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Managing capital flows in a financially integrated area:
Lessons from the Icelandic financial crisis

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challenges
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I would like to thank Eesti Bank, Sveriges riksbank, and the IMF for inviting me to speak at this most interesting event.

In my remarks, I will focus on those aspects of the Icelandic financial crisis that are most closely associated with the topic of this session, which is financial integration. I will draw out some salient features of that story and then link them to several lessons that might be of more general relevance.

In the autumn of 2008, two separate but interrelated sub-stories of the recent Icelandic financial and economic saga converged in a tragic grand finale. These are:

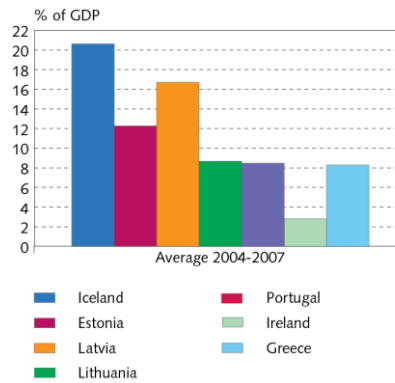
1. Iceland's boom-bust cycle and problems with macroeconomic management in small, open, and financially integrated economies. This is a story that has played out many times around the globe, and many of its elements have been seen before in Iceland.
2. The rise and fall of three cross-border banks operating on the basis of EU legislation (the European "passport"). This story was much more unique, as it involved the first banking crisis in Europe since the EU single market was formed in the early 1990s.

Let me briefly discuss each of these in turn, in order to set the stage for the policy discussions.

First, the macroeconomic boom-bust story. All the usual suspects were present: very strong capital inflows fuelling a credit and asset price boom that subsequently turned into a bubble at the same time as the economy overheated and an unsustainable external position developed, as could be seen in a double-digit current account deficit. And macroeconomic and prudential policies were not up to the task.



Net total capital inflows in selected countries



Sources: Eurostat, Central Bank of Iceland.

At the deepest level, this part of the story was related to three factors:

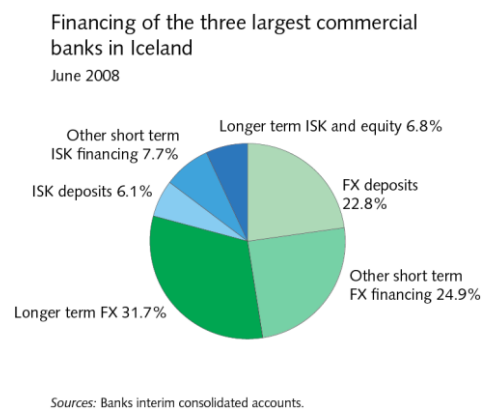
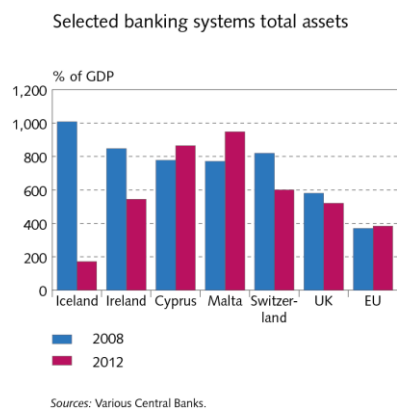
1. The complications that tend to arise with macroeconomic management as very small, open economies become more and more financially integrated;
2. The specific conditions of ample and cheap credit at the global level;
3. And major policy mistakes in Iceland, both of the type that would be deemed to be such in any book (such as giving an already overheated economy a demand stimulus), and those more closely related to the orthodoxy prevailing at the time: freely floating exchange rates, interest rate policy focusing mainly on low inflation in terms of goods and services, and good micro-supervision; and let the markets do the rest.

The first factor is perhaps of interest here. The process runs as follows: Domestic interest rates at the longer end of the maturity spectrum tend to become more closely correlated with the global rate, or the rate of the largest trading partner, and less correlated with the domestic policy rate. This means that monetary transmission tends to go increasingly through the exchange rate channel, which is only a problem, however, if the exchange rate behaves badly. Unfortunately, there is a lot of evidence to suggest that it does. Uncovered interest rate parity (UIP) does not hold except over long horizons. Interest rate differentials give rise to widespread carry trading, which is by nature a bet against UIP. Exchange rates thus diverge from fundamentals for protracted periods, followed by sharp corrections. So the exchange rate often seems to be as much a source of shocks and instability as a tool for adjustment and stabilisation. Ultimately, these cycles can take the boom-bust form and, in extreme cases, can result in serious financial instability or crisis. The research on this phenomenon is still ongoing, but there is a lot of evidence to suggest that the problem would not disappear even if macroeconomic policies in the traditional sense were perfect.



This process was important in the Icelandic episode. The capital inflows were driven by the traditional push and pull factors. But when a benign upturn originally driven by FDI in the energy-intensive sector turned into overheating, and fiscal and other demand levers pulled by the Government were either insufficiently used or pulling in the other direction, monetary policy was overburdened and the increased interest rate differential that resulted pulled in further capital and carry trade positions.

Let me now turn to the banking part of the story. Before the collapse, the banking system had expanded very rapidly, growing in just five years from a combined balance sheet of less than 2 times GDP at the end of 2003 to 10 times GDP. Most of this expansion was cross-border, and a significant part of it was really off-border, having little to do with Iceland, as both financing and investment took place abroad. Around two-thirds of the balance sheet of the three cross-border banks was denominated in foreign currency. As is typical for banks, the FX part of the balance sheet had a significant maturity mismatch. However, there was no safety net of the type that we have in a national setting to back it up. This turned out to be the fatal flaw in the whole setup, although we now know that these banks were also undercapitalised, which might have done them in at a later stage. But so were several European banks that were considered solid at the time – and some of them are still around!



In the panic that gripped global financial markets after the collapse of Lehman Brothers, Iceland's big banks were faced with a wholesale run on their foreign currency liabilities and were therefore heading towards a default on those liabilities in the absence of LOLR assistance in foreign currency. However, given their size, it was impossible for the Icelandic authorities to provide such assistance on their own.

Given the lack of international cooperation, the Icelandic authorities were forced to consider radical solutions. Although they were probably not articulated fully at the time, these solutions entailed several goals: preserving a



functioning domestic payment system, ring-fencing the sovereign in the case of bank failures, limiting the socialisation of private sector losses, and creating the conditions for the reconstruction of a domestic banking system.

In essence, the adopted solution saved the domestic operations of the banking system and let the international part to go into a resolution process. The new banks were created by carving the domestic assets and liabilities out of the old, failing banks. The new banking system amounted to 1.7 times GDP.

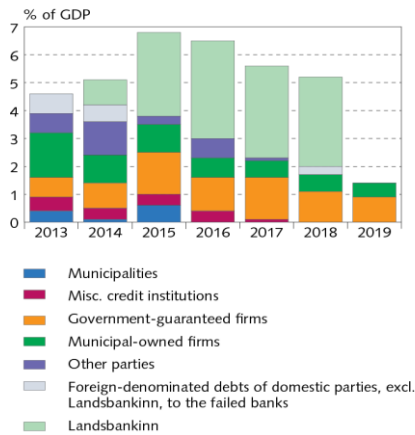
To a significant degree, these measures were successful in keeping the domestic payment system and basic banking services up and running, which was a key factor in dampening the effect of the banks' failure on the economy.

There were two key elements to the policy response during the autumn of 2008. The first was crisis management vis-à-vis the failing banks, which I have just mentioned. The second was the economic programme developed by the Icelandic authorities in co-operation with the IMF. The programme had three key goals: stabilisation of the exchange rate, fiscal sustainability, and reconstruction of the financial sector. Comprehensive capital controls were an important element in the programme, but their rationale was to help to stabilise the exchange rate in a situation where the currency had fallen more than 50% in 2008, where foreign króna positions that were a legacy of carry trade and capital inflows amounted to around 40% of GDP, and where a large fiscal deficit that had to be financed in the domestic market had developed. The capital controls therefore gave monetary policy more scope to help stabilise and turn around the real economy once inflation came down. Subsequently, they shielded the economy from the financial spillover effects of the crisis in the eurozone.

But the problem is that they are still in place, over five years after the climax of Iceland's financial crisis. . The reason is that Iceland is still facing a balance of payments crisis that is a legacy of former capital inflows and the unwinding of these big cross-border banks. There are three elements to this, as is described in this slide: . contractual foreign debt payments in the next few years, well in excess of reasonable expectations of the size of the current account surplus; offshore krónur, a legacy of the carry trade, which still amount to 20% of GDP; and potential króna payments, from the old banks to foreign residents, amounting to another 25% of GDP.

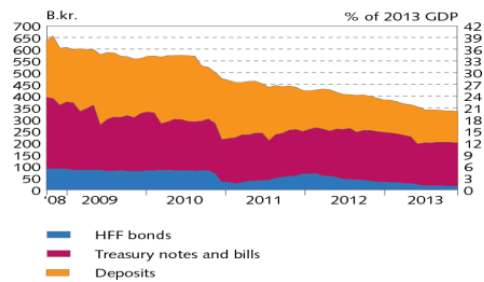


Estimated payments by parties other than the Treasury and CBI on foreign loans and foreign-denominated debts to the failed banks¹



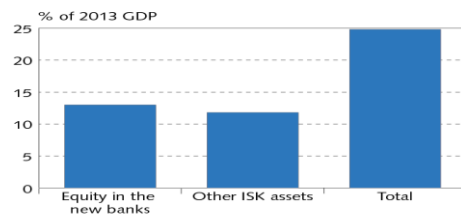
1. As of year-end 2012 and exchange rates of 29 August 2013.
Source: Central Bank of Iceland.

Short-term króna assets held by non-residents
October 2008 - October 2013



Sources: Statistics Iceland, Central Bank of Iceland.

Share of foreign residents in króna assets
of the old banks
Book value 30 September 2013



Sources: Financial information Gilttnir, Kaupthing and LBI, Statistics Iceland, Central Bank of Iceland.

We can see from the Icelandic case, and indeed many others, that although financial integration can offer many benefits to small, open economies, it also potentially entails significant risks that can turn into a nightmare if left unchecked. In Iceland's case, it was a pretty dramatic. What are the lessons, then? In the interest of time, I will briefly mention a select few.

The first issue that I would like to mention is the need to monitor closely both net capital flows that immediately affect the economy – especially credit growth, asset prices, and domestic demand – and the developments of gross external assets and liabilities that might not affect the economy until risks materialise and banks are undergoing the transformation from being international in life to being national in death. During the financial crisis, there have been numerous cases of vulnerabilities in gross positions coming home to roost, such as the dollar-denominated parts of European banks' balance sheets. In Iceland and similar cases there is also a statistical issue here that needs to be acknowledged: the distinction between flows that actually entered or left the country at the time and those that were simply flowing offshore in both directions but were booked through the Icelandic headquarters and thus recorded in the country's BP and IIP.

The second lesson relates to the EU framework for cross-border banking, which clearly facilitated the cross- and off-border expansion of the Icelandic banks through the so-called European passport. It was and is deeply flawed.



The basic problem is that the freedoms are not matched by public action and frameworks at the EU and EEA level. Bank size relative to country size was assumed to be a matter of no concern, and FX risk was largely ignored. Based on the Icelandic experience, a banking union makes perfect sense, but only fully for the eurozone, and even then it has to include all three elements – common supervision, resolution, and deposit insurance – in order to break the deadly embrace of banks and sovereigns. In the interim, I think small countries, especially those with their own currencies, will have to impose their own prudential measures in order to defend themselves against the risks they face.

The third lesson relates to the structure of the financial sector in small, open economies in the absence of robust and credible international or regional safety nets. To my mind, international financial centres cannot be located in such countries without some *ex ante* mechanism that at least partly insulates the domestic economy from the risks involved. In some sense, this is what Iceland did in the nick of time in early October 2008. Furthermore, in very small, open economies with their own currency, like Iceland, the international activities of domestic banks and FX risks on their balance sheets must be limited and regulated. In this context, we have been thinking about the prudential regime that must be in place in Iceland when we have lifted capital controls and Icelandic banks are again free to use their European passporting rights. We will have more stringent restrictions on permissible currency mismatches than in the past, also taking into account positions of unhedged households and companies, but more importantly, we will, through some combination of LCR- and NSFR-type ratios in foreign exchange, put strict limits on FX maturity mismatches. The combination of these and other measures will make it impossible for the banking system to attain the size and cross-border reach it had before the crisis. The big question is whether it will be deemed compatible with the EEA Agreement. More generally, I think the distinction between macroprudential measures and capital controls can be more complex than many make it out to be.

The fourth lesson is on capital flows: Deal with the inflows if you want to avoid the risk of having to introduce comprehensive capital controls on outflows, which can work as in Iceland but have increasingly negative side effects on the economy. The measures that can be taken to deal with the inflows include adopting correctly aligned macroeconomic and macroprudential policies, leaning into the wind by buying part of the inflows into foreign exchange reserves, and even in extreme cases, deploying selective capital inflow management tools.

The final lesson from all of this is that if we are going to reap the benefits of financial globalisation, we must make it safer.