# Can East Asia[10] 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.

[10]Unless 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.

**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.

## 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 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

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

**Table 14: Long-Term Rating Downgrade of Top eurozone Banks**[1]

| 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 |

[1]Based 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.

**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.
[1]Net borrowing/net lending less consolidated interest expenditure.
[2]Consolidated gross debt.
Source: Eurostat.

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.

### 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)

| | Lender | | | | | | |
|---|---|---|---|---|---|---|---|
| | | European Banks | | | | | |
| Borrower | US 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.

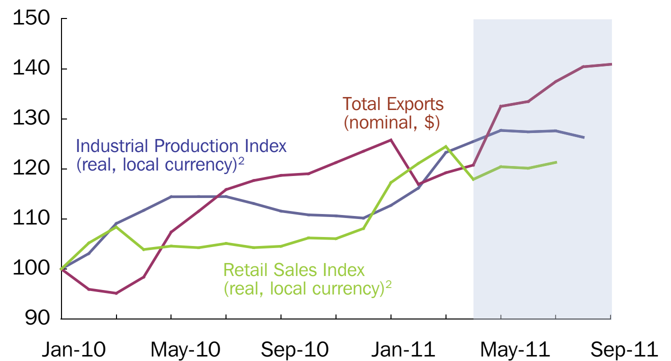
The eurozone and US economies are now weaker than before the 2008/09 global financial crisis. Their governments are also much more fiscally stretched than in 2008/09. Thus, they cannot afford to support any major bank recapitalization. Subsequent bank deleveraging would depress asset prices, reduce credit 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 Asia**[1] (Jan 2010 = 100)




[1]Includes 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.

[2]Aggregates 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 Recessions**[1]
(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** | | | | |
| US | contraction | expansion | contraction | contraction |
| 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** | | | | |
| eurozone | contraction | contraction | contraction | contraction |
| 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.
[1]Recession years in the US (1991, 2001, 2008/09) and eurozone (1992/93).
[2]Average for the period.
[3]Includes emerging East Asia plus Japan.
[4]Excludes Singapore.
[5]Includes 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 Openness**[1] (% of GDP)

| Economies | 2005 | 2010 | Economies | 2005 | 2010 |
|---|---|---|---|---|---|
| **East Asia**[2] | **30.6** | **30.5** | Philippines | 40.0 | 25.9 |
| Japan | 13.1 | 14.1 | Thailand | 62.5 | 61.3 |
| **Emerging East Asia**[3] | **48.0** | **40.0** | Viet Nam | 61.3 | 67.4 |
| **ASEAN**[4] | **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.
[1]Refers to merchandise exports in US dollars as percent of nominal gross domestic product.
[2]Includes emerging East Asia plus Japan.
[3]Includes ASEAN, NIEs, and People's Republic of China.
[4]Excludes 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)

| | Destination | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | United States | | eurozone | | Japan | | People's Republic of China | | Intraregional | |
| Origin | 2001-08 | 2009-10 | 2001-08 | 2009-10 | 2001-08 | 2009-10 | 2001-08 | 2009-10 | 2001-08 | 2009-10 |
| **East Asia**[1] | **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 Asia**[2] | **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 |

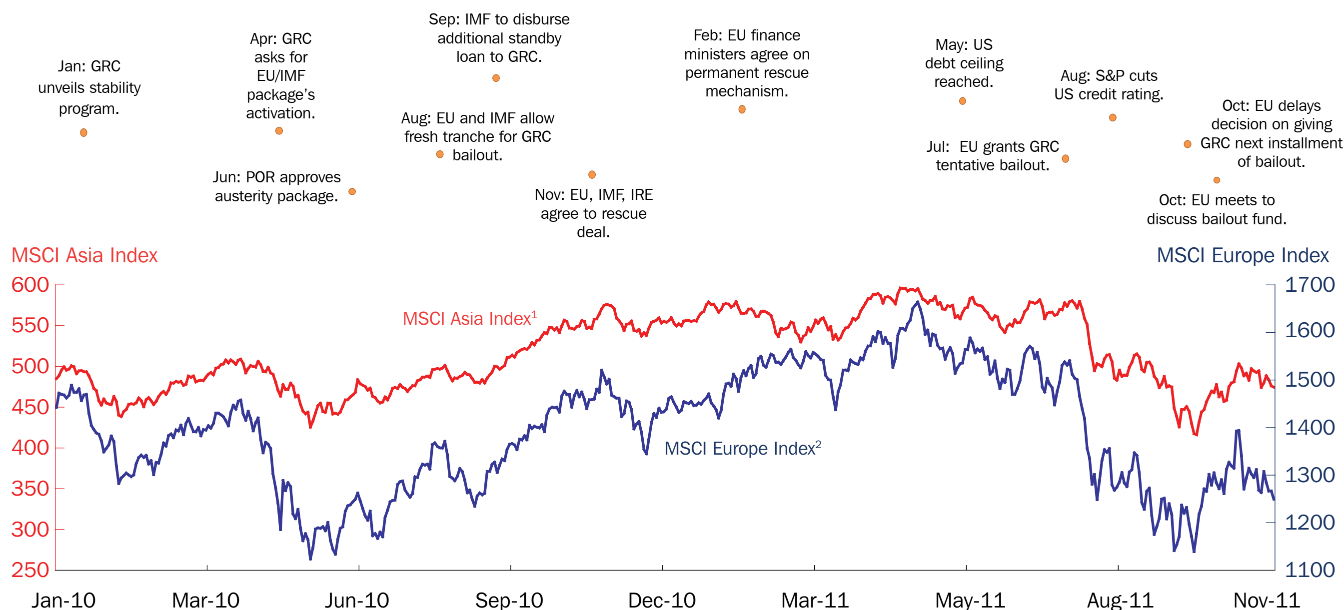
GDP = gross domestic product; NIE = newly industrialized economy.
na = not applicable.
[1]Includes emerging East Asia plus Japan.
[2]Includes ASEAN-10 (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam); People's Republic of China; Hong 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 Exports**[1] (% of total, period average)

| | 2001-2008 | | 2009-2010 | |
|---|---|---|---|---|
| | Manufacturing[2] | Others | Manufacturing[2] | Others |
| **East Asia**[3] | **88.7** | **11.3** | **87.2** | **12.8** |
| Japan | 92.8 | 7.2 | 89.8 | 10.2 |
| **Emerging East Asia**[4] | **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.
[1]Based on first-digit level Standard International Trade Classification, Revision 3.
[2]Refers to the sum of chemicals and related products, manufactured goods classified chiefly by material, machinery and transport equipment, and miscellaneous manufactured articles.
[3]Includes emerging East Asia plus Japan.
[4]Includes 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.
[1]Designed 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.
[2]MSCI 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 2001 | United States 2009 | eurozone 2001 | eurozone 2009 | Japan 2001 | Japan 2009 | Selected Emerging East Asia[1] 2001 | Selected Emerging East Asia[1] 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.
[1]Selected 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)

| | | Weekly Returns | | | | | Weekly Returns Volatiliy | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Economies** | **Period** | **East Asia** | **EEA** | **ASEAN-4** | **NIEs** | **Period** | **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.

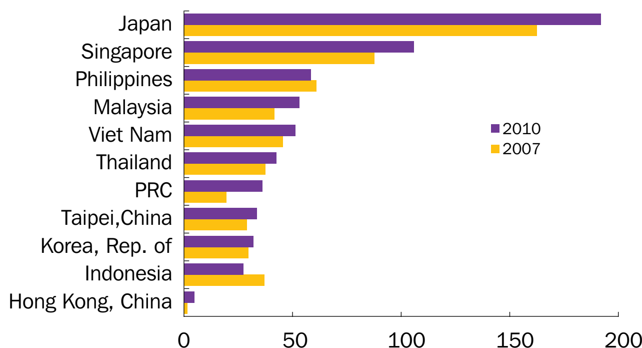
Any impact of a global financial crisis will affect the region through trade and financial channels. The impact of the 2008/09 global financial crisis was transmitted mostly through the trade channel. Global trade flows collapsed and the more open East Asian economies suffered large declines in exports. 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.
[1]Refers 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 Debt**[1] (% of GDP)




PRC=People's Republic of China, GDP = gross domestic product.
[1]Central 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.

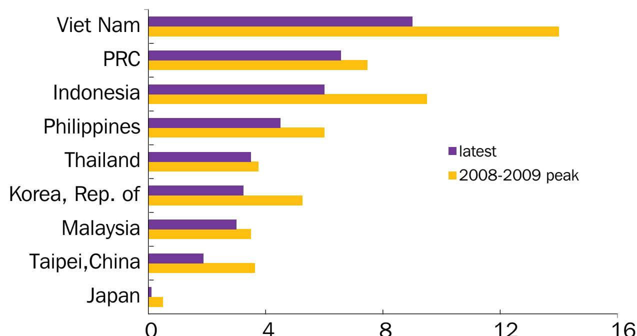
ADB's baseline assumptions forecast 2012 growth in the eurozone and US at 0.5% and 2.1%, respectively. Should downside risks materialize, the eurozone could fall into a deep recession with the US economy dragged lower or possibly slip into recession itself. A low probability worst-case scenario would 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 Government**[1] (% of GDP)

GDP = gross domestic product, PRC = People's Republic of China.
[1]Fiscal 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 Rate[1]—Current Level and Pre-crisis Peak** (% per annum)




PRC=People's Republic of China.
[1]One 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.

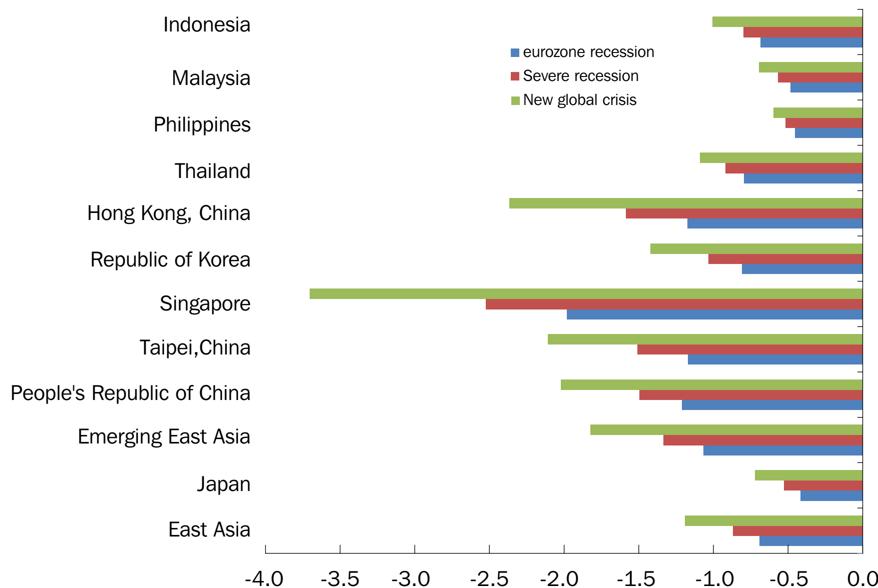
The OEF model is a global macroeconomic model that combines elements of time-series and structural models.[12] It comprises 46 country models—including 11 Asian country models—linked through trade, prices, exchange rates, and interest rates. Each country model is based on the income-expenditure accounting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

[12]Oxford Economics. http://www.oxfordeconomics.com/.

**Figure 77: Impact of eurozone and US Crisis on 2012 GDP Growth**[1]
(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, macroeconometric 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.

[13] ADB. 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.