Direct Financial Impact on the Government

The government's central role in natural disaster emergency relief, recovery, and reconstruction implies a large and direct financial burden. While this burden varies greatly across countries depending on the definition of the government's contingent liability to natural disasters,8 there are many universal features.

During and directly after an event, the government is required to provide emergency relief to the affected population. These costs tend to be small in terms of the event's overall costs, but require immediate mobilization of funds. Emergency relief for the 2011 Great East Japan Earthquake represented less than 1 percent of total government expenditures related to the event, but importantly was first mobilized within just three days (Sato and Boudreau, 2012). Such speed is essential for a successful government response.

Reconstruction of uninsured or underinsured public infrastructure—including low-income housing— typically accounts for the majority of public spending following disasters. In some cases, middle- and high-income residents and SMEs exert pressure for public support of reconstruction. The 1999 Marmara/Izmit Earthquake in Turkey generated fiscal costs in the range of $2.4 to $2.9 billion (2010 US$), with the largest direct cost (estimated between $970 million and $1.6 billion) coming from the reconstruction and repair of housing stock, much of which was owned by middle- and high-income residents (World Bank 1999). While in many cases the government is not legally required to provide this support, social and political pressure can make such support an implicit contingent liability. These types of contingent liabilities are often the most difficult for the government to assess and can pose major fiscal risk.

Even in years without exceptional disasters, costs can be significant. Between 1999 and 2011, the government of Mexico spent on average $1.46 billion annually (2011 US$) on the reconstruction of public assets like roads and bridges and low-income housing following more frequent but less severe disasters (Government of Mexico and World Bank 2012). In addition to replacement of the damaged assets, governments' should consider higher costs for improvement so they do not build back the risk. For example, about 25 percent of post-disaster resources approved by Mexico's natural disaster fund FONDEN are generally allocated for the improvement of public assets, to strengthen their resilience to future disasters. Government-sponsored social and economic support programs for individuals, SMEs, and farmers can also be significant and even exceed the costs of reconstruction. This was the case in Japan after the 2011 earthquake, where economic and social support programs (such as employment programs, measures to support SMEs, housing grants, and education assistance) cost more than direct repair and reconstruction (Sato and Boudreau, 2012). Finally, major natural disasters can trigger public contingent liabilities arising from stateowned enterprises and firms that are critical for economic recovery from the event. Following the 2011 Canterbury Earthquake, New Zealand's then second-largest residential insurer, AMI Insurance, found itself unable to meet the total value of claims resulting from the event. To ensure Canterbury's recovery, the government decided to bail out and subsequently resell AMI, as well as to take responsibility for all of its outstanding claims (Benson and Mahul 2013).