly average of daily spot prices. As of 15 Nov 2010.
Source: Datastream.

Figure 60: OPEC Spare Capacity
(barrels per day, million)



OPEC = Organization of the Petroleum Exporting Countries.
Source: *Short-Term Energy and Summer Fuels Outlook* (Nov 2010), US Energy Information Administration.

Figure 61: Primary Commodity Price Indexes
(Jan 2007 = 100)



[1]Crude oil, natural gas, coal. [2]Copper, aluminum, iron ore, tin, nickel, zinc, lead, uranium. [3]Cereal, vegetable oils, meat, seafood, sugar, bananas, oranges, coffee, tea, cocoa. [4]Timber, cotton, wool, rubber, hides.
Source: OREI staff calculations based on data from *IMF Primary Commodity Prices*, International Monetary Fund.

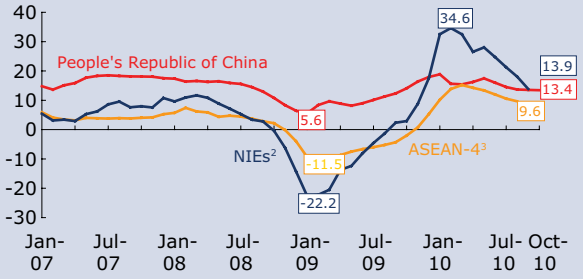
Countries (OPEC) in 2010 and 2011 are likely to help moderate any oil price increase **(Figure 60)**. Prices of other commodities have edged higher with the global recovery **(Figure 61)**. However, a weakening US dollar could push up commodity prices in US dollar terms.

Regional Economic Outlook

With stimulus being withdrawn and the recovery intact, growth in 2011 should moderate as the post-recovery phase kicks in.

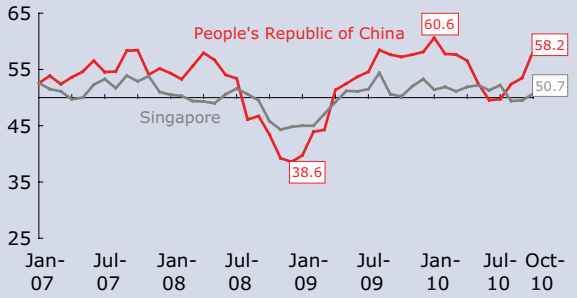
The weaker outlook for the global economy—together with phasing out of fiscal and monetary stimulus—will likely moderate growth for the region in 2011. External demand is expected to remain subdued given the weak and fragile recovery in advanced economies. Export growth is expected to ease after a strong rebound early in 2010 (see Figure 19). The more trade-dependent economies—such as the NIEs—will be more affected by weaker external demand, while the larger economies with greater domestic demand will be less affected. Other leading indicators—industrial production, purchasing managers index, and retail sales for example—also suggest a moderation in the growth trajectory **(Figures 62, 63, 64)**. Robust economic growth attracted large investments to the region—with several bourses

Figure 62: Industrial Production Growth[1]—PRC, ASEAN-4, and NIEs (y-o-y, %)



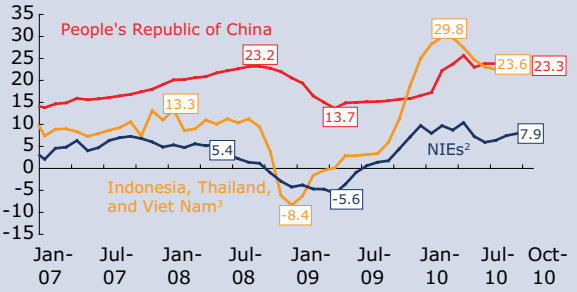
PRC = People's Republic of China, y-o-y = year-on-year.
[1]3-month moving average. [2]NIEs includes Republic of Korea; Singapore; and Taipei,China. Does not include Hong Kong, China, for which monthly data unavailable. Latest data for this group is Sep 2010. [3]ASEAN-4 includes Indonesia, Malaysia, Philippines, and Thailand. Latest data for this region is Aug 2010.
Source: OREI staff calculations based on CEIC data.

Figure 63: Manufacturing Purchasing Managers Indexes (PMI)[1]— Selected Economies



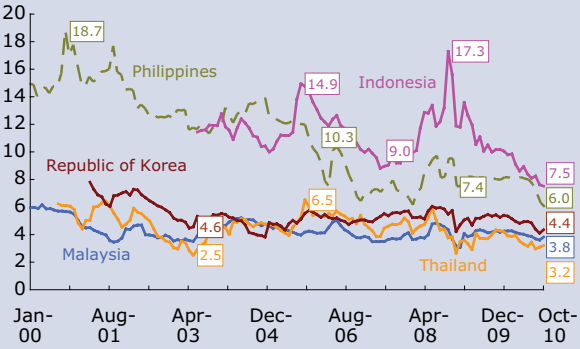
[1]Seasonally adjusted. Series for Japan refers to the composite manufacturing PMI, while series for the People's Republic of China and Singapore refers to manufacturing output PMI. PMI above (below) 50 indicates that manufacturing activity is expanding (contracting).
Source: Bloomberg, CEIC, and Datastream.

Figure 64: Retail Sales Growth[1]—PRC, NIEs, and Selected ASEAN Economies (y-o-y, %)



PRC = People's Republic of China, y-o-y = year-on-year.
[1]3-month moving average. [2]Includes Hong Kong, China; Republic of Korea; Singapore; and Taipei,China. Latest data for this region is Sep 2010. [3]Latest data for this group is Aug 2010.
Source: OREI staff calculations based on CEIC data.

Figure 65: Regional 10-Year Government Bond Yields (% per annum)



Source: Bloomberg.

reaching record highs (see Figure 24)—and falling bond yields **(Figure 65)**. Aggregate growth in emerging East Asia is expected to reach 8.8% in 2010, moderating to 7.3% in 2011 **(Table 11)**.

The PRC's robust economic growth should moderate as property prices cool and stimulus is withdrawn.

The PRC's moderated third quarter GDP growth against the second quarter is a good sign that the economy is shifting toward more sustainable growth from its earlier torrid pace. Rapid export growth—22.9% in October—is expected to ease, consistent with the weaker external environment (see Figure 9). Leading indicators suggest this moderating trend will continue. Industrial production growth slowed to 13.1% in October (see Figure 62). Fixed asset investment is also moderating with measures to cool the property sector expected to continue to restrain real estate investment (see Figure 8). Still, consumer spending remains robust with retail sales increasing 21.9% in October (see Figure 64). The purchasing managers index is also up (see Figure 63). These suggest domestic demand should remain strong. Growth is forecast at 10.1% in 2010, moderating to 9.1% in 2011.

The strong export-driven rebound in the NIEs is expected to moderate on weaker external demand.

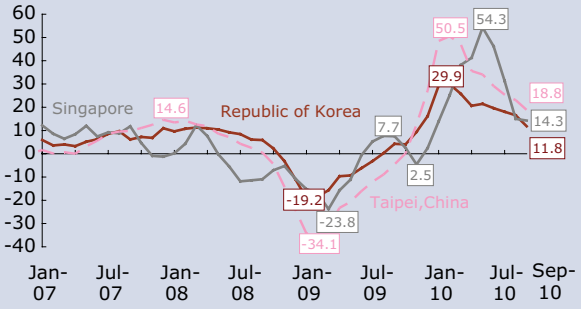
Economic expansion in the NIEs in the second half of 2010 is easing after growing 9.8% in the first half, as low base effects fade and export growth normalizes. Leading indicators suggest growth in the NIEs will moderate further in 2011. Both Korea and Taipei,China saw a sharp drop in industrial production growth—to 3.9% and 12.2%, respectively, in September **(Figure 66)**. Retail sales in Hong Kong, China and Taipei,China saw healthy gains in September. In Singapore, however, retail sales continued to contract due to increased costs of Certificates of Entitlements, which depressed automobile sales **(Figure 67)**. The overall growth trend should continue into

Table 11: Annual GDP Growth Rates (y-o-y, %)

	2000–2007 Average	2004	2005	2006	2007	2008	2009	2010H1	2010Q3	ADB Forecasts	
										2010	2011
Developing Asia[e]	**7.5**	**7.9**	**8.0**	**8.9**	**10.1**	**6.6**	**5.4**	**—**	**—**	**8.6**	**7.3**
Emerging East Asia[1,2]	**7.8**	**8.0**	**8.2**	**9.3**	**10.4**	**6.7**	**5.2**	**10.2**	**8.2**	**8.8**	**7.3**
ASEAN[1,2,3]	**5.5**	**6.5**	**5.7**	**6.1**	**6.6**	**4.4**	**1.3**	**7.4**	**6.7**	**7.5**	**5.4**
Brunei Darussalam	2.2	0.5	0.4	4.4	0.2	-1.9	-1.8	—	—	1.1	1.5
Cambodia	9.5	10.3	13.3	10.8	10.2	6.7	0.1	—	—	5.0	6.0
Indonesia[4]	5.1	5.0	5.7	5.5	6.3	6.0	4.5	5.9	5.8	5.9	6.3
Lao PDR	6.7	7.0	6.8	8.7	7.8	7.2	6.5	—	—	7.4	7.5
Malaysia[5]	5.6	6.8	5.3	5.8	6.5	4.7	-1.7	9.4	5.3	6.8	5.0
Myanmar[6]	9.1	5.0	4.5	7.0	5.5	3.6	4.4	—	—	5.0	5.3
Philippines[7]	5.1	6.4	5.0	5.3	7.1	3.7	1.1	8.0	6.5	6.8	4.6
Thailand	5.1	6.3	4.6	5.1	5.0	2.5	-2.3	10.7	6.7	7.6	4.5
Viet Nam	7.6	7.8	8.4	8.2	8.5	6.3	5.3	6.2	7.2	6.7	7.0
Newly Industrialized Economies[1]	**5.0**	**5.9**	**4.8**	**5.7**	**5.7**	**1.9**	**-0.8**	**9.8**	**6.5**	**7.6**	**4.5**
Hong Kong, China	5.3	8.5	7.1	7.0	6.4	2.2	-2.8	7.2	6.8	6.5	4.3
Korea, Republic of	5.2	4.6	4.0	5.2	5.1	2.3	0.2	7.6	4.4	6.0	4.6
Singapore[8]	6.3	9.2	7.4	8.6	8.5	1.8	-1.3	18.2	10.6	14.0	5.0
Taipei,China	4.4	6.2	4.7	5.4	6.0	0.7	-1.9	13.2	9.8	9.8	4.0
China, People's Republic of	10.5	10.1	11.3	12.7	14.2	9.6	9.1	11.1	9.6	10.1	9.1
Japan	**1.7**	**2.7**	**1.9**	**2.0**	**2.4**	**-1.2**	**-5.2**	**3.8**	**4.4**	**3.2**	**1.4**
US[9]	**2.6**	**3.6**	**3.1**	**2.7**	**1.9**	**0.0**	**-2.6**	**2.7**	**3.2**	**2.8**	**2.6**
eurozone	**2.1**	**2.1**	**1.7**	**3.0**	**2.8**	**0.4**	**-4.1**	**1.7**	**1.9**[10]	**1.5**	**1.4**

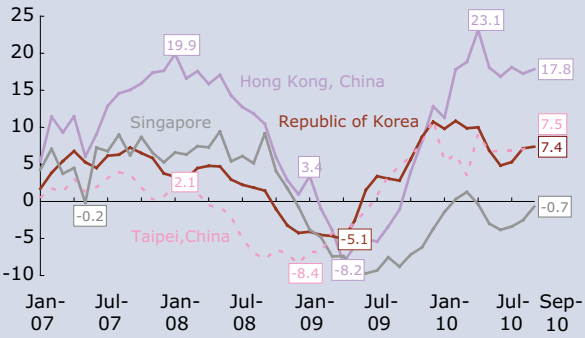
e = ADB estimates, GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic, US = United States, y-o-y= year-on-year, — = unavailable.
[1]Aggregates are weighted according to gross national income levels (atlas method, current $) from the World Bank's *World Development Indicators*. [2]Excludes Myanmar for all years as weights are unavailable. Quarterly figures exclude Brunei Darussalam, Cambodia, Lao PDR, and Myanmar for which quarterly data is unavailable. [3]Includes Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Singapore, Thailand, and Viet Nam. [4]GDP growth rates from 1999–2000 are based on 1993 prices; growth rates from 2001 onward are based on 2000 prices. [5]Growth rates from 1999–2000 are based on 1987 prices; growth rates from 2001 onward are based on 2000 prices. [6]Figures are ADB estimates as reflected in Asian Development Outlook 2010 Update. [7]Figures for 2004–2006 are not linked to the GDP figures prior to 2003 due to National Statistics Office revisions of sectoral estimates. [8]Revised its base year from 2000 to 2005 beginning 2010Q1. [9]Seasonally adjusted rate. [10]Uses flash estimate of seasonally adjusted rate for the third quarter of 2010.
Source: *Asian Development Outlook 2010 Update,* Asian Development Bank; Eurostat website (eurozone); Economic and Social Research Institute (Japan); Bureau of Economic Analysis (US); CEIC; and national sources.

Figure 66: Industrial Production Growth[1]—NIEs[2] (y-o-y, %)



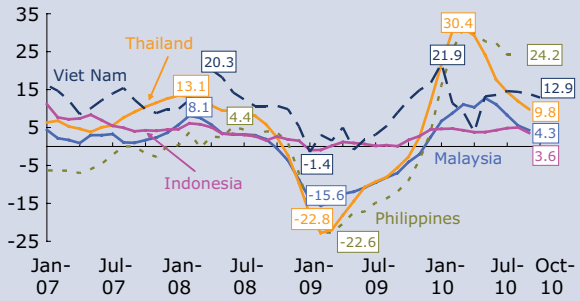
y-o-y = year-on-year.
[1]3-month moving average. [2]Does not include Hong Kong, China, for which monthly data unavailable.
Source: OREI staff calculations based on CEIC data.

Figure 67: Retail Sales Growth[1]—NIEs (y-o-y, %)



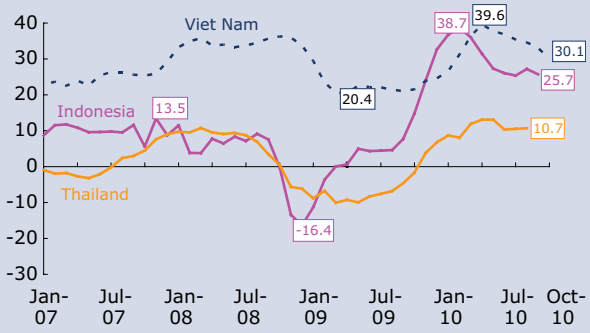
[1]3-month moving average.
Source: OREI staff calculations based on CEIC data.

Figure 68: Industrial Production Growth[1]—ASEAN-4 and Viet Nam (y-o-y, %)



y-o-y = year-on-year.
[1]3-month moving average.
Source: OREI staff calculations based on CEIC data.

Figure 69: Retail Sales Growth[1]—Selected ASEAN Economies (y-o-y, %)



[1]3-month moving average.
Source: OREI staff calculations based on CEIC data.

2011 as the highly export-dependent NIEs will suffer from a weaker external environment and cooling in the PRC. Singapore's growth is expected to fall sharply to 5.0% in 2011 from its exceptional 14.0% growth in 2010. Korea's economy should moderate to 4.6% in 2011 from a 6.0% rise this year, while Hong Kong, China's and Taipei,China's economic expansion is forecast to ease to 4.3% and 4.0% in 2011, respectively, from 6.5% and 9.8% in 2010.

While strong domestic demand is expected to drive Indonesia's economy, growth among other middle-income ASEAN economies will likely moderate.

Of the more open middle-income ASEAN economies (ASEAN-4), Thailand and Malaysia grew rapidly in the first half of 2010 partly due to low base effects, as both economies contracted in the first half of 2009. Growth should moderate during the second half. Leading indicators—industrial production and retail sales—have already been moderating **(Figures 68, 69)**. Economic growth this year in Thailand and Malaysia

is forecast at 7.6% and 6.8%, respectively. With the global recovery looking more anemic, growth in the two countries should slow in 2011 to 4.5% and 5.0%, respectively. Indonesia and the Philippines grew a strong 5.8% and 6.5%, respectively, in the third quarter. Both economies benefited from strong domestic demand. While Philippine growth is expected to moderate in the second half—2010 growth forecast at 6.8%—Indonesia's GDP is expected to expand 5.9% for the full year. In 2011, growth in the Philippines is forecast to decelerate to 4.6%, due to weaker external demand and the need for fiscal consolidation, while growth in Indonesia should accelerate to 6.3% as private consumption growth and private and public investment will continue to drive the recovery.

The smaller ASEAN economies should see improved economic growth.

Viet Nam's economy strengthened this year with third quarter growth outpacing first half expansion. The rebound in world trade and the depreciation of the Vietnamese dong should help the economy grow 6.7% in 2010. Strong growth will continue into 2011, with growth forecast currently at 7.0%. Cambodia's economy is expected to rebound as garment exports and tourism receipts recover, growing 5.0% in 2010 and further improving to 6.0% in 2011. Lao PDR's economy is expected to expand 7.4% in 2010 on increased investments in mining and hydropower—and buoyant copper and gold prices. In 2011, growth should remain robust at 7.5%, as electricity and mineral exports increase with new hydropower and mining projects. Brunei Darussalam's economy, heavily dependent on oil and gas, is expected to recover modestly, growing 1.1% in 2010 and 1.5% in 2011, as oil and gas production recovers with the global economy.

Inflationary pressures up across the region as economies thrive and world prices rise.

With economic recovery well-entrenched, inflation is edging up across the region. Thus far, the rise has been moderate and remained manageable (see Figure 15). In the PRC, inflation rose to 4.4% in October—the highest in 2 years—mainly due to higher food prices. Both the NIEs and ASEAN-4 economies are also seeing higher inflationary pressures as output gaps narrow. The appreciation of most of the region's currencies may temper some impact from imported inflation.

The region's current account surpluses should narrow, but capital inflows are expected to rise.

In the first half of 2010, current accounts remained in surplus as exports recovered. Expected slower export growth in 2011 from weaker external demand will likely result in smaller current account surpluses for most emerging East Asian economies. Capital inflows to ASEAN-4 economies are resuming as the strong recovery and higher interest rates attract portfolio investment. However, net capital inflows to the NIEs in the first half of 2010 slowed (see Figures 21, 22). As low interest rates and quantitative easing continue in advanced economies, funds are expected to continue to flow into the region, swelling the region's capital accounts. Thus, overall balance of payment surpluses are expected to keep rising.

Risks to the Outlook

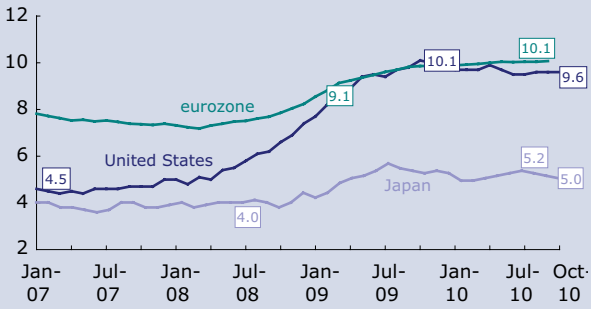
The economic outlook is subject to four major risks: (i) persistent weak growth in advanced economies; (ii) destabilizing capital flows; (iii) inflation and asset price bubbles in some economies; and (iv) protectionism.

The economic outlook for emerging East Asia remains highly uncertain and subject to several downside risks, given the weaker external environment and uncertain effects of further monetary stimulus in advanced economies.

A weaker- and longer-than-expected recovery process in advanced economies will further delay policy normalization, increasing economic distortions and lowering long-term growth prospects.

The severe economic damage caused by the Great Recession will take a long time to heal. The fallout from the financial meltdown will depress private spending for several more years—as banking systems are repaired, and households and firms reduce debt. High unemployment could become entrenched and last for many years, as the unemployed lose their skills in time or possess outdated skill sets **(Figure 70)**. Factories and equipment will also deteriorate quickly if not used or maintained properly, decreasing potential output. Growth in productivity could also suffer as capital investment plummeted during the crisis and has not returned to pre-crisis trend growth. Aging populations and a shrinking labor force—due to demographic changes—could aggravate the slowdown in potential growth in advanced economies. If the recovery in advanced economies falters, sluggish external demand could once again disrupt the region's robust growth.

Figure 70: Unemployment Rate—eurozone[1], Japan, and US (seasonally adjusted, % of labor force)



US = United States.
[1]Refers to Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain. Data for eurozone and Japan until Sep 2010.
Source: US Bureau of Labor Statistics, European Central Bank, and CEIC.

Capital flows could become volatile and destabilizing, creating major challenges for macroeconomic management.

Global liquidity is once again plentiful, as central banks in major economies keep interest rates close to zero and are adopting more unconventional monetary policy measures—such as quantitative easing—to stimulate their economies. Risk appetite has returned—with rising global share prices and US dollar depreciation against most of the region's currencies. Interest rate differentials between emerging market economies and major developed countries are wider than before the crisis—the rapid recovery and higher growth in emerging East Asian economies led authorities to unwind policy stimulus before advanced economies. Moreover, limited exchange rate flexibility in the region can also draw capital inflows as investors anticipate currency appreciation. Yet, these capital flows could destabilize the real economy, posing major challenges for macroeconomic management. The links between capital flows and credit expansion—lending booms with capital account liberalization—and their adverse macroeconomic consequences are not new to emerging East Asia. Moreover, risk sentiment might abruptly change, leading to sudden capital flow reversals.

In several economies, inflation could exceed targets with surging capital inflows fueling asset price bubbles.

Even with economic growth moderating somewhat in recent months, headline inflation continues to rise in several emerging East Asian economies, as world commodity and food prices edge higher and domestic demand remains resilient. In these economies, core inflation is also up. Asset prices have been rising quickly in many emerging East Asian economies, with equity prices at double-digit growth rates this year and housing costs maintaining their upward trend. A few economies are withdrawing monetary stimulus and taking macroprudential measures to curb asset price inflation. However, robust growth and ample credit suggest asset prices may continue to rise despite controls. Moreover, expectations of continued robust growth and currency appreciation have drawn surging capital inflows, which could inflate asset prices further. Monetary tightening in response to demand pressure and rising asset prices could merely attract more capital inflows in the short term, aggravating inflated asset bubbles.

Protectionism could emerge given the unsynchronized global recovery.

With growth in advanced economies slowing again and unemployment remaining stubbornly high, fears of protectionism are rising. Several emerging East Asian economies have already introduced temporary capital controls to counter surging capital flows and appear to be intervening directly in currency markets to stem appreciation. Competitive non-appreciation—or "currency wars" as some put it—may escalate into trade wars as countries try to preserve international competitiveness and exports. One important lesson from the 1930s is that raising trade barriers merely compound recessionary forces and risk lengthening and deepening the economic morass.

Policy Issues

With the V-shaped recovery in hand, many emerging East Asian economies now face the challenge of managing strong growth and capital flows amid a weaker external environment.

After slowing sharply in 2008 and 2009, the strong emerging East Asian economic recovery in 2010 has led GDP growth back near 2007 levels. Despite the weaker external environment, this robust growth should continue next year—though at a somewhat slower pace. The recovery in advanced economies has lost some steam and is expected to weaken in 2011. This suggests that macroeconomic policy in advanced economies will remain loose for some time. The unsynchronized global recovery—red, hot growth in emerging economies against tepid, uncertain recovery in advanced economies—pose policy challenges for emerging East Asia.

Continued robust growth in many emerging East Asian economies suggests authorities are on track in normalizing macroeconomic policy.

Emerging East Asia continues to lead the global recovery with many economies performing strongly despite sluggish growth in advanced economies. While growth momentum in emerging East Asia is now slowing as policy stimulus is withdrawn, external demand weakens, and the effects of inventory restocking fade. Output gaps in the region are narrowing quickly and may have closed in several economies. Demand pressures have emerged in these economies with inflation edging higher. Also, surging capital inflows can inflate asset prices, leading to additional demand pressures. Limited exchange rate flexibility in several economies also adds to inflationary pressures. The relatively rapid growth of the region's economies suggests quick stimulus withdrawal may be needed to avoid the risk of inflationary pressures intensifying. In fact, several economies in the region have already begun to normalize

macroeconomic policy by raising policy rates and reserve requirements and allowing fiscal stimulus to expire (see Figures 29a, 29b). With the external environment weakening, policymakers should constantly assess risks and fine-tune exit strategies as needed.

A "money first with somewhat faster appreciation" strategy seems appropriate for many emerging East Asian economies to both sustain economic growth, while helping rebalance the region's sources of growth.

Unwinding stimulus in emerging East Asia must be calibrated to both specific regional economic conditions and potential spillovers from external macroeconomic policies. In advanced economies, the mix of fiscal tightening and continued low interest rates could create a wave of "search for yield" capital outflows and further depreciating currencies. This complicates macroeconomic management and could reduce external demand for emerging East Asia. With robust fiscal positions in the region, emerging East Asian countries may not need to consolidate fiscal policy. In contrast, removing monetary stimulus first would allow fiscal policy to continue to support domestic demand in the near term. Moreover, the region could adopt a strategy that allows currency appreciation at a somewhat faster rate, keeping interest rates from rising too quickly or too high. This strategy of "money first with somewhat faster appreciation" would be able to support domestic demand, address inflationary pressures, and help facilitate global rebalancing. The strategy can also help manage capital flows and their impact on the domestic economy.

Mitigating the negative effects of surging capital flows will require an appropriate mix of sound macroeconomic management, flexible exchange rates, resilient financial systems, and—in some cases—temporary and targeted capital controls.

While capital flows can benefit economies by financing more investment, volatile short-term capital flows pose a risk to macroeconomic and financial stability. There is no magic solution to effectively managing capital flows. Each policy option has its merits and shortcomings and involves difficult trade-offs. An appropriate mix includes currency flexibility, clear and stable monetary and fiscal policies, and an appropriate regulatory and supervisory framework to help prevent asset bubbles from forming. Under certain circumstances, temporary and targeted capital controls could be considered as part of the policy mix to avoid destabilizing capital flows. The ultimate aim is to ensure macroeconomic and financial stability. However, authorities must be cautious, recognizing that capital controls can have deleterious long-term and cross-border repercussions.

Deeper and more comprehensive structural reforms are needed to improve productivity growth and to build an environment more conducive for private consumption and business investment.

To sustain rapid growth over the long term, policymakers must prioritize structural supply-side policies that improve an economy's productive capacity by fostering factor accumulation and productivity growth. While countercyclical fiscal and monetary policies can smooth temporary output fluctuations, they cannot sustain growth over the long term. Thus, policymakers should broaden and deepen structural reforms. At the same time, however, they also need to strengthen domestic demand. Structural reforms should address key weaknesses in the investment climate—such as policy uncertainty, competition

in product and service markets, governance, the quality of legal and institutional frameworks, and regulatory capacity. In economies with lower levels of private consumption, authorities could tackle income inequalities and increase public spending on social safety nets, housing, education, and health. This would increase disposable income and reduce precautionary savings, removing some of the impediments to boosting household consumption. Deeper and more comprehensive structural reforms can better the region's growth prospects and address more pressing challenges ahead.

It is vital that emerging East Asia continue to work together to address post-crisis challenges.

National policies can have significant spillover effects, or externalities, on other countries, thus the need for policy coordination. To attain financial stability and create an environment conducive to sustained growth—whether global or regional—externalities must be considered in the decision-making process. And policy coordination can help smooth spillover effects. ASEAN+3[5] has taken the lead by improving its regional financial arrangement through the Chiang Mai Initiative Multilateralization (CMIM), backed by stronger regional economic surveillance. Also, the soon-to-be-operational Credit Guarantee and Investment Facility—supported by ADB and developed under the ASEAN+3 Asian Bond Markets Initiative—will help develop local currency and regional debt markets by providing credit upgrades for issuers otherwise unable to tap bond markets for finance. This helps limit the possibility of maturity and currency mismatches developing. To effectively manage surging capital inflows to the region and better rebalance the sources of growth, ASEAN+3 could explore the possibility of regional exchange rate cooperation and coordination **(see *Exchange Rate Cooperation: Is East Asia Ready?*, page 46)**. The results of the recent G20 summit should help ease currency tensions somewhat, while stressing the shared responsibility between advanced and emerging economies—and among groups of emerging market economies—to resolve global imbalances and avoid protectionism.

[5]ASEAN+3 comprises the 10 members of the Association of Southeast Asian nations (Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam) plus the People's Republic of China, Japan, and Republic of Korea.

Exchange Rate Cooperation: Is East Asia Ready?[6]

Introduction

The 1997/98 Asian financial crisis provided greater impetus to East Asian regional economic cooperation.

In response to the 1997/98 Asian financial crisis, East Asia[7] launched several initiatives to enhance regional cooperation, given the contagion both banking and currency crises had on the region as a whole. These centered on early detection and management of financial and macroeconomic vulnerabilities. To promote financial cooperation and build regional financial stability, ASEAN+3 launched three key programs:

(i) A regional economic review and policy dialogue (ASEAN+3 ERPD);
(ii) A regional reserve pooling arrangement, the Chiang Mai Initiative (CMI); and
(iii) The Asian Bond Markets Initiative (ABMI) to develop and integrate local-currency bond markets.

The ASEAN+3 ERPD and the CMI were launched in May 2000, while the ABMI was launched in 2003. ERPD has been an integral part in supporting the CMI, while local currency bond market development was pursued to avoid the currency and maturity mismatches that helped spark the crisis. The three initiatives were designed to both provide liquidity support in times of crisis and to begin constructing a crisis prevention system to reduce and better manage future crisis effects.

The 2007/08 global financial crisis highlighted the need to speed up regional economic cooperation in East Asia.

It was actually in May 2006 that ASEAN+3 began working to improve the ERPD and multilateralize the CMI—from a web of bilateral swap arrangements to one large, unified reserve pooling arrangement. The global financial meltdown in late 2007 hastened the process along. The main components of the CMI Multilateralization (CMIM)—a "self-managed reserve pooling" arrangement governed by a single contractual agreement (with stipulated voting rights, contributions, and multiples in case of emergency borrowing)—were endorsed by ASEAN+3 finance ministers in May 2009 and became effective in March 2010. To strengthen the existing surveillance mechanism in support of the CMIM, the finance ministers also agreed to establish an independent surveillance unit—the ASEAN+3 Macroeconomic Research Office (AMRO) to be established in Singapore.[8] Both the CMIM and AMRO are significant first steps toward institutionalizing regional cooperation in East Asia.

With spillovers from national policies and the growing interdependence between the region's economies, the next step for regional cooperation in East Asia could possibly be starting to cooperate on exchange rate policy.

As East Asia's economies have grown larger and more complex, they also have become more integrated—through trade, financial flows, direct investment, and other forms of economic and

[6]Portions of this special section are based on papers prepared by Charles Wyplosz (Professor of Economics, The Graduate Institute, Geneva, Switzerland) and Charles Adams (Visiting Professor, Lee Kuan Yew School of Public Policy, National University of Singapore).

[7]East Asia comprises the 10 members of the Association of Southeast Asian nations (Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam) plus the People's Republic of China; Hong Kong, China; Japan; Republic of Korea; and Taipei,China.

[8]See "Regional Surveillance for Economic Stability" in the December 2009 edition of the *Asia Economic Monitor*, http://www.aric.adb.org/asia-economic-monitor/.

social exchange. Given this interdependence, East Asia should benefit from stronger mechanisms for macroeconomic monitoring and potentially cooperating on policy measures. Exchange rates are crucial to this process as they can drive trade and capital flows—and be the source of serious instability—well illustrated by the 1997/98 Asian financial crisis. But even with the region becoming increasingly interdependent, its exchange rate policies in particular have been increasingly heterogeneous, with intra-regional exchange rate variability actually increasing in the wake of the recent global financial crisis. As capital inflows are expected to surge with abundant global liquidity attracted to the higher economic growth within the region, differing national policy responses have brought some tension to exchange rate policies.

Thus, this special section attempts to answer four critical issues:

1. What are current exchange rate arrangements in the region?

2. Why cooperate on exchange rates?

3. What are the options for regional exchange rate cooperation?

4. What are the initial steps in building regional exchange rate cooperation?

What are current exchange rate arrangements in the region?

Over the past two decades, exchange rate regimes across the region have undergone substantial change.

East Asian economies are well aware of the importance of exchange rates and the difficulties of choosing the most appropriate regime. In the period before the 1997/98 Asian financial crisis, there was a high degree of similarity across exchange rate arrangements in the region. This was the result of common pegs—though uncoordinated—with the US dollar. These led to a high degree of intra-regional exchange rate stability. Since the Asian financial crisis, however, economies across the region have largely revamped their exchange rate regimes—many with more flexible arrangements. Today, the region's exchange rate regimes span the full spectrum from rigidly managed pegs to the US dollar to mostly floating exchange rate regimes, with considerable variations in between **(Table 12)**.

Intra-regional trade has grown substantially since the 1997/98 Asian financial crisis, partly helped by the stability of intra-regional exchange rates.

While exchange rate regimes vary across the region, the region's local currency exchange rates against both the US dollar and a basket of major trading partner currencies—or in effective terms—have been relatively stable. The coefficients of variation of monthly nominal exchange rates for most East Asian currencies are smaller than 10% of mean, while for other emerging and advanced economies, they are close to 10% of mean or higher **(Table 13)**. Intra-regional exchange

Table 12: IMF Classification of Exchange Rate Regimes

Currency	IMF Classification
Brunei dollar	Currency board
Cambodian riel	Floating
PRC renminbi	Stabilized arrangement
Hong Kong dollar	Currency board
Indonesian rupiah	Floating
Japanese yen	Free floating
Korean won	Free floating
Lao PDR kip	Other managed arrangement
Malaysian ringgit	Floating
Myanmar kyat	Other managed arrangement
Philippine peso	Floating
Singapore dollar	Floating
Thai baht	Floating
Vietnamese dong	Other managed arrangement

PRC = People's Republic of China, Lao PDR = Lao People's Democratic Republic.
Source: *Annual Report on Exchange Arrangements and Exchange Restrictions 2009*, International Monetary Fund.

Table 13: East Asia Currencies (coefficient of variation, %)

	Local Currency/$[1]		Nominal Effective Exchange Rate[2]	
	Jan-00–Jun-07	Jul-07–Sep-10	Jan-00–Jun-07	Jul-07–Sep-10
China, People's Republic of	2.06	3.60	4.99	5.37
Hong Kong, China	0.21	0.29	5.36	3.04
Indonesia	8.19	8.72	8.55	6.26
Japan	6.18	9.83	6.21	11.09
Korea, Republic of	10.84	13.85	7.67	14.31
Malaysia	2.49	4.44	3.97	2.76
Philippines	7.74	4.98	10.04	4.49
Singapore	4.93	3.80	1.95	1.91
Taipei,China	3.82	2.99	4.27	1.82
Thailand	6.76	3.51	3.73	2.02
Viet Nam	4.05	6.54	—	—

— = unavailable.
[1]Local currency/$ values computed using data from Bloomberg. [2]Nominal effective exchange rate values computed using data from Bank for International Settlements.
Source: Bloomberg and Bank for International Settlements.

rate stability has helped intra-regional trade, which has significantly increased in most of the region's economies **(Table 14)**.[9] As trade and investment flows grow within the region, interest in maintaining greater exchange rate stability has grown.

However, following the 2007/08 global financial crisis, intra-regional exchange rates have shown far greater dispersion, potentially affecting the further expansion of intra-regional trade.

While East Asian banks did not hold significant amounts of "toxic" assets, the financial meltdown—while originated in the United States—affected East Asia via strong trade and financial links. With the region's robust "V-shaped" recovery, some currencies appreciated significantly against the US dollar, while

Table 14: Export Shares—East Asia (%)

Export Share[1] (%)	East Asia[2]		United States		eurozone[3]	
Reporter/Partner	2000	2008	2000	2008	2000	2008
China, People's Rep. of	48.28	36.58	20.93	17.69	12.29	15.34
Hong Kong, China	48.88	61.11	23.25	12.75	10.49	9.58
Indonesia	59.25	61.51	13.66	9.55	11.24	9.49
Japan	40.76	47.79	30.09	17.75	12.80	10.55
Korea, Republic of	45.39	47.15	21.89	10.90	10.27	10.21
Malaysia	55.37	57.24	20.54	12.50	10.17	8.92
Philippines	49.49	61.01	29.84	16.72	13.71	15.75
Singapore	52.81	60.68	17.29	7.13	11.02	7.79
Taipei,China	47.84	63.05	23.42	12.05	9.60	6.21
Thailand	47.21	49.78	21.32	11.40	11.69	9.02
Viet Nam	52.84	40.73	5.06	18.93	15.64	13.05
East Asia (EA)	47.09	48.06	23.64	14.63	11.53	11.50
East Asia (extra-EA)[4]			44.68	28.17	21.80	22.13

[1]Refers to exports of each East Asian (EA) country to a partner as a percentage of the former's total exports to the world. For example, United States accounts for 9.55% of Indonesia's total exports in 2008. [2]Includes People's Republic of China; Japan; ASEAN-4 plus Viet Nam = Indonesia, Malaysia, Philippines, Thailand, and Viet Nam; NIEs = Hong Kong, China; Republic of Korea; Singapore; and Taipei,China. [3]Includes Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain. [4]Refers to exports of East Asia to US and eurozone as a percentage of East Asia's total exports as a single trading entity.
Source: *Direction of Trade Statistics September 2010 CD*, International Monetary Fund; and CEIC for Taipei,China.

[9]The share of exports from the PRC to other East Asian economies has declined as the PRC's exports to other parts of the world expanded much faster over the past decade.

others have been relatively unchanged (see Figure 25). In both nominal and real effective terms, several currencies appreciated more, while some even depreciated (see Figures 26, 27). Furthermore, in real terms, the region's individual currencies against a regional basket have become far more widely dispersed since early 2007 **(Figure 71)**. The increase can be contrasted with the low dispersion that followed the 2000/01 "dot.com" stock market crash in developed countries. In short, following the 2007/08 global crisis, intra-regional exchange rate fluctuations have increased—a detriment to expanding intra-regional trade.

Capital controls or foreign exchange market intervention in response to surging capital inflows could hurt trading partners within the region.

More widely dispersed intra-regional exchange rates, coupled with the decreased variations in individual currencies (see Table 13), means some economies may have been intervening in foreign exchange markets to prevent their currencies from appreciating—possibly to smooth exchange rate movements and/or to maintain export competitiveness. This strategy holds the potential to force other countries to follow suit, thus raising the specter of "currency wars". To better manage capital inflows, some economies in the region have implemented capital controls, which may push capital to other economies in the region, and thus make capital inflows potentially more volatile. In addition, the uneven global recovery could draw even greater capital inflows to the region—and over the longer term. Thus, national policy responses could drag exchange rates across the region further apart. Could this increasing dispersion become dangerous to the region's growth prospects? And if so, what mechanisms exist to help cushion the blow?

Figure 71: Regional Real Exchange Rate Dispersion
(coefficient of variation, %)[1]

[1]Coefficient of variation of ASEAN+3 and Hong Kong, China (excluding Indonesia, Myanmar and Lao People's Democratic Republic) real exchange rates against an Asian Monetary Unit (AMU), normalized to 100 over the sample period. The AMU is a trade-weighted basket of 14 currencies (ASEAN+3 and Hong Kong, China). Real effective exchange rates are computed using the divergence indicator. Exchange rates of Indonesia, Lao People's Democratic Republic, and Myanmar are excluded as they have undergone large idiosyncratic changes that cloud the overall pattern.
Source: OREI staff calculations using data from the Research Institute of Economy, Trade, and Industry (RIETI), Japan.

Why cooperate on exchange rates?

The rationale for policy cooperation derives from the fact that national policy actions can have significant spillover effects, or externalities, on other economies.

Globalization is now a fact of life. And each economy is linked by trade and finance. National policies will have spillover effects, or externalities, on other economies. These externalities must be part of the decision-making process to attain a global or regional optimum. Policy cooperation is one way to internalize those spillover effects. Potential destabilizing capital flows and exchange rate instability highlight the need for strong policy cooperation at both global and regional levels.

Studies on the benefits and costs of deep exchange rate cooperation generally use the concept of an optimum currency area (OCA)—yet East Asian economies are far from meeting most OCA criteria.

Drawing on the key insights of a long list of studies,[10] deep forms of exchange rate cooperation—and eventual monetary union—were only seen as beneficial under a set of very stringent criteria. These include common economic shocks, similar levels and structure of economic development, and very high degrees of factor mobility and/or wage price flexibility. Given the euro's history, reinforced during the recent global financial crisis, successful exchange rate—and monetary—cooperation must be supported by very high levels of political, fiscal, and financial cooperation, along with supporting institution building. Because East Asian economies today are nowhere near meeting most OCA criteria, any deep exchange rate (and monetary) cooperation must be a long-term goal for East Asia.

Rapidly growing interdependencies in trade and finance in the region and increasing importance of spillover and contagion effects make regional exchange rate cooperation essential.

Since the 1997/98 Asian financial crisis, intra-regional trade has grown substantially, as supply chains and production networks have become central to East Asia's leadership in global manufacturing (see Table 14). East Asia's financial integration has also progressed over the past two decades, though far less than with production and trade. As with trade and finance, macroeconomic interdependence in East Asia has also increased. New trade theory shows trade links tend to be deeper between neighbors, and those deeper trade links foster a deepening of financial ties. This means exchange rates tend to matter more at the regional than global level. Any exchange rate belongs to two countries, so that any desired reaction to its fluctuations requires some degree of cooperation. Moreover, bilateral cooperation on exchange rates is an unavoidable source of externality for third parties, and given the regional bias in economic integration, this externality is more sizeable at the regional level.

East Asia's production networks illustrate the need for greater intra-regional exchange rate stability.

Intra-regional trade in East Asia is characterized by production fragmentation—a network of small independent firms and multinational corporations using the region as their production base. These regional production networks bring greater interdependence between East Asian economies. For them to flourish, however, they require exchange rate stability, or at least predictability. Exchange rate turbulence makes smooth and efficient production networks difficult, particularly if a production network consists of small firms. Also, excessive exchange rate fluctuations may lead producers to relocate to other countries in the same region. Yet such relocations are inherently costly and unproductive. Limiting exchange rate fluctuations could therefore reduce unproductive relocations.

The need to correct global imbalances in the aftermath of the global financial crisis adds to the argument for greater intra-regional exchange rate stability.

The global financial crisis underscored the need for the region to rebalance its sources of growth from external demand to greater domestic and regional demand. A shift toward increased reliance on regional demand also places increased importance on exchange rate cooperation—as stable exchange rates between regional currencies promotes intra-regional trade. Most East Asian economies run large current account surpluses

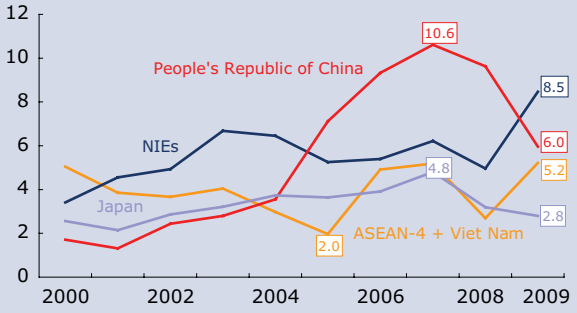
[10]See, for example, R.A. Mundell. 1961. Optimum Currency Areas. *American Economic Review.* 51. pp. 509–517; R.N. Cooper. 1968. *The Economics of Interdependence*. New York: McGraw-Hill; K. Hamada. 1976. A Strategic Analysis of Monetary Interdependence. *Journal of Political Economy*. 84. pp. 667-700; and K. Hamada. 1985. *The Political Economy of International Monetary Interdependence*. Cambridge: MIT Press.

(Figure 72). So, exchange rates against both the US dollar and primary trading partners will tend to appreciate. However, authorities in individual economies might be reluctant to allow their currencies to appreciate if it means losing competitiveness. Greater regional cooperation may allow the region's economies to be more willing to appreciate currencies without fear of losing competitiveness to other economies, thus helping global rebalancing.

Achieving greater intra-regional exchange rate stability promotes intra-regional trade, reduces exchange rate policy tension and improves the allocation of regional resources.

Reducing exchange rate uncertainty, most importantly, helps expand intra-regional trade in goods and financial assets as a key component of the region's rebalancing strategy. It helps reduce tensions arising from attempts to make exchange rates appreciate less. In addition, greater intra-regional exchange rate stability improves price transparency and contributes to better allocation of regional resources.

Figure 72: Current Account Balance—East Asia
(% of GDP)



ASEAN-4 = Indonesia, Malaysia, Philippines and Thailand; NIEs = Hong Kong, China; Republic of Korea; Singapore; and Taipei,China; GDP = gross domestic product.
Source: *International Financial Statistics*, International Monetary Fund; CEIC; and national sources.

But there are also obvious potential costs to greater intra-regional exchange rate stability.

The exchange rate is a crucial channel for transmitting economic and financial disturbances as well. And some fluctuation helps restore equilibrium when the pre-existing equilibrium is disturbed by other factors. Intra-regional exchange rate stability may not be able to help react to economic shocks, which then places a greater burden on internal price and cost adjustments within a specific economy. Also, unless a system is designed to allow some flexibility in intra-regional exchange rates, misalignments or distortions can result leading to speculative currency attacks. Thus, there are good reasons for adopting a step-by-step approach in building exchange rate cooperation to preserve a degree of intra-regional exchange rate flexibility.

The objective of regional exchange rate cooperation should be to stabilize *intra-regional* exchange rates, while allowing for sufficient *inter-regional* exchange rate flexibility.

The depth of the global financial crisis will have a long-lasting impact on advanced economies—with economic growth remaining weak for at least the next several years. The growth differential between East Asia and the US and eurozone would lead the region's currencies to appreciate against the US dollar and euro over a long period. Appreciation of East Asia's currencies also contributes to correcting global payments imbalances. Long-term growth differentials and expectations of long-term currency appreciation suggest that capital inflows to East Asia could be long-lasting. Maintaining flexible exchange rates *inter-regionally* is an essential tool to manage potentially volatile capital flows and external shocks.

What are the options for regional exchange rate cooperation?

There is a range of options for greater regional cooperation that can attain intra-regional exchange rate stability while allowing for inter-regional exchange rate flexibility.

The options available to the region can broadly be categorized into three types. At one end of the spectrum, there are relatively informal arrangements where—through policy dialogue and discussion—the region moves toward greater exchange rate cooperation. These are informal arrangements with no need for new institutions. Cooperation can be pursued through existing regional forums such as the ERPD. The mid-level option would be for the region's economies to develop a binding agreement to peg exchange rates in one of several ways. This more ambitious option has its constraints, though. One way would be to agree to peg the region's currencies to a particular currency or basket of currencies. Alternatively, it is also possible to peg the region's currencies to another and allow them to float jointly against outside currencies. At the other end of the spectrum, the region could aim to become a full-blown monetary union like the eurozone, where the region adopts a common currency and irrevocably binds exchange rates together. This is naturally a much more complicated process requiring the establishment of a new institutional framework for the region.

Regional dialogue leading to agreements on stabilizing exchange rates could be one way of achieving exchange rate cooperation.

The most informal form of regional cooperation on exchange rates would be dialogue and discussion among policymakers, which would allow them to understand spillover effects of national policies. Policy dialogue and discussion could lead to agreements among a group of economies to maintain exchange rate stability. An example of this type of cooperation is the Plaza and Louvre Accords by the G7.[11] Europe's response in the aftermath of the collapse of the Bretton Woods System provides another example of regional cooperation on exchange rates. Europe's response was to set up the Exchange Rate Mechanism (ERM), a tight arrangement that eventually led to the adoption of a monetary union in Europe **(Box 2)**. East Asia's ERPD in many ways resembles the G7 process. It is mostly informal and seeks to improve mutual understanding of each country's needs and policy response. In addition, it can develop joint policy initiatives when needed, yet is entirely consultative and devoid of any binding authority. In short, it is a soft cooperative arrangement. The recent ASEAN+3 decision to create AMRO—a permanent office for economic monitoring and surveillance in support of the CMIM—could elevate ERPD's status and ability to act, somewhat similar to the European process.

A stronger form of cooperation would be for the region's economies to peg their currencies to achieve intra-regional exchange rate stability.

There are several options in choosing which currencies should be included in a currency peg. It could either be a single currency or a basket of currencies. Furthermore, any basket of currencies used for the peg could either be from within or outside the region, or some combination of the two. When a basket of currencies is used, it can be a common basket or a basket that differs country by country. A single currency is generally considered unattractive for East Asian economies because trade is quite diversified (see Table 14), making any one of the major international currencies—the US dollar, euro, or yen—ill-suited as a common peg. This is why most of the attention has been devoted to basket pegs.[12]

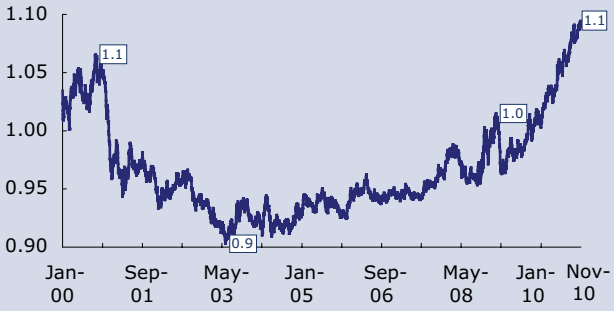
[11]The G7 includes Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.

[12]J. Williamson. 1999. The Case for a Common Basket Peg for East Asian Currencies. In S. Collignon, J. Pisani-Ferry and Y.C. Park, eds. *Exchange Rate Policies in Emerging Asian Countries*. London and New York: Routledge.

An Asian Monetary Unit would be an example of an internal basket of currencies that could stabilize intra-regional exchange rates.

This "internal basket" would include regional currencies. An Asian Monetary Unit (AMU)—or Asian Currency Unit (ACU)—was proposed by Mori, Kinukawa, Nukaya, and Hashimoto (2002),[13] Kuroda and Kawai (2003),[14] and Kawai and Takagi (2005).[15] The AMU is a basket of all ASEAN+3 currencies, with weights reflecting each country's size in terms of GDP and trade volume. The AMU's value can be defined by way of either an external currency or a basket of external currencies. Ogawa (2006)[16] uses a basket combining the US dollar and the euro, carrying weights of 65% and 35%, respectively **(Figure 73)**. While proponents do not explicitly suggest that regional currencies be tied to the AMU, this is one obvious use. Some countries could manage exchange rates to keep external values in line with the AMU within predetermined margins. Under this structure, bilateral exchange rates would be stable. This arrangement's appeal is that the link to international currencies is indirect and, more importantly, there is no presumption that the AMU—and therefore East Asian individual currencies—would be pegged to any external currency. In fact, if the AMU fluctuates widely against the US dollar or euro, the region's currencies would fluctuate similarly, maintaining stable bilateral rates.

Figure 73: AMU Exchange Rate
($-EUR/AMU, benchmark year = 2000/2001)[1]



AMU = Asian Monetary Unit.
[1]Value of one (1) synthetic AMU against a weighted average of the US dollar and the euro—using weights of 65% and 35%, respectively (based on the East Asian countries' trade volumes with the United States and the euro area). Thus, in the figure above, the value of the AMU in Nov 2010 is 10% higher than the benchmark exchange rate in 2000/2001.
Source: Research Institute of Economy, Trade, and Industry (RIETI), Japan.

The problem with basket pegs, however, is that the arrangement would be undefined if all regional currencies were included.

This is the so-called "N-1" problem, a consequence of the fact that N currencies have only N-1 independent bilateral exchange rates. At least one currency must remain out of the mix, and that currency, if alone, would determine how all others fluctuate jointly against external currencies. In effect, it would become an anchor. If two or more currencies were to stay out, AMU movements would represent a weighted-average evolution of two or more currencies, while all others would remain with stable bilateral rates. From an economic viewpoint, there is nothing inherently wrong with this arrangement, but the political aspects are bound to be delicate. If, as is likely, the PRC, Japan, and Korea elect to stay out, then the AMU, and the exchange rates of ASEAN countries, would be driven by the average evolution of the Japanese yen, the PRC renminbi, and Korean won. The principle of averages implies that ASEAN exchange rates would not deviate much from the three "outs".

[13]J. Mori et al. 2002. Integration of East Asian Economics and a Step by Step Approach Towards a Currency Basket Regime. Paper prepared for the 1st International Conference of Japan Economic Policy Association on Nation States and Economic Policy. Tokyo. 30 November.

[14]H. Kuroda and M. Kawai. 2003. Strengthening Regional Financial Cooperation in East Asia. *PRI Discussion Paper Series*. (03A-10). Tokyo: Policy Research Institute, Ministry of Finance.

[15]M. Kawai and S. Takagi. 2005. Towards regional monetary cooperation in East Asia: Lessons from other parts of the world. *International Journal of Finance and Economics.* 10(2). pp. 97-116.

[16]Research Institute of Economy, Trade & Industry. AMU and AMU Deviation Indicators. http://www.rieti.go.jp/users/amu/en/ (accessed 1 December 2010). Eiji Ogawa calculates the indicators along with Junko Shimizu.

Each country targeting its own basket of currencies could also stabilize intra-regional exchange rates if trade structures are similar across the region.

This alternative suggests that each country stabilize its own currency against its self-defined basket of currencies—the choice of which and the corresponding weights representing each economy's specific trade structure. If these are similar across the region, the region's economies are in effect adopting the same basket. Another implication of averaging is that regional bilateral rates would also be stable. In fact, Park and Wyplosz (2004)[17] show empirically that this arrangement provides almost as much stability as pegging to an AMU. By leaving each country free both to define its own basket and to decide on the degree of stabilization vis-à-vis the basket, this approach greatly simplifies political issues while achieving similar economic goals. It also removes the N-1 problem once non-regional currencies are included in individual baskets.

East Asia's economies could also choose to peg their currencies directly to each other, allowing the currencies to freely float relative to extra-regional currencies.

A more ambitious plan would directly peg East Asian currencies to each other and let them float jointly against other currencies. In practical terms, the result would be similar to the basket pegging described above. In fact, the similarity extends to the N-1 problem, which in this case implies that among all countries in the arrangement, one will remain free to carry out its monetary policy independently of the others. This is how the Bretton Woods system operated, leaving US authorities to set the dollar value (in terms of gold). This also applied to the European Monetary System (EMS). But the remaining degree of freedom was never officially attributed to any currency. Over time, the strongest currency, the German mark, assumed this role informally. Frustration with this evolution finally led other countries to call for a fully symmetric arrangement, the common currency managed by the supranational European Central Bank.

The strongest form of cooperation would be to adopt a common currency and form a monetary union.

Adopting a common currency would be the strongest commitment to maintain exchange rate stability. The most obvious parallel was the introduction of the euro. A common currency is clearly a very robust arrangement but—as seen by the ongoing sovereign debt crisis in Europe—it may suffer from fiscal or public debt weaknesses. Given the profound transfer of sovereignty implied by adopting a common currency, it is worth asking whether the euro's experience during the crisis can be seen as a failure. There is no doubt that European policymakers were taken by surprise. They did not expect contagion and failed to notice the growing current account imbalances within the eurozone. Having been caught unprepared, they had to improvise under heavy market pressure, with their actions both hailed for their audacity and criticized over some longer-run implications. The current concern is whether the risks taken will pay off. There remains a very real possibility that some countries may need to restructure public debt and that contagion would then spread.

The recent debt crisis in the eurozone shows that stronger institutions than previously thought are required for monetary unions to function properly.

Europe's monetary union must be credited for having fully protected internal exchange rates—since they no longer exist. Without the euro, it is likely that some countries would have had a high degree of exchange rate volatility—as for example in the UK and Sweden—possibly linked with a public debt crisis, as was the case in Hungary. A fair conclusion is that the European monetary union has delivered on its main goal—internal exchange

[17]Y.C. Park and C. Wyplosz. 2004. Exchange Rate Arrangements in East Asia: Do They Matter?. In Y. Oh, D.R. Yoon and T.D. Willett, eds. *Monetary and Exchange Rate Arrangements in East Asia*. Seoul: Korea Institute for International Economic Policy. pp. 129-160.

rate stability—but that the system's imperfections, long-identified by researchers, are now plain for all to see. This episode illustrates a general principle: that economic integration is a dynamic process with each integrative step requiring greater integration down the line. Europe began its integration with a tariff union, then moved to a common market, which then underpinned the search for internal exchange rate stability. The system of fixed exchange rates then gave way to monetary union, which now implies mutual guarantees on public debt. Each step needs the transfer of sovereignty and building new institutions. For East Asia, it would mean that a common currency requires an even more demanding institutional arrangement than previously thought.

What are the initial steps toward regional exchange rate cooperation?

For East Asia, cooperation needs to be "institution-lite" rather than based on the full range of institutions created for Europe's monetary and economic union.

National authorities in East Asia prefer cooperation to be "institution-lite" rather than structured on a full range of institutions. That said, an "institution-lite" approach to exchange rate cooperation in the region does not preclude the possibility of the region adopting a more ambitious approach over the long haul. It places constraints, however, on what might be achievable in the near term.

A realistic short-term objective would be to reduce intra-regional exchange rate variability, while allowing exchange rates to respond to shocks outside the region.

Growing trade links have made the region's economies more interdependent. Intra-regional trade is likely to grow further given global rebalancing and robust growth within the region compared with advanced economies. Thus, a pragmatic goal for regional exchange rate cooperation would be to reduce intra-regional exchange rate volatility while at the same time allowing flexibility in responding to shocks outside the region. This way, the region would be able to decouple its intra-regional exchange rate policy from its external exchange rate policy. This is especially pertinent in today's environment where the region needs to realign its currencies vis-à-vis the rest of the world without disrupting intra-regional exchange rates.

The adoption of a peg for the region's currencies looks unlikely for now.

It is clear the region remains far from forming a monetary union. However, creating a regional exchange rate mechanism modeled on, for example, the EMS, could help decouple the region's intra-regional and inter-regional exchange rate policies. As mentioned, East Asian economies could link exchange rates indirectly through an artificial currency unit such as the AMU. Still, this approach is not feasible in the near term as it requires either an agreement for one or more of the region's currencies to be anchors for the system—to determine monetary policy for the entire region—or a sharp jump in the level of monetary cooperation across all the region's central banks (to determine a region-wide monetary policy). Neither of these are realistic currently. Moreover, many East Asian countries remain skeptical about the benefits of returning to complete exchange rate fixity (even among regional currencies) given the role exchange rate policy currently plays in helping respond to asymmetrical shocks. Also, exchange rate pegs under an AMU-based system could become vulnerable to speculative attacks given the relatively high rate of capital mobility in the region.

Europe's experience immediately following the collapse of the Bretton Woods agreement can provide some clues as to how East Asia can initially approach regional exchange rate cooperation.

Another approach is to examine the European experience following the collapse of the Bretton Woods agreement (see Box 2). Over the past 10 years, East Asia's policymakers and many others have used the European experience as a sort of blueprint for regional economic and monetary integration—even if it has been long understood that Europe's path to integration cannot simply be copied. While the ongoing sovereign debt crisis illustrates problems with the European model, it can still provide useful lessons. In particular, Europe's early attempts at integration may show how the region can initiate a process toward greater regional cooperation on exchange rates. The situation becomes similar to the current East Asian situation where there is interest in maintaining intra-regional exchange rate stability yet with flexibility against currencies outside the region. Following Europe's example, the region's economies could agree to peg exchange rates together to limit volatility within the region, but allowing whatever unit is chosen to move freely against currencies outside the region. Initially, the arrangement may be informal but can become more formalized over time—perhaps even into formal agreements with binding commitments.

The region could start by adopting informal reference or monitoring zones for regional exchange rates to gradually reduce intra-regional exchange rate variability over time.

This actually mimics the European experience. The reference values under this structure, in and of themselves, would have no intrinsic significance and, most importantly, would not serve as an exchange rate policy target. Rather, any large or persistent deviation from these reference values can serve as a trigger for confidential discussions on exchange rate policies and potential mitigation policies to narrow deviations. Over time, as confidence in the system evolves into trust in the system, reference values might begin to take on more credence as a form of exchange rate targeting. Initially, however, the system would only act as a framework for discussing exchange rate and other policies to help reduce intra-regional exchange rate variance.

The reference currency should come from outside the region and monitoring zones be wide enough to allow for some intra-regional flexibility.

Initially, reference values could be chosen as the most recent values of exchange rates. But they could vary over time based on changes in the underlying equilibrium exchange rates. The reference currency or currencies used should not come from within the region given the N-1 problem. This excludes an AMU. In the near term, the most practical reference currency would be the US dollar—given its role as international reserve currency—although a basket of the dollar and euro could also be used. To allow some flexibility in exchange rates, even while seeking to reduce intra-regional exchange rate variability, the monitoring zones around the reference values would need to be relatively wide (say, plus or minus 5%–10%). They should not, however, be so wide to allow disruptive shifts in the region's exchange rates that threaten the ultimate goal of greater intra-regional exchange rate stability—and they could narrow over time. In adopting this approach, a simple bilateral grid of reference values and zones for each regional currency could be defined based on agreed reference values based on a reference currency and the sizes of zones around these values.

Large movements of intra-regional exchange rates outside reference zones would trigger further discussions and consultations.

Under the reference zone approach, the divergence between the strongest (or weakest) intra-regional currencies in each period could be used to

benchmark divergences between exchange rates in the region. As structured, reference zones for triggering exchange rate discussions would not be crossed if there were simultaneous movements in all the region's currencies against the US dollar (or against any other external currency). However, large differentials between the region's currencies against extra-regional currencies could trigger a move outside reference zones. Because exchange rates are relative prices, there would be no presumption that any particular currency would be at "fault" when pairs of currencies move outside their monitoring zones. Each instance of large deviations from reference values would need to be considered on a case-by-case basis. Moreover, circumstances could arise where some currencies in the region move outside their reference zones because other currencies in the region resisted adjustments in their underlying equilibrium exchange rates. In this case, currencies that did not cross their reference zones would become the source of common concern in the region, rather than the currencies that crossed their reference zones.

The reference zone arrangement could evolve over time into a more formal arrangement for exchange rate cooperation.

Over time, as trust and confidence grow, there could be a gradual hardening of the reference values and a narrowing of reference zones. As a result, the system could eventually converge into a more traditional target zone system. But this can happen only gradually. The key reason for the go-slow approach is that any hardening of the system will require a clear agreement on sharing adjustment responsibilities across economies and an agreement on providing external liquidity for market intervention. Also, when exchange rate targets become more binding, the system would need to eventually be integrated with monetary policy frameworks and operating procedures throughout the region. At least in the near term, however, the proposed monitoring system would not require this level of agreement. The system could be applied under the current ERPD framework as a key stepping stone toward gradually achieving greater intra-regional exchange rate stability.

Conclusion

The most recent crisis—which originated outside the region—calls for greater regional economic cooperation.

Crises are extreme events that reveal pre-existing weaknesses. The past 2 years have shown the limits of East Asian financial cooperation—much as flaws in the European monetary union have become the source of deep turmoil. Europe's response has been to deepen integration, extending solidarity and collective oversight. The crisis and recovery show that the demands of economic cooperation are heavier than previously thought. The likelihood of continuing exchange rate instability, including recurring crises, strengthens the appeal of cooperation.

Regional exchange rate cooperation—if handled wisely—can ensure intra-regional exchange rate stability while allowing inter-regional flexibility; thus helping promote intra-regional trade and rebalance the region's sources of growth.

Growing interdependence within East Asia and the increasing spillover effect of national policies underscore the importance of regional cooperation on exchange rate policy. Intra-regional exchange rate stability would promote intra-regional trade in goods and financial assets—critical for the region to rebalance its sources of growth more toward domestic and regional demand. Stability among regional currencies also reduces tensions that might arise due to "competitive non-appreciation". The region's currencies also need flexibility against major extra-regional currencies to better manage capital flows and respond to external shocks.

Regional exchange rate cooperation can begin with informal or "institution-lite" arrangements.

Regional exchange rate cooperation could start with considerably less ambitious goals than the monetary union adopted in Europe. One possible approach would be an informal reference or monitoring zones for the region's exchange rates—to reduce intra-regional exchange rate variability over time. Current arrangements in East Asia, such as the CMIM and ERPD—and now backed by AMRO—could support this kind of informal approach. If East Asian economies, or a subset of them, conclude that monetary and exchange rate cooperation should be strengthened, they should aim to carefully craft more ambitious, step-by-step goals over time.

Box 2: How Did Europe Tighten Cooperation on Exchange Rates?[1]

In general, European governments have long been convinced that exchange rate stability is critical for trade integration.[2] It is no surprise, then, that the 1971 end of the Bretton Woods system of fixed exchange rates triggered a major effort in Europe to reestablish exchange stability *within* the Common Market. Within a year, several countries (European Community members along with Denmark, Ireland, Norway, the United Kingdom, and Sweden) agreed to peg exchange rates together (within a +/- 2.25% band) and let them float against the US dollar. This "snake in the tunnel" arrangement was loose, however, because each country remained free to adjust its own parity, with no mutual surveillance, no reserve pooling arrangement or support agreement. It was merely an official statement of intent without any firm commitment.

In the volatile post-Bretton Woods environment, the Snake suffered numerous withdrawals. European leaders soon recognized that agreements without binding commitments are ineffective. It took several years before the Snake evolved into an Exchange Rate Mechanism (ERM)—the core of the European Monetary System created in 1979. The ERM agreement had two crucial features. First, there was a commitment to unlimited exchange market intervention, symmetrically by strong and weak currency countries, where bilateral rates reached set limits. Second, parity changes were explicitly allowed, but had to be agreed upon by all ERM-members. This last feature led to round-the-clock weekend negotiations (when markets were closed); and while realignments were frequent, no country ever changed its parity without full agreement by the others.

The ERM provides more lessons. It quickly became evident that members had tacitly given up an important element of monetary policy sovereignty—a recognition that exchange rate stability does not come for free. Importantly, it became clear that the arrangement left one degree of freedom in setting bilateral exchange rates—the so-called N-1 problem. It gradually emerged that this last degree of freedom was captured by Germany, the country with the lowest inflation rate and, accordingly, the strongest currency. Thus the ERM became a "Deutschemark zone", whereby the Bundesbank retained control of its own monetary policy, while all other countries had to *de facto* peg their currencies to the deutschemark. This paved the way for monetary union. For all countries, except Germany, monetary union meant recovering some control on the common monetary policy by participating in the European Central Bank. Germany was making the real sacrifice, which it accepted as a purely political *quid pro quo* for gaining support for reunification with East Germany.

[1]For more details, see R. Baldwin and C. Wyplosz. 2009. *The Economics of European Integration*, 3rd ed. McGraw Hill. pp. 307–310.

[2]For long, this stood in sharp contrast with the absence of any international backing. It is only recently that evidence has begun to back this view. The turning point was the work on currency unions by A. Rose. 2000. One Money, One Market: The Effect of Common Currencies on Trade. *Economic Policy* 30: 9–45. For a detailed assessment, see P.B. Clark, N. Tamirisa, and S-J. Wei. 2004. A New Look at Exchange Rate Volatility and Trade Flows. *Occasional Paper* 235. International Monetary Fund.

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