

A sudden stop, or a capital account crisis, can be defined as a large – and largely unexpected – fall in capital inflows occurring in conjunction with a sharp rise in credit spreads (See Calvo et al., 2006, Mendoza, 2008, and Chamon et al., 2006). Such a scenario is generally associated with a sharp depreciation of the currency and an abrupt collapse in aggregate demand. Output falls and unemployment rises substantially. This is what the Icelandic economy is experiencing now. While the macroeconomic consequences of sudden stops are generally very similar, the causes can vary, as can the factors triggering the crisis.

Vulnerabilities and crises

An economy can live with currency and maturity mismatches for years if, by chance, nothing triggers a crisis. But balance sheet weaknesses, macroeconomic imbalances, credit booms, etc., can make such an economy vulnerable to a sudden stop. Given these vulnerabilities, however, there are many possible crisis triggers (see, for example, Ghosh et al., 2008). A sudden stop may result in a single crisis (banking, currency or sovereign debt), a twin crisis (banking and currency) or a triple crisis (banking, currency and debt). In 2007, the United Kingdom and the United States faced a banking crisis (but not a currency or sovereign debt crisis). Iceland is now experiencing a twin crisis. Sovereign debt will be severely affected also, but due to a low initial debt ratio, sovereign debt should remain manageable, assuming fiscal consolidation in the years ahead. Laeven and Valencia (2008) give an in-depth historical analysis of banking crises worldwide. The number of crises in the world since 1997 is shown in Chart 1.

In Iceland, the financial vulnerabilities were the size of banking sector balance sheets relative to the economy, combined with doubts that the Central Bank could act as a credible foreign-currency lender of last resort. The banking crisis trigger was the closing of international wholesale money markets amid the global credit crunch. The currency crisis was the consequence of foreign-currency funding problems due to a loss of confidence in the Icelandic banking sector. This contributed to foreign exchange hoarding through the spot market and to severe distortions in the foreign exchange swap market.

According to the empirical literature (Calvo et al., 2006), the probability of a sudden stop increases with the current account deficit and foreign currency-denominated debt (where the latter may be impaired substantially by a real exchange rate depreciation). Therefore, the risks of such a scenario in Iceland were substantial, as has been discussed frequently in previous issues of *Monetary Bulletin*.

Macroeconomic impact

Sudden stops are generally preceded by current account deficits, and absorption and production levels above trend. Many historical crises have also been characterised by the build-up of asset price bubbles (especially in real estate) on the back of financial liberalisation or, more lately, financial innovation, which neither the market nor regulators fully understood. A capital account crisis causes (1) a sudden switch from trade deficit to surplus, (2) a sharp decline in domestic production and absorption, and (3) a fall in asset prices (generating what is typically known as a boom-bust cycle). Experience shows that larger build-ups of asset prices and leverage tend to lead to deeper contractions following crises (see Table 1 and IMF (2008)). Empirically, the contraction in domestic demand (due to lower real wages, etc.) dominates the increase in foreign demand for domestic goods (as a result of the real exchange rate depreciation).

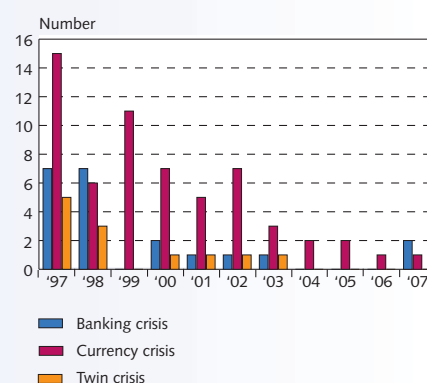
Output rebounds after sudden stop

Recoveries that follow collapses could ensue quite quickly. In fact, a strong V-shape recovery in macroeconomic variables historically takes place in a so-called Phoenix Miracle-like fashion, where output

Box IV-1

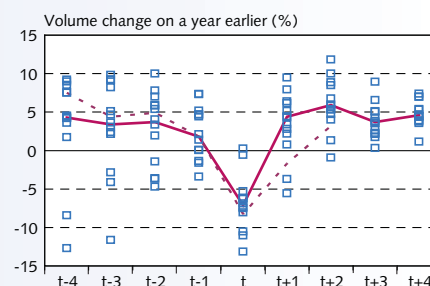
Sudden stop of international capital inflows

Chart 1
Frequency of financial crises 1997-2007



Source: Laeven and Valencia (2008).

Chart 2
Economic growth preceding and following crises in a number of countries¹
Median (line), distributions (boxes) and forecast for Iceland (broken line)



1. Argentina (2002), Brazil (1999), Bulgaria (1996), Ecuador (1999), Finland (1991), Indonesia (1998), Korea (1998), Malaysia (1998), Mexico (1995), Philippines (1998), Russia (1998), Thailand (1998), Turkey (2001), Uruguay (2002).

Sources: IMF, Statistics Finland, Central Bank of Iceland.

"rises from its ashes" (see Chart 2). Interestingly, the output rebound takes place with virtually no recovery in domestic or external bank credit, which is highly suggestive of sudden underutilisation of production capacity during the recession. That said, considerable downside risk to a strong V-shape growth recovery remains, not to mention the long-lasting social repercussions of a twin crisis.

References

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Table 1 Comparison with other major financial stress episodes in developed countries during the 1990s¹

	Initial conditions						
	Asset price increase ²				Net lending ratio ⁴		
	Equity prices in real terms	House prices in real terms	Credit/GDP	Banks' assets ³	Households	Businesses	
Finland	80.0	36.1	16.6	21.0	6.5	-5.1	
Sweden	68.5	17.5	19.1	27.2	...	...
Norway	73.9	26.5	18.8	27.6	-6.9	-3.6	
Japan	54.4	12.2	7.4	22.4	5.3	-5.1	
United Kingdom	19.9	22.9	2.5	16.1	-2.3	-3.4	
United States	14.5	4.9	3.1	9.5	-0.4	-0.3	
Average	51.9	20.0	11.3	20.6	-2.1	-3.5	
Iceland	253.0	68.6	91.5	17.7	...	...
	Outcomes						
	Asset price decrease ⁵				Macroeconomic deleveraging ⁹		
	Equity prices in real terms	House prices in real terms	Credit/GDP	Banks' assets ⁸	Households	Businesses	
Finland	-85.9	-39.8	-16.8	-5.1	16.2	17.0	27
Sweden	-69.5	-20.1	-21.3	-4.9	...	...	19
Norway	-76.9	-24.6	-2.7	-12.5	16.5	8.5	12
Japan	-58.5	-11.1	-6.8	-8.5	0.5	15.4	19
United Kingdom	-21.4	-23.3	-5.6	-6.5	9.6	4.4	13
United States	-21.0	-4.8	-3.8	-5.4	0.8	0.6	5
Average	-55.5	-20.6	-9.5	-7.2	8.7	9.2	15.8
Iceland	-81.1 ⁶	-22.6 ⁷	...	...	...	...	16 ¹¹

1. For countries other than Iceland, data are based on Table 4.4 in International Monetary Fund (2008), p. 149.

2. Trough-to-peak changes before the start of the crisis in the detrended Hodrick-Prescott (HP) filter levels of the variables. In the case of Iceland, the period for equity prices, house prices, and total credit system lending is from the beginning of 2002 until September 2008.

3. Maximum percent deviation from detrended (HP filter) levels of bank assets before the start of the crisis. For Iceland, this is the maximum deviation from the detrended combined asset levels of the parent companies of the three commercial banks since 2003, when the privatisation of the State-owned banks was completed.

4. Deviation from the trend according to the HP filter one year before the crisis. These data are not available for Iceland.

5. Peak-to-trough changes after the start of the crisis in the detrended (HP filter) level of the variables.

6. Peak-to-trough changes after the crisis started in the detrended (HP filter) level of equity prices in the Central Bank's baseline forecast in this issue of *Monetary Bulletin*.

7. Peak-to-trough changes after the crisis started in the detrended (HP filter) level of house prices in the Central Bank's baseline forecast in this issue of *Monetary Bulletin*. It is appropriate to bear in mind that real house prices had already dropped considerably when the crisis hit, as is discussed in Section VIII of this *Monetary Bulletin*. The decline in real house prices from the top of the upswing to the bottom of the downswing in the forecast is approximately 30% in the detrended (HP filter) level of house prices, and 49% based on unfiltered real house prices.

8. Minimum percent deviation from detrended (HP filter) level of bank assets after the start of the crisis.

9. Trough-to-peak changes in the detrended (HP filter) net lending ratios.

10. Output loss is measured as the decline from peak to trough in percent of peak level output. For Iceland, this is based on the Central Bank's baseline forecast in this issue of *Monetary Bulletin*.

11. According to the Central Bank's baseline forecast in this issue of *Monetary Bulletin*.

Sources: International Monetary Fund and Central Bank of Iceland.