

## THE RECENT EARTHQUAKE AND TSUNAMI IN JAPAN: IMPLICATIONS FOR EAST ASIA

*The tragic earthquake on March 11 in Japan with a magnitude 9 on the Richter scale—the most powerful in the country’s recorded history and fourth most severe in the world—and the subsequent tsunami are a stark reminder of the unpredictable dangers posed by natural hazards. The loss of life has been heartbreaking. Many people have been injured, and damage to housing and infrastructure has been unprecedented. There are uncertainties and challenges posed by the unfolding issue of nuclear radiation in Japan. The Japanese people have shown strength and resilience as they struggle to deal with this crisis.*

### Impact on the Japanese Economy

If history is any guide, real GDP growth will be negatively affected through mid-2011. Growth should though pick up in subsequent quarters as reconstruction efforts, which could last five years, accelerate. The intensity of these efforts is likely to impact on the final cost of the disaster. While it is too early to estimate accurately, the cost of the damage is likely to be greater than the damage caused by the 6.9 magnitude Kobe earthquake in 1995 (see Table below). Private insurers are likely to bear a relatively small portion of the cost, leaving a substantial part to be borne by households and the government.

The March 11, 2011 northeast earthquake and the 1995 Kobe earthquake: some comparisons

	March 11, 2011 northeast earthquake and tsunami – estimates	The 1995 Kobe earthquake
<b>Damage</b>	Estimates range from \$122 to 235 billion (2.5 to 4 percent of GDP)	\$100 billion (around 2 percent of GDP)
<b>Death toll</b>	15,214 (dead and missing)	6,434
<b>Cost to private insurance</b>	\$14–33 billion*	\$783 million
<b>National budget for reconstruction</b>	\$12 billion from current budget. Much more in FY2011.	\$38 billion over 2 fiscal years

Sources: Government of Japan and private estimates and projections as of March 17, 2011.  
Note: \* AIR World estimate.

To assess the possible impact of increased public and private spending on bond yields and lending rates, it may again be helpful to refer to the past. After the Kobe earthquake struck, government bond yields declined markedly, with those on 10-year government bonds declining from 4.2 percent in 1994 to 3.5 percent at the end of 1995 and further to 1.7 percent at the end of 1999, thanks to large injections of liquidity by the Bank of Japan. This time around, large injections of liquidity by the Bank of Japan and the appreciation of the exchange rate following the unwinding of the carry trade and expected repatriation of funds for reconstruction are similarly combining to create downward pressure on bond yields.

### Impact on developing East Asia

A temporary growth slowdown in Japan will have a modest short-term impact on the region. There are two significant channels to consider—trade and finance.

## Impact through trade

After the Kobe earthquake, Japan's trade slowed only for a few quarters before recovering. Within a year, imports had recovered fully and exports had rebounded to 85 percent of pre-quake levels.

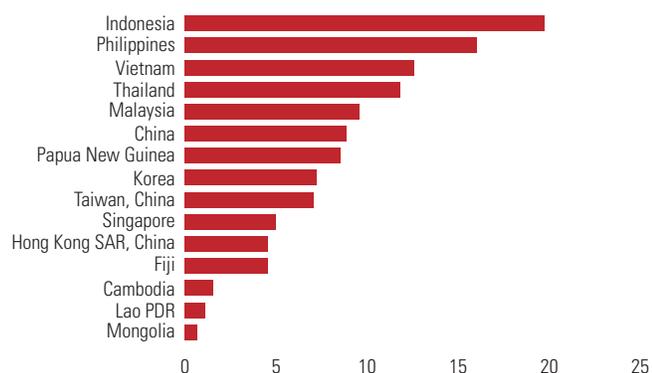
Over the last five years, developing East Asia's trade with Japan has accounted for about 9 percent of the region's total external trade. On average, assuming Japanese real GDP growth slows by 0.25 to 0.5 percentage points by mid-2011, exports from developing East Asia may slow by 0.75 to 1.5 percent. But this time around, disruption to production networks, especially in automotive and electronics industries, could continue to pose problems. Japan is a major producer of parts, components, and capital goods which supply East Asia's production chains. In Thailand, exporters of cars report that current supplies of components imported from Japan will last through April. Some plants in Japan are already experiencing shortages in parts sourced from the northeast. In electronics, Korean firms are facing higher prices for memory chips, in part because Japan accounts for up to 36 percent of global production and that production is now disrupted. Prices have already risen by more than 20 percent in some categories. China and the Philippines are more connected to developments in Japan than the rest of East Asia; in the Philippines, electronics exports account for two-thirds of total exports. In the short to medium-term, energy producers, such as Indonesia, Malaysia, and Vietnam, could benefit from higher energy prices, as Japan begins to rebuild and tries to close the energy gap caused by the loss of nuclear capacity. Longer-term demand for fossil fuels could remain high as other nations revisit plans for their nuclear electricity production.

## Impact through finance

About one-fourth of developing East Asia's long-term debt is denominated in yen, ranging from about 8 percent in China to about 60 percent in Thailand. A one percent appreciation in the Japanese yen translates into a \$250 million increase in annual debt servicing on yen-denominated liabilities held by East Asia's developing countries—about 0.25 percent of the region's aggregate debt-service ratio. Japan is a significant source of foreign direct investment (FDI) to East Asia—the largest direct investor in Thailand, the Philippines, and Korea, and the second or the third largest in Malaysia, Indonesia, and Singapore. At this stage, it is unclear how the disaster will affect Japanese outward FDI, but it may dent the pace of overseas investment as the country's focus turns inward on reconstruction.

On average, exports to Japan account for about 10 percent of East Asia's total exports

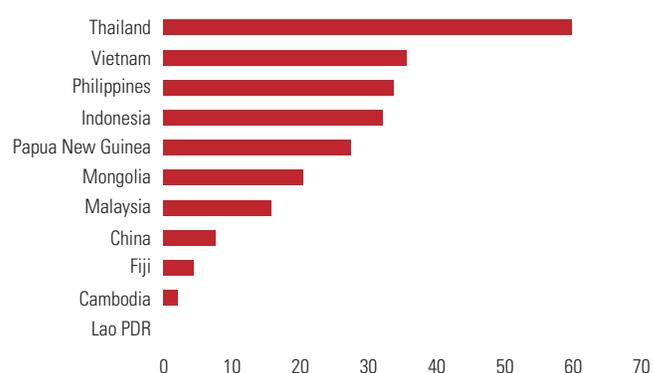
in percent of total



Source: IMF Direction of Trade Statistics.

Governments have a significant share of external debt denominated in yen

in percent of total government external debt



Source: Haver.