The Economic and Fiscal Consequences of Financial Crises
North and South

BY CARMEN M. REINHART

The Ds: Sharp economic downturns follow banking crises; with government revenues falling, fiscal deficits worsen; deficits lead to debt, as debts pile up rating downgrades follow. For the most fortunate countries it does not end in default.

SINCE THE SUBPRIME CRISIS BEGAN to unfold in the summer of 2007 and escalated in the early fall of 2008, a cursory reading of the global financial press would lead to the logical conclusion that the world economy is moving through uncharted waters. There is little need to convince anyone that financial crises are associated with economic downturns and severe dislocations in financial markets.

In a recent paper with Kenneth S. Rogoff we examined the international experience with episodes of severe banking crises to identify empirical similarities as regards the depth, duration, and characteristics of the economic slump following the crises.¹ Our findings in that paper can be summarized as follows:
Financial crises are protracted affairs.
Asset market collapses are deep and prolonged.
Real housing price declines average 35 percent stretched out over six years.
Equity price collapses average 55 percent over a downturn of about three and a half years.
There are profound declines in output and employment.
The unemployment rate rises an average of 7 percentage points over the down phase of the cycle, which lasts four years on average.
Real GDP per capita falls (from peak to trough) an average of more than 9 percent, and the duration of the downturn averages roughly two years.
The financial crisis has significant adverse consequences for government finances.
Tax revenues shrink as the economic conditions deteriorate, the fiscal deficit worsens markedly, and the real value of government debt explodes, rising an average of 86 percent in the major post–World War II episodes.

In this article I elaborate on these points and follow up with a sketch of how the crises and their ramifications affected sovereign risk in the aftermath of the crisis episodes.

The downturn
IT IS NOW BEYOND CONTENTION that the present U.S. financial crisis is severe by any metric. As a result, we focus on systemic financial crises: the “big five” advanced economy crises (Spain 1977, Norway 1987, Finland 1991, Sweden 1991, and Japan 1992) plus a number of famous emerging market episodes: the 1997–1998 Asian crisis (Hong Kong, Indonesia, Korea, Malaysia, the Philippines, and Thailand); Colombia, 1998; and Argentina 2001. Central to the analysis are historical housing price data, which can be difficult to obtain and are critical for assessing the crisis episode. We also include two earlier historical cases for which we have housing prices, Norway in 1899 and the United States in 1929.

Figure 1 looks at the bust phase in housing price cycles surrounding banking crises, including the current episode in the United States and a number of other countries now experiencing banking crises: Austria, Hungary, Iceland, Ireland, Spain, and the United Kingdom. Ongoing crises are in dark shading, past crises are in light shading. The cumulative decline in real housing prices from peak to trough averages 35.5 percent.² The most severe real housing price declines were experienced by Finland, the Philippines, Colombia and Hong Kong. Their crashes were 50 to 60 percent, measured from peak to trough. The housing price decline experienced by the United States to date during the current episode is already more than twice that registered in the U.S. during the Great Depression. The duration of housing price declines is quite long, averaging roughly six years.

As illustrated in Reinhart and Rogoff (2009a), the equity price declines that accompany banking crises are steeper than
The average historical decline in equity prices is 55.9 percent, with the downturn phase of the cycle lasting 3.4 years. Notably, during the current cycle, Iceland and Austria have already experienced peak-to-trough equity price declines far exceeding the average of the historical comparison group.

Figure 2 shows increases in unemployment rates across the historical episodes. On average, unemployment rises for almost five years, with an increase in the unemployment rate of about 7 percentage points. None of the postwar episodes rivals the rise in unemployment of over 20 percentage points experienced by the United States during the Great Depression.

Although Figure 2 indicates that the emerging markets, particularly those in Asia, have done better in terms of unemployment than the advanced economies (Figure 2), there are well-known data issues in com-

### TABLE 1: FISCAL DEFICITS

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>Years before the crisis</th>
<th>Peak deficit (year)</th>
<th>Increase (-decrease) in the fiscal deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina, 2001</td>
<td>-2.4</td>
<td>-11.9 (2002)</td>
<td>9.5</td>
</tr>
<tr>
<td>Chile, 1980</td>
<td>4.8</td>
<td>-3.2 (1985)</td>
<td>8.0</td>
</tr>
<tr>
<td>Colombia, 1998</td>
<td>-3.6</td>
<td>-7.4 (1999)</td>
<td>3.8</td>
</tr>
<tr>
<td>Finland, 1991</td>
<td>1.0</td>
<td>-10.8 (1994)</td>
<td>11.8</td>
</tr>
<tr>
<td>Indonesia, 1997</td>
<td>2.1</td>
<td>-3.7 (2001)</td>
<td>5.8</td>
</tr>
<tr>
<td>Japan, 1992</td>
<td>-0.7</td>
<td>-8.7 (1999)</td>
<td>9.4</td>
</tr>
<tr>
<td>Korea, 1997</td>
<td>0.0</td>
<td>-4.8 (1998)</td>
<td>4.8</td>
</tr>
<tr>
<td>Malaysia, 1997</td>
<td>0.7</td>
<td>-5.8 (2000)</td>
<td>6.5</td>
</tr>
<tr>
<td>Mexico, 1994</td>
<td>0.3</td>
<td>-2.3 (1998)</td>
<td>2.6</td>
</tr>
<tr>
<td>Norway, 1987</td>
<td>5.7</td>
<td>-2.5 (1992)</td>
<td>7.9</td>
</tr>
<tr>
<td>Spain, 1977</td>
<td>-3.9</td>
<td>-3.1 (1977)</td>
<td>-0.8</td>
</tr>
<tr>
<td>Sweden, 1991</td>
<td>3.8</td>
<td>-11.6 (1993)</td>
<td>15.4</td>
</tr>
<tr>
<td>Thailand, 1997</td>
<td>2.3</td>
<td>-3.5 (1999)</td>
<td>5.8</td>
</tr>
</tbody>
</table>

Source: Reinhart and Rogoff (2009b).

*Spain was the only country in our sample to show an increase (modest) in per capita GDP growth during the post-crisis period.

Sources: Reinhart and Rogoff (2009a).
paring unemployment rates across countries. Widespread “underemployment” in many emerging markets and the vast informal sector are not captured in the official unemployment statistics.

As to real per capita GDP, the average magnitude of the decline is 9.3 percent. The declines in real GDP are smaller for advanced economies than for emerging markets. A probable explanation for the more severe contractions in emerging market economies is that they are more affected by abrupt reversals in the availability of foreign credit. When foreign capital comes to a “sudden stop,” to use the phrase coined by Guillermo Calvo, economic activity heads into a tailspin. The cycle from peak to trough in GDP is much shorter, two years.

**Deficits**

DECLINING REVENUES AND HIGHER EXPENDITURES owing to a combination of bailout costs and higher transfer payments and debt servicing costs have led to a rapid and marked worsening in the fiscal balance. The episodes of Finland and Sweden stand out in this regard, as the latter went from a pre-crisis surplus of nearly 4 percent of GDP to a whopping 15 percent deficit-to-GDP ratio.

**Debt**

FIGURE 3 SHOWS THE RISE in real government debt in the three years following a banking crisis. The deterioration in government finances is striking, with an average debt rise of over 86 percent. We use the percentage increase in debt, rather than debt-to-GDP, because steep output drops sometimes complicate interpretation of debt–GDP ratios. As
Reinhart and Rogoff (2009b) note, the huge buildups in government debt are driven mainly by sharp falloffs in tax revenue. The much publicized bank bailout costs are typically second order. Fiscal stimulus also adds to the deficits in advanced and emerging market economies.

Downgrades (sometimes default)

As shown in Figure 4 (on the previous page), sovereign default, debt restructuring, or near defaults (prevented by international bailout packages) have been a part of the financial crisis experience in many emerging markets, therefore a decline in the country rating hardly comes as a surprise. Advanced economies, however, do not go unscathed. Finland’s score went from 79 to 69 in the space of three years, placing it close to the scores for some of the emerging markets!

Conclusions and implications for emerging economies

An examination of the aftermath of severe financial crises shows deep and lasting effects on asset prices, output, and employment. Unemployment rises and housing price declines extend out for five and six years, respectively. The recessions are almost invariably accompanied by massive increases in government debt. The crises adversely impact sovereign creditworthiness, as reflected in higher risk premia.

The global nature of the present crisis will make it far more difficult for many countries to grow their way out through increased exports. The growth slowdown is amplified in world commodity markets, as many emerging markets face steep declines in their terms of trade.

If historical patterns hold, showing a link between banking and debt crises the current lull in sovereign defaults or restructurings in emerging markets will likely come to an end, particularly if the recovery process in the world’s largest economies is delayed.

With the advanced economies’ running large government deficits that are accompanied by a rapid rise in government debt, emerging markets will find external private financing less available—this is the global dimension of crowding out. Emerging markets will therefore rely more on the multilateral institutions for external funds and on domestic debt. It is important for policymakers in these countries to remember that “fiscal space” is limited, that their scope for sustained stimulus packages financed by debt is capped by their low thresholds for debt (at least historically). More than one half of emerging market sovereign defaults since World War II took place at levels of debt below 60 percent and would have satisfied the Maastricht criteria. Debt intolerance applies to both external and domestic debt.

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References

Ilzetzki, Ethan, Enrique Mendoza and Carlos Vegh, “How big (small) are fiscal multipliers?” Mimeograph, University of Maryland. College Park, June 2009.


Endnotes


2 The historical average, which is shaded in black in the diagram, does not include the ongoing crises.


4 While, historically, stimulus packages have not been as large in emerging market economies as in advanced economies, fiscal multipliers also appear to be smaller for the former. Ilzetzki, Mendoza and Vegh (2009) show that while fiscal multipliers are roughly of the same order of magnitude in advanced and developing economies on impact, they erode much more quickly in emerging markets.

5 Reinhart and Rogoff (2009b).

6 See Reinhart, Rogoff and Savastano (2003).