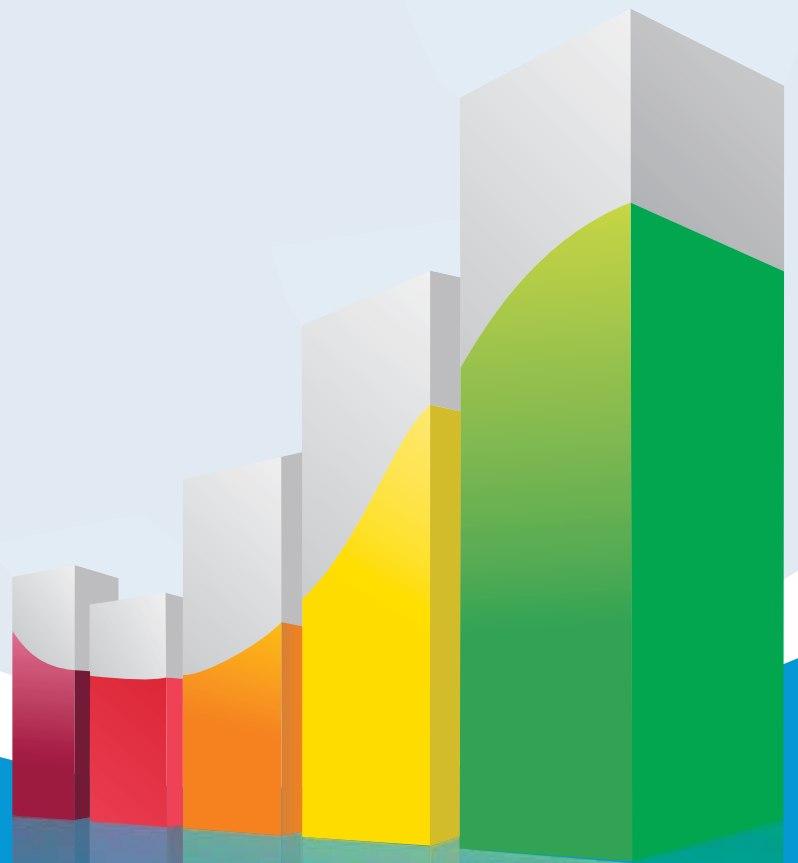


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Asia Economic Monitor

DECEMBER 2011



Asian Development Bank



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Contents

Emerging East Asia—A Regional Economic Update

Highlights2

Economic Performance.....3

Growth and Inflation.....3

Balance of Payments.....7

Financial Markets and Exchange Rates.....10

Monetary and Fiscal Policy.....14

Financial Vulnerability.....16

Economic Outlook, Risks, and Policy Issues..... 24

External Economic Environment.....24

Regional Economic Outlook for 2012.....35

Risks to the Outlook.....39

Policy Issues.....40

Can East Asia Weather Another Global Economic Crisis?... 43

Introduction.....43

What are the risks of another global financial crisis?.....44

How would another global financial crisis impact East Asia?.....47

Estimating the impact of a new global crisis on East Asia.....53

Where can policymakers make a difference?.....56

Conclusion.....58

Box

1. A eurozone and US “Lost Decade”: A Comparison with Japan.....25

Abbreviations and Acronyms

ADB	Asian Development Bank	MSCI	Morgan Stanley Capital International
ASEAN	Association of Southeast Asian Nations	m-o-m	month-on-month
ASEAN-4	Indonesia, Malaysia, Philippines, and Thailand	NIE	newly industrialized economy
ASEAN-10	Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam	OECD	Organisation for Economic Co-operation and Development
BI	Bank Indonesia	OEF	Oxford Economic Forecasting Model
BIS	Bank for International Settlements	OPEC	Organization of the Petroleum Exporting Countries
CBOE	Chicago Board Options Exchange	PCOMP	Philippine Composite Index
CDS	credit default swaps	PRC	People's Republic of China
CMIM	Chiang Mai Initiative Multilateralization	PMI	purchasing managers' index
EEA	Emerging East Asia	q-o-q	quarter-on-quarter
EMBI	Emerging Markets Bond Index	repo	reverse repurchase
ERPDI	Economic Review and Policy Dialogue	saar	seasonally adjusted annualized rate
EU	European Union	SET	Stock Exchange of Thailand
G3	US, eurozone, and Japan	SIPMM	Singapore Institute of Purchasing and Materials Management
GDP	gross domestic product	SMEs	small and medium enterprises
GIIPS	Greece, Ireland, Italy, Portugal, and Spain	S&P	Standard and Poor's
ICT	information and communications technology	STI	Straits Times Index
IMF	International Monetary Fund	TED	treasury bill and eurodollar futures contract
ISM	Institute for Supply Management	TWSE	Taipei, China's stock exchange
JCI	Jakarta Composite Index	UK	United Kingdom
KLCI	Kuala Lumpur Composite Index	US	United States
KOSPI	Korean Stock Price Index	UV curve	Beveridge curve
Lao PDR	Lao People's Democratic Republic	VNINDEX	Ho Chi Minh Stock Index
LIBOR	London Interbank Offered Rate	WB	World Bank
M2	broad money	y-o-y	year-on-year
		\$	US dollars unless otherwise indicated

Emerging East Asia
**A Regional
Economic Update**

Highlights

Economic Performance

- Economic growth in emerging East Asia moderated this year due to weaker external demand and tightened monetary policies to battle inflation; investment edged up, while consumption remained strong.
- Inflation appears to have peaked, but remains a concern for several economies.
- Balance of payments were mixed; the NIEs' surplus narrowed on reduced current account surpluses, while those in the PRC and middle income ASEAN increased slightly.
- Stock market indexes in emerging East Asia were volatile as investor sentiment swayed in tandem with the unfolding eurozone crisis and US economic uncertainty.
- Currency movements were mixed; largely mimicking market reaction to events in the eurozone and US.
- Bond yield curves flattened due to declines in long-term interest rates—meaning investors expect weaker growth.
- Across the region, safeguarding growth is becoming the focus of policymakers as the global economy slows.
- Although emerging East Asia's financial systems remain sound, vulnerabilities exist.

Outlook and Risks

- Since mid-2011, the external environment for emerging East Asia has worsened; no resolution of the eurozone sovereign debt crisis is in sight and the US recovery remains fragile.
- Aggregate GDP in emerging East Asia is expected to grow 7.2% in 2012 after expanding 7.5% this year.
- The cautiously optimistic outlook for emerging East Asia is subject to major downside risks: (i) a deep recession in both the eurozone and US; (ii) protectionism or tight trade finance; (iii) destabilizing capital flows; and (iv) persistent or resurgent inflation.

Policy Issues

- The biggest policy challenge facing emerging East Asia is how to safeguard the region's robust growth against the threat of another global economic crisis.

- With the eurozone's sovereign debt crisis unfolding and risks of faltering global recovery rising, macroeconomic policy must remain cautious and prudent.
- With demand from the eurozone and US expected to remain weak for some time, emerging East Asia should continue to work toward increasing intraregional trade and financial integration, and expanding links with other emerging economies.
- Emerging East Asia could accelerate regional policy cooperation to mitigate the effects of external shocks.

Can East Asia Weather Another Global Economic Crisis?

- The eurozone sovereign debt crisis continues to worsen; it would have a serious yet manageable impact on East Asia should it evolve into a full-blown global financial and economic crisis.
- The region should be able to weather a crisis if policymakers respond promptly, decisively, and collectively:
 - They need to respond quickly and firmly by deploying financial, monetary, and fiscal policies to restore confidence, ensure financial stability, and support growth.
 - Fiscal policy could be central to sustain growth, while monetary policy retains enough flexibility to allow stimulus while keeping inflationary expectations anchored.
 - East Asia must intensify collective action in addressing the knock-on effects of another global financial crisis.
- Regardless, emerging East Asia must prepare for a prolonged crisis and weak post-crisis recovery by implementing appropriate short-term macroeconomic responses and pursuing necessary long-term structural reform.
 - National development agendas and the desire to rebalance sources of growth make targeted fiscal stimulus attractive.
 - Emerging East Asia should cooperate more on efforts to accelerate rebalancing growth toward domestic and regional demand.

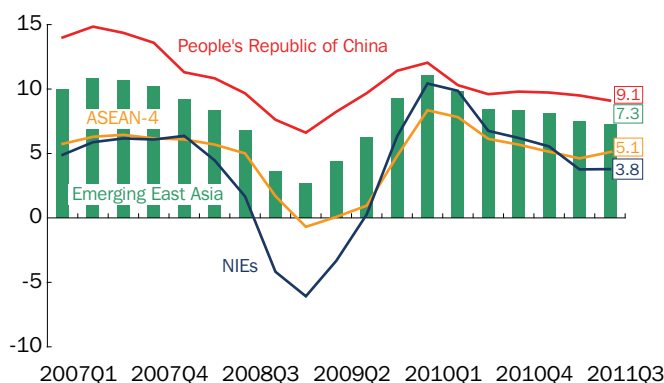
Economic Performance

Growth and Inflation

Economic growth in emerging East Asia is moderating in the second half of 2011 due to weaker external demand and tightened monetary policies to battle inflation.

Economic performance in emerging East Asia remained robust even as moderation continued. Export growth decelerated on weak external demand, while authorities generally maintained tight monetary policies to curb inflation. In the third quarter of 2011, aggregate gross domestic product (GDP) of the 10 largest emerging East Asian¹ economies expanded 7.3%,² down from 7.8% growth in the first half (**Figure 1**). The People's Republic of China (PRC) remained the strongest economy in the region, growing 9.1% in the third quarter, slower than its first half 9.6% rate. The four middle-income economies of the Association of Southeast Asian Nations (ASEAN-4)³ are expected to grow 4.5% in the second half (against 4.9% in the first 6 months). The four newly industrialized economies (NIEs)⁴ expanded 3.8% in the third quarter—close to the 3.9% consolidated average annual growth rate between 2001 and 2010, but below its 4.6% first half performance. With leading indicators—exports, industrial production, and retail sales—more or less constant or

Figure 1: Regional GDP Growth¹—Emerging East Asia² (y-o-y,%)



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.

¹Weighted by gross national income (atlas method, current \$).

²Includes ASEAN-4, NIEs, Viet Nam, and People's Republic of China.

Source: ADB calculations using data from CEIC and national sources.

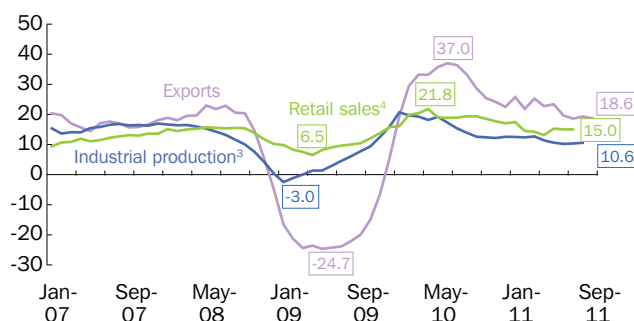
¹The 10 largest economies in emerging East Asia are the People's Republic of China; Hong Kong, China; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; Taipei, China; Thailand; and Viet Nam.

²All comparative figures are year-on-year unless otherwise indicated.

³Indonesia, Malaysia, the Philippines, and Thailand.

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

Figure 2: Merchandise Export, Industrial Production, and Retail Sales Growth¹—Emerging East Asia² (y-o-y, %)



y-o-y = year-on-year.

Note: Exports in \$ value; industrial production and retail sales in local currency.

³3-month moving average. Data on industrial production until Aug 2011 and retail sales until Jul 2011.

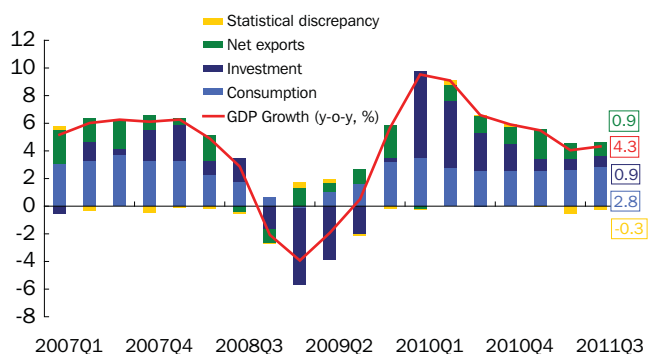
²Includes People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; Thailand; and Viet Nam.

³Excludes Hong Kong, China as data unavailable.

⁴Excludes Malaysia and Philippines as data unavailable.

Source: ADB calculations using data from CEIC.

Figure 3: Contributions to GDP Growth¹—Emerging East Asia¹ ex PRC (percentage points²)



GDP = gross domestic product, PRC = People's Republic of China, y-o-y = year-on-year.

¹Refers to ASEAN-4 (Indonesia, Malaysia, Philippines, and Thailand) plus NIEs (Hong Kong, China; Republic of Korea; Singapore; and Taipei, China).

²Based on y-o-y changes.

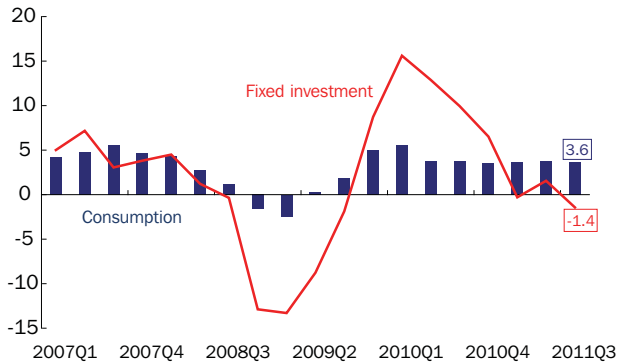
Source: ADB calculations using data from CEIC.

slightly declining, economic growth in the region is expected to ease further during the remainder of the year (**Figure 2**).

Investment edged up, while consumption remained a strong driver of economic growth.

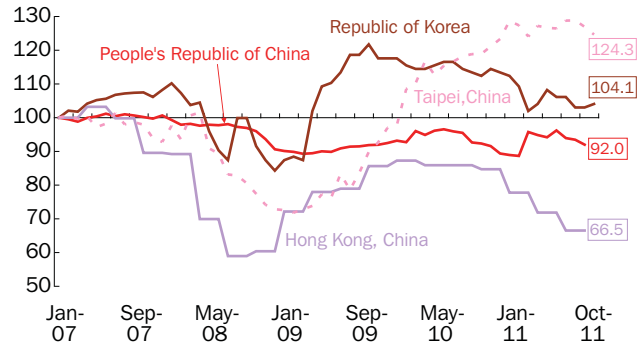
In the third quarter of 2011, domestic demand continued as the main source of economic growth in the NIEs and the ASEAN-4. Investment contributed an anemic 0.9%—barely up from its 0.8% second quarter contribution (**Figure 3**). Fixed investment in the NIEs contracted 1.4% in the third quarter, following a weak 1.6% rise in the second, while in the ASEAN-4 it grew to 4.9% from

Figure 4a: Domestic Demand Growth—NIEs (y-o-y, %)



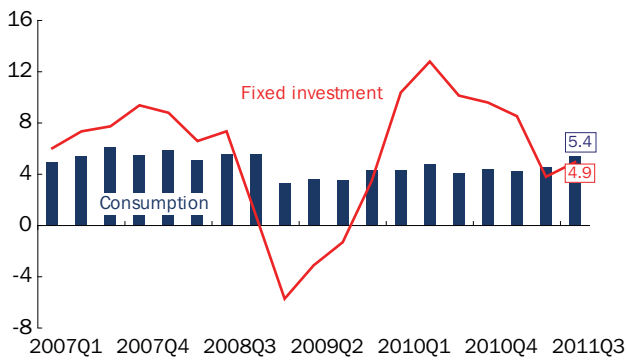
NIE = newly industrialized economy (Hong Kong, China; Republic of Korea; Singapore; and Taipei, China); y-o-y = year-on-year.
Source: ADB calculations using data from CEIC.

Figure 5a: Consumer Confidence Indexes—People’s Republic of China and NIEs (January 2007 = 100)



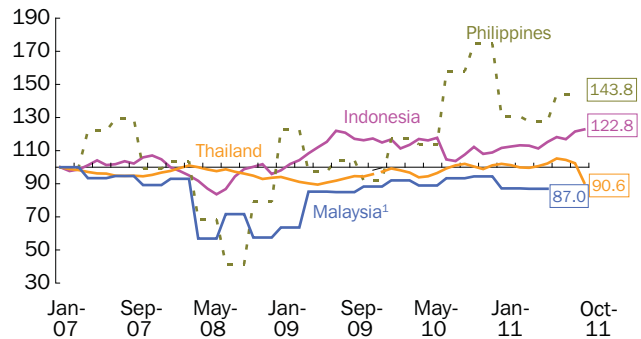
NIE = newly industrialized economy.
Source: Bloomberg and CEIC.

Figure 4b: Domestic Demand Growth—ASEAN-4 (y-o-y, %)



ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand; y-o-y = year-on-year.
Source: ADB calculations using data from CEIC.

Figure 5b: Consumer Confidence Indexes—ASEAN-4 (January 2007 = 100)



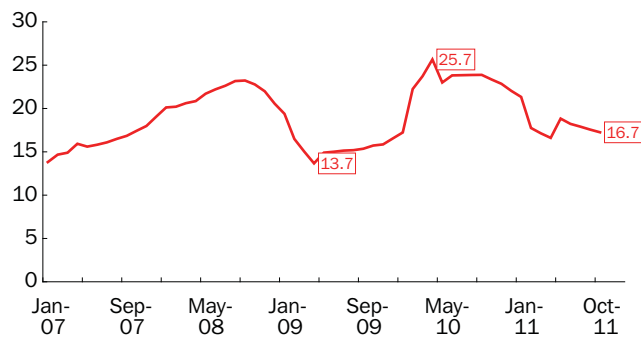
¹Latest data as of 2011Q2.
Source: Bloomberg and CEIC.

3.8% in the second quarter (**Figures 4a, 4b**). Growth in inventories in both the NIEs and the ASEAN-4, though positive, were quite small. In contrast, consumption growth held steady in the NIEs as consumer confidence was mixed (strong in Taipei, China; weak in Hong Kong, China) (**Figures 5a, 5b**). Consumption growth continued to increase slightly in the ASEAN-4 (except in Thailand). In the PRC, expanding consumption—proxied by retail sales—remained robust, but showed signs of easing gradually (**Figure 6**).

PRC’s economic growth moderated, on government efforts to cool the economy and manage a “soft landing.”

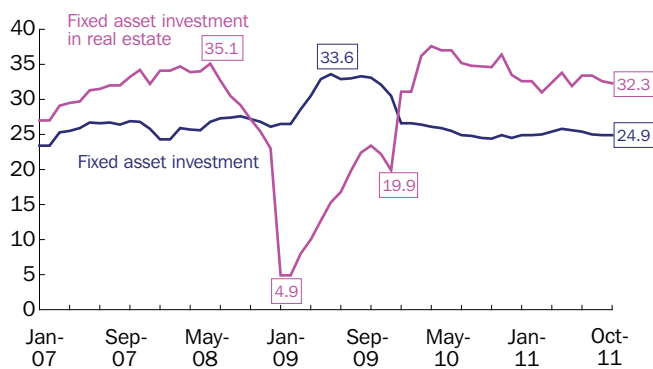
Economic expansion eased to 9.1% in the third quarter from 9.6% in the first half, primarily due to monetary tightening and weakening external demand. Since April, policy rates were raised twice and reserve requirements

Figure 6: Retail Sales Growth¹—People’s Republic of China (y-o-y, %)



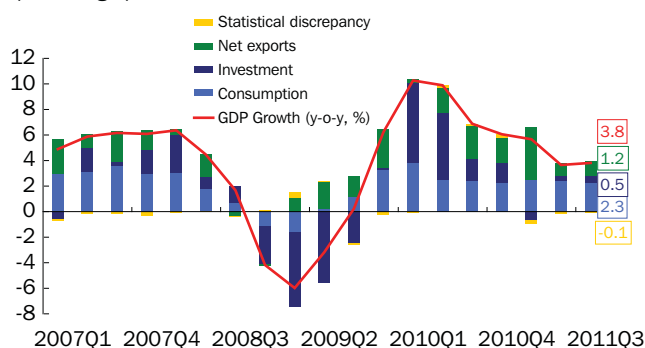
y-o-y = year-on-year.
¹3-month moving average.
Source: ADB calculations using data from CEIC.

Figure 7: Growth of Fixed Asset Investment—People's Republic of China (nominal, year-to-date, y-o-y, %)



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

Figure 8: Contributions to GDP Growth—NIEs (percentage points¹)



GDP = gross domestic product; NIE = newly industrialized economy (Hong Kong, China; Republic of Korea; Singapore; and Taipei, China); y-o-y = year-on-year.

¹Based on y-o-y changes.

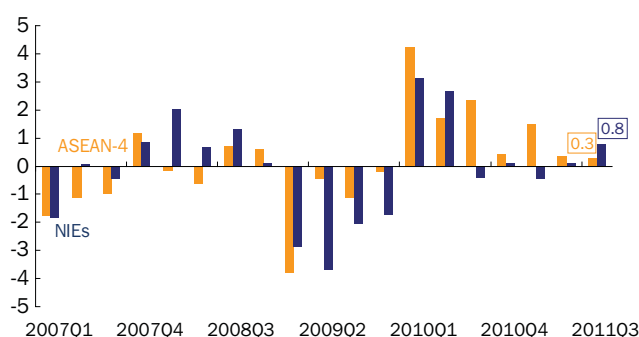
Source: ADB calculations using data from CEIC.

three times. However, private consumption and investment remained strong. Retail sales increased 16.7% in October, while urban fixed investment rose 24.9% between January and October (**Figure 7**). In particular, real estate investment continued to expand rapidly on government calls for private investment in social-housing projects.

Economic growth in the NIEs eased as investment and net exports increased only marginally.

In the third quarter, the NIEs' aggregate GDP expanded 3.8%, lower than the first half 4.6% rate. Investment and net export growth were up slightly (**Figure 8**). Fixed investment contracted and inventories hardly expanded

Figure 9: Contribution of Changes in Inventories to GDP Growth—ASEAN-4 and NIEs (percentage points¹)

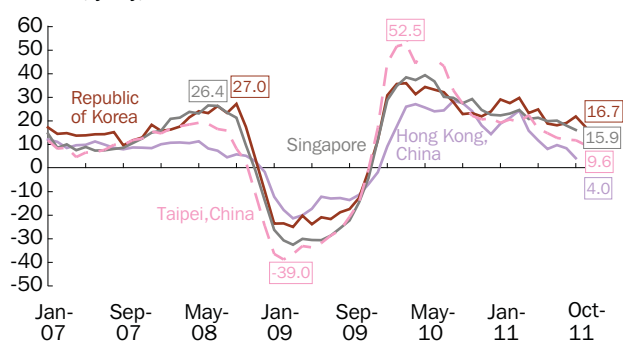


ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand; GDP = gross domestic product; NIEs = newly industrialized economies (Hong Kong, China; Republic of Korea; Singapore; and Taipei, China).

¹Based on year-on-year changes.

Source: ADB calculations using data from CEIC.

Figure 10: Merchandise Export Growth¹—NIEs (\$ value, y-o-y, %)



NIE = newly industrialized economy, y-o-y = year-on-year.

¹3-month moving average. Data for Hong Kong, China and Singapore until Sep 2011.

Source: ADB calculations using data from CEIC.

(**Figure 9**). Export growth, although still substantial, continued to slow (**Figure 10**). Slower export expansion brought economic growth in Hong Kong, China, down to 4.3% in the third quarter despite resilient domestic demand. The economies of the Republic of Korea and Taipei, China both expanded at slower rates, as weak investment compounded the effects of slower export growth. The Republic of Korea grew 3.4% in both second and third quarters—its slowest since the third quarter of 2009. Taipei, China expanded 3.4% in the third quarter from 5.5% in the first half. In contrast, Singapore's GDP increased 6.1% in the third quarter from 5.0% in the first six months—a surge in biomedical manufacturing output more than made up for a slump in electronics.

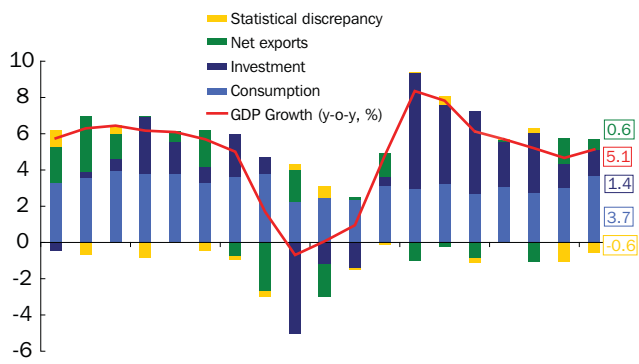
Economic growth in the ASEAN-4 was sustained by resilient domestic demand.

The ASEAN-4 economy is expected to expand 4.5% in the second half of 2011, down from 4.9% in the first half. In the third quarter, growth in consumption returned to pre-crisis levels and fixed investment rebounded slightly from a second-quarter slowdown (**Figure 11**). Indonesia's economy was the strongest, expanding 6.5% in each of the first three quarters due to continued strong domestic demand. In contrast, the Philippines—after 7.6% growth in 2010 (its fastest since 1976)—saw its economy expand 3.2% in the third quarter from 3.8% in the first half. Strong consumer spending made up for a sharp decline in gross exports. In Malaysia and Thailand, last year's rapid growth (7.2% for Malaysia and 7.8% for Thailand) slowed to 5.8% for Malaysia and 3.5% for Thailand in the third quarter, even as they were recovering from supply chain disruptions caused by Japan's March earthquake and tsunami.

Viet Nam's economic growth accelerated in the first three quarters of the year, while other smaller ASEAN economies improved.

Viet Nam's economy grew 5.4%, 5.7%, and 6.1% in the first three quarters, respectively, due to strong growth in industrial output and consumption. Cambodia's GDP expanded 6.3% in 2010, up from 0.1% in 2009, on increased garment exports and tourism. In the Lao People's Democratic Republic (Lao PDR), economic growth increased to 7.5% in 2010 from 7.3% in 2009, driven by expanding hydropower and mining. In Brunei Darussalam, growth was 2.0% in 2010, reversing a 1.8%

Figure 11: Contributions to GDP Growth—ASEAN-4 (percentage points)¹



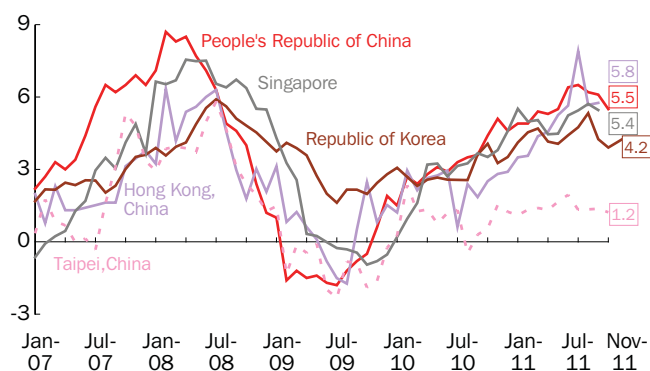
ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand; GDP = gross domestic product; y-o-y = year-on-year.
¹Based on year-on-year changes.
 Source: ADB calculations using data from CEIC.

contraction in 2009 on higher oil and gas production. Myanmar's economy grew 5.3% in 2010, up from 5.1% in 2009 on higher investment and increased agricultural productivity.

Inflation appears to have peaked, but remains a concern for several economies.

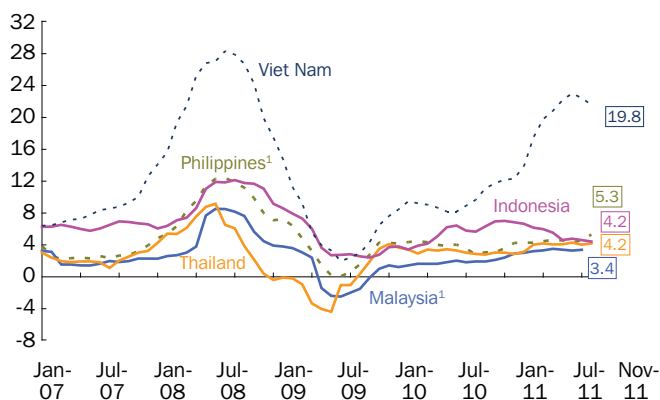
In the PRC, headline inflation moderated for the third straight month in October (to 5.5%) as government measures began to take effect. Inflation in the NIEs have also begun to ease (**Figure 12a**). Inflation is down in Indonesia and below Thailand's target (**Figure 12b**). But it remains above target in the PRC, the Philippines, and Viet Nam, and above official forecasts in Hong Kong, China; Malaysia; and Singapore (**Figure 13**). Despite rising world food prices—particularly rice—headline inflation should ease further as the region's growth

Figure 12a: Headline Inflation¹—PRC and NIEs (y-o-y, %)

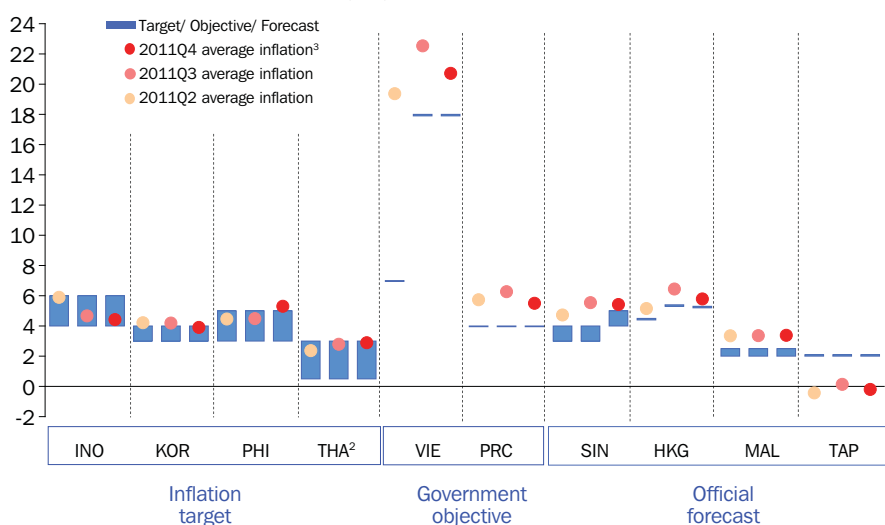


NIE = newly industrialized economy, PRC = People's Republic of China, y-o-y = year-on-year.
¹Data until Oct 2011 except for the Republic of Korea, which is until Nov 2011.
 Source: ADB calculations using data from CEIC.

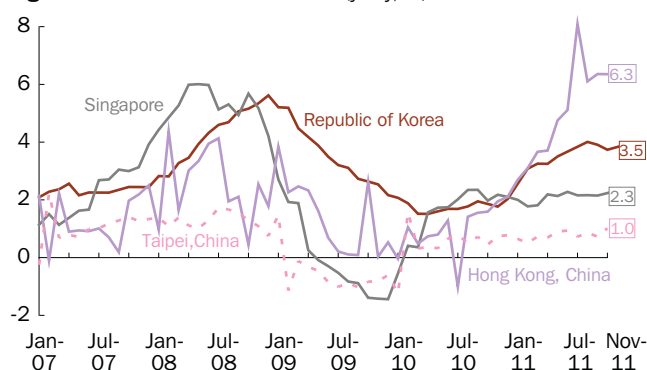
Figure 12b: Headline Inflation—ASEAN-4 plus Viet Nam (y-o-y, %)



y-o-y = year-on-year.
¹Data for Malaysia and Philippines until Oct 2011.
 Source: ADB calculations using data from CEIC.

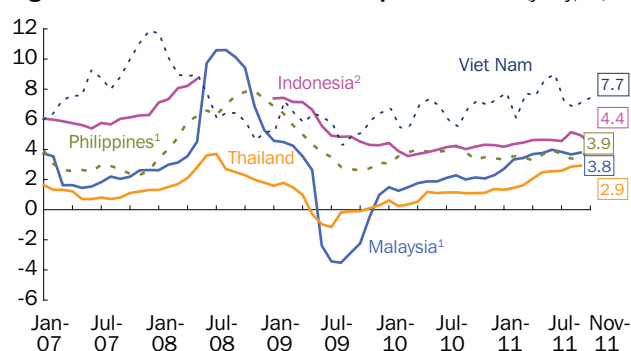
Figure 13: Inflation Performance¹ (y-o-y, %)

y-o-y = year-on-year; INO = Indonesia; KOR = Republic of Korea; PHI = Philippines; THA = Thailand; VIE = Viet Nam; PRC = People's Republic of China; SIN = Singapore; HKG = Hong Kong, China; MAL = Malaysia; and TAP = Taipei, China.
¹Headline inflation against inflation target, government objective, or official forecast.
²Core inflation.
³October value except for INO, KOR, THA, and VIE which are October-November averages.
 Source: ADB calculations using data from CEIC and national sources.

Figure 14a: Core Inflation¹—NIEs (y-o-y, %)

NIE = newly industrialized economy, y-o-y = year-on-year.
 Note: Official figures, except for Hong Kong, China (excluding food and utilities) and Singapore (excluding food and private transport).
¹Data until Oct 2011 except for the Republic of Korea, which is until Nov 2011.
 Source: ADB calculations using data from CEIC.

moderates and the global economy weakens. Similarly, core inflation is generally subsiding, but remains high in several countries paying relatively high prices for intermediate inputs—such as chemical products (the Republic of Korea), precious metals (Indonesia and Viet Nam), and primary commodities (Hong Kong, China) (Figures 14a, 14b).

Figure 14b: Core Inflation—ASEAN-4 plus Viet Nam (y-o-y, %)

y-o-y = year-on-year.
 Note: Official figures, except for Malaysia (excluding food, fuel, and utilities).
¹Data for Malaysia and Philippines until Oct 2011.
²Series break due to unavailability of data.
 Source: ADB calculations using data from CEIC.

Balance of Payments

The NIEs' balance of payments surplus narrowed on reduced current account surpluses; those in the PRC and the ASEAN-4 plus Viet Nam increased slightly.

In the first half, the NIEs reported an overall balance of payments surplus of 2.9% of GDP—lower than the 4.8% in the second half of 2010. The PRC surplus was 9.0% of

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

	2007H1	2007H2	2008H1	2008H2	2009H1	2009H2	2010H1	2010H2	2011H1 ²
Current Account	4.9	5.4	2.8	2.6	6.9	3.9	3.3	3.3	3.3
Net goods balance	7.0	7.3	4.9	5.5	7.8	6.1	5.8	5.5	5.8
Net services	-1.7	-1.5	-1.8	-2.2	-0.9	-1.5	-1.2	-1.2	-1.1
Net income	-3.0	-2.8	-2.7	-2.9	-2.5	-2.6	-3.0	-2.9	-2.9
Net transfers	2.6	2.3	2.4	2.2	2.4	2.0	1.8	1.8	1.5
Capital and Financial Account	2.6	-0.3	3.2	-4.9	-3.9	1.0	2.8	4.5	4.3
Capital account	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Net direct investment	1.5	1.1	1.0	0.7	0.9	0.0	1.8	0.7	0.9
Net portfolio investment	4.5	-1.4	0.9	-5.3	-1.2	1.6	2.7	2.8	4.1
Net other investment ¹	-3.4	-0.1	1.3	-0.4	-3.6	-0.6	-1.8	1.0	-0.7
Net errors and omissions	0.0	-1.1	0.7	-1.2	-0.6	-1.4	-3.2	-1.5	-0.8
Overall Balance	7.5	4.0	6.7	-3.5	2.4	3.6	2.9	6.3	6.8

ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand. GDP = gross domestic product.

¹Includes financial derivatives.

²Excludes Viet Nam in 2011Q2 as data unavailable.

Source: ADB calculations using data from *International Financial Statistics*, International Monetary Fund; and CEIC.

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

	2007H1	2007H2	2008H1	2008H2	2009H1	2009H2	2010H1	2010H2	2011H1
Current Account	6.9	7.4	4.6	5.5	9.2	7.0	6.5	7.4	5.7
Net goods balance	4.8	5.5	1.9	1.3	4.8	4.0	3.1	4.5	2.1
Net services	1.9	2.3	2.7	3.4	3.2	3.2	3.0	3.6	3.6
Net income	0.8	0.3	0.7	1.2	1.6	0.4	1.1	0.0	0.9
Net transfers	-0.7	-0.7	-0.7	-0.5	-0.5	-0.7	-0.7	-0.8	-0.9
Capital and Financial Account	-5.4	-5.4	-1.2	-7.0	1.0	7.3	1.6	-2.9	-2.5
Capital account	-0.2	0.0	0.0	0.2	0.3	0.3	0.2	0.3	0.3
Net direct investment	-0.4	-2.1	-1.4	1.1	-1.7	-2.3	-0.1	-1.6	0.7
Net portfolio investment	-5.1	-4.2	-2.9	-5.3	-2.5	-0.1	-3.0	-3.8	-3.9
Net other investment ¹	0.3	0.9	3.2	-3.0	5.0	9.4	4.5	2.3	0.4
Net errors and omissions	0.6	0.8	-0.5	0.3	0.5	0.1	-0.2	0.3	-0.3
Overall Balance	2.2	2.8	2.9	-1.1	10.7	14.4	7.9	4.8	2.9

NIEs = Hong Kong, China; Republic of Korea; Singapore; and Taipei, China. GDP = gross domestic product.

¹Includes financial derivatives.

Source: ADB calculations using data from *International Financial Statistics*, International Monetary Fund; and CEIC.

GDP, while the ASEAN-4 plus Viet Nam was 6.8%; both were larger than the second half of 2010 (**Tables 1a, 1b, 1c**). In the NIEs, a smaller current account surplus drove the overall surplus down. A narrower current account surplus in the PRC was compensated by an increase in the capital and financial account surplus. For the ASEAN-4 plus Viet Nam, the balance of payments accounts of the first half of this year were similar to

the second half of 2010. A small increase in the overall surplus was due in large part to a decline in errors and omissions during the first half. Healthy balance of payments allowed most emerging East Asia to continue adding to their ample foreign exchange reserves (**Table 2**).

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

	2007H1	2007H2	2008H1	2008H2	2009H1	2009H2	2010H1	2010H2	2011H1
Current Account	10.8	9.6	9.6	8.7	6.2	4.5	4.0	6.0	2.8
Net goods balance	9.0	9.0	6.7	9.0	5.5	4.6	3.5	4.9	2.8
Net services	-0.2	-0.2	-0.2	-0.3	-0.8	-0.5	-0.5	-0.3	-0.6
Net income	0.9	-0.3	1.9	-0.8	0.8	-0.3	0.2	0.8	0.1
Net transfers	1.2	1.1	1.2	0.9	0.7	0.7	0.8	0.7	0.6
Capital and Financial Account	6.0	0.3	3.6	-1.0	2.8	4.2	3.6	3.9	5.8
Capital account	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Net direct investment	3.4	4.6	2.0	3.2	0.7	1.9	2.4	1.9	2.9
Net portfolio investment	-0.3	1.2	1.0	0.9	0.9	0.7	-0.3	0.9	0.3
Net other investment ¹	2.8	-5.6	0.5	-5.2	1.1	1.6	1.4	1.1	2.5
Net errors and omissions	0.9	-0.1	0.9	0.1	-0.4	-1.2	-0.7	-1.3	0.4
Overall Balance	17.7	9.7	14.1	7.8	8.6	7.5	7.0	8.7	9.0

GDP = gross domestic product.

¹Includes financial derivatives.Source: ADB calculations using data from *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-10	Mar-11	Jun-11	Oct-11	Dec-10	Mar-11	Jun-11	Oct-11	Jul-11	Aug-11	Sep-11	Oct-11
Brunei Darussalam	1.6	1.7	–	–	15.2	29.8	–	–	–	–	–	–
Cambodia	3.3	3.3	3.4	–	14.2	10.0	9.6	–	1.0	–	–	–
People's Republic of China	2866.1	3067.2	3219.8	3223.0 ⁴	18.6	24.5	30.3	20.9 ⁴	1.5	0.5	-1.9	–
Hong Kong, China	268.6	272.5	277.1	277.5 ⁴	5.0	5.3	7.9	4.3 ⁴	0.6	0.3	-0.7	–
Indonesia	92.9	102.4	116.1	109.9	46.2	47.9	58.2	23.9	2.4	1.4	-8.2	-0.8
Republic of Korea	291.5	298.5	304.4	309.7	8.0	9.7	11.0	5.6	1.7	0.4	-2.8	2.5
Lao People's Democratic Republic	0.7	–	–	–	15.6	–	–	–	–	–	–	–
Malaysia	104.9	112.2	132.6	132.9	9.9	19.3	42.1	28.0	0.8	0.6	-4.0	2.9
Myanmar	–	–	–	–	–	–	–	–	–	–	–	–
Philippines	55.4	58.9	61.4	67.9	42.8	48.6	46.7	34.9	4.6	6.5	-1.0	0.3
Singapore	225.8	234.2	242.3	245.4	20.2	18.8	21.2	10.9	2.8	0.0	-6.2	5.1
Taipei, China	382.0	392.6	400.3	393.3	9.7	10.6	10.5	2.5	0.1	-0.1	-2.8	1.1
Thailand	167.5	176.5	178.8	173.5	23.7	25.1	24.7	4.1	1.2	-0.4	-4.5	0.8
Viet Nam	12.5	12.2	–	–	-24.2	-11.8	–	–	–	–	–	–
Emerging East Asia	4472.6¹	4732.3²	4936.2³	4933.1⁵	16.7¹	21.1²	25.9³	9.5⁵	1.4³	0.5⁵	-2.4⁵	2.0⁶
Japan	1061.5	1080.6	1100.8	1167.5	3.8	6.4	8.0	7.6	0.9	5.7	-1.1	0.6
East Asia	5534.1¹	5812.9²	6036.9³	6100.6⁵	14.0¹	18.0²	22.2³	8.7⁵	1.3³	1.4⁵	-2.2⁵	1.4⁶

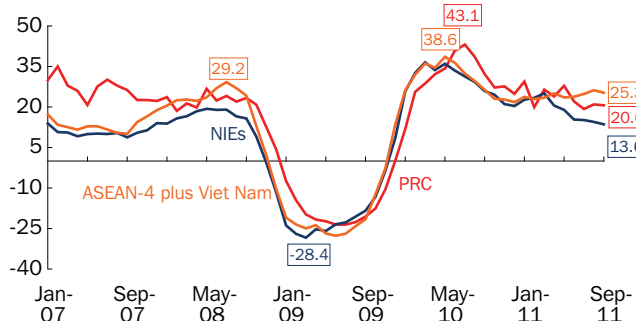
– = data unavailable, m-o-m = month-on-month, y-o-y = year-on-year.

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

Current account surpluses in the NIEs and the PRC narrowed on lower trade surpluses.

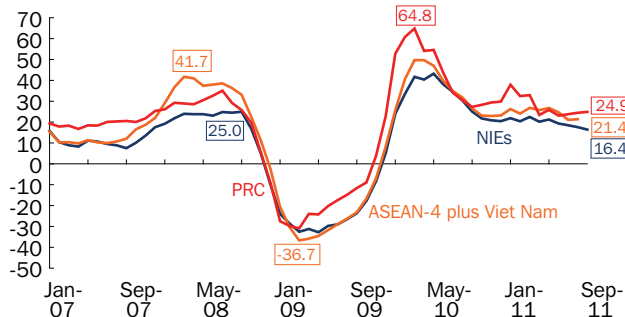
In the NIEs, the trade surplus fell to 2.1% of GDP in the first half from 4.5% in the second half of 2010 (Figures 15, 16). In the PRC, all components of the current account narrowed—the trade surplus down most, to 2.8% of GDP in the first half from 4.9% the second half of 2010. In the ASEAN-4 plus Viet Nam, the current account surplus was unchanged—a slight increase in the trade surplus offset by lower net transfers.

Figure 15: Merchandise Export Growth¹—PRC, ASEAN-4 plus Viet Nam, and NIEs (\$ value, y-o-y, %)



ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand; NIEs = Hong Kong, China; Republic of Korea; Singapore; and Taipei, China; PRC = People's Republic of China; y-o-y = year-on-year.
¹3-month moving average.
 Source: ADB calculations using data from CEIC.

Figure 16: Merchandise Import Growth¹—PRC, ASEAN-4 plus Viet Nam, and NIEs (\$ value, y-o-y, %)



ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand; NIEs = Hong Kong, China; Republic of Korea; Singapore; and Taipei, China; PRC = People's Republic of China; y-o-y = year-on-year.
¹3-month moving average. Data for ASEAN-4 plus Viet Nam until Aug 2011.
 Source: ADB calculations using data from CEIC.

The PRC and ASEAN-4 plus Viet Nam reported capital and financial account surpluses, but the NIEs recorded a deficit on portfolio investment outflows.

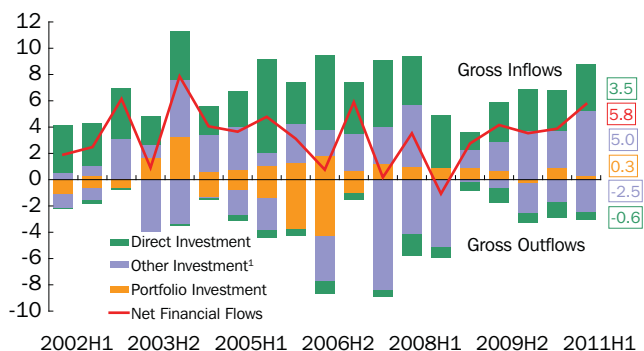
In the first half, the capital and financial account surplus of the PRC expanded to 5.8% of GDP (3.9% in the second half of 2010) on increased inflows in net direct investment and net “other investment” (Figure 17a). The ASEAN-4 plus Viet Nam also continued to draw net financial flows as larger net portfolio and direct investment offset net outflows in other investment (Figure 17b). But the NIEs continued to show a capital and financial account deficit—2.5% of GDP, slightly better than last year's second half as net direct investment flows improved (Figure 17c). As the most open economies in the region, the NIEs continued to have net outflows of portfolio investments in response to the eurozone crisis.

Financial Markets and Exchange Rates

In the months to November, composite equity indexes in emerging East Asia were volatile as investor sentiment swayed in tandem with the unfolding eurozone crisis and US economic uncertainty.

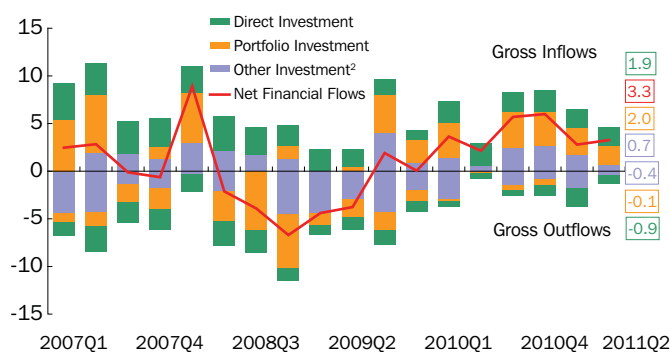
In general, stock price indexes remained within or above pre-2008/09 crisis bands (Figures 18a, 18b, 18c). Compared with January levels, however, equity values have dropped significantly—the result of rising global financial uncertainty and the flight-to-safety market reactions (Figure 19). The exceptions were the Indonesian and Philippine markets.

Figure 17a: Gross and Net Financial Flows—People's Republic of China (% of GDP)



GDP = gross domestic product.
¹Includes financial derivatives.
 Source: ADB calculations using data from national sources.

Figure 17b: Gross and Net Financial Flows¹—ASEAN-4 plus Viet Nam (% of GDP)



GDP = gross domestic product. ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand.
¹Does not include Malaysia from 2010Q1 to 2011Q2 as data on inflow-outflow breakdown for portfolio and other investment unavailable. Does not include Viet Nam in 2011Q2 as data unavailable.

²Includes financial derivatives.

Source: ADB calculations using data from *International Financial Statistics*, International Monetary Fund; and national sources.

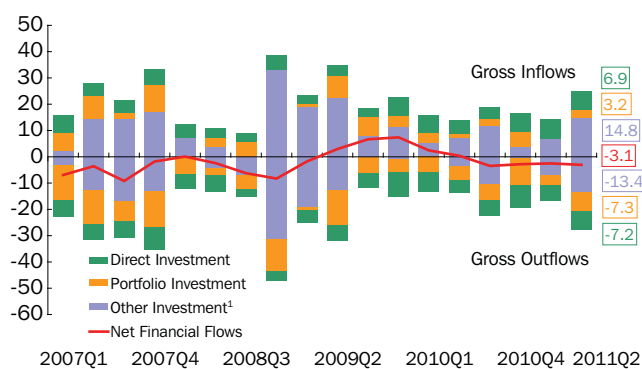
Figure 18a: Composite Stock Price Index—People’s Republic of China¹ (2 Jan 2007 = 100, local index)



¹Daily stock price indexes of combined Shanghai and Shenzhen composites, weighted by respective market capitalizations.

Source: ADB calculations using data from Reuters and Bloomberg.

Figure 17c: Gross and Net Financial Flows—NIEs (% of GDP)

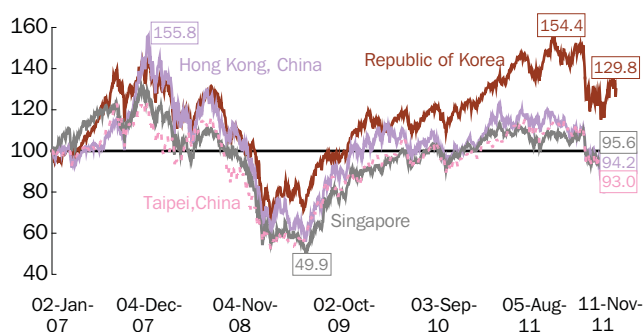


GDP = gross domestic product. NIEs = Hong Kong, China; Republic of Korea; Singapore; and Taipei, China.

¹Includes financial derivatives.

Source: ADB calculations using data from *International Financial Statistics*, International Monetary Fund; and national sources.

Figure 18b: Composite Stock Price Indexes—NIEs¹ (2 Jan 2007 = 100, local index)



NIE = newly industrialized economy.

¹Daily stock price indexes of Hang Seng (Hong Kong, China); KOSPI (Republic of Korea); STI (Singapore); and TWSE (Taipei, China).

Source: ADB calculations using data from Reuters.

The region’s foreign exchange rates against the US dollar largely mimicked events in the eurozone and the US.

Since mid-year, exchange rate indexes in emerging East Asia showed increased volatility (**Figures 20a, 20b**). Against the US dollar, the renminbi appreciated the most, gaining 3.9% (**Figure 21**). Viet Nam’s dong depreciated the most, losing 7.2% given the large current account deficit and low foreign exchange reserves. In general, currencies that appreciated against the US dollar also appreciated against their baskets of trade-weighted currencies—whether unadjusted or adjusted for inflation (**Figures 22, 23**).

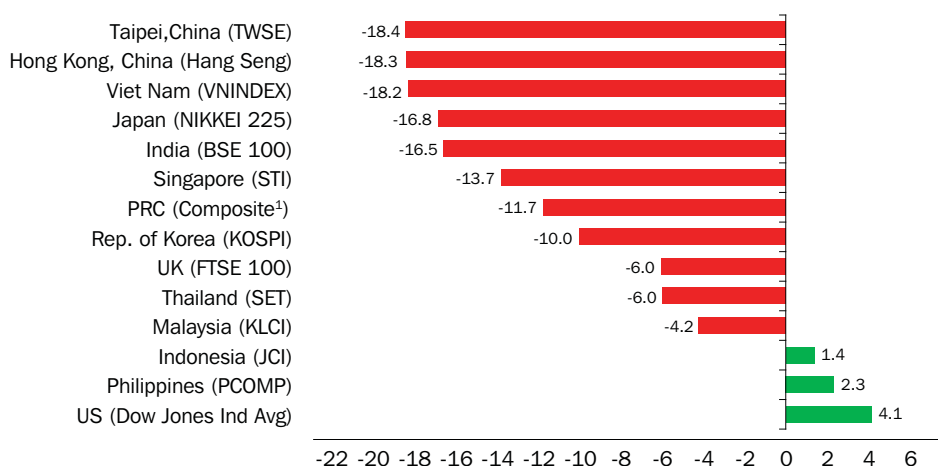
Figure 18c: Composite Stock Price Indexes¹—ASEAN-4 plus Viet Nam (2 Jan 2007 = 100, local index)



¹Daily stock price indexes of JCI (Indonesia), KLCI (Malaysia), PCOMP (Philippines), SET (Thailand) and VNINDEX (Viet Nam).

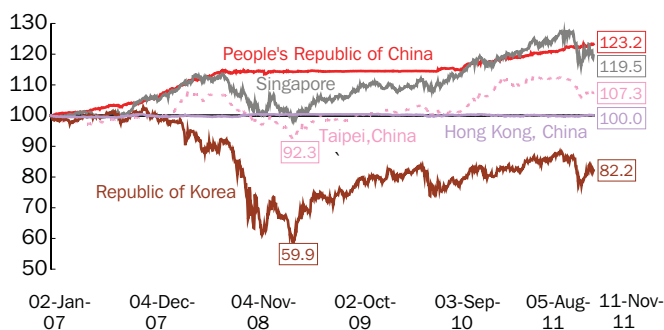
Source: ADB calculations using data from Reuters.

Figure 19: Growth in Stock Price Indexes (3 Jan 2011 to 11 Nov 2011, %)



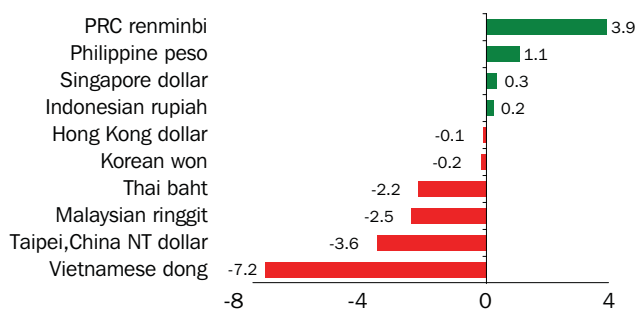
PRC = People's Republic of China, UK = United Kingdom, US = United States.
¹Daily stock price indexes of combined Shanghai and Shenzhen composites, weighted by respective market capitalizations
 Source: ADB calculations using data from Bloomberg and Reuters.

Figure 20a: Exchange Rate Indexes—People's Republic of China and NIEs (local currency against \$, 2 Jan 2007 = 100)



NIE = newly industrialized economy.
 Source: ADB calculations using data from Reuters.

Figure 21: Exchange Rates against US dollar¹ (3 Jan 2011 to 11 Nov 2011, % change)



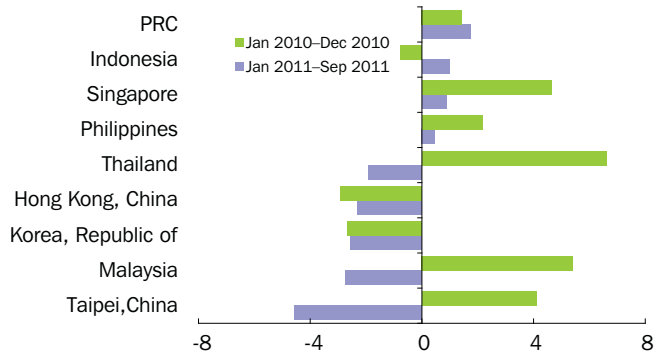
PRC = People's Republic of China.
 Note: Positive values indicate appreciation; negative values indicate depreciation.
¹Latest closing as of 11 Nov 2011, based on local currency value of the \$.
 Source: ADB calculations using data from Reuters.

Figure 20b: Exchange Rate Indexes—ASEAN-4 (local currency against \$, 2 Jan 2007 = 100)



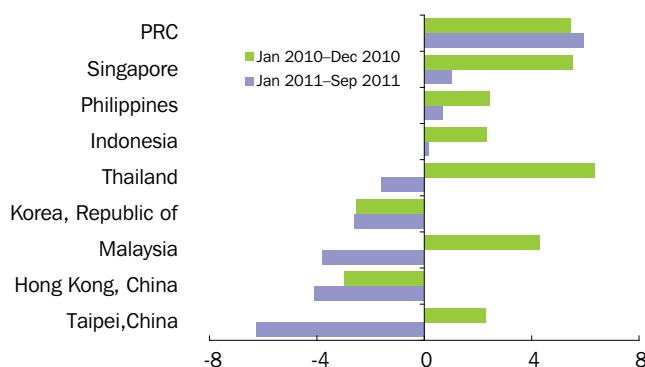
Source: ADB calculations using data from Reuters.

Figure 22: Change in Nominal Effective Exchange Rate (%)



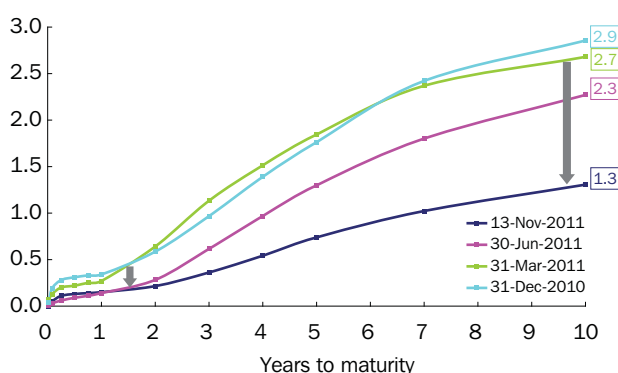
PRC = People's Republic of China.
 Source: ADB calculations using data from Bank for International Settlements.

Figure 23: Change in Real Effective Exchange Rate¹ (%)



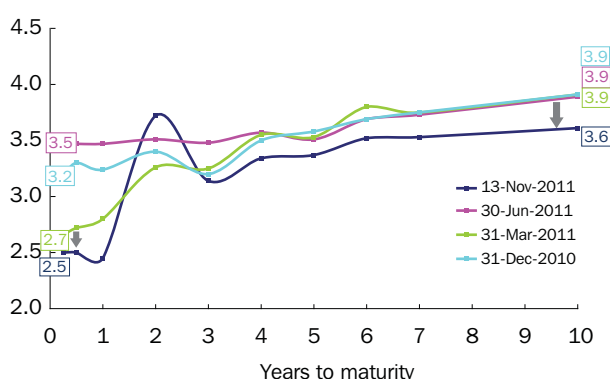
PRC = People's Republic of China.
¹Consumer price index-based.
 Source: ADB calculations using data from Bank for International Settlements.

Figure 24b: Benchmark Yields—Hong Kong, China
 (% per annum)



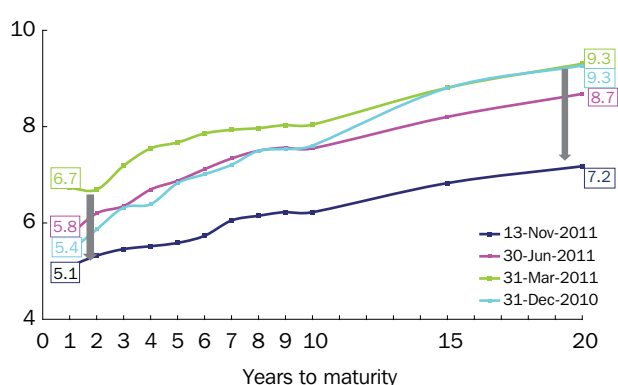
Source: Bloomberg.

Figure 24a: Benchmark Yields—People's Republic of China
 (% per annum)



Source: Bloomberg.

Figure 24c: Benchmark Yields—Indonesia
 (% per annum)

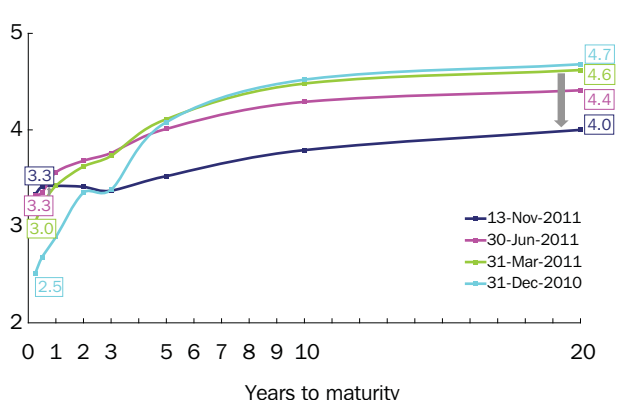


Source: Bloomberg.

Bond yield curves flattened due to declines in long-term interest rates—meaning investors expect weaker growth.

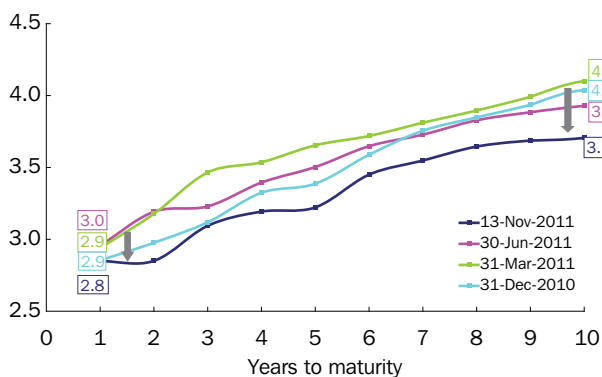
Between December 2010 and November this year, yields-to-maturity on 10-year bonds fell 0.3 percentage points in the PRC, Malaysia, and Thailand; 0.7 percentage points in the Republic of Korea; 1.6 percentage points in Hong Kong, China; and 2.1 percentage points in Indonesia (Figures 24a, 24b, 24c, 24d, 24e, 24f). The flattening occurred due to lower inflationary expectations on weak economic prospects. In the Republic of Korea and Thailand, short-term interest rates rose as well, as monetary authorities raised policy rates to counter inflationary pressures (although Thailand lowered its policy rate on November 30).

Figure 24d: Benchmark Yields—Republic of Korea
 (% per annum)



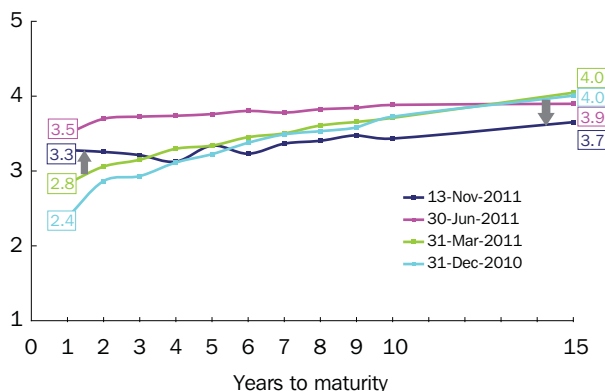
Source: Bloomberg.

Figure 24e: Benchmark Yields—Malaysia
(% per annum)



Source: Bloomberg.

Figure 24f: Benchmark Yields—Thailand
(% per annum)



Source: Bloomberg.

Table 3: Output Gap (%)

Economy	Hodrick-Prescott Filter			Baxter-King Band-Pass Filter		
	2011Q1	2011Q2	2011Q3	2011Q1	2011Q2	2011Q3
People's Republic of China	0.4	0.2	0.0	0.4	0.3	0.2
Hong Kong, China	1.4	0.1	-0.9	0.9	0.5	0.2
Indonesia	-0.1	0.0	0.0	0.1	0.1	0.0
Republic of Korea	0.1	0.0	-0.2	0.0	-0.1	-0.2
Malaysia	0.4	0.1	-0.1	0.2	0.1	0.0
Philippines	0.3	-0.3	-0.2	0.3	-0.1	-0.4
Singapore	4.3	1.2	0.2	1.5	0.5	-0.1
Taipei, China	2.2	1.3	0.1	0.9	0.3	-0.1
Thailand	0.3	-0.6	-1.0	-0.3	-0.5	-0.4
Viet Nam	-1.1	-0.4	0.0	0.1	-0.1	-0.2

Note: Output gap is computed as the percentage deviation between actual and trend real gross domestic product (GDP). A positive value denotes that actual output is above trend. Seasonally adjusted real GDP series from 1999 to 2011 and extended to 2013 using forecasts from Consensus Economics and International Monetary Fund's *World Economic Outlook* (for Viet Nam), except for People's Republic of China (PRC); Indonesia; Malaysia; and Viet Nam where original series are seasonally adjusted using Census X12. Source: ADB calculations using data from CEIC; *World Economic Outlook* (September 2011), International Monetary Fund; and Oxford Economics for PRC data only.

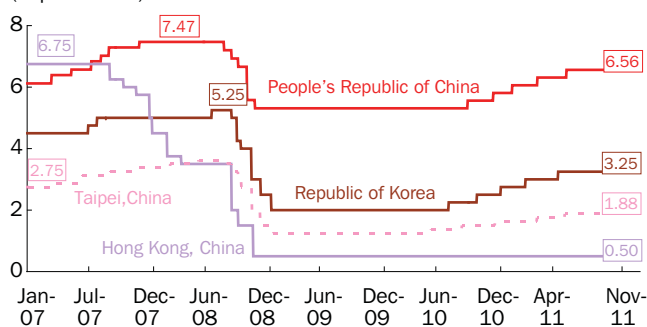
Monetary and Fiscal Policy

Across the region, safeguarding growth is becoming the focus of policymakers as the global economy slows.

Output gaps are mixed, though they generally narrowed in the third quarter, suggesting they remain close to potential (**Table 3**). Slowing global economic growth and weakening external demand imply that safeguarding growth is becoming a greater concern for policymakers as inflation begins to slow—prices may also drop as growth eases.

Most of the region's policymakers eased monetary policy or adopted a "wait-and-see" stance on concerns over the health of the global economy.

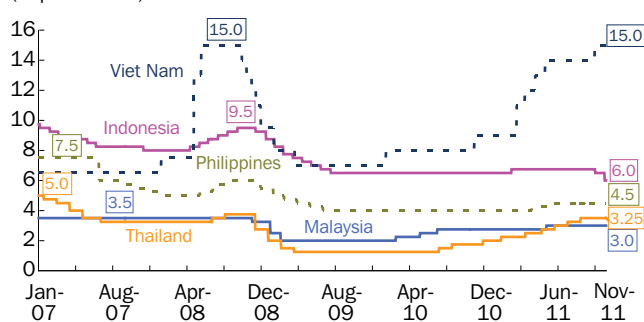
More concerned with the effects of a possible global slowdown than inflationary pressures, Bank Indonesia and Bank of Thailand cut their policy rates, the People's Bank of China lowered its reserve requirement ratio, while the Monetary Authority of Singapore switched to a slower rate of currency appreciation on the premise that risks of imported inflation have subsided (**Figures 25a, 25b**). Authorities in the PRC, the Republic of Korea, Malaysia, and the Philippines maintained policy rates.

Figure 25a: Policy Rates¹—People's Republic of China and NIEs (% per annum)

NIE = newly industrialized economy.

¹One-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 and Datastream.

Figure 25b: Policy Rates¹—ASEAN-4 plus Viet Nam (% per annum)

ASEAN = Association of Southeast Asian Nations.

¹Bank Indonesia rate (Indonesia); overnight policy rate (Malaysia); reverse repurchase (repo) rate (Philippines); 1-day repo rate (Thailand); and refinancing rate (Viet Nam).

Source: Bloomberg, Datastream, and State Bank of Viet Nam.

The sole exception was Viet Nam, which raised interest rates and reserve requirements on foreign currency holdings to contain inflation and stabilize the economy.

Governments also adopted administrative measures to protect consumers while continuing the inflation fight.

Some governments maintained or imposed price controls on fuel to counter high global oil prices (the PRC and Viet Nam), extended the coverage period or increased the amount of fuel subsidies (Indonesia, Malaysia, and Thailand). Malaysia also delayed implementing a goods-and-services tax, while Viet Nam set price ceilings on a wide range of commodities, including electricity, drugs, and agricultural produce. In addition, the PRC; Hong Kong, China; and Singapore undertook measures to address housing shortages, which have been driving up property prices.

Governments fine-tuned fiscal policies to safeguard growth.

Most governments in emerging East Asia continued to maintain fiscal deficits. Changes in fiscal positions from 2010 were marginal (**Table 4**). There were four exceptions: Viet Nam reduced its budgetary deficit—to 4.5% of GDP from 8.0% in 2010—as part of its fight against inflation. Hong Kong, China, is projected to fall into deficit (of 0.5% of GDP) in 2011 from a 4.2%

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

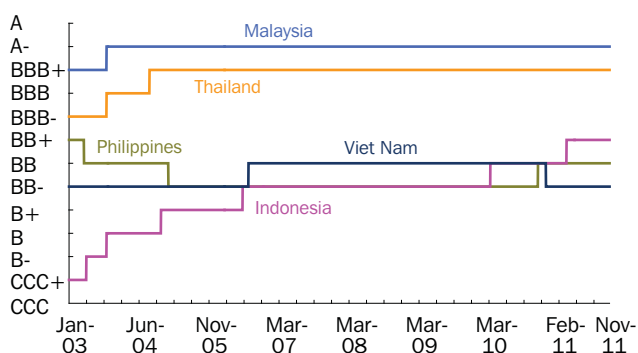
	2000–2004 Average	2005	2006	2007	2008	2009	2010	2011 ²
Cambodia	-5.7	-2.5	-2.7	-2.9	-2.8	-6.4	-6.0	-6.2
China, People's Rep. of	-2.2	-1.2	-0.8	0.6	-0.4	-2.9	-2.1	-2.1
Hong Kong, China ¹	-2.4	1.0	4.0	7.7	0.1	1.6	4.2	-0.5
Indonesia	-1.5	-0.5	-0.9	-1.3	-0.1	-1.6	-0.7	-2.1
Korea, Rep. of	-1.3	-2.5	-2.6	0.4	-2.0	-5.1	-2.3	-2.0
Malaysia	-5.0	-3.6	-3.3	-3.2	-4.8	-7.0	-5.6	-5.4
Philippines	-4.1	-2.6	-1.0	-0.2	-0.9	-3.7	-3.5	-2.4
Singapore ¹	-0.1	0.7	0.0	2.9	0.1	-0.3	-0.1	0.0
Taipei, China ¹	-2.5	-0.6	-0.7	-0.1	-0.9	-3.5	-3.0	-2.5
Thailand ¹	-1.2	0.2	0.1	-1.1	-0.3	-4.7	-2.0	-1.5
Viet Nam	-4.9	-3.6	-1.2	-4.6	-3.1	-10.6	-8.0	-4.5

GDP = gross domestic product.

¹Fiscal year.²2011 figures are ADB forecasts, budget estimates and government targets of respective economies. Figures as of 25 Nov 2011.Source: *Asian Development Outlook* (various issues), ADB; *Article IV Consultation* reports, International Monetary Fund; CEIC; and national sources.

surplus in 2010. Indonesia increased budget outlays relative to national government revenues, while the Philippines decreased its deficit—from 3.5% of GDP in 2010 to 2.4%—reflecting greater fiscal consolidation efforts. To stimulate growth, the PRC offered credit and tax breaks to small and medium enterprises (SMEs), raised the threshold on taxable income, and began a massive building program to increase affordable housing supply. Indonesia provided cash transfers to low-income families, increased government salaries, and increased public spending on transportation and social services. The Philippines provided for a second stimulus package to fund critical infrastructure projects; housing, relocation, and resettlement programs; and healthcare insurance for indigents. Thailand reallocated 10% of the government’s budget for flood relief and rehabilitation programs.

Figure 26a: S&P Sovereign Ratings—ASEAN-4 plus Viet Nam (long-term, foreign currency)



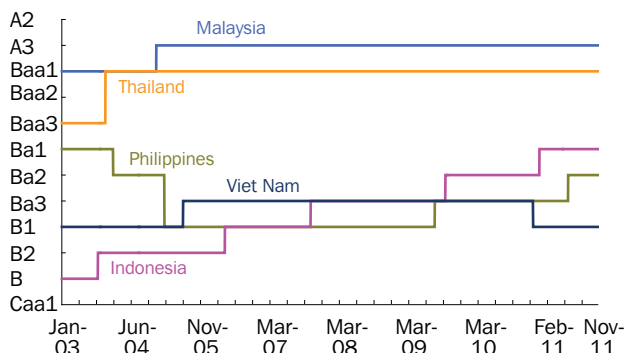
S&P = Standard and Poor’s.
Source: Bloomberg.

Financial Vulnerability

Although emerging East Asia’s financial systems remain sound, vulnerabilities exist.

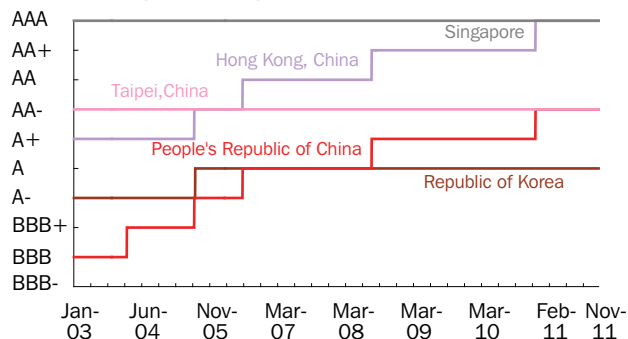
In general, the region’s economies continue to maintain comfortable external and fiscal positions (**Tables 5, 6a, 6b**). Rating agencies have also kept sovereign debt ratings unchanged, unlike in other regions (**Figures 26a, 26b, 26c, 26d**). Except for Cambodia, Lao PDR, Myanmar, and Viet Nam, the rest of emerging East Asia continues to run current account surpluses. As a result of fiscal stimulus, however, most economies are now running fiscal deficits, with those in Cambodia and Malaysia above 5% of GDP. Brunei Darussalam; Hong

Figure 26c: Moody’s Sovereign Ratings—ASEAN-4 plus Viet Nam (long-term, foreign currency)



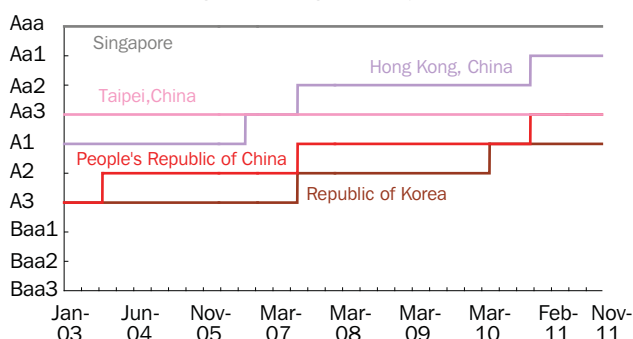
Source: Bloomberg.

Figure 26b: S&P Sovereign Ratings—People’s Republic of China and NIEs (long-term, foreign currency)



NIE = newly industrialized economy, S&P = Standard and Poor’s.
Source: Bloomberg.

Figure 26d: Moody’s Sovereign Ratings—People’s Republic of China and NIEs (long-term, foreign currency)



NIE = newly industrialized economy.
Source: Bloomberg.

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

	2000– 2004 Average	2004	2005	2006	2007	2008	2009	2010
Public Sector Debt								
People's Republic of China	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	4.7
Indonesia ¹	70.8	55.8	46.3	40.4	36.9	33.2	28.6	27.4
Republic of Korea ¹	20.4	23.7	27.6	30.1	29.7	29.0	32.5	31.9
Lao People's Democratic Rep.	77.6	88.2	79.7	64.6	60.7	55.2	57.2 ^e	60.9 ^p
Malaysia ²	42.1	45.7	43.8	42.2	41.5	41.4	53.3	53.1
Philippines ³	81.9	90.7	78.8	70.5	60.9	61.7	62.4	58.5
Singapore	94.4	98.0	95.8	89.4	87.6	95.3	109.3	105.8
Taipei, China ¹	27.6	29.6	30.2	29.6	28.8	30.0	33.1	33.5
Thailand	52.9	48.0	46.4	40.3	37.4	38.2	43.9	42.4
Viet Nam	38.5	42.4	44.5	42.9	45.6	43.9	49.0	51.3 ^e
External Debt								
Brunei Darussalam	9.6	8.7	7.7	7.0	7.5	7.9	11.8	14.5
Cambodia	27.2	25.7	24.6	21.5	23.1	19.7	22.0	17.9 ^e
People's Republic of China	8.3	8.0	7.9	7.1	6.8	5.2	4.4	6.3
Hong Kong, China	128.9	138.6	141.6	153.6	173.1	176.1	184.8	235.3
Indonesia	57.5	42.5	40.5	29.2	26.9	27.0	18.4	17.2
Republic of Korea	22.3	20.3	19.1	23.1	26.7	26.4	34.4	28.8
Lao People's Democratic Rep.	64.9	59.9	62.7	55.1	58.1	48.9	41.0	39.0 ^e
Malaysia	43.2	44.4	44.7	41.5	39.4	28.9	31.6	28.6
Myanmar	59.5	52.4	42.7	35.7	24.6	18.2	4.1	3.7 ^e
Philippines	78.0	76.9	73.9	60.1	50.2	42.5	38.4	38.5
Singapore	266.6	270.9	261.4	238.3	264.2	265.1	248.1	237.6
Taipei, China	14.1	24.6	22.2	18.3	19.4	15.7	14.8	20.5
Thailand	38.3	26.3	24.8	22.3	17.0	14.3	13.8	15.8
Viet Nam	29.3	33.2	31.7	31.4	35.5	40.6	29.2	34.0

e = estimate, GDP = gross domestic product, p = projection.

¹Central government debt.

²Federal government debt.

³National government debt.

Source: *Article IV Consultations*, International Monetary Fund; CEIC (Public Debt); and Joint External Debt Hub database (External Debt).

Table 6a: Assessment of Financial Vulnerabilities (%)

	Inflation Rate (latest available)	Fiscal Balance/ GDP (2010) ¹	Public Sector Debt/GDP ² (2010) ³	Loans/Deposits of Banks ⁴ (latest available)	Bank Lending Growth ⁵ (y-o-y, latest available)
Brunei Darussalam	2.7 (Sep11)	8.0	–	53.0 (May11)	-0.3 (May11)
Cambodia	6.4 (Aug11)	-6.0	–	80.1 (Aug11)	25.6 (Jul11)
People's Republic of China	5.5 (Oct11)	-2.1	36.0	73.5 (Aug11)	15.8 (Oct11)
Hong Kong, China	5.8 (Oct11)	4.2	4.7	62.5 (Jul11)	21.9 (Sep11)
Indonesia	4.2 (Nov11)	-0.7	27.4	90.8 (Aug11)	23.0 (Aug11)
Republic of Korea	4.2 (Nov11)	-2.3	31.9	117.5 (Jul11)	7.0 (Sep11)
Lao People's Democratic Republic	6.6 (Oct11)	-4.8	60.9	71.1 (Dec10)	43.8 (Dec10)
Malaysia	3.4 (Oct11)	-5.6	53.1	94.4 (Aug11)	13.7 (Sep11)
Myanmar	3.3 (Aug11)	–	–	39.7 (Jun11)	56.9 (Jun11)
Philippines	5.3 (Oct11)	-3.5	58.5	64.5 (Aug11)	21.7 (Sep11)
Singapore	5.4 (Oct11)	-0.1	105.8	86.1 (Aug11)	24.0 (Sep11)
Taipei, China	1.2 (Oct11)	-3.0	33.5	63.4 (Sep11)	7.4 (Sep11)
Thailand	4.2 (Nov11)	-2.0	42.4	95.8 (Aug11)	16.5 (Sep11)
Viet Nam	19.8 (Nov11)	-8.0	51.3	107.3 (May11)	32.7 (Apr11)

Note: Green font implies an improvement from Aug 2008 for monthly data, Q3 2008 for quarterly data, or 2008 for annual data. Red font implies a deterioration from the same base periods.

GDP = gross domestic product, y-o-y = year-on-year, – = unavailable.

¹Latest International Monetary Fund *Article IV Consultation* estimates of overall primary balance (excludes interest and investment income) for Brunei Darussalam and overall balance (including grants) for Lao People's Democratic Republic (Lao PDR). Data for Hong Kong, China; Lao PDR; Singapore; Taipei, China; and Thailand are fiscal year.

²Central government debt for Indonesia; Republic of Korea; and Taipei, China; federal government debt for Malaysia; and national government debt for the Philippines.

³Data are projections for People's Republic of China and Lao PDR; and estimates for Viet Nam from *IMF Article IV Consultation* reports.

⁴Loans to private sector and non-financial institutions, and deposits (demand, time, savings, foreign currency), bonds, and money market instruments (where available) of banking institutions, deposit money banks, and other depository corporations of each economy.

⁵Data for Brunei Darussalam and Cambodia refer to claims on private sector and nonbank financial institutions of other depository corporations; for People's Republic of China to financial institution loans; Hong Kong, China to domestic credit; Indonesia to commercial bank loans; Republic of Korea to loans of commercial and specialized banks; Lao PDR to claims on private sector of deposit money banks; Malaysia to commercial bank loans and advances; Philippines to commercial and universal bank loans net of reverse repurchase arrangements; Singapore to loans and advances of domestic banking units; Taipei, China to domestic banks' loans and advances; Thailand to commercial bank loans; and Viet Nam to claims on private sector of banking institutions.

Source: ADB calculations using data from CEIC; national sources; *Asian Development Outlook Update 2011*, 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.

Kong, China; the Republic of Korea; Singapore; and Viet Nam also hold short-term external debt above 60% of foreign reserves—although in the case of Hong Kong, China, and Singapore, the high ratios reflect their role as regional financial centers. Low levels of foreign reserves in the Lao PDR and Viet Nam, covering about a mere 2 months of imports, are a cause for concern.

Thus far, the region's banking systems have been little affected by the economic problems in the eurozone and US; they continue to maintain high capital adequacy ratios, healthy returns, and declining nonperforming assets.

Bank capital in the PRC, NIEs, and ASEAN-4 remains strong with risk-weighted capital adequacy ratios well above 10% (**Table 7**). The region's robust economies have led to improved bank profitability (**Tables 8, 9**). And prudent risk management has thus far seen nonperforming loans continue to decline (**Table 10**). In the PRC, however, informal credit, off-balance sheet lending, and government-directed lending have been

Table 6b: Assessment of External Vulnerabilities (%)

	Current Acct./ GDP (latest available)	External Debt/ GDP ¹ (2010)	Short-Term External Debt/ Reserves (Q12011) ²	Broad Money ³ / Foreign Reserves (latest available)	Foreign Reserves (number of months of imports) ⁴	Foreign Liabilities/ Foreign Assets ⁵ (latest available)
Brunei Darussalam	42.6 (2010)	14.5	113.6	6.3 (Mar11)	4.8 (Mar11)	4.0 (May11)
Cambodia	-12.3 (2010)	17.9	3.6	1.6 (Jul11)	5.5 (Jul11)	47.9 (Aug11)
People's Republic of China	1.9 (H111)	6.3	11.9	3.7 (Aug11)	23.2 (Sep11)	37.9 (Aug11)
Hong Kong, China	1.0 (Q211)	235.3	66.8	3.6 (Aug11)	7.0 (Sep11)	75.6 (Jul11)
Indonesia	0.1 (Q311)	17.2	46.5	2.5 (Aug11)	7.8 (Oct11)	156.0 (Sep11)
Republic of Korea	1.9 (Q211)	28.8	60.3	5.2 (Jul11)	7.2 (Oct11)	203.9 (Jul11)
Lao People's Democratic Republic	-9.0 (2010)	39.0	9.5	3.7 (Dec10)	2.2 (Dec10)	75.3 (Dec10)
Malaysia	11.2 (Q211)	28.6	32.0	2.8 (Aug11)	8.6 (Oct11)	92.6 (Aug11)
Myanmar	-2.2 (2010)	3.7	11.4	–	2.8 (Jun07)	–
Philippines	3.7 (Q211)	38.5	27.8	2.0 (Apr11)	13.6 (Oct11)	101.8 (Sep11)
Singapore	18.2 (Q211)	237.6	73.2	1.4 (Aug11)	8.3 (Oct11)	105.8 (Aug11)
Taipei,China	7.8 (Q211)	20.5	20.4	2.7 (Sep11)	16.6 (Oct11)	72.0 (Sep11)
Thailand	1.6 (Q211)	15.8	11.1	2.4 (Aug11)	9.4 (Oct11)	128.4 (Aug11)
Viet Nam	-4.9 (Q111)	34.0	70.1	9.9 (May11)	1.6 (May11)	135.2 (May11)

Note: Green font implies an improvement from Aug 2008 for monthly data, Q3 2008 for quarterly data, or 2008 for annual data. Red font implies a deterioration from the same base periods. Black font implies no change.

GDP = gross domestic product, y-o-y = year-on-year, – = unavailable.

¹Data are estimates for Cambodia, Lao People's Democratic Republic (Lao PDR), and Myanmar.

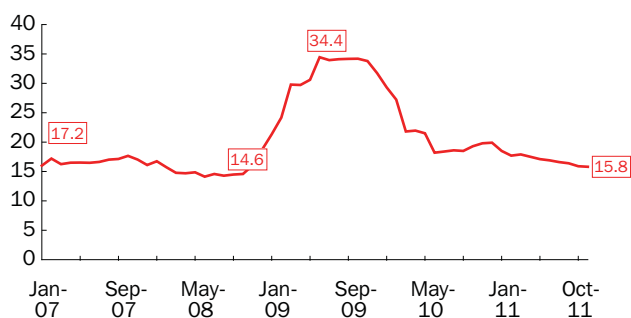
²Short-term external debt includes loans and credits due and debt securities due within a year as defined in the Joint External Debt Hub. Total reserves data for Lao PDR as of Dec 2010; Myanmar as of Jun 2007.

³Data for Brunei Darussalam; Philippines; Taipei,China; and Thailand refer to broad money; for Cambodia; People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Lao PDR; and Malaysia refer to M2; for Myanmar and Viet Nam to money plus quasi-money.

⁴Refers to reserves minus gold over a 12-month moving average of imports (cost of insurance, freight). Latest month when data is available. Import data may be earlier, the same, or later than period indicated.

⁵Foreign liabilities and assets of banking institutions, deposit money banks, and other depository corporations.

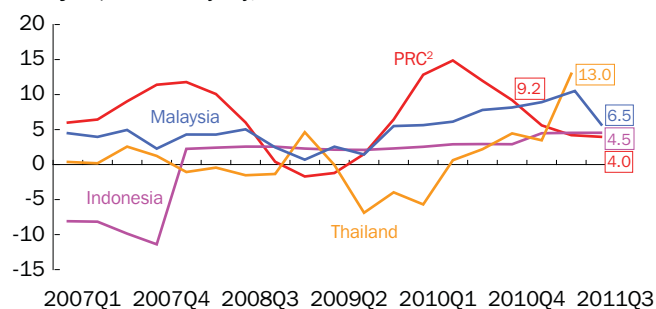
Source: ADB calculations using data from CEIC; national sources; *Asian Development Outlook Update 2011*, Asian Development Bank; *Joint External Debt Hub*, BIS-IMF-OECD-WB; *International Financial Statistics*, *Direction of Trade Statistics*, *World Economic Outlook* and *Article IV Consultations*, International Monetary Fund.

Figure 27: Bank Lending Growth¹—People's Republic of China (y-o-y, %)

y-o-y = year-on-year.

¹Data refer to financial institution loans.

Source: CEIC.

Figure 28: Growth of Housing Prices¹—PRC, Indonesia, Malaysia, Thailand (y-o-y, %)

PRC = People's Republic of China, y-o-y = year-on-year.

¹Data for Indonesia refer to residential property price index; Malaysia to house price index; and Thailand to housing price index. Data for Thailand until 2011Q2.

²Data for PRC refer to house price index for newly-built residential buildings until 2010Q4, and to year-on-year growth of house prices (total) until present. Series break after 2010Q4.

Source: ADB calculations using data from CEIC and Reuters.

Table 7: Risk-Weighted Capital Adequacy Ratios¹ (% of risk-weighted assets)

Economy	2000–2004 Average	2005	2006	2007	2008	2009	2010 ²	2011 ³
China, People's Rep. of	-2.3 ⁴	2.5	4.9	8.4	12.0	11.4	12.2	11.8
Hong Kong, China	16.1	14.8	14.9	13.4	14.7	16.8	15.9	15.9
Indonesia	18.7	19.3	21.3	19.3	16.8	17.4	17.2	16.6
Korea, Republic of	10.7	12.4	12.3	12.0	12.7	14.6	14.6	14.5
Malaysia	13.4	13.6	13.1	12.8	12.2	14.9	14.4	14.2
Philippines	17.0	17.7	18.5	15.9	15.7	16.0	16.5	17.4
Singapore	17.7	15.8	15.4	13.5	14.7	17.3	17.0	–
Taipei, China	10.5	10.3	10.1	10.6	10.8	11.6	12.0	11.7
Thailand	13.2	14.2	14.5	15.4	14.1	16.1	16.2	15.7

– = unavailable.

¹Based 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.

²Data for Singapore as of Sep 2010.

³Data for Indonesia, Malaysia and Thailand as of Sep 2011; Hong Kong, China; Republic of Korea; and Taipei, China as of Jun 2011; People's Republic of China and Philippines as of Mar 2011.

⁴Average of 2000 and 2002–2004 figures. Figure for 2000 is ratio for state commercial banks.

Source: National sources and *Global Financial Stability Report September 2011*, International Monetary Fund.

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

Economy	2000–2004 Average	2005	2006	2007	2008	2009	2010 ¹	2011 ²
China, People's Rep. of	0.2	0.6	0.9	0.9	1.0	0.9	1.0	–
Hong Kong, China ³	1.2	1.7	1.8	1.9	1.8	1.5	1.3	1.2
Indonesia	2.2	2.6	2.6	2.8	2.3	2.6	2.9	3.1
Korea, Republic of	0.4	1.2	1.1	1.1	0.6	0.4	0.5	–
Malaysia	1.3	1.3	1.3	1.5	1.5	1.2	1.5	1.8
Philippines	0.8	1.1	1.3	1.4	0.8	1.2	1.4	1.6
Singapore	1.1	1.2	1.4	1.3	1.0	1.1	1.2	–
Taipei, China	0.3	0.3	-0.4	0.1	-0.1	0.3	0.5	0.6
Thailand	0.7	1.3	0.8	0.2	1.0	0.9	1.0	1.1

– = unavailable

¹Data for Singapore as of Sep 2010.

²Data for Indonesia and Thailand as of Sep 2011; Hong Kong, China; Philippines; and Taipei, China as of Jun 2011; Malaysia as of Mar 2011.

³Net interest margin of retail banks, year-to-date annualized.

Source: ADB calculations using data from national sources and *Global Financial Stability Report September 2011*, International Monetary Fund.

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

Economy	2000–2004 Average	2005	2006	2007	2008	2009	2010 ¹	2011 ²
China, People's Rep. of ³	–	15.1	14.9	16.7	17.1	16.2	17.5	–
Hong Kong, China ⁴	14.9	16.7	16.7	21.3	13.0	14.4	14.2	–
Indonesia	20.3 ⁵	23.1	27.1	27.8	23.9	26.3	26.1	25.9
Korea, Republic of	7.2	20.3	15.6	16.2	9.1	6.6	7.7	–
Malaysia	16.2	15.7	17.3	19.8	18.6	14.0	16.6	18.9
Philippines	5.9	9.5	11.5	11.8	7.2	11.4	12.7	13.3
Singapore	9.6	11.2	13.7	12.9	10.7	10.8	12.3	–
Taipei,China	4.1	4.4	-7.3	2.6	-0.7	4.3	8.6	9.8
Thailand	13.3	16.5	10.2	2.8	12.2	10.4	12.1	13.6

– = unavailable.

¹Data for Singapore as of Sep 2010.

²Data for Thailand as of Sep 2011; Philippines and Taipei,China as of Jun 2011; Indonesia and Malaysia as of Mar 2011.

³Total banking industry, except for 2006, which refers to four listed state-owned banks.

⁴Post-tax profit to shareholders' funds of locally incorporated licensed banks.

⁵Average over a four-year period 2000-2004 that excludes 2003 when data was not available.

Source: ADB calculations using data from national sources and *Global Financial Stability Report September 2011*, International Monetary Fund.

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

Economy	2000–2004 Average	2005	2006	2007	2008	2009	2010 ¹	2011 ²
China, People's Rep. of	21.0	8.6	7.1	6.2	2.4	1.6	1.1	1.0
Hong Kong, China ³	4.0	1.4	1.1	0.9	1.2	1.4	0.8	0.6
Indonesia	10.2	7.6	6.1	4.1	3.2	3.3	2.6	2.7
Korea, Republic of	3.1	1.3	0.9	0.7	1.2	1.2	1.9	1.6
Malaysia ³	8.9	5.6	4.8	3.2	2.2	1.8	2.3	2.0
Philippines ³	14.8	8.5	5.7	4.4	3.5	3.0	2.9	2.5
Singapore ⁴	5.3	3.8	2.8	1.5	1.7	2.4	1.8	–
Taipei,China	5.2	2.2	2.1	1.8	1.5	1.2	0.6	0.5
Thailand ³	13.5	8.3	7.5	7.3	5.3	4.8	3.6	3.2

– = unavailable.

¹Data for Singapore as of Sep 2010.

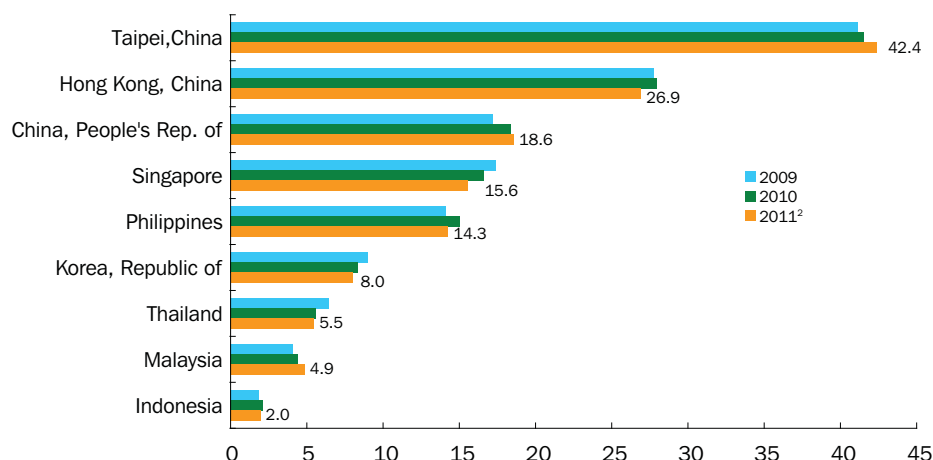
²Data for Indonesia, Malaysia and Thailand as of Sep 2011; Philippines as of Aug 2011; People's Republic of China; Hong Kong, China; Republic of Korea; and Taipei,China as of Jun 2011.

³Reported nonperforming loans are gross classified loans of retail banks.

⁴Nonbank nonperforming loans to total nonbank loans.

Source: National sources; CEIC; and *Global Financial Stability Report September 2011*, International Monetary Fund.

Figure 29: Real Estate Loans¹ (% of total loans)



¹Data for People's Republic of China includes loans for commercial real estate development of major financial institutions as percent of total renminbi and foreign currency loans of all financial institutions; for Hong Kong, China, loans of all authorized institutions for building, construction, property development over total loans and advances for use in Hong Kong, China; for Indonesia, real estate property loans as percent of outstanding loans in rupiah and foreign currency of commercial and rural banks; for Republic of Korea, real estate, renting and leasing loans over total loans of commercial and specialized banks; for Malaysia, real estate loans as percent of total loans of the banking system; for the Philippines, real estate, renting, and business activities loans over total loans of the banking system; for Singapore, business loans for building and construction as percent of total loans and advances of domestic banking units; for Taipei, China, loans and discounts at all banks for real estate; and for Thailand, real estate activities, renting and business credits as percent of total credits of all commercial banks.

²Data as of Sep 2011 except for Republic of Korea and Philippines which are as of Jun 2011.

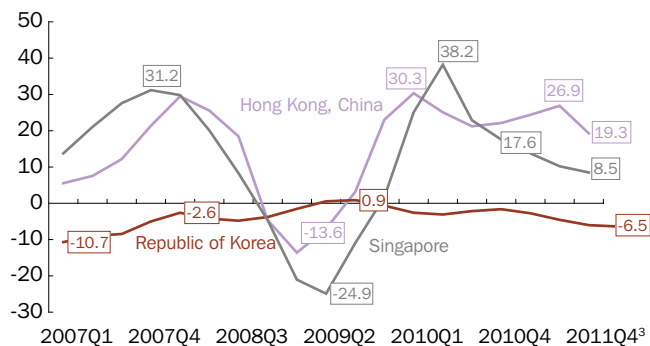
Source: ADB calculations using data from People's Bank of China, Hong Kong Monetary Authority, Bank Indonesia, Bank Negara Malaysia, Bangko Sentral ng Pilipinas (Philippines), Monetary Authority of Singapore, the Central Bank of the Republic of China (Taipei, China), Bank of Thailand, and CEIC.

rising. These are not easily monitored or regulated, and can lead to deterioration in the quality of bank assets, increased exposure to unsecured debt, the fanning of asset property bubbles, and greater economic imbalances.

Bank lending, while continuing to grow across the region, moderated somewhat on easing economic growth.

Weaker economic prospects have softened property markets in some of the region's economies, resulting in moderation in loan growth. The PRC scaled back new credit after a major surge in 2009. Nevertheless, as of October this year, growth in bank lending remained strong at 15.8% (Figure 27). Measures to cool property markets appear to be working as the PRC housing price inflation slowed to 4.0% in the third quarter, although the share of real estate loans to total loans still increased marginally (Figures 28, 29). Weaker property markets also slowed bank lending growth in both Hong Kong, China—where bank lending peaked in May—and in Singapore, where lending growth currently appears to have stabilized (Figures 30, 31a). However, property price inflation in Hong Kong, China remains high at 19.3% in the third quarter. In response, authorities are increasing the land supply and announced the

Figure 30: Growth of Housing Prices¹—NIEs (y-o-y, %)²



NIE = newly industrialized economy, y-o-y = year-on-year.

¹Data for Hong Kong, China refer to property price index of domestic premises; Singapore to residential property price index; and Republic of Korea to housing price index.

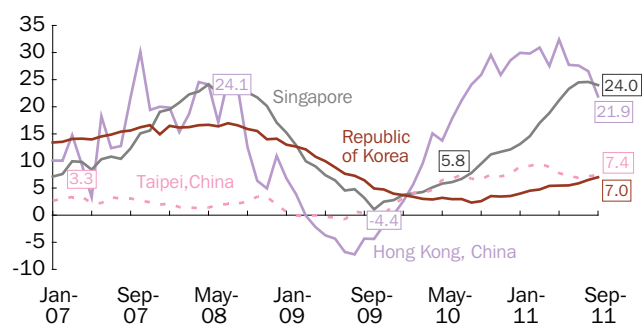
²Average of three months for Hong Kong, China and Republic of Korea. Data for Hong Kong, China and Singapore until 2011Q3.

³Average of October and November for Republic of Korea.

Source: ADB calculations using data from CEIC.

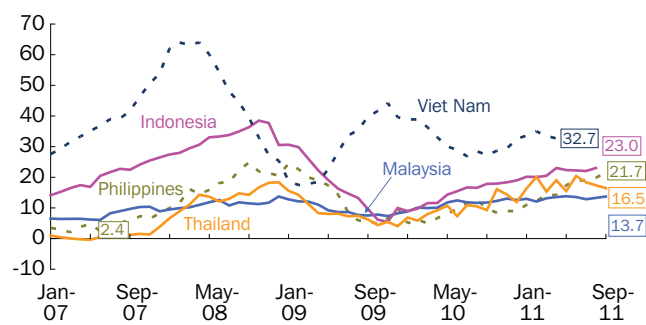
construction of more public housing. A special stamp duty was also introduced to curb short-term speculative transactions on residential properties, and measures to ensure prudent bank mortgage underwriting practices were adopted. Bank lending growth in Thailand appears to be slowing, but continues to expand in Indonesia, Malaysia, Philippines, and Viet Nam (Figure 31b).

Figure 31a: Bank Lending Growth¹—NIEs
(y-o-y, %)



NIE = newly industrialized economy, y-o-y = year-on-year.
¹Data for Hong Kong, China refer 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.
 Source: ADB calculations using data from CEIC and Bank of Korea.

Figure 31b: Bank Lending Growth¹—ASEAN-4 plus Viet Nam
(y-o-y, %)



y-o-y = year-on-year.
¹Data for Indonesia refer to commercial bank loans; Malaysia to commercial bank loans and advances; Philippines to commercial and universal bank loans net of reverse repurchase agreements; Thailand to commercial bank loans; and Viet Nam to claims on private sector of banking institutions. Data for Indonesia until Aug 2011; Viet Nam until April 2011.
 Source: ADB calculations using data from CEIC.

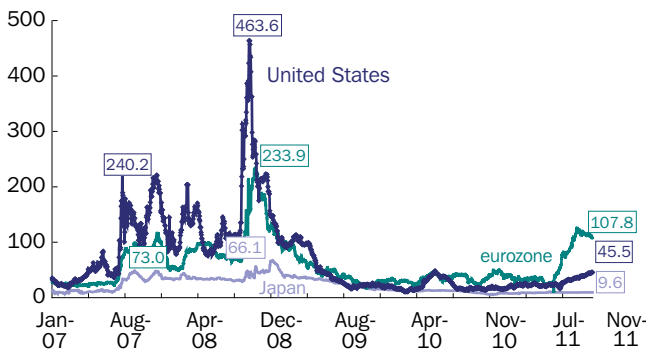
Economic Outlook, Risks, and Policy Issues

External Economic Environment

Since mid-2011, the external environment for emerging East Asia has worsened; no resolution of the eurozone sovereign debt crisis is in sight and the US recovery remains fragile.

In the eurozone, there is rising concern of crisis contagion—Italy being the latest. In the US, the political impasse over economic policy ahead of the 2012 presidential elections—most recently the congressional deficit-reduction super committee’s failure to reach an agreement—suggests large stimulus measures are unlikely. Household spending remains weak as deleveraging consumer debt and home mortgages continue. High unemployment remains (Box 1). Global financial markets have been volatile as events over the debt crisis in Europe unfold. TED spreads—the difference between interbank rates and US Treasury bill rates—have risen sharply in the US but particularly in the eurozone since July on concerns over the health of European banking system (Figure 32). Credit default swap indexes, which measure the insurance costs of corporate defaults, have also increased in Europe and the US (Figure 33). Stock price indexes are down, though they have recently recovered somewhat (Figure 34). In addition, the Chicago Board Options Exchange (CBOE) Volatility Index or VIX—which measures US stock price volatility—has risen significantly (to 31.1 index points after starting to rise in July), as have emerging market bond spreads (to 357.8 index points) (Figure 35).

Figure 32: TED Spreads¹—G3 (basis points)

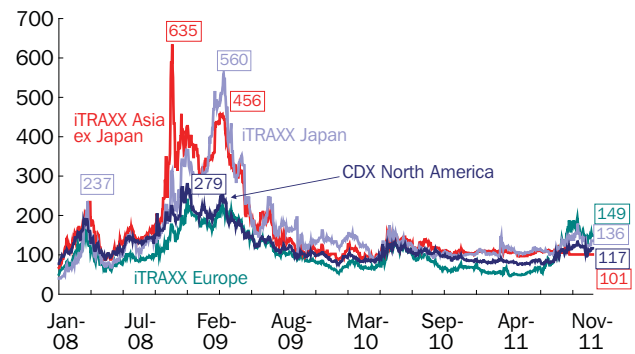


eurozone = Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain.

¹Difference between 3-month LIBOR (London Interbank Offered Rate) and 3-month government debt (e.g. Treasury bills).

Source: ADB calculations using data from Bloomberg and Datastream.

Figure 33: Credit Default Swap Indexes (investment grade, senior 5-year)



Source: Bloomberg.

Figure 34: MSCI Indexes (2 Jan 2008 = 100)



Source: Morgan Stanley Capital International (MSCI) Barra and Datastream.

Figure 35: Equity Market Volatility and Bond Spreads



JP Morgan EMBI+ = JP Morgan Emerging Market Bond Indices Plus; VIX = Chicago Board Options Exchange Volatility Index.

Source: Bloomberg.

Box 1: A eurozone and US “Lost Decade”: A Comparison with Japan

Global jitters over a possible new global economic crisis are the immediate concern. But what about the longer term? Are the eurozone and United States (US) spiraling toward a Japan-like “lost decade”? Wide structural differences make any direct economic comparison fraught with danger. But one can analyze some of the similarities and differences. The good news is that the US and eurozone may have avoided the deflationary threat. The bad news is that structural labor problems may keep unemployment high for some time to come.

Japan’s “lost decade” began when asset price bubbles burst in December 1989. Stock prices started to fall with property prices following suit in early 1990. The declines were not taken seriously because output and wages continued growing. In fact, some welcomed the slowdown as a counter to property speculation. It was only when gross domestic product (GDP) began to drop 3 years later—in the fourth quarter of 1992, accelerating into 1993—that the real worries set in. Nonperforming loans were exacerbated by declining land prices, and a financial crisis ensued. Bankruptcies followed with the crisis plodding on into the early 2000s.

What is similar with the eurozone and US? First, both Japan’s slowdown and the 2008/09 crisis followed sustained economic expansion¹ accompanied by inflating asset bubbles. In both cases, withering asset prices severely damaged financial institutions’ balance sheets. Getting the financial sector back on track has been a problem for all three advanced economies.

And what are the differences? The most significant is temporal. Japan’s financial crisis and economic contraction only came after a significant time lag. The global financial crisis emanating from the US was triggered by the Lehman Brothers bankruptcy in September 2008. So the global shocks of 2008/09 came suddenly, forcing authorities to respond immediately to what was easily apparent—illiquid credit markets and recession. In Japan, it took years for authorities to acknowledge the depth of the crisis.

¹J. Stock and M. Watson. 2003. Has the Business Cycle Changed and Why? In M. Gertler and K. Rogoff, eds. *NBER Macroeconomics Annual 2002*. Vol. 17. Massachusetts: MIT Press.

Output, Price, and Money Supply

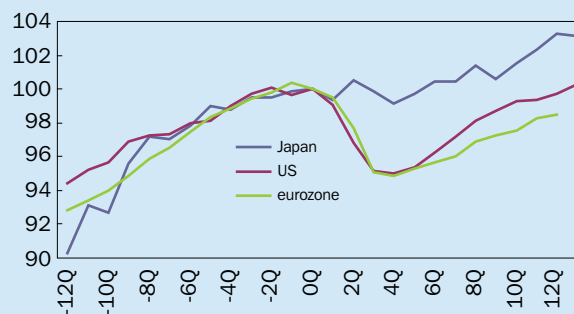
What do the data tell us?

First, the immediate effect on production was far greater in the 2008 recession than in 1990s Japan. Real GDP fell more than 5% in the US and eurozone, but below 1% until 1997 and 3% over the remainder of Japan’s lost decade (**Figure B1.1**).

Second, price shocks were far more persistent in Japan than in the US and eurozone during the 2008/09 global recession. Even though consumer price indexes in the US and eurozone fell rapidly immediately after the crisis hit—deflating within a year, inflation was back to 2% within 3 years. In contrast, prices in Japan fell only gradually and after 2 years settled below 1%, where they have stayed (**Figure B1.2**).²

Third, the US boosted money supply dramatically—often well above 10% annually, with current levels 1.5 times above the August 2008 level. Japan’s money supply, however, declined soon after GDP beginning in late 1992—with growth rates below 2% until August 1994, growing a maximum 5% in 1998. Data from the eurozone falls between the two. Money supply increased above 10% soon after the 2008/09 crisis began—similar to the US—but then growth fell below 2% in 2010, similar to Japan’s level (**Figure B1.3**).

Figure B1.1: Real Gross Domestic Product Index
(Q = 100)



Q = quarter.

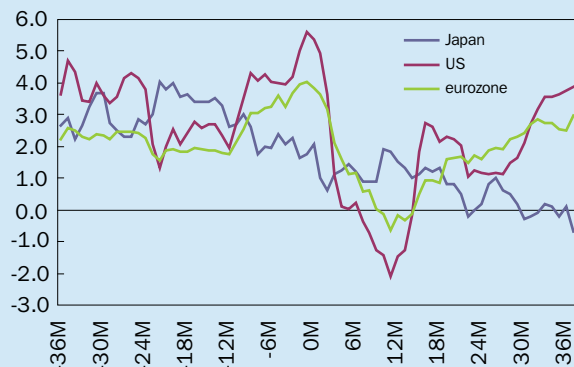
Note: 0Q is pre-crisis peak—third quarter 1992 for Japan; and second quarter 2008 for the eurozone and US.

Source: Statistics Bureau (Japan), US Bureau of Economic Analysis, and Eurostat.

²The exceptions were from April 1997 to March 1998 and from February 2008 to October 2008, when they exceeded 1%.

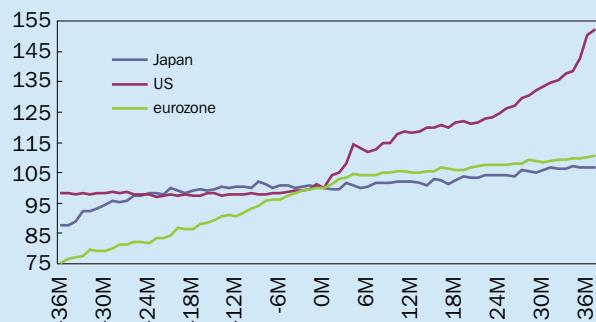
Box 1 continued

Figure B1.2: Consumer Price Index Growth
(%, y-o-y)



M = month, y-o-y = year-on-year.
Note: 0M is September 1992 for Japan and August 2008 for US and eurozone.
Consumer price index includes all items.
Source: Statistic Bureau (Japan), US Bureau of Labor Statistics, Eurostat.

Figure B1.3: Money Supply Index (0M = 100)



M = month.
Note: 0M is September 1992 for Japan and August 2008 for US and eurozone.
Money supply = broad money (M2) + certificates of deposit for Japan, M2 for US, and M2 monetary aggregate for eurozone.
Source: Statistics Bureau (Japan), US Federal Reserve System, European Central Bank.

From a price standpoint, the critical difference was in policy response. Japan was often “too late, too slow”, while US and eurozone reactions were both prompt and far-reaching. For instance, the US Federal Reserve lowered its policy rates from 2% to 1% within 1 month, and to 0.25% in December 2008—within three months. The European Central Bank reduced its rate from 4.25% to 3.75% within a month, to 3.25% by November 2008, and finally to 1.00% in May 2009—8 months after the Lehman Brothers’ collapse. The Bank of Japan, on the

other hand, decreased its bank rate from 3.25% to 2.50% in February 1993—4 months after GDP began its fall—and to 1.75 % in September 1993 (after more than 11 months). Besides, the amount of fiscal stimulus was larger in the US and eurozone recession than in Japan during the mid-1990s.

Thus, it is likely that the risk of deflation is smaller for the eurozone and highly unlikely for the US—good news given the problems deflation brought Japan during periods of large nonperforming assets. Inflation expectations and money velocity must also be examined to assess deflation risks more carefully. For instance, money velocity declined from the early 1990s in Japan as demand for money increased because of price declines, and money supply finally lost its impact on prices after 1998.³

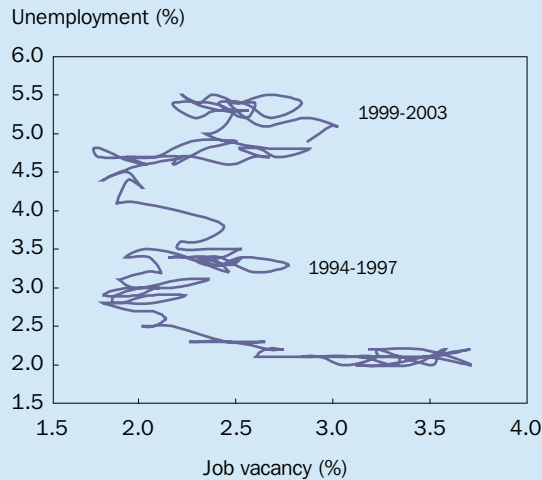
Labor Markets

Despite policy differences, there are similarities between the labor markets in Japan and US/eurozone. First, in both the Japan and US/eurozone cases, unemployment rose after the crisis—though the size and speed of increase was greater in the US and eurozone. And they have stagnated—approximately 9% in the US and 10% in the eurozone. Japan’s unemployment increased more gradually—from 2.1% in June 1992 to 5.5% in June 2002 and stagnated between 3.6% and 5.5% until now. Japan’s unemployment also remains above its pre-crisis level.

The interesting similarity lies in the relationship between unemployment and job vacancy (the Beveridge, or UV, curve). Normally, unemployment decreases as job openings increase. But with a structural mismatch between labor demand and supply—for example, available jobs require better trained workers—unemployment stays high even as vacancies increase. This is called structural unemployment, which appears as an upward (horizontal) movement in the UV curve.

³R. Miyao. 2005. Use of the Money Supply in the Conduct of Japan’s Monetary Policy: Re-examining the Time-Series Evidence. *Japanese Economic Review*. 56 (2). pp. 165–187; R. Miyao. 2006. *Time Series Analysis on Macro Monetary Policy* (in Japanese). Tokyo: Nihon Keizai Shinbunsha.

Figure B1.4: Beveridge (UV) Curve—Japan



Note: Monthly data from January 1990 to December 2003.
 Job vacancy rate = (Number of effective job seekers - Number of newly employed)/(Total number of employees + Number of effective job seekers - Number of newly employed).
 Source: ADB calculations using data from Statistics Bureau and Ministry of Health, Labor and Welfare.

Figure B1.5: Beveridge (UV) Curve—United States



Note: Monthly data from January 2001 to October 2011.
 Job vacancy rate = Job opening rate.
 Source: ADB calculations using data from US Bureau of Labor Statistics.

In Japan's case, two periods of structural mismatches appear—between 1994 and 1997 and between 1999 and 2003 (Figure B1.4). Structural unemployment also appeared for the US and eurozone beginning the latter half of 2009 for the US and the first quarter of 2010 for the eurozone (Figures B1.5, B1.6).

Structural mismatches in Japan's labor market have been confirmed by many scholars⁴—due to aging demographics, higher education and female participation on the supply side, shifts to service industries, globalization in production and ICT innovations on the demand side. It remains unclear precisely where the structural problems lie in the US and eurozone—and it remains a sensitive topic under debate.

In sum, timely policy responses in the US and eurozone may have sidestepped the risk of deflation, at least so far. But labor markets are beginning to show structural unemployment, which could prolong a recovery—similar to Japan's lost decade.

Figure B1.6: Beveridge (UV) Curve—eurozone



Note: Quarterly data from first quarter 2007 to second quarter 2011.
 Source: ADB calculations using data from Eurostat.

⁴M. Abe. 2005. *Environmental Change in the Japanese Economy and Labor Market* (in Japanese). Tokyo: Toyo Keizai Shinposha.

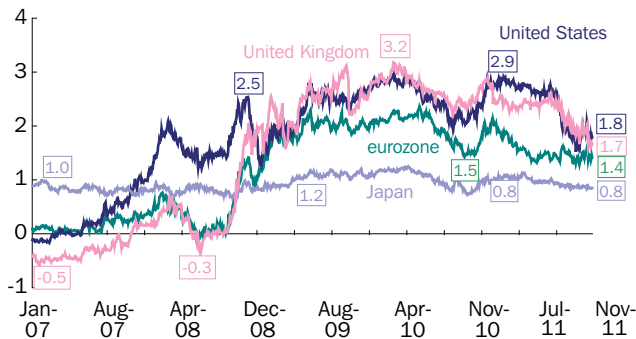
Spreads between 10-year and 2-year bond yields in the US and the UK have converged (to 1.8% and 1.7%, respectively), while those in the eurozone declined to 1.4% (**Figure 36**). The narrowing yield spreads in the eurozone may indicate that investors expect austerity and monetary tightening will continue for the foreseeable future.

The US recovery is edging forward, but remains fragile.

The US economy grew 2.0% in the third quarter on a quarter-on-quarter (q-o-q) seasonally adjusted annualized rate (saar) from 1.3% (q-o-q, saar) in the second quarter, pushing the economy above its pre-global financial crisis

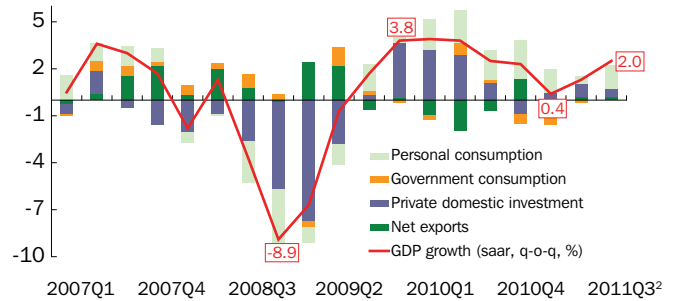
peak (**Figure 37**). The third quarter expansion came largely from stronger growth in personal consumption (2.3% in the third quarter compared to 0.7% in the second), nonresidential fixed investment (14.8% from 10.3%), and exports (4.3% against 3.6%). Nonetheless, leading indicators suggest the economy remains frail. Housing starts continue to languish, existing home sales remain relatively low, and housing prices are well below pre-crisis levels (**Figures 38, 39**). From a bullish first quarter, business and consumer confidence have weakened (**Figure 40**). Similarly, while non-farm employment has been rising, monthly increments have been below first half levels and unemployment remains stubbornly high (**Figure 41**). Moreover, real disposable income has been declining (2.1% in the third

Figure 36: 10-year and 2-year Government Bond Yield Spreads (% per annum)



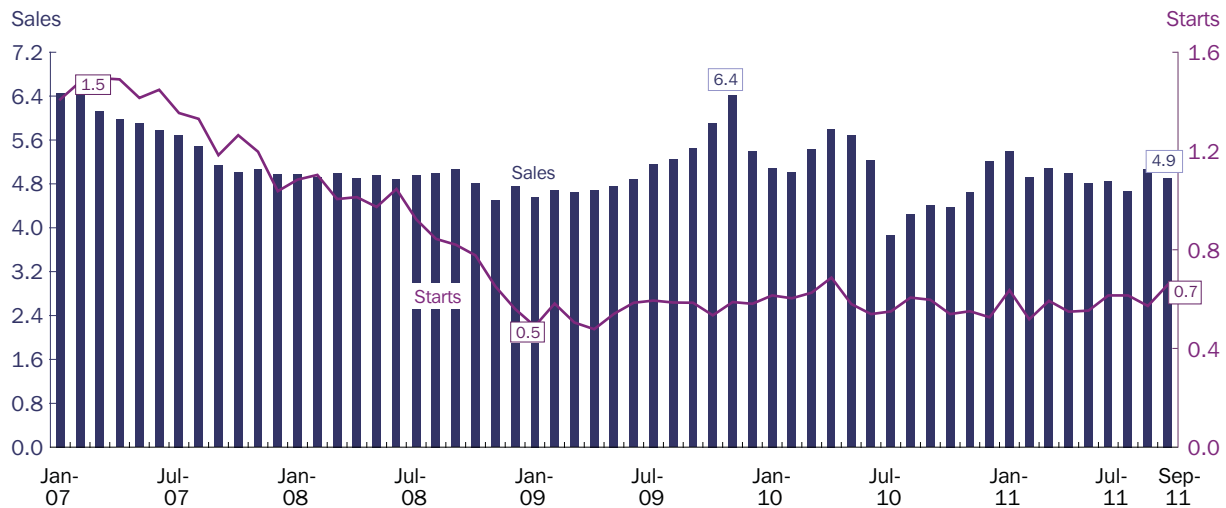
eurozone = Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain.
Source: Datastream.

Figure 37: Contributions to GDP Growth—US (percentage points¹)



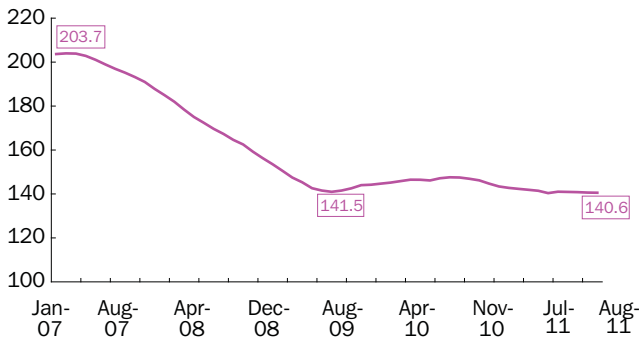
GDP = gross domestic product, q-o-q = quarter-on-quarter, saar = seasonally adjusted annualized rate, US = United States.
¹Based on saar, q-o-q changes.
²Second estimate as of 22 Nov 2011.
Source: US Bureau of Economic Analysis.

Figure 38: Private Housing Starts¹ and Existing Home Sales²—United States (million units)



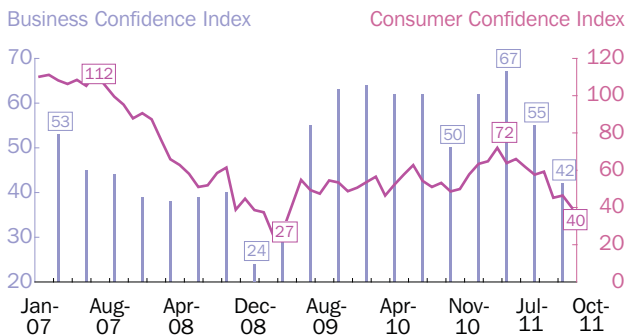
¹Seasonally adjusted levels.
²Seasonally adjusted and annualized.
Source: CEIC.

Figure 39: Standard and Poor's/Case-Shiller Home Price Index¹—United States



¹20-city composite index, seasonally adjusted.
Source: Standard and Poor's.

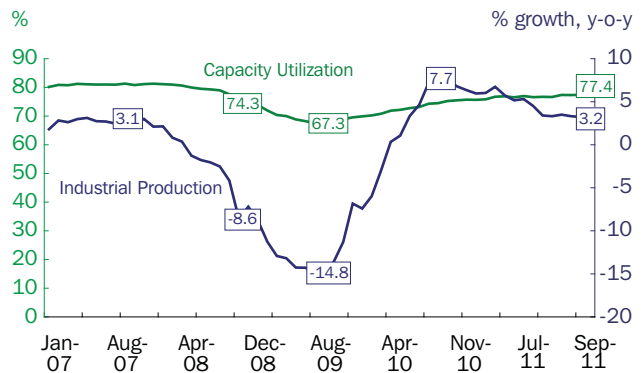
Figure 40: Business and Consumer Confidence Indexes—United States



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.

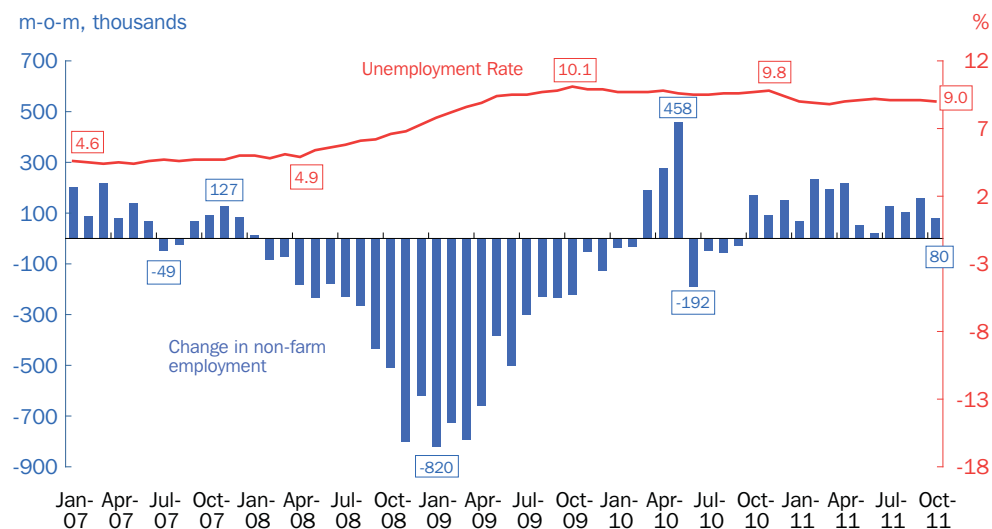
quarter on top of a 0.5% fall in the second quarter). Capacity utilization, though rising, remains below the pre-crisis level of 80%, while growth in industrial production has dropped to 3.2% from its 7.7% peak in June 2010 (**Figure 42**). The Purchasing Managers' Index increased to 52.7 in November 2011 from 50.8 in October, suggesting that manufacturing is only inching up. Economic growth in 2011 is estimated at 1.6%, while weak consumer confidence and continued high unemployment levels will limit the upward expansion to 2.1% in 2012.

Figure 42: Industrial Production Growth and Capacity Utilization Rate—United States



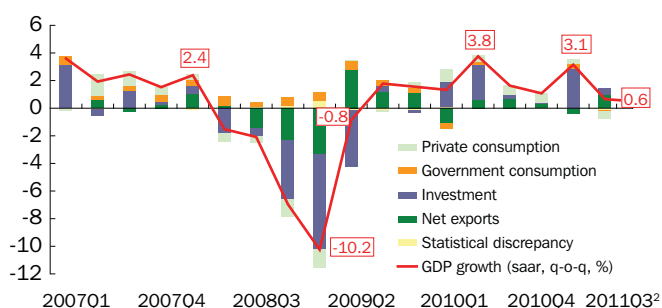
y-o-y = year-on-year.
Source: Board of Governors of the US Federal Reserve System.

Figure 41: Unemployment Rate and Change in Non-Farm Employment—United States¹



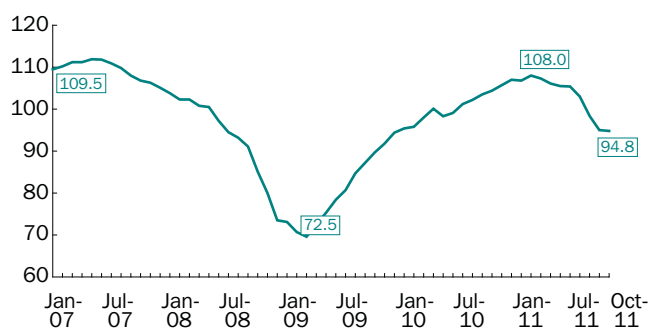
m-o-m = month-on-month.
¹Change in non-farm employment figures for Sept and Oct 2011 are preliminary.
Source: ADB calculations using data from the US Bureau of Labor Statistics.

Figure 43: Contributions to GDP Growth—eurozone
(percentage points¹)



eurozone = Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain; GDP = gross domestic product; q-o-q = quarter-on-quarter; saar = seasonally adjusted annualized rate.
¹Based on saar, q-o-q changes.
²Flash estimate as of 15 Nov 2011.
 Source: Eurostat.

Figure 44: Economic Sentiment Indicator¹—eurozone



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

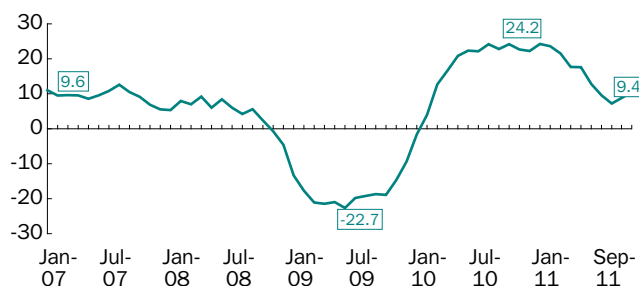
Uncertainty over the unresolved eurozone sovereign debt crisis will likely keep economic growth anemic.

Eurozone economies eked out 0.6% (q-o-q, saar) growth in the third quarter, down from 0.7% (q-o-q, saar) in the second quarter. However, there were sharp divisions between individual economies, with Germany and France growing 2.0% and 1.6%, respectively, against Spain with zero growth. Decelerating investment growth contributed to the weak performance (**Figure 43**). Business and consumer confidence continue to wane with the economic sentiment indicator declining to 94.8 points in October from its 108.0 point peak in February (**Figure 44**). Other leading indicators are also weak. August growth in exports and industrial production slumped to 7.2% and 4.2%, respectively, while retail sales has been contracting since April (**Figures 45, 46**). With their fiscal health already under close scrutiny, eurozone economies have limited options for stimulus. This, combined with the fragile health of the banking system, suggests the slowdown in growth may be prolonged. Low business and consumer confidence, together with the tight fiscal stance, will likely push eurozone growth down to 1.7% in 2011, further falling to 0.5% in 2012.

Despite the announced “comprehensive” rescue package, eurozone tension remains the paramount global economic threat.

The main concern is that a potential Greek default could have ramifications beyond its borders. Other highly indebted eurozone economies—such as Spain, Portugal, Ireland, and Italy—will fall under closer market scrutiny.

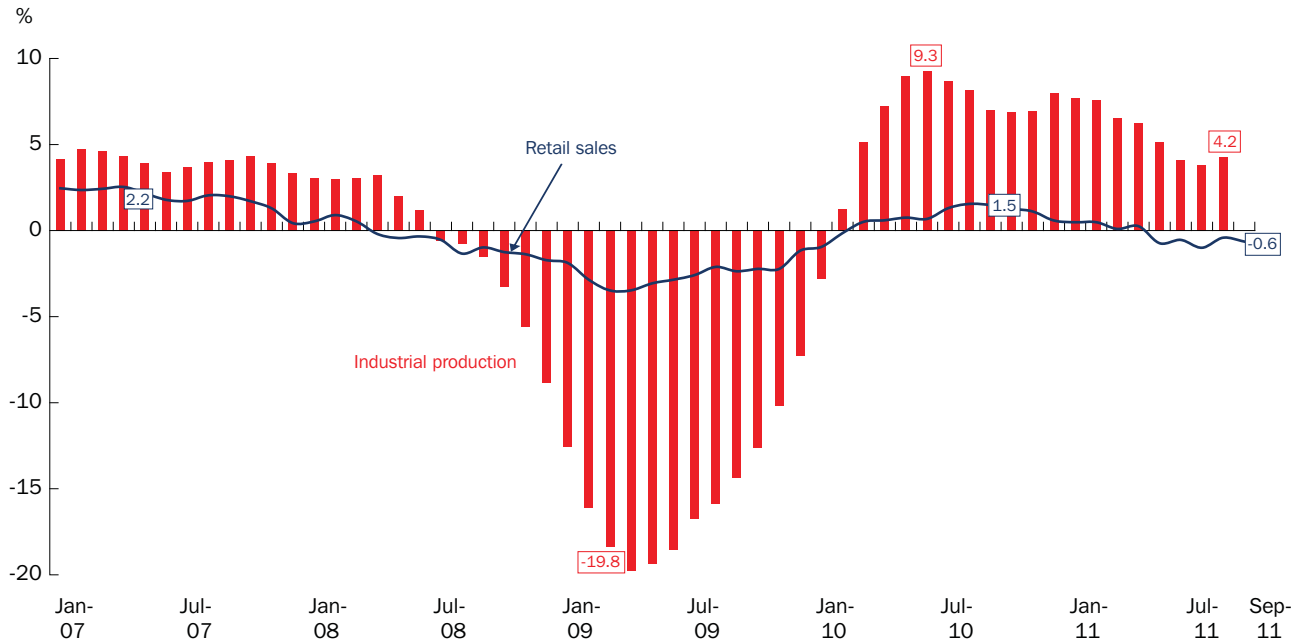
Figure 45: Export Growth¹—eurozone (y-o-y, %)



eurozone = Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain;
¹Year-on-year (y-o-y) growth of 3-month moving averages of export values.
 Source: ADB calculations using data from Datastream.

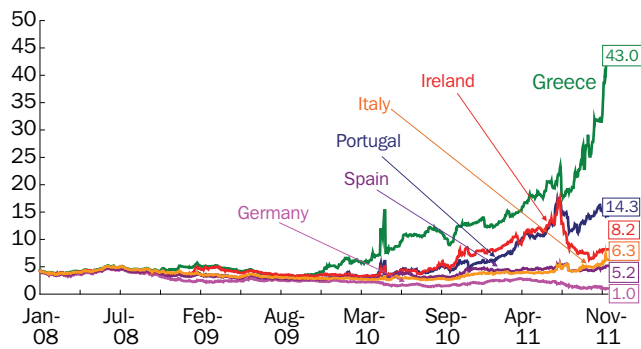
This has led eurozone governments to piece together a Greek rescue package designed to insulate other economies from possible fallout. However, economic and political leaders remain divided on the details of the plan. And the lack of clear collective action in the eurozone keeps resolution of the Greek debt crisis uncertain. It also casts doubt over the future of eurozone sovereign debt in general. It has driven up sovereign bond yields, particularly in Portugal and, most recently, Italy, and credit default swap indexes (**Figures 47a, 47b, 48**). A consequence thus far on emerging East Asia has been that eurozone banks’ recall of loan funds resulted in net outflows of “other investments” in the Republic of Korea. To stem a creeping liquidity crunch, the US Federal Reserve, the European Central Bank, and the central banks of Canada, Japan, Switzerland, and the United Kingdom agreed to extend the terms and lower the costs of reciprocal currency arrangements (or swap lines) among them, as well as increase the funds for these

Figure 46: Growth of Retail Sales and Industrial Production¹—eurozone (y-o-y, %)



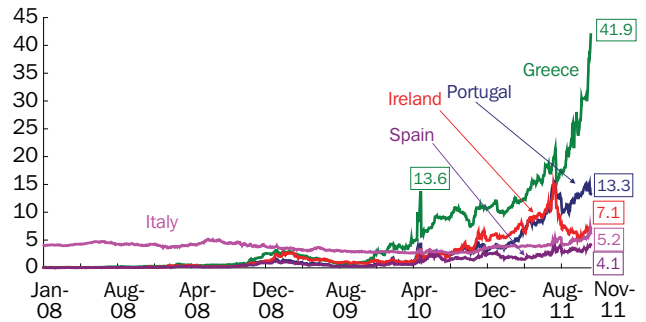
eurozone = Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain;
 y-o-y = year-on-year.
¹Working-day adjusted, year-on-year growth rate of 3-month moving averages. Retail sales data until Sep 2011. Industrial production data until Aug 2011.
 Source: ADB calculations using data from CEIC.

Figure 47a: Sovereign Bond Yields—Selected European economies (% , 5-year)



Source: Bloomberg.

Figure 47b: Sovereign Bond Yield Spreads¹—Selected European economies (% , 5-year)



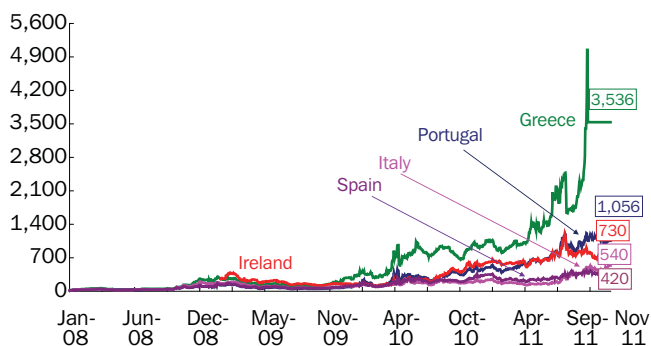
¹Spread from German sovereign bond yields of the same tenor.
 Source: Bloomberg.

transactions. As the central banks can lend currencies “borrowed” using this facility to cash-strapped banks in their countries at lower than market rates, it will likely ensure the flow of credit to businesses and households. However, the swap lines on their own do not solve the sovereign debt crisis of the eurozone.

Japan’s economy is forecast to bounce back from the effects of its natural disasters.

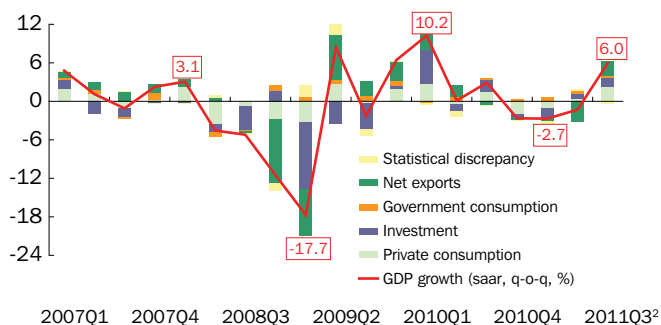
The Japanese economy showed zero growth in the third quarter after contracting 1.0% in the first half. But quarter-on-quarter, GDP rebounded 6.0% (saar) in the third quarter after contracting three consecutive quarters. Private consumption and private investment both recovered strongly (Figure 49). Rebuilt supply chains

Figure 48: Credit Default Swap Indexes—Selected European Economies (senior, 5-year)



Source: Bloomberg.

Figure 49: Contributions to GDP Growth—Japan (percentage points¹)



GDP = gross domestic product, q-o-q = quarter-on-quarter, saar = seasonally adjusted annualized rate.

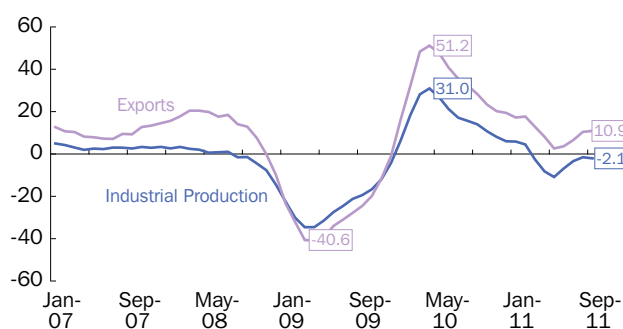
¹Based on saar, q-o-q changes.

²First preliminary estimates.

Source: Cabinet Office, Government of Japan.

disrupted in the aftermath of the Tohoku earthquake helped boost growth. Exports grew 12.4% in September as companies rushed to catch-up on production shortfalls and supply-chain disruptions suffered in the immediate aftermath of the earthquake. However, going forward, the yen's continued strength—favored as a safe haven asset—will likely hurt net exports. Industrial production continues to shrink, contracting 3.3% in September (**Figure 50**). Business and consumer confidence indexes remain weak, indicating that domestic demand is not likely to increase dramatically in the short term (**Figure 51**). Nonetheless, the massive cleanup and reconstruction projects now underway or planned could bring a pump-priming effect on the economy in the second half. Thus, Japan's economy is expected to contract 0.5% this year and expand 2.5% in 2012.

Figure 50: Merchandise Export and Industrial Production Growth¹—Japan (y-o-y, %)

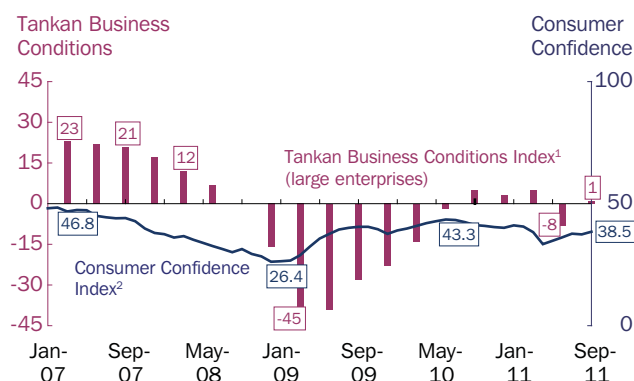


y-o-y = year-on-year.

¹Exports in \$ value; industrial production in local currency. 3-month moving average. Latest exports data as of Aug 2011.

Source: ADB calculations using data from CEIC.

Figure 51: Business and Consumer Sentiment Indexes—Japan



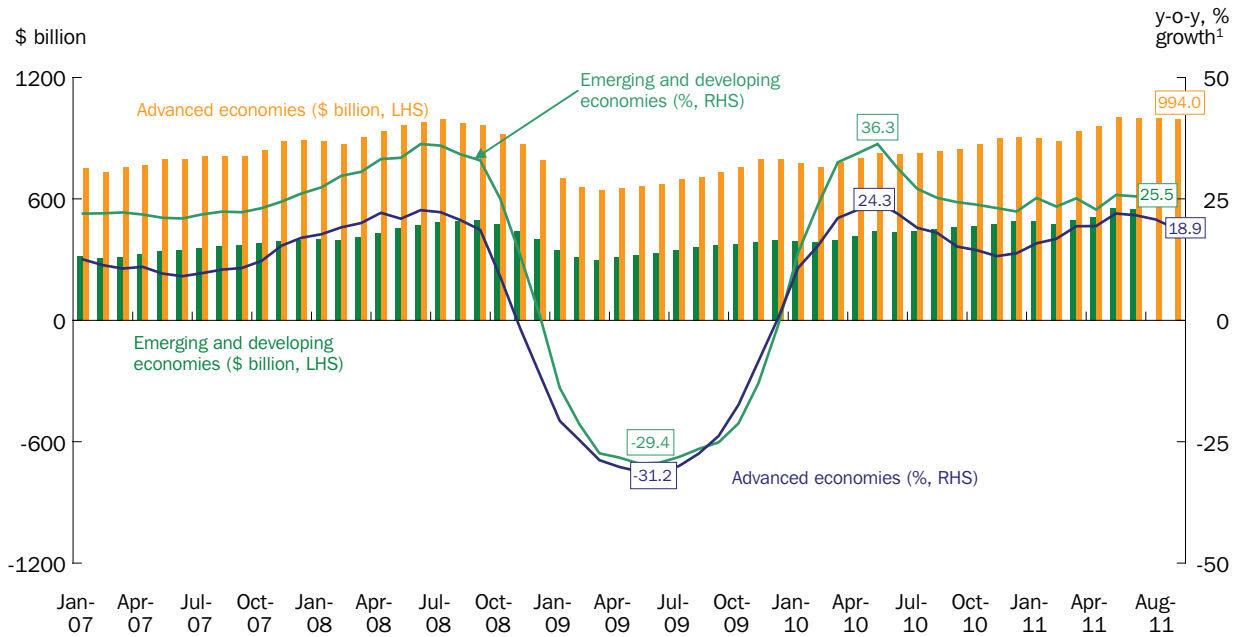
¹Quarterly survey. A positive figure indicates higher percentage of companies reporting favorable business conditions from those reporting unfavorable conditions.

²Monthly survey. A figure above 50 indicates positive consumer sentiment, while a number below 50 indicates negative consumer sentiment.

World trade growth continues to slow, after trade volumes returned to pre-crisis levels last year.

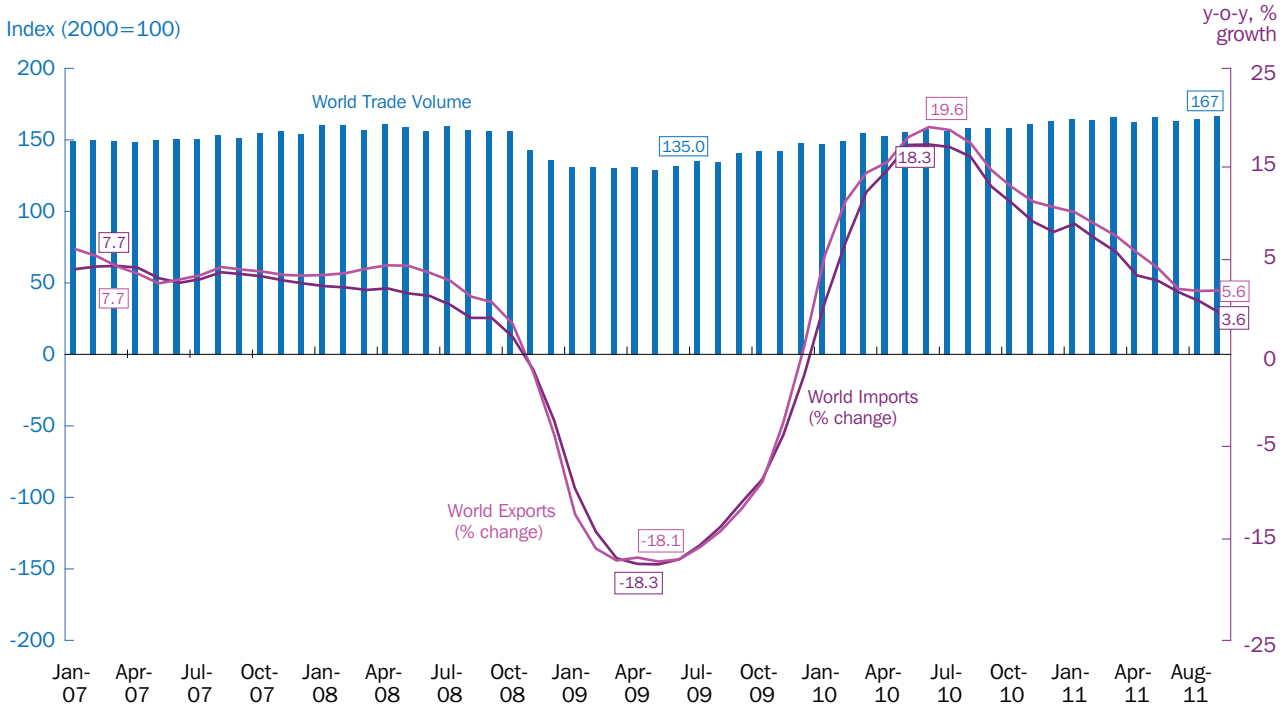
Having returned to long-term trends, imports from advanced as well as emerging and developing economies are steadily growing (**Figure 52**). As the global economy slows, trade volumes are correspondingly dropping according to estimates from CPB Netherlands Bureau for Economic Policy Analysis (**Figure 53**). Demand for high-tech products are also hurt by slower global growth. New information technology orders in the G3 remain weak, up 0.3% (month-on-month, sa) in September 2011, with computer and software sales declining 4.4% in August (**Figures 54, 55**).

Figure 52: Imports—Advanced Economies; Emerging and Developing Economies



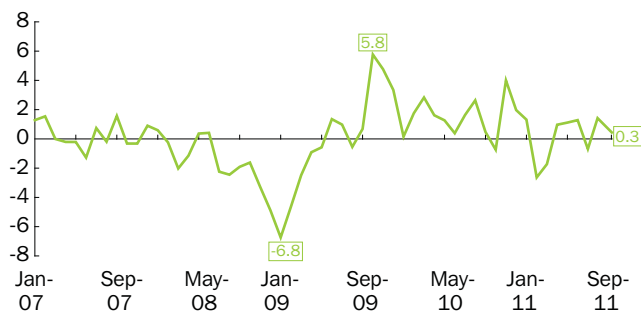
LHS = left-hand scale, RHS = right-hand scale, y-o-y = year-on-year.
¹Growth rates of 3-month moving average. Data for emerging and developing economies until Jun 2011.
 Source: *International Financial Statistics*, International Monetary Fund.

Figure 53. World Trade Volume (seasonally adjusted index, % growth)



y-o-y = year-on-year.
 Source: ADB calculations using data from CPB Netherlands Bureau for Economic Policy Analysis.

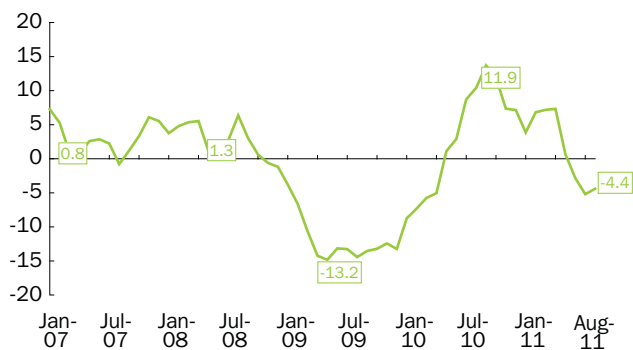
Figure 54: Growth of New Information Technology Orders—G3¹
(seasonally adjusted, m-o-m, %)²



m-o-m = month-on-month.
¹eurozone, Japan, and United States.
²3-month moving average.

Source: ADB calculations using data from national sources.

Figure 55: Computer and Software Sales Growth—G3¹
(y-o-y, %)



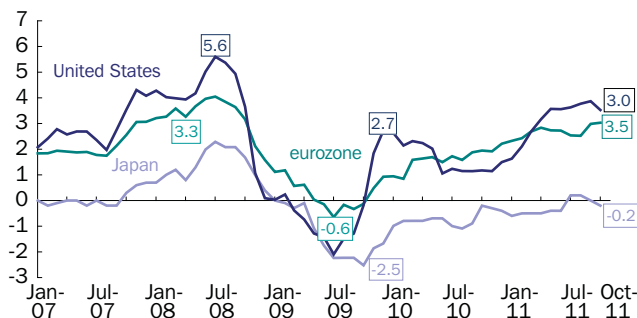
y-o-y = year-on-year.
¹3-month moving average of y-o-y growth in sales values. G3 refers to eurozone, Japan and United States.

Source: Datastream and Eurostat.

Weak economic prospects and high unemployment in the US and the eurozone suggest that inflation is unlikely to rise further.

Since 2010, headline inflation has been rising due to the accelerating prices of food and energy (**Figure 56**). But core inflation, while edging up, remains low (**Figure 57**). Excess capacity in advanced economies should help put downward pressure on prices. Unemployment rates have stayed stubbornly high in the US and the eurozone, and capacity utilization in the US is still below pre-crisis levels (**Figure 58**; see Figure 42). In the US and France, implied inflationary expectations—estimated by the yield difference between 10-year bonds and 10-year inflation-linked bonds—have fallen slightly (**Figure 59**).

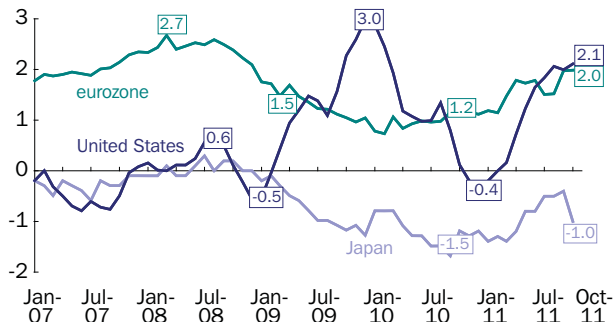
Figure 56: Headline Inflation—eurozone, Japan, and United States (y-o-y, %)



eurozone = Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain;

y-o-y = year-on-year.
Source: ADB calculations using data from CEIC.

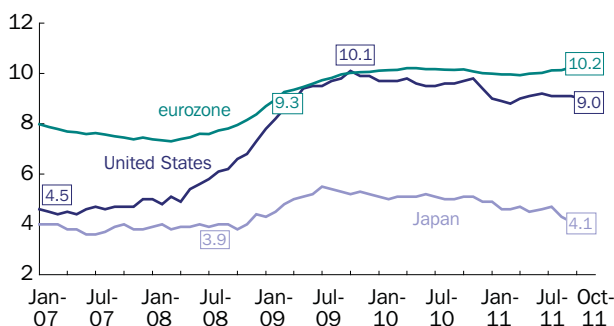
Figure 57: Core Inflation—eurozone, Japan, and United States (y-o-y, %)



eurozone=Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain;

y-o-y = year-on-year.
Source: ADB calculations using data from CEIC.

Figure 58: Unemployment Rate—eurozone¹, Japan, and United States (seasonally adjusted, % of labor force)

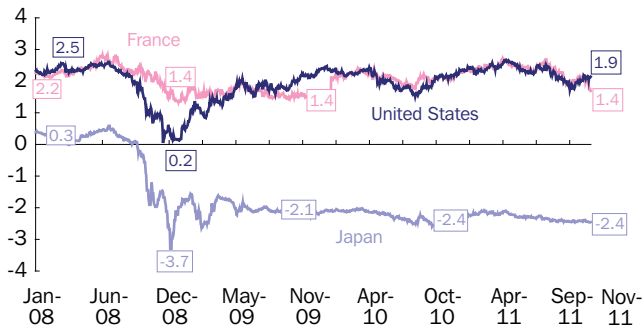


eurozone = Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain.

¹Data for US until Oct 2011; data for eurozone and Japan until Sep 2011.

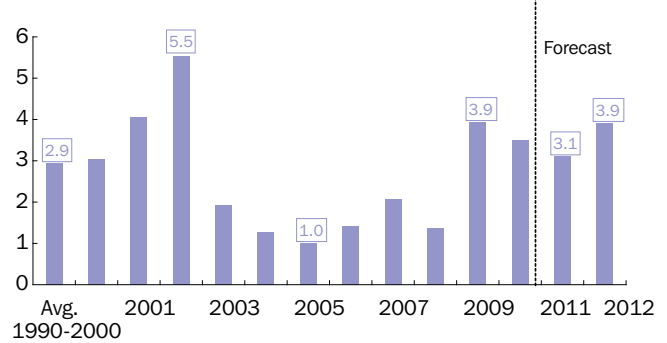
Source: US Bureau of Labor Statistics, European Central Bank, and CEIC.

Figure 59: Implied Inflation Expectations by Financial Market¹—US, Japan, France (in percentage points)



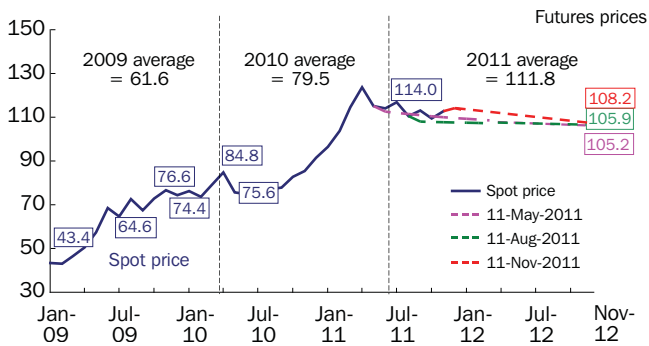
¹Implied inflation expectation is the difference between yields of 10-year bonds and 10-year inflation-linked bonds.
Source: Bloomberg.

Figure 61: OPEC Spare Capacity (million barrels per day)



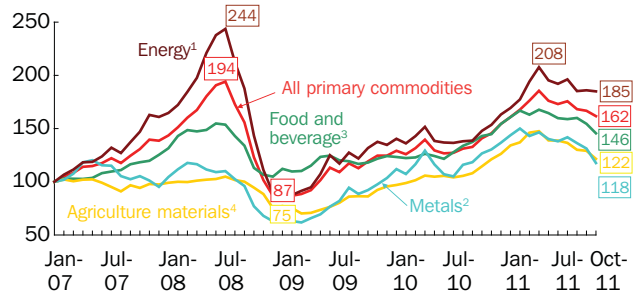
OPEC = Organization of the Petroleum Exporting Countries.
Source: *Short-Term Energy Outlook* (November 2011), US Energy Information Administration.

Figure 60: Brent Spot¹ and Futures Prices (\$ per barrel)



¹Monthly average of daily spot prices. As of 11 Nov 2011.
Source: Datastream.

Figure 62: Primary Commodity Price Indexes (Jan 2007 = 100)



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

Commodity prices—led by energy—are off their early 2011 peaks, but are still elevated.

From the Brent spot peak of \$109.4 per barrel in October, oil futures are projected to moderate with the expected slowdown in global economic growth (Figure 60). The Organization of the Petroleum Exporting Countries (OPEC) should have ample spare capacity through 2012, even though it may take months to restore Libya’s oil and gas production to full capacity (Figure 61). Other commodity prices have already slipped from their early-2011 peaks (Figure 62).

Regional Economic Outlook for 2012

Most of emerging East Asia should see growth rates continue to moderate in 2012 due to the weaker external environment; aggregate GDP in the region is expected to grow 7.2% in 2012 after expanding 7.5% this year.

In general, economic growth in individual economies will ease this year and remain close to levels in 2012 (Table 11). Differences will depend on openness to trade and capital investments as well as the capacity of domestic demand to sustain growth. In most economies, inflation is not likely to be as much of a concern as this year. The ASEAN-4 may also benefit from the

Emerging East Asia—A Regional Economic Update

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

	2001– 2010 Average	2006	2007	2008	2009	2010	2011 Q1-Q3	2011Q1	2011Q2	2011Q3	ADB September Forecast		Revised Forecast	
											2011	2012	2011	2012
Emerging East Asia^{1,2}	7.4	9.3	10.4	6.8	5.8	9.4	7.6	8.1	7.4	7.3	7.6	7.5	7.5	7.2
ASEAN^{1,2,3}	4.8	6.1	6.6	4.3	1.3	7.9	5.1	5.8	4.2	5.3	5.4	5.6	4.8	5.3
Brunei Darussalam ⁴	1.5	4.4	0.2	-1.9	-1.8	2.0	–	–	–	–	1.7	1.8	1.7	1.8
Cambodia ⁴	8.0	10.8	10.2	6.7	0.1	6.3	–	–	–	–	6.8	6.5	6.8	6.5
Indonesia	5.1	5.5	6.3	6.0	4.6	6.1	6.5	6.5	6.5	6.5	6.6	6.8	6.6	6.5
Lao PDR ⁴	6.7	8.1	7.9	7.2	7.3	7.5	–	–	–	–	8.1	7.6	8.1	7.6
Malaysia	4.3	5.8	6.5	4.8	-1.6	7.2	5.1	5.2	4.3	5.8	4.8	5.1	4.8	4.7
Myanmar ^e	7.7	7.0	5.5	3.6	5.1	5.3	–	–	–	–	5.3	5.4	5.3	5.4
Philippines	4.6	5.2	6.6	4.2	1.1	7.6	3.6	4.6	3.1	3.2	4.7	5.1	3.7	4.8
Thailand	4.2	5.1	5.0	2.5	-2.3	7.8	3.1	3.2	2.7	3.5	4.0	4.5	2.0	4.5
Viet Nam	7.2	8.2	8.5	6.3	5.3	6.8	5.8	5.4	5.7	6.1	5.8	6.5	5.8	6.3
Newly Industrialized Economies¹	3.9	5.8	5.8	1.9	-0.6	8.2	4.3	5.7	3.7	3.8	4.7	4.5	4.2	4.0
Hong Kong, China	3.8	7.0	6.4	2.3	-2.7	7.0	5.6	7.5	5.3	4.3	5.5	4.7	5.0	4.0
Republic of Korea	4.1	5.2	5.1	2.3	0.3	6.2	3.7	4.2	3.4	3.4	4.3	4.3	3.7	3.9
Singapore	5.1	8.7	8.8	1.5	-0.8	14.5	5.4	9.4	1.0	6.1	5.5	4.8	5.1	4.0
Taipei, China	3.4	5.4	6.0	0.7	-1.8	10.7	4.8	6.6	4.5	3.4	4.8	4.7	4.6	4.1
People's Republic of China	10.3	12.7	14.2	9.6	9.2	10.4	9.4	9.7	9.5	9.1	9.3	9.1	9.3	8.8
Japan	0.7	2.0	2.4	-1.2	-6.3	4.1	-0.7	-1.0	-1.1	0.0	-0.5	2.8	-0.5	2.5
US⁵	1.5	2.7	1.9	-0.3	-3.5	3.0	1.8	2.2	1.6	1.6	1.6	2.2	1.6	2.1
eurozone⁶	1.3	3.2	3.0	0.4	-4.2	1.8	1.8	2.4	1.6	1.4	1.7	1.3	1.7	0.5

– = unavailable, e = ADB estimates, FY = fiscal year, GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic, US = United States, and y-o-y= year-on-year.

¹Aggregates are weighted according to gross national income levels (atlas method, current \$) from the World Bank's *World Development Indicators*.

²Excludes Myanmar for all years as weights are unavailable. Quarterly figures exclude Brunei Darussalam, Cambodia, Lao PDR, and Myanmar for which quarterly data is not available.

³Includes Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Singapore, Thailand, and Viet Nam.

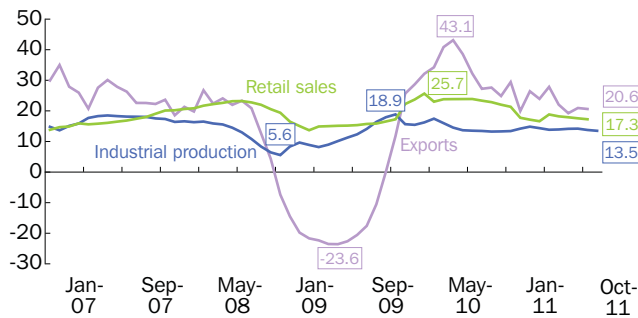
⁴Figures from *Asian Development Outlook 2011 Update*, Asian Development Bank, published in September.

⁵Seasonally adjusted.

⁶Flash estimate, seasonally adjusted for 2011Q3.

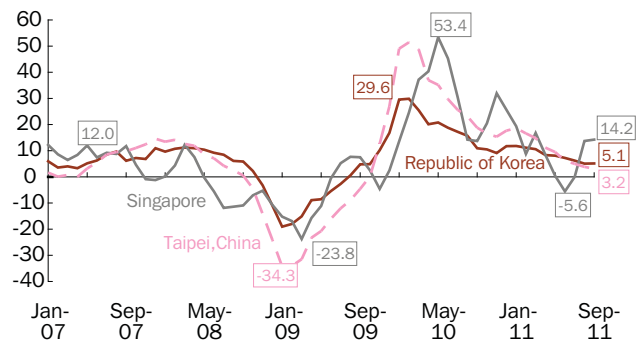
Source: *Asian Development Outlook 2011 Update*, Asian Development Bank; Eurostat website (eurozone); Economic and Social Research Institute (Japan); Bureau of Economic Analysis (US); and CEIC.

Figure 63: Merchandise Export, Industrial Production, and Retail Sales Growth¹—People’s Republic of China (y-o-y, %)



y-o-y = year-on-year.
 Note: Exports in \$ value; industrial production and retail sales in local currency.
¹3-month moving average. Exports and retail sales until Sep 2011.
 Source: ADB calculations using data from CEIC.

Figure 64: Industrial Production Growth¹—NIEs² (y-o-y, %)



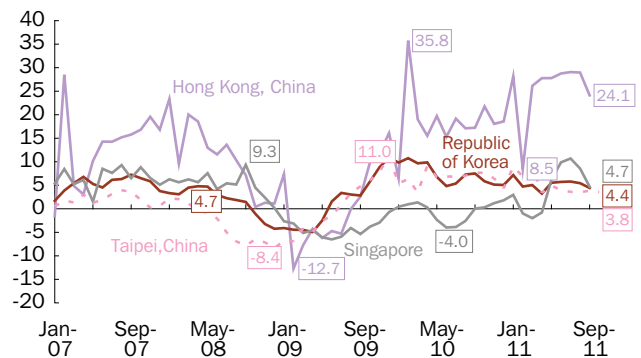
NIE = newly industrialized economy, y-o-y = year-on-year.
¹3-month moving average.
²Does not include Hong Kong, China as monthly data unavailable.
 Source: ADB calculations using data from CEIC.

Table 12: Manufacturing Purchasing Managers’ Index (PMI)—Selected Economies (2011)

	Jul	Aug	Sep	Oct
People’s Republic of China	49.3	49.9	49.9	51.0
Hong Kong, China ¹	51.4	47.8	45.9	49.0
Republic of Korea	51.3	49.7	47.5	48.0
Singapore	49.3	49.4	48.3	49.5
Taipei, China	46.1	45.2	44.5	43.7

¹PMI Composite Index.
 Source: Markit Financial Information Services, except for Singapore which is from Singapore Institute of Purchasing & Materials Management (SIPMM).

Figure 65: Retail Sales Growth¹—NIEs (y-o-y, %)



y-o-y = year-on-year.
¹3-month moving average except for Hong Kong, China.
 Source: ADB calculations using data from CEIC.

Japan’s recovery, particularly as reconstruction shifts from publicly-funded infrastructure to private business recapitalization. An additional boost should come from the restoration of supply chains in Malaysia and Thailand. Should the US and the eurozone suffer severe recessions, the region’s growth will naturally be expected to worsen.

PRC’s economic growth is expected to moderate as government efforts to cool the economy and achieve a soft landing bear fruit.

PRC’s economic expansion eased this year due to tight monetary policy and the accelerated weakening of external demand. Leading indicators suggest, however, that economic growth may be rebalancing toward domestic sources. Net exports in the third quarter were below last year’s, as import growth outpaced exports

(Figure 63). The Purchasing Managers’ Index fell to 51.0 in October, and further to a 32-month low in November at 47.7, implying a contraction in manufacturing output **(Table 12)**. Growth in industrial production was less steady at 13.5% in October. But retail sales and fixed investment remain strong. Taken together, growth is expected to slow to 9.3% this year and 8.8% in 2012.

After a strong 2010 rebound and moderate growth this year, further easing in the NIEs is expected due to deteriorating global economic conditions.

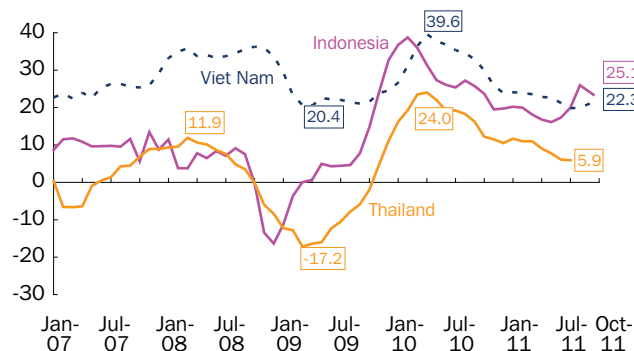
Leading indicators for the NIEs generally point to continued moderation into 2012. September industrial production in the Republic of Korea and Taipei, China grew 5.1% and 3.2%, respectively, their weakest since November 2009. Singapore’s was buoyed only by

biomedical manufacturing (**Figure 64**). Although retail sales growth in Hong Kong, China remained robust at 24.1% in September, it is slower than in the last six months. In the Republic of Korea, retail sales grew 4.4% in September—lower than the 7.5% growth in the same period last year. In Singapore, retail sales increased a mere 4.7% in September due to a drop in motor vehicle sales and a slowdown in spending at supermarkets and department stores (**Figure 65**). Overall, economic growth in the NIEs is forecast to be 4.2% this year and 4.0% in 2012. After growing 5.0% this year, the Hong Kong, China, economy is forecast to grow 4.0% in 2012; the Republic of Korea economy from 3.7% this year to 3.9% in 2012; Singapore by 5.1% in 2011 and 4.0% in 2012; and Taipei, China by 4.6% this year and 4.1% in 2012.

Growth in ASEAN’s middle-income economies will likely improve, with Indonesia sustaining growth momentum and Thailand recovering from supply disruptions caused by recent floods.

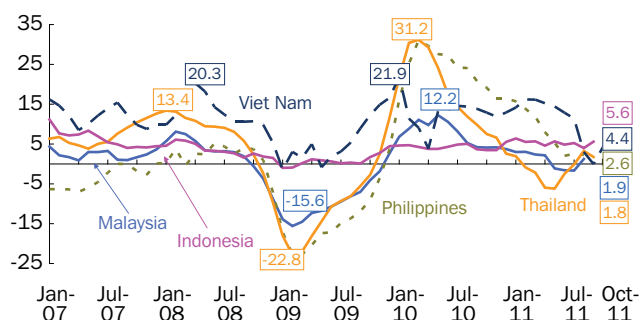
The Indonesian economy will continue to be buoyed by strong domestic demand supported by accommodative monetary policy. In September, retail sales grew a robust 25.1%, and industrial output expanded 5.6% (**Figures 66, 67**). Consumer confidence is also rising (see Figure 5b). The economy should grow 6.6% this year and 6.5% in 2012, primarily driven by domestic demand. Similarly, robust domestic demand from strong remittance inflows will likely sustain growth in the Philippines—3.7% this year and 4.8% in 2012. Malaysia and Thailand, the more open ASEAN economies, are expected to bounce back from supply chain disruptions

Figure 66: Retail Sales Growth¹—Selected ASEAN Economies (y-o-y, %)



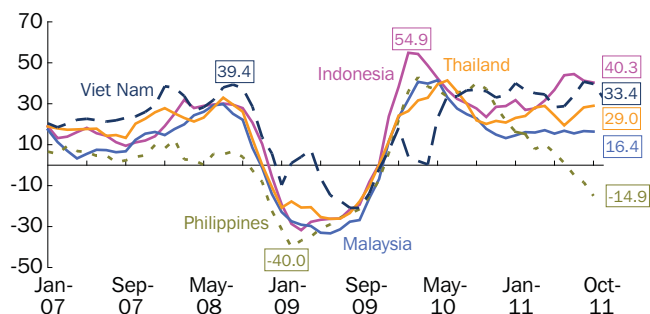
y-o-y = year-on-year.
¹3-month moving average. Latest data for Indonesia as of Sep 2011; Thailand as of Jul 2011.
 Source: ADB calculations using data from CEIC.

Figure 67: Industrial Production Growth¹—ASEAN-4 plus Viet Nam (y-o-y, %)



y-o-y = year-on-year.
¹3-month moving average. Latest data for Indonesia, Malaysia, and Thailand as of Sep 2011; and Philippines as of Aug 2011.
 Source: ADB calculations using data from CEIC.

Figure 68: Merchandise Export Growth¹—ASEAN-4 plus Viet Nam (\$ value, y-o-y, %)



ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand; y-o-y = year-on-year.
¹3-month moving average. Latest data for Indonesia, Malaysia, Philippines, and Thailand as of Sep 2011.
 Source: ADB calculations using data from CEIC.

caused by Japan’s earthquake and tsunami, but may see a slump in exports to the eurozone and the US (**Figure 68**). The forecast for Malaysia is 4.8% growth this year and 4.7% in 2012. For Thailand, the effects of extensive flooding will likely cause further interruption in industrial output. Thailand’s GDP is now forecast to grow 2.0% this year and 4.5% in 2012.

Viet Nam’s economy is expected to pick up as the macroeconomy stabilizes, while the smaller ASEAN economies will continue to improve.

Economic growth in Viet Nam is forecast at 5.8% this year and 6.3% in 2012. Monetary tightening moderated the pace of economic expansion in 2011, but will push growth up in 2012 once macroeconomic stability sets in. Cambodia’s economy is expected to grow 6.8% this year

and 6.5% in 2012, due to policy initiatives in agriculture, real estate, and finance—intended to diversify the economy beyond garment exports and tourism. In the Lao PDR, economic growth should remain robust with continued expansion in mining and hydropower. GDP is expected to expand 8.1% this year and 7.6% in 2012. Brunei Darussalam’s economy will continue to recover, as both oil-and-gas and other sectors continue to rebound. GDP is expected to grow 1.7% this year and 1.8% in 2012. The economy of Myanmar will expand 5.3% this year and 5.4% in 2012, supported by improving agriculture, increased tourism revenues, and larger remittances.

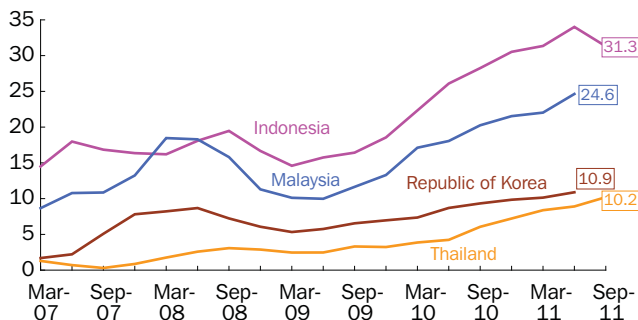
Inflation appears to have peaked, but remains a concern in several economies.

Inflationary expectations should remain steady. Core inflation may slow as global demand for intermediate inputs weakens. Domestic sources of inflation, such as housing shortages and high demand for real estate, are not expected to add pressure as government administrative measures reduce their inflationary impact.

The region’s balance of payments surpluses continue to narrow on reduced export demand and lower capital inflows.

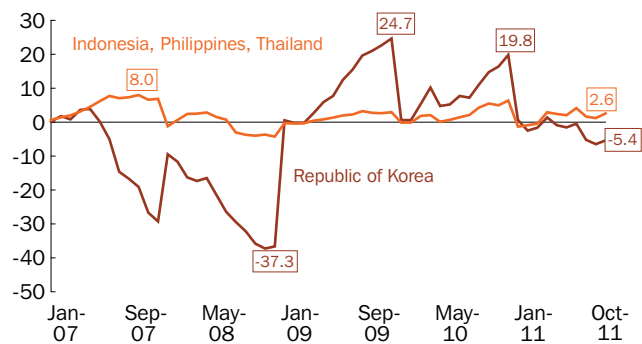
Emerging East Asian economies are expected to retain positive, though narrowing, current account balances—as weakening export markets coupled with strong domestic demand lead to smaller trade surpluses or, in some cases, deficits. Foreign capital may continue to flow into ASEAN-4, given their strong growth and relatively higher interest rates (Figures 69, 70). The NIEs, however, will likely register net capital outflows, particularly portfolio investments. Given the high level of uncertainty in

Figure 69: Foreign Holdings of Local Currency Government Bonds¹ (% of total)



¹Latest data as of June 2011 for the Republic of Korea and Malaysia. Source: ADB AsianBondsOnline.

Figure 70: Net Foreign Portfolio Investment in Equities—Selected Emerging East Asian Economies (\$ billion)



Source: Bloomberg and CEIC.

global financial markets, capital inflows to the region are expected to be volatile.

Risks to the Outlook

The cautiously optimistic outlook for emerging East Asia is subject to much greater downside risks now than just a few months ago.

The main risks include (i) a deep recession in both the eurozone and the US; (ii) protectionism or overly restrictive financial policies that unintentionally disrupt trade finance; (iii) destabilizing capital flows; and (iv) persistent or resurgent inflation.

The global economic recovery could flounder if the eurozone and the US fall back into recession, causing another global financial crisis.

Uncertainty continues over the euro as (i) eurozone leaders continue to grapple with the overall debt crisis, (ii) Greece tries to settle both political and economic fallout from the late October rescue agreement, and (iii) Italy’s new government attempts to calm markets with a credible economic reform package. Any disorderly result could spook markets, spark financial contagion and, in turn, cause a global liquidity crunch. To complicate matters, the US recovery could be disrupted for many reasons, such as falling business and consumer confidence, political gridlock ahead of the 2012 presidential elections, or lack of job growth at the same time that households reduce consumer spending to continue deleveraging. The worst-case scenario is for both the US and eurozone to fall back into recession, pushing the global economy into a deep slump.

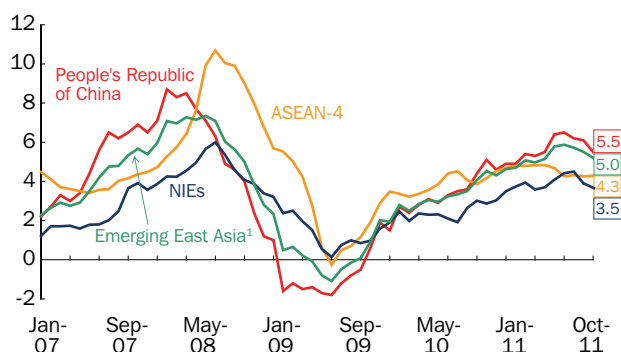
Protectionism or a liquidity crunch in trade finance could significantly reduce global trade.

Trade protectionism has been on the rise since the global economy began to recover from the 2008/09 financial crisis—even if its effect on world trade thus far has been marginal. Nonetheless, several countries have either (i) reintroduced export subsidies or levied higher import tariffs on specified products, (ii) newly subsidized vulnerable or distressed domestic industries, (iv) established additional non-tariff barriers (such as restricting entry points for imports or imposing additional licensing requirements), and (v) lodged anti-dumping complaints with the World Trade Organization and introduced export bans. Disputes over who should bear the cost of global rebalancing could trigger higher trade barriers—or political recrimination that damages global trade. Also, financial tensions could spawn tighter policies that—while intended to help financial institutions through tough times—could force banks to restrict credit lines to businesses, drying up trade finance. Politically motivated protectionism could spark a trade war; a credit crunch would choke business. Either or both may lead to a slump in world trade or, worse, another global recession.

Large and destabilizing capital flows could complicate the region's macroeconomic management and jeopardize economic growth.

The cautiously optimistic growth outlook for emerging East Asia compared with those of the eurozone and the US suggests that capital should continue to flow to the region. However, the lingering eurozone debt crisis could boost risk aversion among investors, with rapid swings in risk appetite boosting capital flow volatility beyond the spurts and stops seen in the third quarter of this year. Consequently, exchange rate volatility would follow from large but fickle capital movements. And large capital flows could also destabilize the real economy, posing major challenges for macroeconomic managers. Excessive capital inflows could lead to undue credit expansion, with adverse macroeconomic consequences, as occurred during the 1997/98 Asian financial crisis. Moreover, abrupt changes in risk sentiment could bring sudden capital flow reversals, damaging the region's growth prospects or exposing otherwise hidden vulnerabilities.

Figure 71: Headline Inflation (y-o-y, %)



ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand; NIE = Hong Kong, China; Republic of Korea; Singapore; and Taipei, China; y-o-y = year-on-year.

¹Refers to ASEAN-4, NIEs, People's Republic of China, and Viet Nam. Weighted using gross national income (atlas method, current \$).

Source: ADB calculations using data from CEIC.

Inflation remains a concern.

For many emerging East Asian economies, headline inflation accelerated since late 2009 on robust economic growth and rising food and energy prices. It is now only starting to ease (**Figure 71**). For some, headline inflation remains above targets or objectives. Output gaps generally narrowed in the third quarter over the second quarter, suggesting economies are close to potential output and can quickly heat up (see Table 3). More importantly, core inflation—excluding food and energy prices—continues edging up. With food and fuel prices still high—and the impact of recent flooding uncertain—inflation expectations could rise leading to dangerous price-wage spirals. Although the weakened external environment should reduce imported inflation somewhat, vigilance is required as rapid price movements imply less macroeconomic space to respond to a potential global slowdown.

Policy Issues

The biggest challenge facing policymakers in emerging East Asia is how to safeguard the region's robust growth against the threat of another global economic crisis.

The region recovered strongly from the 2008/09 global financial crisis—even if economic growth moderated this year due to the effects of unwinding policy stimulus, slowing external demand, Japan's earthquake, and flooding in Thailand. Despite the weaker external environment, robust growth should continue into next year—though at a slower pace. The recovery in advanced economies lost steam this year and they will continue to

struggle. While US economic growth could strengthen somewhat, the eurozone will likely fall into either a brief recession or a more severe long-term downturn. Emerging East Asia is certainly not immune to a major slowdown in advanced economies, which would hurt the region's economic growth and pose significant policy challenges (**“Can East Asia Weather Another Global Economic Crisis?”—page 43**).

With the eurozone's sovereign debt crisis unfolding and risks of faltering global recovery rising, macroeconomic policy must remain cautious and prudent.

Many of the region's economies continued to unwind macroeconomic stimulus in the first half to counter price pressures. When the eurozone crisis, the gridlock in US politics, and the US credit rating downgrade began to unravel global financial markets in July, policymakers across the region largely chose a “wait and see” stance, momentarily halting further policy tightening. The People's Bank of China lowered its reserve requirement ratio for the first time in three years as Bank Indonesia and Bank of Thailand cut their policy rates. Authorities may be concerned over the region's high dependence on external demand, financial contagion, and the potential impact of an economic slowdown in the eurozone and the US. Robust domestic demand and lingering inflationary pressures in some economies may prevent policymakers in some countries from loosening macroeconomic policy.

Continued uncertainty over the eurozone debt crisis and recovery in the US underscores the need to retain sufficient flexibility to quickly fine-tune policy levers.

If the crisis does not worsen and the eurozone begins to orderly resolve its debt problems, prudent macroeconomic management is still required to boost domestic demand given the expectations of continued weak external demand—all the while containing risks from continued inflationary pressures. In economies with robust growth and lingering inflation, authorities may need to continue to unwind policy stimulus. In economies with relatively weak growth and low inflation, policymakers may be able to fine-tune policy to support growth.

Should the eurozone fall into a full-blown financial and economic crisis, emerging East Asian economies must respond promptly, decisively, and collectively.

Should the downside risks from the eurozone and US materialize, market reaction to the eurozone debt crisis could trigger financial contagion and a global liquidity crisis. The eurozone could fall into a deep and long recession, possibly of the same magnitude as in 2008/09, dragging the US into recession as well. As the special section explains, the impact of another deep recession in the eurozone and US would be significant yet manageable. The region's policymakers will need to act promptly, nonetheless, to stem the threat to both their financial systems and the real economy. As in late 2008, they must be decisive in order to rebuild confidence among businesses and consumers. And they must cooperate and act collectively to minimize any damages further financial contagion could cause. As high public debt and fiscal deficits in many advanced economies may take many years to return to relatively healthy levels, policymakers in the region should also be prepared for a prolonged, weak recovery in advanced economies.

Policymakers must strive to ensure regional financial stability.

With the specter of severe financial contagion from Europe, policymakers in emerging East Asia will need to continue bolstering the foundations of financial stability and avoid any deterioration in market confidence. This could involve ring-fencing financial systems, providing adequate liquidity to financial institutions, and containing spillover effects from worsening financial or macroeconomic conditions on the region's banking systems. Authorities have learned lessons well from previous crises and will address any weakness and vulnerability found in real economies, financial sectors, and the link between the two. The 2008/09 global financial crisis unmasked major regulatory and supervisory gaps related to institutional and market conduct, and the eurozone debt crisis illustrates how differences in competitiveness are transformed into vulnerabilities in finance (both private and public)—compounded by the single currency. Policymakers could consider the medium- to long-term agenda of improving and streamlining financial regulatory and supervisory regimes in conjunction with global efforts. The region must also play a greater role on the global stage to ensure the new financial architecture meets both the

challenges of globalized finance and the region's financial development agenda.⁵

Regardless of short-term adjustments in responding to immediate economic events, emerging East Asia needs to continue its structural reforms and supply-side policies to sustain long-term growth.

The region's future depends on developing new growth sources or drivers of the economy, and policymakers must be allowed to prioritize policies that foster factor accumulation and productivity growth. In particular, four areas stand out—human capital, infrastructure, financial development, and promoting small and medium enterprises (SMEs). These will augment growth by increasing available factors of production and supporting their efficient use.⁶ Increased investment in human capital will enhance economic capacity to import, adapt, and innovate technology. Recent empirical evidence suggests that infrastructure stocks positively impact economic growth—and galvanizing the massive investment required is a major challenge. Integrated and deeper financial systems (including capital market development) will promote better project risk-assessment and risk-management, which in turn will foster better intermediation of the region's savings into productive investment. A large share of the region's labor—clear majorities in many countries—are employed in SMEs, which often operate under difficult circumstances. Public policy can help SMEs become more productive by improving access to finance and helping SMEs adopt new technologies and access new markets.⁷

With demand from the eurozone and the US expected to remain weak for some time, emerging East Asia should continue to work toward increasing intraregional trade and financial integration, and expanding links with other emerging economies.

International trade has been the engine of growth for emerging East Asia. Its significance in raising living standards across the region has been widely

acknowledged and substantiated. Increased intraregional and “South-South” trade will provide Asian exports more diversified markets, reducing dependence on advanced or more mature markets. The region's production and trade networks can be adjusted to accommodate more domestic and regional consumption. Consequently, intraregional trade will expand in volume and scope. In addition, the region should also foster financial flows within the region to integrate and deepen the region's financial markets. Furthermore, economic links between emerging economies has huge potential as a new source of growth for the region. To promote this expansion, structural weaknesses such as trade barriers, uncompetitive domestic industries, and poor trade-related infrastructure and logistics must be overcome.⁸

Emerging East Asia could accelerate regional policy cooperation to mitigate the effects of external shocks.

National policies can have significant spillover effects, or externalities, on other economies. This implies that externalities be taken into account in the decision-making process to reach a global or regional optimum. Policy coordination can ensure externalities are identified and taken into account. In particular, contingency plans for coordinated policy action should be formulated in case the external environment worsens. For example, monetary authorities could coordinate policies to boost domestic and regional demand, and ensure intraregional exchange rate stability while maintaining inter-regional exchange rate flexibility. Exchange rate cooperation could promote intraregional trade and investment and help rebalance the region's sources of growth.⁹ Authorities should work toward further enhancing the Chiang Mai Initiative Multilateralization as a strong regional financial safety net with crisis-prevention capabilities. Policymakers could also collaborate at regional and global levels to avoid trade protectionism. The Asian Bond Market Initiative and Credit Guarantee and Investment Facility can also be further enhanced to facilitate capital market development in the region.

⁵ADB. 2009. Beyond the Crisis: Regulatory Reform in Emerging East Asia. *Asia Economic Monitor July 2009*. <http://www.aric.adb.org/asia-economic-monitor/2009-July>.

⁶ADB. 2010. The Future of Growth in Asia. *Asian Development Outlook 2010 Update*. Manila.

⁷ADB. 2009. *Key Indicators 2009: Enterprises in Asia: Fostering Dynamism in SMEs*. Manila.

⁸ADB. 2011. South–South Economic Links. *Asian Development Outlook 2011*. Manila.

⁹ADB. 2010. Exchange Rate Cooperation: Is East Asia Ready? *Asia Economic Monitor December 2010*. <http://www.aric.adb.org/asia-economic-monitor/2010-December>.

Can East Asia¹⁰ Weather Another Global Economic Crisis?

Introduction

There is rising concern that the unresolved eurozone sovereign debt crisis could spread, resulting in a wider, more severe financial crisis and a sharp global economic slowdown.

The already anemic global economic outlook could worsen should the Greek debt crisis spread to other larger highly indebted eurozone economies—such as Italy or Spain. Despite recent collaborative efforts to resolve the crisis, the threat of a disorderly debt default in Greece and ensuing contagion is rising. The heavily exposed eurozone banking system could suffer dramatically as a result of any sovereign default. There could be severe repercussions for eurozone financial systems and for economic growth (it has already begun to slow). More worrying, eurozone financial instability could spill over to markets in the United States (US) and elsewhere, further damaging global economic activity. With Europe focused on fiscal austerity, there is little scope for fiscal stimulus to support economies in the event of another recession.

The impact of a eurozone debt crisis could affect US financial institutions, disrupting the fragile recovery in the US.

While the US economy edges forward—with growth forecasts looking somewhat brighter—the recovery could falter as unemployment stays stubbornly high and the housing market remains moribund. A full-fledged European crisis could dampen US efforts given the close economic and financial ties between the two. Therefore, the risk of a double-dip recession in the US has also risen, with its high fiscal deficit and continued political deadlock in Congress limiting available responses to another economic downturn. On the monetary front, the US Federal Reserve has shown more willingness to adopt more expansionary policies. However, with policy rates close to zero, the two rounds of quantitative easing had limited impact and further easing would likely have minimal effect as well.

With the risk of another global financial crisis increasing, a critical question is whether East Asia has the means to withstand another global shock.

The threat of double-dip recessions in the eurozone and US has elevated concerns among the region's policymakers over how another contraction would affect the region. Memories of the sharp slowdown from the 2008/09 global financial crisis remain fresh. Many East Asian economies suffered large declines in trade and output. In addition, the region's financial sector and stock markets were battered as foreign investors fled to “safe havens” elsewhere. Still, the region recovered quickly—primarily because (i) its financial institutions held few toxic assets, (ii) the global financial system stabilized quickly—with sizable liquidity injections and government guarantees—and (iii) there was sufficient monetary and fiscal space for effective stimulus. The region has posted robust growth since.

This time around, however, any new global financial crisis would likely last longer— as weaker fiscal conditions in the eurozone and US limit their capacity to rescue financial systems.

With advanced economies' sovereign credit ratings under scrutiny, the scope for rescuing troubled financial institutions is limited. Government guarantees are less valuable. This makes it more difficult to resolve any new global financial crisis quickly. This note assesses how East Asian economies would be affected by a new global financial crisis. It begins by identifying and examining the risks of another crisis. It then analyzes crisis transmission channels. It compares the region's current economic position relative to that just prior to the 2008/09 crisis to isolate changing vulnerabilities. And to provide a quantitative estimate of the potential impact, it simulates the effects a new global financial crisis might have. The note continues with suggestions on how policymakers could respond.

¹⁰Unless otherwise indicated, East Asia refers to emerging East Asia (Brunei Darussalam; Cambodia; People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Lao People's Democratic Republic; Malaysia; Myanmar; Philippines; Singapore; Taipei, China; Thailand; and Viet Nam) plus Japan.

What are the risks of another global financial crisis?

The most pressing concern is whether the sovereign debt crisis in Europe will spread from Greece to other larger eurozone economies.

The European sovereign debt crisis will likely persist unless there is a much more determined effort to place a firewall around Greece. Bond markets have already factored in a Greek debt default. The latest European Union (EU) plan to resolve the crisis includes private investors taking a voluntary 50% haircut on the nominal value of Greek bonds. The main concern is that a Greek default could impact other highly indebted EU economies such as Portugal, Ireland, Italy, and Spain, which would likely come under further investor scrutiny. It is this fear of contagion that brought several attempts by eurozone governments to piece together a Greek rescue package that would prevent the crisis from spreading further. Most recently the fear has spread to Italy—the eurozone’s third largest economy—which, with a high public debt, has seen its sovereign debt rating downgraded and is grappling with rising bond yields. Belgium also had its rating downgraded recently. So far, the lack of decisive collective action has left the future of the Greek debt situation uncertain. It leaves a cloud hanging over the fate of other highly indebted eurozone economies.

Europe’s already fragile banking sector could be further destabilized by the spreading debt crisis—leading to reduced lending or possible bank failures.

The eurozone crisis is also affecting banking systems. Many European banks—especially French and German—hold large amounts of “periphery”¹¹ country sovereign debt (**Table 13**). These exposures are potentially larger if one includes financial derivatives such as credit default swaps (CDS). The rescue of Dexia by France and Belgium underscored the fragility of Europe’s banks. Of particular concern was that Dexia ranked 12th best in recent stress tests by the European Banking Authority. Worries over the health of Europe’s banks have led to many bank downgrades (**Table 14**). A widening sovereign debt crisis would bring large losses for banks, eroding their capital base. With many European banks already facing capital shortfalls, there is urgency in raising new

¹¹Peripheral countries include GIIPS (Greece, Ireland, Italy, Portugal, and Spain).

Table 13: GIIPS Debt Exposure of French, German, and British Banks (as of June 2011, \$ million)

Borrower	Lender		
	French Banks	German Banks	British Banks
Greece			
Public sector	10,686	12,411	3,251
Banks	1,583	1,842	1,052
Non-bank private sector	43,470	7,119	8,339
Ireland			
Public sector	2,896	3,470	3,709
Banks	9,841	21,532	16,868
Non-bank private sector	19,278	85,507	120,272
Italy			
Public sector	106,764	47,624	17,430
Banks	44,657	48,338	8,898
Non-bank private sector	264,952	65,795	47,391
Portugal			
Public sector	6,153	8,978	1,859
Banks	6,170	12,554	3,958
Non-bank private sector	13,339	14,320	19,622
Spain			
Public sector	30,492	29,454	7,638
Banks	38,616	69,144	17,980
Non-bank private sector	81,784	78,867	75,263

GIIPS = Greece, Ireland, Italy, Portugal, and Spain.

Source: Table 9E (Consolidated foreign claims and other potential exposures—ultimate risk basis), Bank for International Settlements.

capital. However, with low investor confidence, it will likely be difficult and costly to raise amounts required. Therefore, banks may be forced to shrink their assets by reducing lending. This would reduce business lending stunting economic growth. In a worst case scenario, the deteriorating health of the eurozone economy and large losses on sovereign debt could lead to bank failures. This could in turn lead to panic and a lending freeze.

Crisis contagion in Europe will likely push the eurozone into a deep and prolonged recession.

Our baseline forecasts already envisage a gloomy outlook for the eurozone—the region’s economy is forecast to grow 1.7% this year and 0.5% in 2012 (see Table 11). Should the debt crisis spread to Italy or Spain, for example, the eurozone will likely fall into a deep recession. The widening crisis would batter already

Table 14: Long-Term Rating Downgrade of Top eurozone Banks¹

Country	Number of banks downgraded	Ratio to rated banks (%)	Total assets of downgraded banks (\$ billion)	Ratio to total assets of all rated banks (%)
Austria	1	25.0	275	34.2
Belgium	6	100.0	2,560	100.0
Finland	2	100.0	494	100.0
France	13	61.9	11,935	76.7
Germany	17	65.4	7,609	64.7
Greece	4	100.0	444	100.0
Ireland	6	100.0	1,285	100.0
Italy	10	100.0	3,603	100.0
Netherlands	6	75.0	4,341	90.6
Portugal	2	100.0	302	100.0
Spain	10	76.9	3,859	87.2

¹Based on October 2011 assessment of Fitch Ratings. Top banks based on the 300 largest banks in Europe in terms of total assets in US dollars.
Source: Bankscope.

fragile consumer confidence and prompting businesses to hold back on future investment. This will exacerbate already high unemployment. In addition, it could spark even more fiscal consolidation to calm financial markets, further dampening aggregate demand across the region.

Despite the huge economic challenges, the sheer size of fiscal deficits and public debt limit the ability of authorities to respond aggressively.

As eurozone economies slow due to continued uncertainty, there is limited scope for fiscal stimulus, as affected eurozone governments are already highly indebted and running large fiscal deficits (**Table 15**). Thus, should the eurozone slip into deep recession, governments will have few tools to respond. Eurozone governments continue to pursue fiscal austerity despite weakening economic conditions. In addition, the European Central Bank is unlikely to run a more expansionary monetary policy as it worries of stoking inflation—even if inflation currently remains low. Should the crisis escalate, there is limited scope for governments to reflate their economies.

Table 15. Eurozone Fiscal Balance and Public Debt (% of GDP)

	Primary fiscal balance ¹		Gross public debt ²	
	2005	2010	2005	2010
eurozone	0.5	-3.4	70.1	85.4
Austria	1.2	-1.7	64.2	71.8
Belgium	1.5	-0.7	92.0	96.2
Cyprus	1.1	-3.1	69.4	61.5
Estonia	1.8	0.4	4.6	6.7
Finland	4.3	-1.5	41.7	48.3
France	-0.3	-4.6	66.4	82.3
Germany	-0.5	-1.8	68.6	83.2
Greece	-0.7	-5.0	100.0	144.9
Ireland	2.7	-28.2	27.2	94.9
Italy	0.2	-0.1	105.4	118.4
Luxembourg	0.2	-0.7	6.1	19.1
Malta	0.7	-0.6	69.7	69.0
Netherlands	2.1	-3.1	51.8	62.9
Portugal	-3.4	-6.8	62.8	93.3
Slovakia	-1.1	-6.3	34.2	41.0
Slovenia	0.1	-4.2	26.7	38.8
Spain	3.1	-7.4	43.1	61.0

GDP = gross domestic product.

¹Net borrowing/net lending less consolidated interest expenditure.

²Consolidated gross debt.

Source: Eurostat.

Should periphery members decide the cost of remaining in the eurozone is prohibitive, several could abandon the euro—leading to a potential catastrophic disruption of the global economy.

Facing unsustainable debt and many years of fiscal austerity and belt tightening, Greece could decide to abandon the euro. While unlikely—as eurozone leaders remain strongly committed to retaining Greek membership—the return of the drachma (or introducing a new currency) would carry the benefit of allowing devaluation to rebuild competitiveness. However, it would be at the cost of being shut out of global financial markets. There would also likely be a massive bank run in Greece as people rush to withdraw euro deposits before devaluation. To avoid this, capital controls would have to be imposed, breaking the EU rule on free flowing capital. While abandoning the euro might allow Greece to escape its heavy debt burden, it would have large spillover effects on other eurozone economies. Borrowing costs

may rise sharply as other countries consider following the Greek lead—resulting in greater losses for sovereign bond holders. For European banks—which hold most Greek debt—it could lead to large scale bank failures and bailouts by already fiscally stretched eurozone governments.

US economic growth has been edging upward, but remains fragile; and the outlook could deteriorate.

Across the Atlantic, US economic growth has been rising somewhat with the outlook slightly more optimistic given improved third quarter data. However, downside risks are many. For example, current growth rates are unlikely to reduce unemployment, which will likely put downward pressure on wages and constrain consumer spending. Also, continued housing weakness leaves many homeowners owing more than the value of their

homes, making them feel poorer and limiting their spending power. Congressional budget gridlock and deficit reduction leaves little room to revive the economy. The failure of the so-called budget “super committee” is the latest example. New fiscal stimulus is unlikely and monetary tools are limited. Thus, the outlook for the US economy is for continued anemic growth.

A severe recession in the eurozone could easily push the US into recession as well.

With feeble US domestic demand, an external shock like a severe eurozone recession could easily lead to economic contraction. During the global financial crisis, US toxic assets brought large losses to European banks. This time it could be the reverse. The recent failure of MF Global is one example of the close links. US borrowings from Europe’s banks are more than 10% of US domestic credit (**Table 16**). Derivatives such as CDS

Table 16: Exposure to US and European Banks by Region
(as of June 2011, % of Borrower’s Domestic Credit)

Borrower	Lender						
	US Banks	European Banks					
		Total	France	Germany	UK	GIIPS	Rest of Europe
East Asia	2.2	5.0	0.9	0.5	2.7	0.1	0.8
Japan	1.7	2.4	0.8	0.3	0.7	0.0	0.5
Emerging East Asia	2.7	8.3	1.0	0.7	5.2	0.2	1.3
ASEAN-4 plus Viet Nam	4.2	10.5	1.3	1.1	6.5	0.1	1.5
Indonesia	6.0	13.3	1.6	2.0	6.5	0.1	3.1
Malaysia	5.7	16.7	1.5	1.1	12.8	0.1	1.2
Philippines	7.5	15.1	2.6	1.7	7.1	0.1	3.6
Thailand	2.2	4.7	0.5	0.7	2.9	0.0	0.6
Viet Nam	1.2	6.5	2.3	0.9	2.6	0.1	0.7
NIEs	7.0	22.0	2.6	1.7	14.0	0.4	3.3
Hong Kong	10.9	72.1	5.4	2.7	56.1	1.7	6.2
Republic of Korea	8.3	16.4	2.8	1.7	8.8	0.2	2.8
Singapore	25.7	78.6	8.7	9.8	37.9	0.9	21.3
Taipei, China	2.7	4.9	0.9	0.4	2.9	0.0	0.7
People’s Republic of China	0.8	2.7	0.3	0.2	1.6	0.2	0.4
US	na	10.9	1.7	1.6	3.2	0.9	3.4
eurozone	3.8	28.0	6.3	5.3	4.5	4.6	7.4

eurozone = Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia and Spain; GIIPS = Greece, Ireland, Italy, Portugal, and Spain; na = not applicable; NIE = newly-industrialized economy; UK = United Kingdom; US = United States.

Note: Red implies an increase in exposure compared with September 2008 in terms of GDP percentage value greater than \$100 million; green implies a decrease in exposure; and black implies no change. Emerging East Asia includes People’s Republic of China; ASEAN-4 plus Viet Nam and NIEs. East Asia includes emerging East Asia plus Japan. Domestic credit as of March 2011 for Japan, Philippines and Viet Nam.

Source: ADB calculations using data from Table 9D (Consolidated foreign claims of reporting banks—ultimate risk basis) of the Bank for International Settlements and CEIC.

on eurozone sovereign debt could bring substantial losses in the event of a default—further deleveraging the US banking system. Given current congressional gridlock and monetary options, policy responses to shocks emanating from the eurozone are likely to be limited.

There are significant risks that both the eurozone and US could suffer a severe and prolonged recession should Europe’s financial crisis deepen significantly.

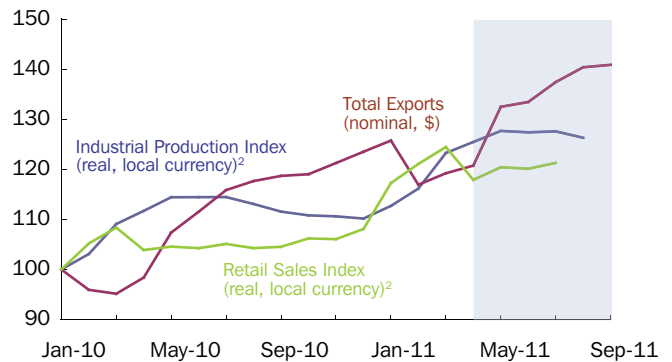
The eurozone and US economies are now weaker than before the 2008/09 global financial crisis. Their governments are also much more fiscally stretched than in 2008/09. Thus, they cannot afford to support any major bank recapitalization. Subsequent bank deleveraging would depress asset prices, reduce credit supply, and raise lending costs to businesses and consumers—thus dampening private demand. Fiscal austerity saps strength from the economy, while monetary policy cannot offer much traction. Also, financial system stress feeds recession, with the risk that the vicious cycle continues. All this suggests that should the eurozone and US fall into recession anew, it could be deeper, more persistent, and lead to weak and delayed recovery. Thus, it is prudent to examine worst case scenarios and analyze their impact on East Asian economies. An analysis of the impact of a eurozone breakup is beyond the scope of this note—as it could be catastrophic and not easily captured by the model.

How would another global financial crisis impact East Asia?

The region’s economies were severely affected during the global economic slowdown in 2008/09; but most rebounded rapidly.

The 2008/09 global financial crisis immediately hit East Asian markets to varying degrees with credit and equity markets battered—as risk aversion led to a major rise in capital outflows to safe haven assets. The spillover to the real economy led to large declines in trade and GDP growth. Nonetheless, the region recovered quickly and has posted rapid growth since—largely due to strong policy responses from authorities based on massive fiscal and monetary stimulus. East Asian banking systems had the wherewithal to withstand the financial turmoil as they were well capitalized and held few toxic assets. The rapid recovery was aided as global financial markets

Figure 72: Impact of Current Financial Crisis—Emerging East Asia¹ (Jan 2010 = 100)



¹Includes ASEAN-4 (Indonesia, Malaysia, Philippines, and Thailand), People’s Republic of China, NIEs (Hong Kong, China; Republic of Korea; Singapore; and Taipei, China), and Viet Nam.

²Aggregates are computed using gross national income (Atlas method, current \$) as weight. Excludes Hong Kong, China in industrial production index, and Malaysia in retail sales index as monthly data unavailable.

Source: ADB calculations using data from CEIC; national sources; and *World Development Indicators*, World Bank.

stabilized quickly following US and eurozone government intervention to restore confidence.

Thus far, the eurozone’s sovereign debt crisis and anemic US recovery have had limited impact on the region’s economic growth.

While the region’s economic expansion has moderated this year, it remains robust roughly in line with recent historical trends. Exports and industrial production, while slowing, have continued to grow (**Figure 72**). The economic resilience is partly due to rebalancing sources of growth from external to domestic demand. Consumption and investment are growing in importance as drivers of growth (see Figure 3). Financial systems have been little affected by financial market volatility and have continued channeling funds for investment. Growth in bank lending, while slowing, remains robust.

Historically, the impact of eurozone and US recessions on East Asia has been increasing.

Both the US and eurozone are major markets for the region’s exports and significant sources of financial capital. Hence, any shock to both will have strong repercussions on the region. An examination of four previous episodes of US and eurozone recessions shows their impact on East Asia has been increasing (**Table 17**). In the two 1990s recessions, East Asia in aggregate

Table 17: Impact of US and eurozone Recessions¹
(percentage points)

	1991	1992/93 ²	2001	2008/09 ²
Changes in GDP growth				
US	-2.1	1.5	-3.0	-2.7
eurozone	-1.1	-1.7	-1.8	-3.6
East Asia ³	-1.2	-0.9	-2.8	-2.9
Japan	-2.2	-1.6	-2.7	-4.3
EEA	1.6	0.4	-3.0	-2.3
ASEAN ⁴	-1.4	0.2	-2.3	-2.0
NIEs ⁵	0.5	-0.8	-6.4	-3.2
PRC	5.4	2.4	-0.1	-2.5
Median for EEA	0.5	0.2	-2.0	-2.6

Impact of 1 percentage point change in US growth

	contraction	expansion	contraction	contraction
US				
eurozone	-0.5	-1.1	-0.6	-1.3
East Asia ³	-0.6	-0.6	-0.9	-1.1
Japan	-1.1	-1.0	-0.9	-1.6
EEA	0.7	0.3	-1.0	-0.9
ASEAN ⁴	-0.6	0.1	-0.8	-0.7
NIEs ⁵	0.3	-0.5	-2.1	-1.2
PRC	2.6	1.6	0.0	-0.9
Median for EEA	0.3	0.1	-0.7	-1.0

Impact of 1 percentage point change in eurozone growth

	contraction	contraction	contraction	contraction
eurozone				
US	-1.9	0.9	-1.7	-0.7
East Asia ³	-1.1	-0.6	-1.6	-0.8
Japan	-2.0	-0.9	-1.5	-1.2
EEA	1.4	0.2	-1.6	-0.6
ASEAN ⁴	-1.2	0.1	-1.3	-0.6
NIEs ⁵	0.5	-0.5	-3.5	-0.9
PRC	4.9	1.4	-0.1	-0.7
Median for EEA	0.5	0.1	-1.1	-0.7

PRC = People's Republic of China; EEA = Emerging East Asia; eurozone = Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia and Spain; GDP = gross domestic product; NIE = newly industrialized economy; US = United States.

¹Recession years in the US (1991, 2001, 2008/09) and eurozone (1992/93).

²Average for the period.

³Includes emerging East Asia plus Japan.

⁴Excludes Singapore.

⁵Includes Hong Kong, China; Republic of Korea; Singapore; and Taipei, China.

Source: ADB calculations using data from *World Economic Outlook Database* and *Direction of Trade Statistics*, International Monetary Fund; and CEIC.

contracted less than in the two recessions during the 2000s. Analyzing the ratio of change, it becomes clear that the impact of US and eurozone recessions has grown. It is not surprising that the more export-oriented newly industrialized economies suffered more than the middle income ASEAN during the US and eurozone recessions. As the People's Republic of China's (PRC's) exports grew, it has also become more sensitive to recessions in the US and eurozone.

As may seem obvious, economies that are more export-dependent or trade heavily with the eurozone and US—and more reliant on manufactured exports—would be most affected by a new global crisis.

Any financial or economic shocks from the eurozone and US will impact the more export-oriented East Asian economies (**Table 18**). However, since 2009 the region has increased domestic and regional demand as sources of growth, thus reducing its overall dependence on eurozone and US demand. While still crucial trading partners, their share of East Asian exports has fallen below the average of the previous eight years (**Table 19**). This should make the region less vulnerable to future drops in external demand. The region's economies have diversified export markets, increasing intraregional trade in East Asia, particularly to the PRC—which itself has increased exports to Latin America and Africa. The shifting composition of trade may also affect demand for the region's exports in a crisis. Exports in manufactures are more income elastic and thus would likely suffer a larger drop, while commodity exports—which tend to have lower income elasticity—would be less affected (**Table 20**).

The financial channel would also impact East Asia through capital outflows and the liquidation of foreign asset holdings.

In 2008, soon after the mid-September Lehman Brothers collapse, a sudden spate of capital outflows struck the region as global risk perception increased and uncertainty rose over who ultimately held toxic subprime assets. A large and rapid drop in equity indexes hit several East Asian markets. The drop impacted real economies as the fall in household wealth reduced consumption. A new global financial crisis would likely reverse capital inflows to the region as well. The uncertainty this time would be which banks or institutions hold affected eurozone sovereign debt. Since the start of the current eurozone crisis, the MSCI Asia and eurozone stock markets have

Table 18: Trade Openness¹ (% of GDP)

Economies	2005	2010	Economies	2005	2010
East Asia²	30.6	30.5	Philippines	40.0	25.9
Japan	13.1	14.1	Thailand	62.5	61.3
Emerging East Asia³	48.0	40.0	Viet Nam	61.3	67.4
ASEAN⁴	53.8	42.4	NIEs	66.3	78.8
Brunei Darussalam	59.1	66.7	Hong Kong, China	162.9	173.9
Cambodia	47.9	47.9	Republic of Korea	33.8	46.4
Indonesia	30.0	22.3	Singapore	183.1	158.8
Lao People's Democratic Republic	25.5	34.0	Taipei, China	54.4	63.9
Malaysia	102.1	83.6	People's Republic of China	33.8	26.9
Myanmar	30.9	14.3			

NIE = newly industrialized economy.

¹Refers to merchandise exports in US dollars as percent of nominal gross domestic product.

²Includes emerging East Asia plus Japan.

³Includes ASEAN, NIEs, and People's Republic of China.

⁴Excludes Singapore.

Source: ADB calculations using data from *Direction of Trade Statistics* and *World Economic Outlook Database September 2011*, International Monetary Fund.

Table 19: Destination of Exports (% of GDP, period average)

Origin	Destination									
	United States		eurozone		Japan		People's Republic of China		Intraregional	
	2001-08	2009-10	2001-08	2009-10	2001-08	2009-10	2001-08	2009-10	2001-08	2009-10
East Asia¹	5.3	4.0	3.5	3.2	2.2	3.2	3.6	4.2	12.2	12.7
Japan	3.0	2.1	1.5	2.5	na	na	1.7	2.5	5.1	6.0
Emerging East Asia²	11.1	6.8	6.9	5.2	4.4	3.0	7.2	6.9	18.4	16.2
ASEAN-4 plus Viet Nam	8.5	5.1	5.7	4.0	7.5	5.1	3.6	5.4	5.1	5.0
Indonesia	3.4	2.0	3.0	2.1	6.2	3.5	1.7	2.2	2.5	2.6
Malaysia	17.6	9.6	9.4	7.4	10.1	8.3	6.7	14.6	9.1	9.5
Philippines	8.0	4.0	6.1	3.7	6.4	3.7	2.9	3.6	3.8	2.2
Thailand	9.4	6.3	6.2	4.5	8.0	6.2	4.6	6.4	7.1	8.3
Viet Nam	10.3	13.1	8.1	8.0	8.1	7.0	5.2	5.7	5.2	5.8
NIEs	9.8	7.4	6.4	6.0	4.4	4.0	15.5	22.1	8.9	9.3
Republic of Korea	5.3	4.5	3.8	3.7	2.8	2.6	6.5	11.4	4.5	5.0
Hong Kong, China	25.0	18.4	14.5	13.6	7.6	7.0	66.7	84.8	7.1	6.3
Singapore	18.8	10.0	15.0	11.2	9.8	7.0	13.1	15.4	25.7	27.5
Taipei, China	8.5	6.8	4.9	4.5	4.2	4.0	10.2	16.1	13.5	11.9
People's Republic of China	6.0	4.6	0.7	1.5	3.6	2.6	na	na	29.9	24.9

GDP = gross domestic product; NIE = newly industrialized economy.

na = not applicable.

¹Includes emerging East Asia plus Japan.

²Includes ASEAN-10 (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam); People's Republic of China; Hong Kong, China; Republic of Korea; and Taipei, China.

Source: ADB calculations using data from *Direction of Trade Statistics* and *World Economic Outlook Database September 2011*, International Monetary Fund and CEIC.

Table 20: Composition of Exports¹ (% of total, period average)

	2001-2008		2009-2010	
	Manufacturing ²	Others	Manufacturing ²	Others
East Asia³	88.7	11.3	87.2	12.8
Japan	92.8	7.2	89.8	10.2
Emerging East Asia⁴	87.5	12.5	86.7	13.3
ASEAN-4 plus Viet Nam	69.7	30.3	64.7	35.3
Indonesia	50.6	49.4	42.1	57.9
Malaysia	74.1	25.9	69.7	30.3
Philippines	90.0	10.0	87.3	12.7
Thailand	75.6	24.4	72.8	27.2
Viet Nam	51.4	48.6	59.1	40.9
NIEs	90.8	9.2	87.7	12.3
Hong Kong, China	96.0	4.0	94.4	5.6
Republic of Korea	91.6	8.4	90.3	9.7
Singapore	81.2	18.8	73.7	26.3
Taipei, China	93.2	6.8	91.0	9.0
People's Republic of China	92.8	7.2	94.7	5.3

NIE = newly industrialized economy.

¹Based on first-digit level Standard International Trade Classification, Revision 3.

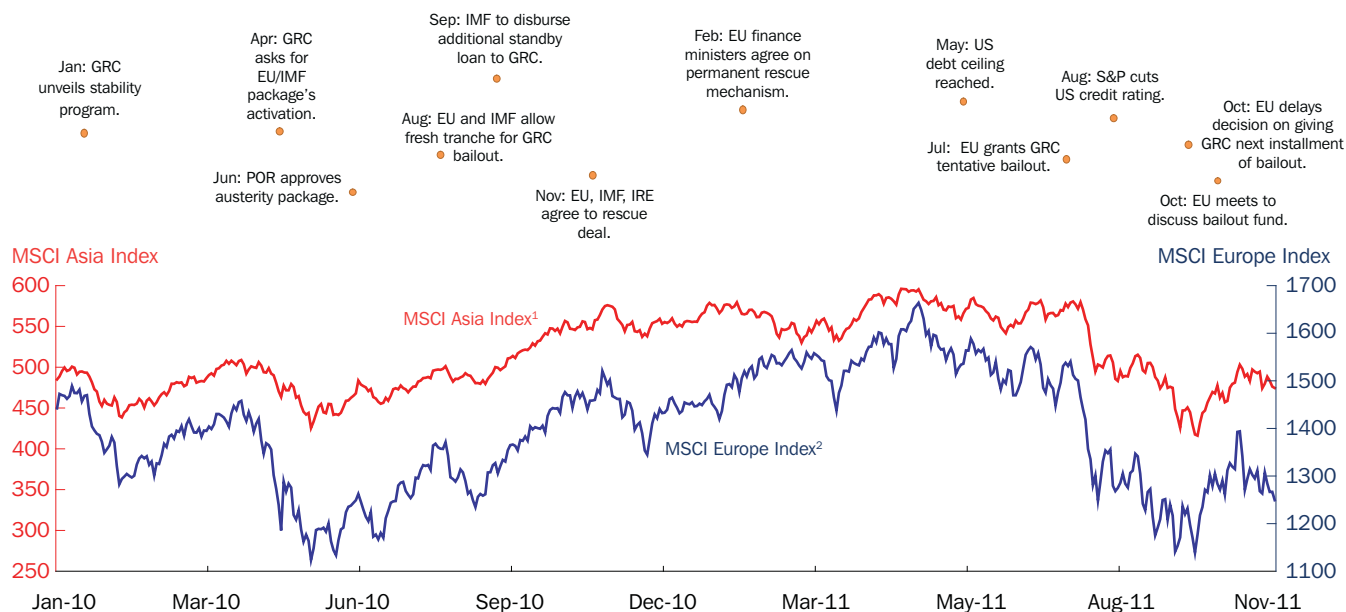
²Refers to the sum of chemicals and related products, manufactured goods classified chiefly by material, machinery and transport equipment, and miscellaneous manufactured articles.

³Includes emerging East Asia plus Japan.

⁴Includes ASEAN-4 plus Viet Nam, NIEs, and People's Republic of China.

Source: ADB calculations using data from CEIC and United Nations Commodity Trade Database.

Figure 73: Current Financial Crisis Timeline



EU=European Union, GRC=Greece, IRE= Ireland, POR=Portugal, IMF=International Monetary Fund, S&P = Standard and Poor's.

¹Designed to measure the equity performance of Asia, excluding Japan. It consists of the country indexes: People's Republic of China; Hong Kong, China; India; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei, China; and Thailand.

²MSCI Europe Index includes 16 developed market country indexes.

Source: ADB compilation based on Datastream for MSCI Index data; and news articles.

Table 21: Portfolio Investment to East Asia by Origin (% of Destination's GDP)

Destination	Origin							
	United States		eurozone		Japan		Selected Emerging East Asia ¹	
	2001	2009	2001	2009	2001	2009	2001	2009
East Asia	4.6	7.0	2.1	5.1	0.3	0.5	1.0	2.3
Japan	4.8	8.0	2.1	6.7	na	na	0.5	0.9
Emerging East Asia	4.4	6.3	2.1	4.0	0.8	0.8	1.7	3.2
ASEAN-4 plus Viet Nam	2.7	5.2	1.3	3.2	1.1	0.7	3.6	2.3
Indonesia	1.1	4.2	1.0	2.4	0.1	0.5	0.6	3.2
Malaysia	4.6	9.8	2.2	5.7	2.7	1.6	10.5	1.8
Philippines	5.3	5.5	1.9	6.3	2.0	1.0	3.5	3.6
Thailand	2.3	5.4	1.1	1.9	0.9	0.7	3.2	0.8
Viet Nam	0.1	0.4	0.0	0.2	0.1	0.1	0.2	0.0
NIEs	10.4	19.7	3.9	11.1	1.4	2.6	2.0	6.7
Hong Kong, China	19.2	44.4	12.5	28.4	3.7	7.9	3.3	12.7
Republic of Korea	6.8	12.6	1.8	5.8	1.2	1.6	1.7	7.1
Singapore	26.0	28.4	6.2	17.5	2.4	5.5	4.0	7.8
Taipei, China	6.8	17.9	1.8	10.2	0.2	0.7	1.2	2.6
People's Republic of China	0.2	2.0	1.3	1.9	1.2	0.3	0.8	2.2

GDP = gross domestic product, na = not applicable, NIE = newly industrialized economy.

¹Selected emerging East Asia includes Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; and Thailand where portfolio investment data are available. Emerging East Asia includes People's Republic of China; ASEAN-4 plus Viet Nam and NIEs. East Asia includes emerging East Asia plus Japan.

Source: ADB calculations using data from *Consolidated Portfolio Investment Survey* and *World Economic Outlook Database September 2011*, International Monetary Fund.

virtually moved in lockstep (**Figure 73**). As the region's financial markets deepen, foreign holdings of portfolio assets have grown, making East Asia more susceptible to sudden capital outflows (**Table 21**). Rising shares of foreign holdings of local currency bonds in the region also support this contention (see Figure 69). And growing global financial market integration underscores the increased tendency of the region's markets to follow global investor perception and movements of asset prices. Correlations of stock returns and volatilities for East Asia increased dramatically in the second half of the 2000s (**Table 22**).

Financial institutions in the eurozone and US would likely roll back lending to East Asia in the event of a new global financial crisis.

A new global financial crisis would bring tighter global credit conditions, affecting banking system liquidity in East Asia. With ailing eurozone banks needing to recapitalize, a recession would likely reduce bank

lending as banks attempt to strengthen their balance sheets. Politically, it is easier to cut lending abroad than within Europe, thus reducing available liquidity for the region. US banks with their close eurozone links will likely be drawn into the crisis as well, further reducing funds for East Asian banks (see Table 16). It is not surprising that financial centers such as Hong Kong, China and Singapore have sizeable exposure to credits from European banks, but banks in Indonesia, Malaysia, Philippines, and the Republic of Korea also have substantial European exposure. East Asian banks have very limited exposure in the eurozone's peripheral countries.

The region's banking systems remain sound; yet high loan-to-deposit ratios and lending growth in some economies may make them more vulnerable to tightening global liquidity.

One reason East Asia emerged from the 2008/09 global financial crisis relatively unscathed was its financial

Table 22: Average Simple Correlation of Stock Price Index (Weekly Returns and Volatility)

Economies	Period	Weekly Returns				Period	Weekly Returns Volatility			
		East Asia	EEA	ASEAN-4	NIEs		East Asia	EEA	ASEAN-4	NIEs
East Asia	2002-2005	0.36	0.36	0.35	0.41	2003-2005	0.22	0.20	0.18	0.30
	2006-2011	0.61	0.61	0.61	0.66	2006-2011	0.74	0.74	0.75	0.78
Japan	2002-2005	0.40	0.40	0.37	0.50	2003-2005	0.35	0.35	0.30	0.57
	2006-2011	0.60	0.60	0.58	0.71	2006-2011	0.68	0.68	0.68	0.74
EEA	2002-2005	0.36	0.35	0.35	0.40	2003-2005	0.20	0.18	0.17	0.26
	2006-2011	0.61	0.61	0.62	0.66	2006-2011	0.74	0.75	0.76	0.79
ASEAN-4	2002-2005	0.35	0.35	0.36	0.37	2003-2005	0.18	0.17	0.15	0.20
	2006-2011	0.61	0.62	0.66	0.65	2006-2011	0.75	0.76	0.78	0.78
NIEs	2002-2005	0.41	0.40	0.37	0.51	2003-2005	0.30	0.26	0.20	0.51
	2006-2011	0.66	0.66	0.65	0.76	2006-2011	0.78	0.79	0.78	0.88
United States	2002-2005	0.30	0.29	0.20	0.43	2003-2005	0.22	0.20	-0.01	0.48
	2006-2011	0.48	0.46	0.43	0.54	2006-2011	0.72	0.71	0.66	0.83
Europe	2002-2005	0.37	0.35	0.26	0.52	2003-2005	0.24	0.21	-0.02	0.55
	2006-2011	0.59	0.58	0.56	0.67	2006-2011	0.71	0.71	0.65	0.83

ASEAN-4 = Indonesia, Malaysia, Philippines, and Thailand; EEA = Emerging East Asia; NIEs = Hong Kong, China; Republic of Korea; Singapore; and Taipei, China; and East Asia = EEA plus Japan.

Note: Stock price index for each country is in local currency value. Weekly returns are computed as the natural log difference of a Wednesday closing stock price index from the previous Wednesday's closing price. Correlations reported are taken as simple averages of individual cross-country correlations within a group, and as such, do not necessarily equal to one. Volatility is measured as a 12-week moving standard deviation. EEA includes People's Republic of China (PRC), ASEAN-4 and NIEs. Data for Europe refer to MSCI Europe Index, which includes 16 developed market country indexes. PRC's stock price index is computed by combining Shanghai and Shenzhen composites, weighted by respective market capitalizations.

Source: ADB calculations using data from Reuters and Bloomberg. Accessed 6 Nov 2011.

system's strength. A strong capital base and low levels of nonperforming loans left the region's banking systems largely unaffected during the crisis. This overall soundness continues with high capital adequacy ratios and low nonperforming loans (see Tables 7, 10). As the region recovered from the 2008/09 global financial crisis, lending began to surge on expansionary monetary policy. The result has been growing loan-to-deposit ratios and high bank lending growth in several East Asian economies (see Table 6a). This has led to concerns over possible asset bubbles forming. In the event of a future financial crisis, credit conditions may tighten and bank lending will be constrained—possibly leading to falling asset prices that could damage the health of the banking system.

External vulnerabilities for East Asia appear lower than in 2007.

Another indicator of vulnerability is the current account balance. Economies with balance of payments surpluses will be less susceptible to future crises as they are less dependent on borrowings from abroad. East Asian economies generally show healthy current account

balances (see Table 6b). The region's external debt position has also improved since 2008 and remains low. In addition, the region's economies have accumulated substantial foreign reserves, which can comfortably cover import requirements and short-term external debt.

The trade channel is less exposed; but the financial channel remains just as vulnerable as in 2008.

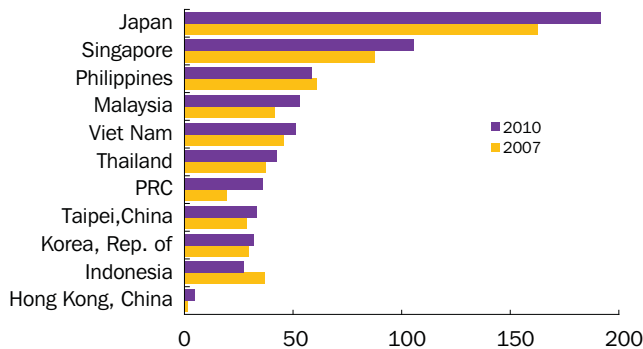
Any impact of a global financial crisis will affect the region through trade and financial channels. The impact of the 2008/09 global financial crisis was transmitted mostly through the trade channel. Global trade flows collapsed and the more open East Asian economies suffered large declines in exports. The trade collapse in 2008 was also exacerbated by the lack of trade financing. Since then, the region has become less dependent on export markets in the eurozone and US. However, some of the decline in trade exposure was due to the weakness in those economies rather than anything structural. While there were large capital outflows in 2008 and 2009, capital soon returned. A new global financial crisis would likely cause a rise in global risk aversion, leading

Table 23: Fiscal Stimulus in 2008 and 2009
(% of GDP)

	Fiscal stimulus
China, People's Rep. of ¹	13.0
Hong Kong, China	3.6
Indonesia ¹	1.4
Japan ¹	2.0
Korea, Republic of ¹	4.0
Malaysia	1.0 (first), 9.0 (second)
Philippines	4.6
Singapore	8.0
Taipei, China	1.1
Thailand ¹	1.3
Viet Nam	1.1 (first), 21.0 (second)

GDP = gross domestic product.
¹Refers to first fiscal stimulus only; other stimulus packages not included.
 Source: Figures are based on *Economic and Social Survey of Asia and the Pacific 2009*, United Nations Economic and Social Commission for Asia and the Pacific; and *Asia Capital Markets Monitor April 2009*, ADB (for Hong Kong, China and Taipei, China).

Figure 74: Public Debt¹ (% of GDP)



PRC=People's Republic of China, GDP = gross domestic product.
¹Central government debt for Indonesia; Japan; Republic of Korea; and Taipei, China; federal government debt for Malaysia; and national government debt for Philippines. 2010 values are projections for People's Republic of China and estimates for Viet Nam.
 Source: *Article IV Consultations*, International Monetary Fund; and CEIC.

investors to flee the region. Highly leveraged banks would cut lending, resulting in tighter credit conditions and destabilizing the region's financial systems.

Nonetheless, the ability of East Asian authorities to respond to any immediate crisis has been reduced by limited policy space.

One reason the region escaped the worst impact of the 2008/09 global financial crisis was authorities' prompt and decisive policy responses. They were able

to implement massive fiscal and monetary stimulus (**Table 23**). Prudent budget management in response to the 1997/98 Asian financial crisis left ample fiscal space and low public debt except for Japan and Singapore (**Figure 74**). However, the cost of the macroeconomic stimulus in 2008/09 means economies in the region would face a new crisis with smaller room to maneuver. Fiscal deficits have increased, except in Indonesia (**Figure 75**). Public debt is also higher for most economies. Given the concerns over Europe's sovereign debt, East Asian governments would be wary over increasing fiscal deficits. Despite some increases in policy rates, interest rates have not returned to pre-2008 levels, thus reducing the scope for renewed policy interest rate cuts (**Figure 76**).

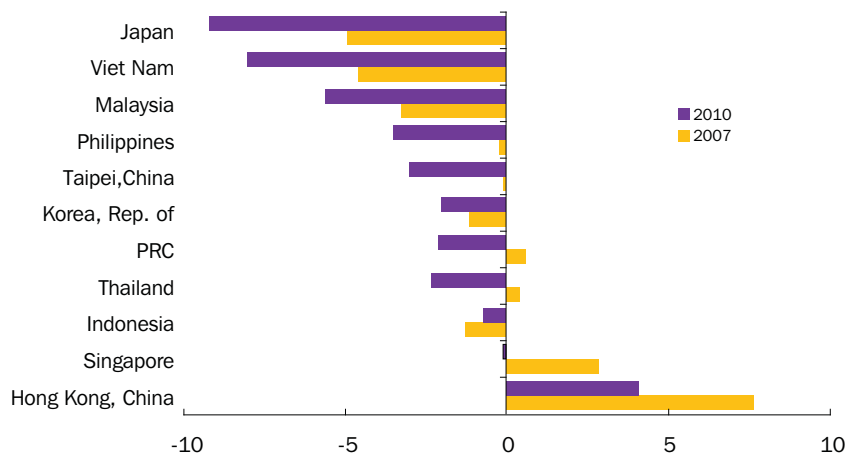
Estimating the impact of a new global crisis on East Asia

The extent of the impact on East Asia depends on the severity and depth of the crisis in Europe and its contagion effect.

ADB's baseline assumptions forecast 2012 growth in the eurozone and US at 0.5% and 2.1%, respectively. Should downside risks materialize, the eurozone could fall into a deep recession with the US economy dragged lower or possibly slip into recession itself. A low probability worst-case scenario would find both the eurozone and US in deep recession, with output reaching the economic troughs of 2009. Thus, three possible scenarios in 2012 are examined:

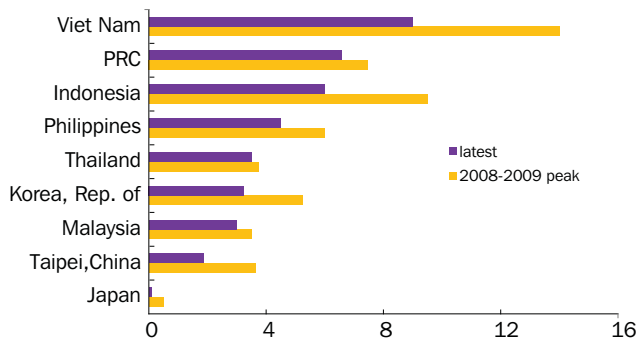
- A recession confined to the eurozone, with the economy contracting 3.9% for 2012 (4.4 percentage points below the ADB baseline). This would bring output to its 2009 level. Under this scenario the US economic growth would slow to 1.6% in 2012 (down 0.5 percentage point from the baseline);
- A deep recession in the eurozone and US—as the US nascent recovery is disrupted by the eurozone debt crisis. Under this scenario, the US economy would contract 0.1% in 2012, 2.2 percentage points below the baseline. A growth of slightly below zero implies the US would be in technical recession.
- A new global crisis where both the eurozone and US output falls to the 2009 troughs.

Figure 75: Fiscal Balance of Central Government¹ (% of GDP)



GDP = gross domestic product, PRC = People's Republic of China.
¹Fiscal year for Hong Kong, China; Singapore; Taipei, China; and Thailand.
 Source: *Asian Development Outlook* (various issues), ADB; *Article IV Consultations*, International Monetary Fund; CEIC; and national sources.

Figure 76: Policy Rate¹—Current Level and Pre-crisis Peak (% per annum)



PRC=People's Republic of China.
¹One year lending rate (PRC); BI Rate (Indonesia); refinancing rate (Viet Nam); unsecured overnight call rate (Japan); Korea base rate (Republic of Korea); overnight policy rate (Malaysia); reverse repurchase (repo) rate (Philippines); discount rate (Taipei, China); and one-day repo rate (Thailand).
 Source: Bloomberg and Datastream.

The Oxford Economic Forecasting Model (OEF) is used to assess the potential impact on East Asia under the three scenarios.

The OEF model is a global macroeconomic model that combines elements of time-series and structural models.¹² It comprises 46 country models—including 11 Asian country models—linked through trade, prices, exchange rates, and interest rates. Each country model is based on the income-expenditure accounting framework. The

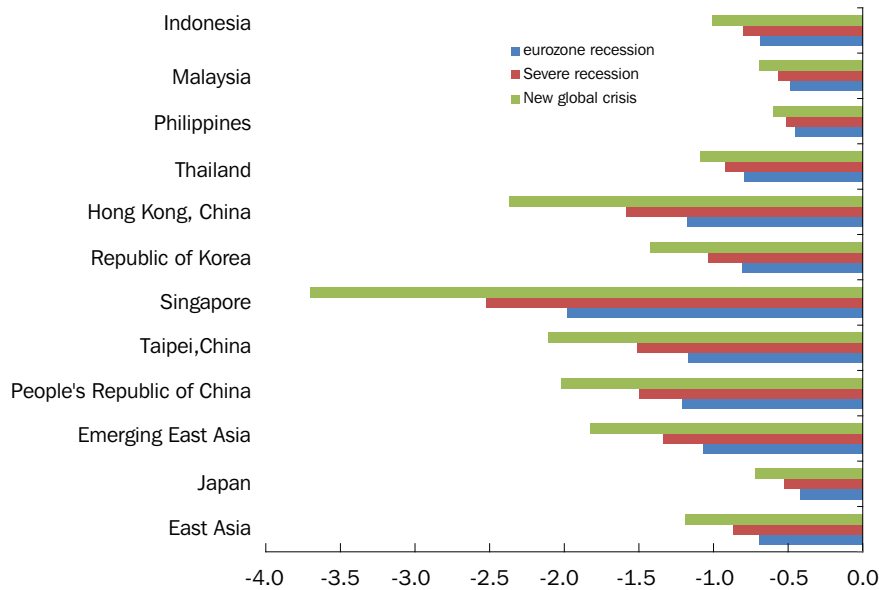
model incorporates a natural long-run growth path determined by population and productivity growth. Supply-side policies determine the unemployment rate over the long term, while vertical Phillips curves imply that in the long run, demand policies only yield pressure on inflation and have no impact on real variables. The model also incorporates the Taylor rule for monetary policy for all country models.

Under the first scenario, with recession confined to the eurozone, the growth impact on East Asia ranges from 0.4 to 2.0 percentage points below the 2012 baseline forecast.

As expected, the two city economies—Hong Kong, China and Singapore—would be worst affected, with 2012 GDP growth 1.2 and 2.0 percentage points below their baseline forecasts, respectively (**Figure 77**). Similarly, those with large trade exposure to the eurozone—the PRC and Taipei, China—would fall about 1.2 percentage points below baseline projections. Japan would be somewhat cushioned by post-disaster reconstruction, with growth expected to fall 0.4 percentage point from its baseline. And possibly because of Japan's relative resilience and the PRC's continuing robust growth (above 7%), ASEAN's major economies would suffer between 0.5 and 0.8 percentage point in 2012 GDP growth.

¹²Oxford Economics. <http://www.oxfordeconomics.com/>.

Figure 77: Impact of eurozone and US Crisis on 2012 GDP Growth¹
(deviation from the baseline forecast, percentage points)



GDP = gross domestic product.

Note: Emerging East Asia includes People's Republic of China (PRC); Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Thailand; and Taipei, China. East Asia includes emerging East Asia and Japan. Eurozone, according to the OEF model, includes Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Slovakia, and Spain.

¹**Eurozone recession** refers to the case when eurozone 2012 GDP level settles at its 2009 trough. **New global crisis** refers to the case of a eurozone recession and a US 2012 GDP level settling at its 2009 trough. **Severe recession** refers to a eurozone recession and a technical recession in the US for the first two quarters of 2012.

Source: ADB calculations using the Oxford Economics Forecasting Model.

Should the US economy fall into recession in 2012 from a deep eurozone recession and its own weakness, the impact on East Asia would be slightly larger, ranging from 0.5 to 2.5 percentage points below baseline.

Again, Hong Kong, China and Singapore would be hurt most, with 2012 GDP growth 1.6 and 2.5 percentage points below their baseline forecasts, respectively. PRC's growth would be 1.5 percentage points from its baseline (0.3 percentage point lower than that under the first scenario), while Japan's output would be 0.5 percentage point below its baseline (0.1 percentage point lower than that under the first scenario). The more open NIEs would grow 1.4 percentage points below the baseline. In contrast, output in ASEAN-4 economies with strong domestic sources of growth would fall an average of 0.7 percentage point from baseline forecasts.

If there is a new global crisis where eurozone and US GDP were to fall to 2009 levels next year, the impact on East Asia would be much more serious, though still less than in 2008/09.

In this extreme scenario, the US economy would be 5.8 percentage points below its 2012 baseline, forcing output growth in East Asia down by 1.2 percentage points from its baseline, or 0.5 percentage point lower than the eurozone-only recession scenario. While substantial, it is much smaller than the observed fall in output growth in the region between 2007 and 2009—when East Asia's economic growth fell from 6.8% to 1.2%. This is partly due to the base effect: GDP growth in East Asia peaked in 2007 and therefore the 2008-2009 drop was larger. For 2011, East Asia's GDP growth is estimated to be 4.4%, much lower than 2010's 7.3%.

The modest GDP growth impact in 2012 on East Asia from OEF model simulations may underestimate the potential effect of economic decline in the eurozone and US.

There are four reasons the simulations could underestimate the effect. First, macroeconomic models by their nature show shock effects averaging over the sample period as they are estimated in that period. While the 2008/09 crisis may carry a larger weight, the estimated model coefficients are also affected by past events, when the impact of output changes in the eurozone and US were smaller (see Table 17). Second, in the OEF model, countries are linked mainly through trade channels and financial links are limited. Therefore the impact of eurozone and US recessions through the financial channel may not be captured by model simulations. Third, the OEF model does not account for the impact of confidence. Confidence itself could be a major transmission channel through which financial markets affect the real economy immediately and financial panic spreads globally. During the global financial turmoil in late 2008 when Lehman Brothers collapsed, confidence among businesses and consumers dropped significantly, causing business investment and household consumption to fall, leading to an output slump. Finally, as mentioned earlier, Japan remains resilient in all simulations owing to the expected rebound from post-earthquake reconstruction—quite different from 2008/09 when Japan was also in recession. Without Japan's positive growth in 2012, the rest of East Asia would see a larger decline from economic troubles in the eurozone and US.

Where can policymakers make a difference?

Authorities in East Asia need to respond promptly, decisively, and collectively should downside risks from the eurozone and US materialize and the current crisis morphs into a full-blown financial and economic crisis.

A deepening crisis would send the eurozone into a deep and prolonged recession—with the US possibly following suit. The most immediate challenge would relate to pressures on foreign currency liquidity and the risks of spillovers to the region's financial systems. Slowing growth could also expose latent financial vulnerabilities, and contingency plans are needed to safeguard financial stability. Preemptive and proactive policies may help,

thus breaking a potentially vicious loop between financial weakness and the real economy. Policy specifics would naturally vary by economy, although short-term responses would broadly fall in three areas—financial, monetary, and fiscal.

Short-term responses are needed to bolster the foundations of financial stability and avoid deterioration in market confidence.

The region's policymakers will need to ensure adequate and timely provisioning for foreign and domestic liquidity. This is to ensure that systemically important financial institutions are not pressured and credit is available for key economic activities, including trade. Crisis management frameworks can be strengthened and prepared for implementation, if required. Critically important are institutional arrangements for providing emergency liquidity—their scope and effectiveness must be adequate to deal with potentially troubled institutions. Policymakers should also encourage and help banks raise necessary capital to strengthen capital ratios, if needed, and provide full or partial guarantees to new lending. This would help contain the spillover effects from worsening financial conditions and the risks of financial contagion associated with the region's financial systems.

Monetary policy must remain flexible to allow stimulus where appropriate, while keeping inflationary expectations firmly anchored.

While easing in many East Asian economies, inflation remains elevated in, for example, the PRC; Hong Kong, China; the Republic of Korea; Philippines; Singapore; Thailand; and Viet Nam. Although world commodity prices have fallen somewhat and capacity pressures are easing, currency depreciation from global financial turmoil could become an inflationary source for some economies. Moreover, prices may be less flexible downward as firms strive to maintain profitability in a weakening economic environment. Also, monetary policy may have less traction as banks may become more risk averse and reluctant to lend during a financial panic. Under these circumstances, monetary authorities will need to strike a careful balance to keep inflation under control, even though it limits room to respond to a slowing economy. In particular, the implications of inflation on the poor are important as much of the burden of heightened food and fuel prices disproportionately falls on the most vulnerable. With

present elevated price levels, diminishing employment opportunities, budgetary pressures on social programs, and the prospect of slowing growth in remittances, strains on the poor will likely intensify.

While extreme volatility (and over- or under-shooting) may warrant foreign exchange market intervention, excessive exchange rate support or foreign exchange reserve drawdowns could overly weaken macroeconomic fundamentals.

During financial panic, particularly when excess volatility and overshooting undermine currency markets and severely disrupt economic activity, there is merit in foreign exchange market intervention. Nonetheless, authorities should be mindful that excessive intervention eventually increases the risk of one-way currencies bets, exacerbating exchange rate volatility and likely forcing a more disruptive adjustment down the road. At the same time, authorities should also avoid competitive depreciation amid a rapidly deteriorating export outlook. It may help if East Asia works to ensure intraregional currency stability through exchange rate policy coordination. In some economies with relatively rigid currency regimes, introducing greater flexibility should help enhance the effectiveness of monetary and fiscal stimulus while rebalancing demand.

Should the eurozone plummet into a full-blown financial and economic crisis, fiscal policy could mitigate the adverse impact on East Asia's growth prospects—much as it did in late 2008 and in 2009.

Experience from 2008/09 vindicates the critical role fiscal policy played in boosting domestic demand and growth. Since then, many economies in the region have started consolidating public finance and fiscal positions have improved. If spillovers from the eurozone and US hit East Asia again, fiscal and external positions in many economies should have sufficient scope to reintroduce fiscal stimulus to support growth—though not as large as in 2008/09. Also, with monetary policy possibly less effective, a financial panic might lead authorities to favor a more active fiscal response. Furthermore, authorities need to speed the implementation of fiscal stimulus to make it more effective in supporting domestic demand. When deploying fiscal stimulus, however, authorities must be mindful of medium- and long-term fiscal effects—particularly in economies where populations are aging quickly.

National development agendas and the desire to rebalance sources of growth make targeted fiscal stimulus attractive.

Authorities should carefully design fiscal support to cushion the most vulnerable from the immediate effects of a potential global downturn. In particular, they can widen safety nets to cover more of those directly affected by a global downturn or increase the support of these programs, for example, by increasing social security payouts. Also, given the massive deficit in public infrastructure and human resources in most of East Asia, expansionary fiscal policies can target trade and logistics networks on the one hand, and health and education on the other. Better road, sea, and air networks lower trade costs and foster further regional integration; better social services improve human capital. These investments lay the foundations for future growth and help rebalance the region's sources of growth in the process.

Moreover, macroeconomic stimulus may need to be deployed gradually and judiciously to prepare for a prolonged crisis and weak post-crisis recovery in the eurozone and US.

In both advanced and emerging economies, there is much smaller macroeconomic space than in 2008/09 to respond to a new global financial crisis. The vicious cycle between economic recession and global financial stress would worsen and prolong a crisis, weakening and delaying recovery. The region's policymakers should thus respond at a measured pace and deploy macroeconomic stimulus gradually and judiciously. As the difficult external environment may last for some time, economies will need to constantly support domestic demand, while continuing the structural adjustments required to adapt to a new environment of low global growth. To counter low demand from advanced economies, the region needs to develop new sources (or drivers) of economic growth by pursuing structural reforms and supply-side policies.

As a corollary, East Asia should cooperate more on efforts to accelerate rebalancing growth toward domestic and regional demand.

With the eurozone and US economies expected to struggle in the coming years, East Asia will have to rely more on regional and domestic demand to grow. To a certain extent, many in East Asia have already diversified export markets beyond the US and eurozone. The PRC

in particular is expanding exports to Latin America and Africa. Even if the eurozone and US were to avoid severe and prolonged recessions, their growth will likely remain anemic in the near future. It may help for East Asia to consolidate many bilateral and plurilateral free trade agreements into a single, region-wide agreement and to accelerate the rebalancing process.¹³ Further investment in cross-border infrastructure—transport, communications, and energy systems—will provide the backbone for fostering greater integration.

East Asia must intensify collective action in addressing the knock-on effects of another global financial crisis.

Existing mechanisms under East Asia, particularly the Economic Review and Policy Dialogue (ERPD) and the Chiang Mai Initiative Multilateralization (CMIM), need to be strengthened and used should a new global crisis materialize. Aside from reviewing economic prospects and policy issues, ERPD can become a forum for discussion on coordinating policy responses to external shocks. East Asian policymakers should formulate regional strategies—such as on exchange rates, monetary, and fiscal policies—to counter the possible impact of another global crisis. The CMIM should be further strengthened by expanding its size, expanding its crisis prevention function, and deepening the role of swap lines among regional central banks. Moreover, East Asia could consider establishing an Asian Financial Stability Dialogue to coordinate efforts to address the financial crisis. This could work in parallel with the ERPD. The dialogue would include finance ministries, central banks, and other financial supervisors and regulators—to address financial market vulnerabilities, regulations, and integration efforts with private sector participation.

Conclusion

The eurozone sovereign debt crisis has continued to worsen, and would have serious yet manageable repercussions to East Asia should it evolve into a full-blown financial and economic crisis.

The region's strong macroeconomic fundamentals allowed it to ride out the 2008/09 crisis despite large initial declines in output. Part of the reason was that it entered the crisis when growth rates were well above long-run averages. Today, growth rates are more aligned with their historical average, leaving the region less vulnerable. Macroeconomic stability will be key for the region to maintain growth momentum. Policymakers have been prudent in managing their economies—with many financial and external vulnerability indicators below those in 2007. Yet some financial vulnerabilities linger and policy space may be smaller today than in 2007. The OEF model simulations show the region's GDP growth may fall between 0.5 to 2.5 percentage points from ADB baseline forecasts should the eurozone fall into deep recession similar to 2008/09 and the US is also dragged into recession. A deep recession in both the eurozone and US would have more serious impact on East Asia (yet still smaller than in 2008/09).

East Asia should be able to weather another global financial crisis if the region's policymakers respond promptly, decisively, and collectively.

Policymakers are rightly cautious and prudent with the eurozone debt crisis still unfolding. If downside risks from the eurozone and the US materialize, a disorderly resolution of the eurozone debt crisis could trigger financial contagion and cause a worldwide liquidity crunch. The region's policymakers need to respond quickly and firmly by deploying financial, monetary, and fiscal policies to restore confidence, ensure financial stability, and support growth. Fiscal policy could be central to support growth, while monetary policy retains enough flexibility to allow stimulus while keeping inflationary expectations anchored. Policymakers should also collaborate closely to prevent financial contagion from spreading further and maximize the positive impact of national policies on other economies in the region.

¹³ADB. 2008. *Emerging Asian Regionalism: A Partnership for Shared Prosperity*. Manila.

Nonetheless, the region must prepare for a prolonged crisis and weak post-crisis recovery by implementing appropriate short-term macroeconomic responses and pursuing necessary long-term structural reforms.

A new global economic crisis could be worse and more prolonged than the 2008/09 crisis. Financial systems would enter a new crisis already damaged. Governments and central banks have far diminished policy space given forced fiscal consolidation in the eurozone and US. The difficult external environment in the coming years suggests that structural reform should be combined with macroeconomic policies that provide needed and affordable support to domestic demand—and thus growth. As external demand is expected to remain sluggish for many years to come, East Asia must rebalance its sources of growth more toward domestic and regional demand.

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