Central Bank of Iceland

The Financial Crisis in Iceland:

Reflections on causes, consequences and lessons to be learnt

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The recent Icelandic saga

Two separate but interrelated sub-stories:

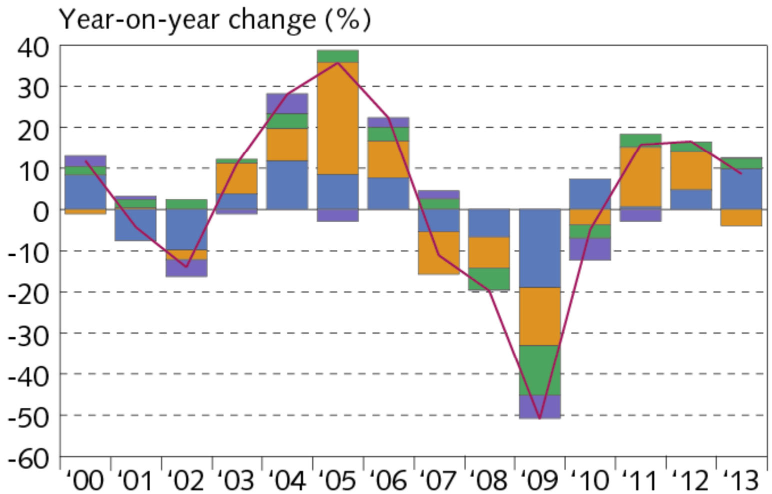
1. Iceland's boom-bust cycle and problems with macroeconomic management in small, open, and financially integrated economies.
2. The rise and fall of three cross-border banks operating on the basis of EU legislation (the European "passport").

The two converged in a tragic grand finale in early October 2008, when Iceland's three commercial banks failed and were placed in special resolution regimes.

The boom-bust

It began as a positive FDI shock

Gross fixed capital formation and contributions of its main components 2000-2013[1]



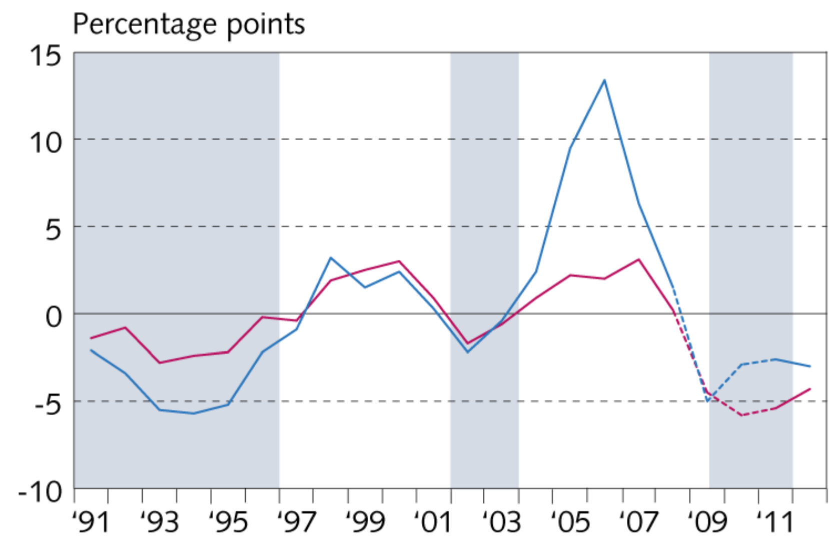
- Gross fixed capital formation
- Businesses excluding aluminium and power stations
- Aluminium and power stations
- Residential
- Public sector

1. Central Bank baseline forecast 2011-2013.

Sources: Statistics Iceland, Central Bank of Iceland.

Business investment as % of GDP 1991-2012[1]

Deviation from average for 1970-2007



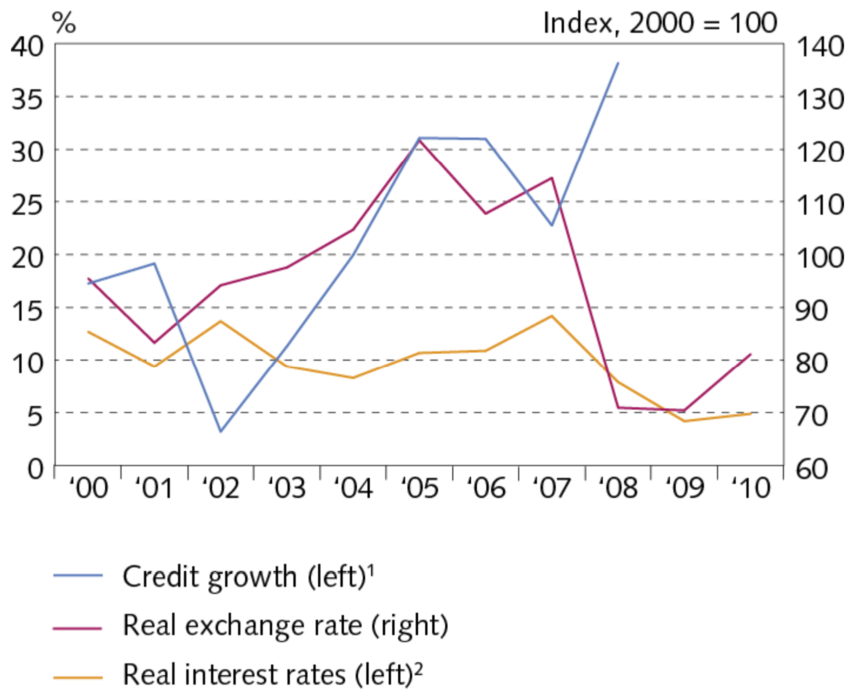
- Business investment
- Business investment excluding aluminium and power stations

1. Central Bank baseline forecast 2009-2012. Shaded areas show periods with negative output gap.

Sources: Statistics Iceland, Central Bank of Iceland.

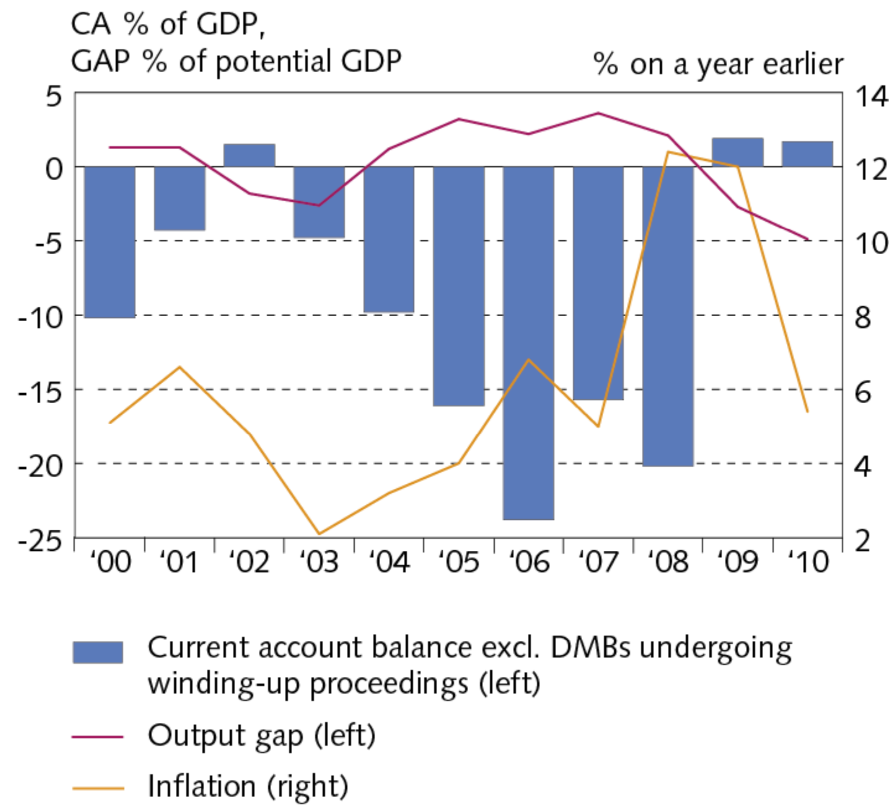
Developing into a credit boom and serious overheating

Credit growth, real exchange rate and real interest rates on non-indexed bank loans



1. Latest figures for credit are from Q3 2008.
2. Real interest rates on non-indexed bank lending.
Sources: Statistics Iceland, Central Bank of Iceland.

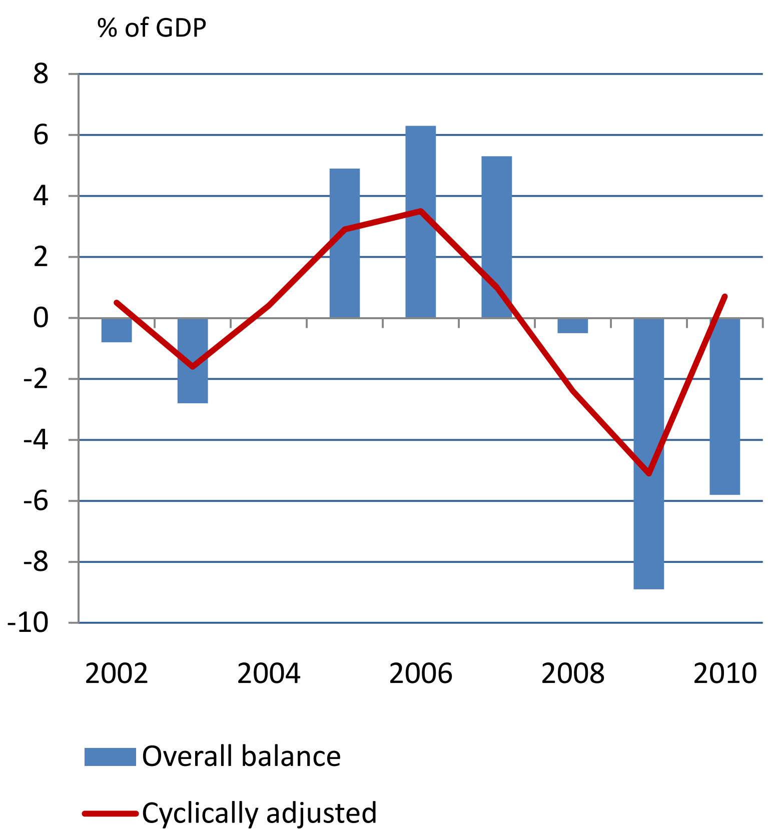
Current account, output gap and inflation



Sources: Statistics Iceland, Central Bank of Iceland.

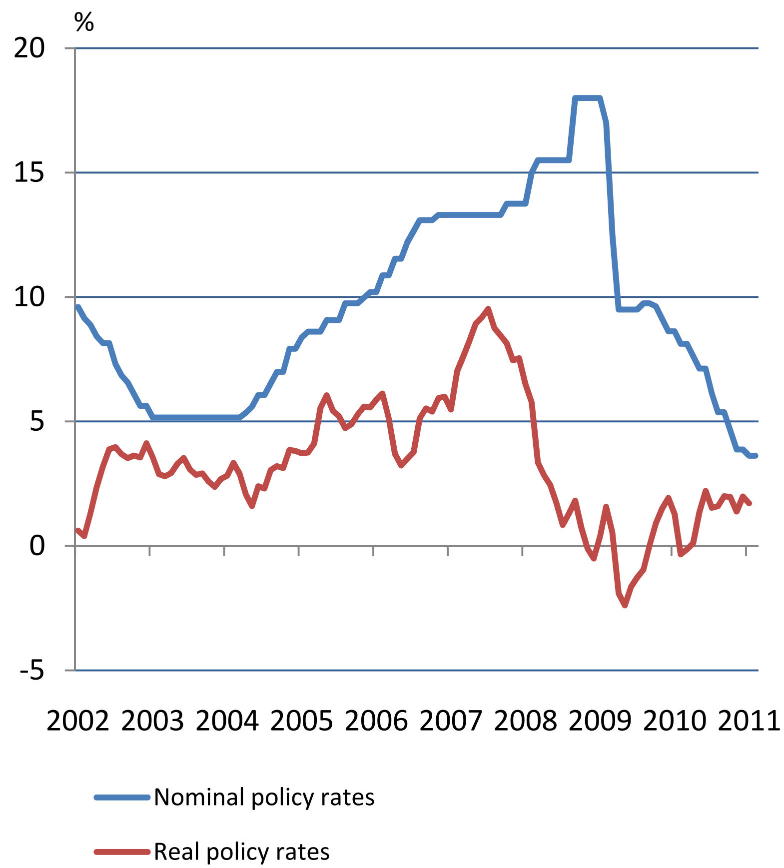
Fiscal policy was too loose and monetary policy overburdened

General government balance



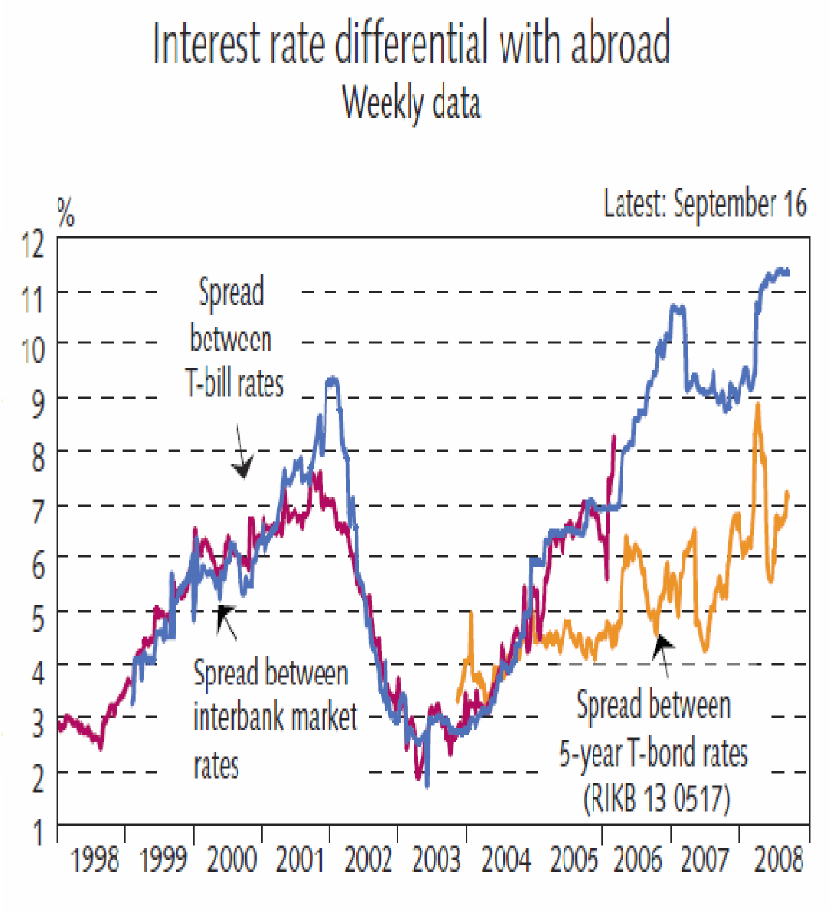
Sources: IMF, Statistics Iceland.

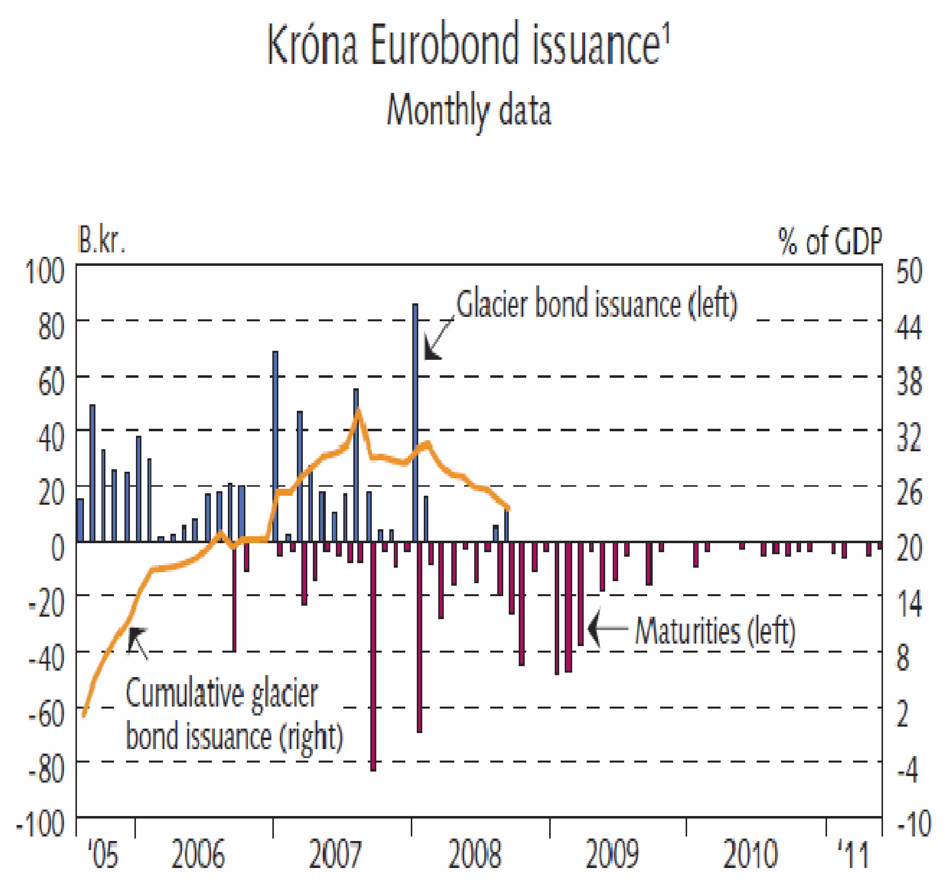
Real and nominal policy rates



Source: Central Bank of Iceland.

A wide interest rate differential induced capital inflows and encouraged carry trade



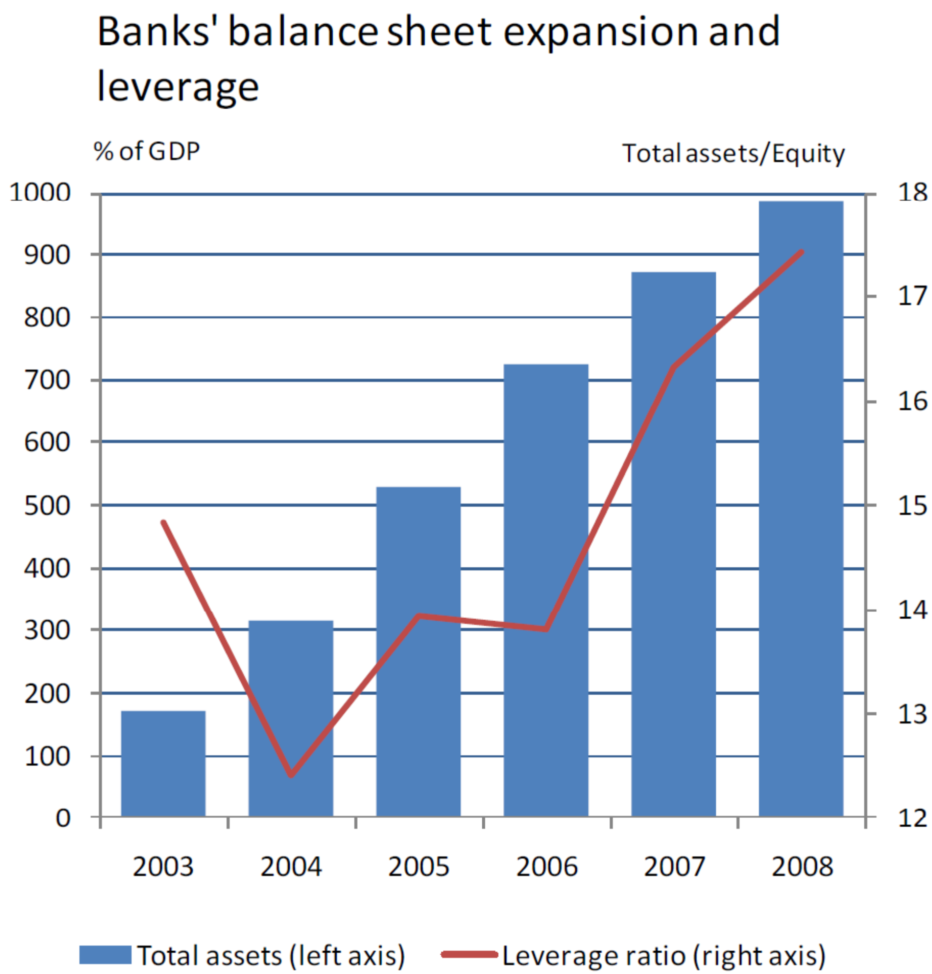


The cross-border banks

The European Economic Area

- European "passport" for financial institutions headquartered in any country within the area
- Common legal and regulatory framework …
- … but supervision, safety net (e.g., deposit insurance and LOLR), and crisis management and resolution remained largely national.

Rapid expansion of the banks



Consolidated accounts of three largest commercial banks. 2008 data is end-June.

Source: Central Bank of Iceland.

Geographic and currency dispersion

- 41% of total assets in foreign subsidiaries.
- 60% of total lending to non-residents and 60% of income from foreign sources.
- Over 2/3 of total lending and deposits in foreign currency.

The warning: mini-crisis of 2006

- Icelandic banks experienced a marked drop in their stock market valuations; this was associated with a sizable currency depreciation.
- But they “cleaned up their act” somewhat.
- They began collecting foreign deposits, largely in branches, reducing the likelihood of failure but increasing its impact. Iceland is still suffering the consequences (Icesave).
- Then global risk appetite returned ...
- ... and some of the rating agencies took the Icelandic banks to AAA!!

Traditional metrics looked fine but there were hidden vulnerabilities

As of 30 June 2008	Official	Less "weak" capital*
CAD ratio	11%	7%
Tier 1 ratio	9%	5%
Equity/tangible assets	6%	3%
Leverage ratio	16	31
Bond maturity	5y	5y
Liquidity ratio	1.7	1.7

* "Weak" capital is bank equity financed by lending from the banks themselves.

The crisis

Adjustment and three shocks

- Unusually large external and internal macroeconomic imbalances in 2005-2007.
- Their subsiding was bound to be associated with a significant slowdown, if not an outright recession (from 2006 onwards, the CBI consistently predicted a recession in 2009).
- Currency crisis in early 2008 (exchange rate fell by 26% in the first half).
- Collapse of the banking system in October 2008 (exchange rate fell by another 26% to year-end).
- Global contraction in Q4/2008 and the first half of 2009.

Sudden stop and a run on FX liabilities

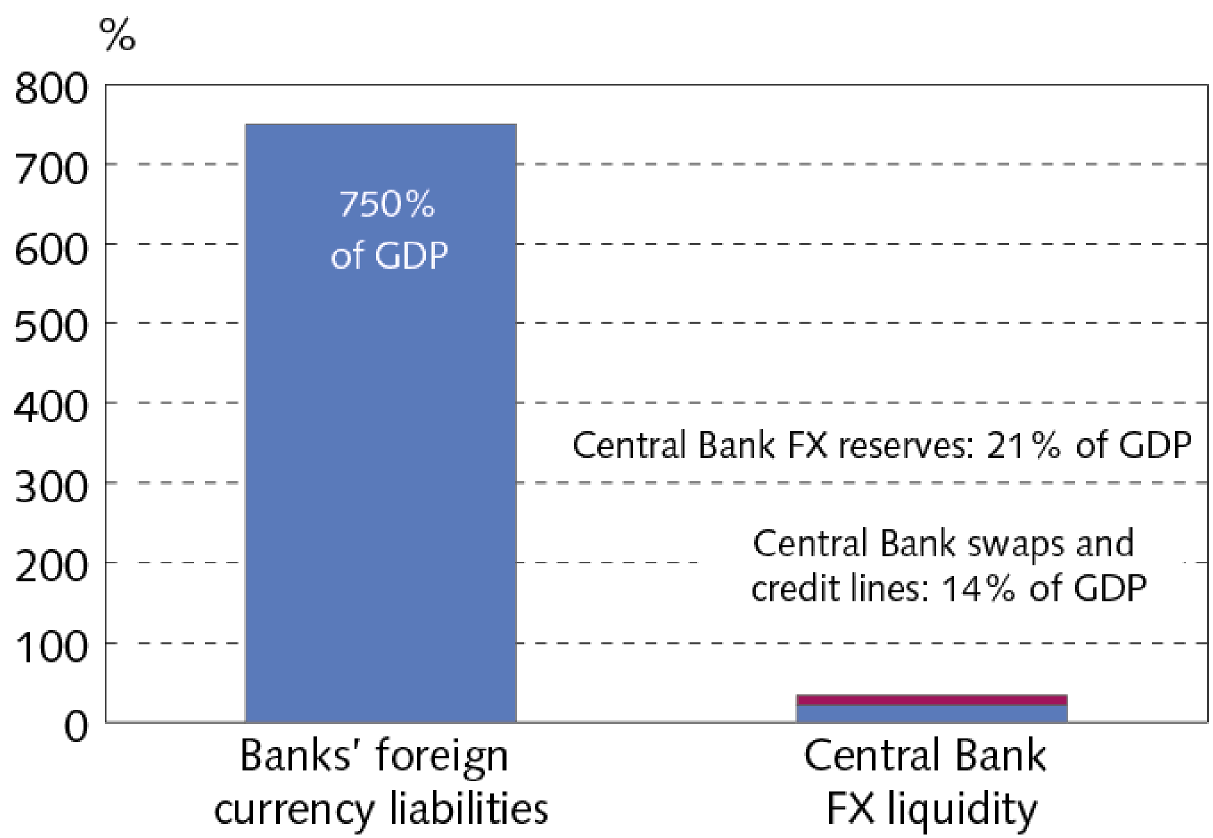
- The Icelandic banks were largely unable to refinance foreign currency liabilities after the outbreak of the international financial crisis in August 2007.
- Claimed to be able to operate without market access well into 2009 at least.
- Serious concerns in early 2008.
- Run on FX liabilities post-Lehman in late September 2008.

Building defences

- It was clear by early 2008 that the banks were in dire straits and faced massive rollover risk in terms of foreign currency liabilities.
- Authorities tried to negotiate swap lines, declined by ECB, BoE and Fed (told to go to the IMF), but negotiated € 1.5 m with Nordic countries in May.
- In May 2008, Parliament approved substantial foreign borrowing to boost FX reserves (€ 5 m, mostly unused).

FX liquidity available to the Central Bank was dwarfed by the banks' FX liabilities

Banks' foreign currency liabilities and Central Bank FX reserves, September 2008



The policy responses

Too big to save

- These were private banks.
- Their assets were in excess of 10x GDP, with around 2/3 of the balance sheet in foreign currencies.
- CB did some limited last-resort lending in FX.
- But in the absence of international cooperation, forced downsizing through resolution and winding-up was the only option.
- Guaranteeing the banking system would have been a disaster.

Securing continued domestic payment and banking operations

- Emergency Act:
  - FME entrusted with broad-based intervention powers
  - Deposits given priority over other unsecured claims
  - Parliamentary approval of governmental capital injections
- Statement from the Government that all deposits in Iceland were guaranteed.
- Failing banks were placed in resolution regimes (became the property of (mostly foreign) creditors).
- Domestic banks were carved out of the failed banks (1.7 times GDP).
- Domestic payment systems functioned throughout.

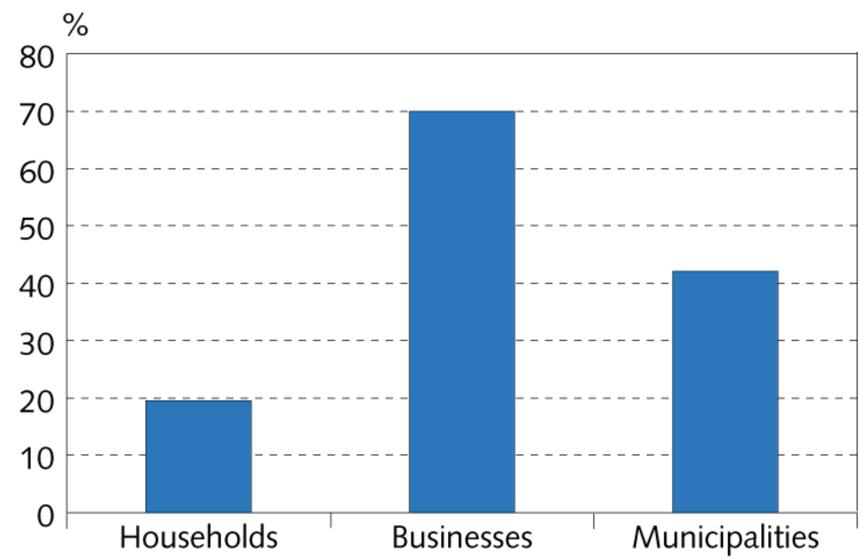
Disorderly and partly hostile cross-border crisis management

- Lack of information sharing and co-operation across affected jurisdictions.
- Early sale of “good” assets at fire sale prices => recovery ratio for bond holders will be reduced.
- UK authorities froze and ring-fenced assets and closed Singer & Friedlander, bringing down Kaupthing – however, LOLR loan in Sweden and Iceland to Kaupthing.

The crisis struck a heavily indebted private sector

- With a large share of foreign currency-denominated or foreign currency-linked debt.
- 75% of total household debt was price-indexed.

Proportion of total foreign-denominated debt[1]



1. Figures for households and municipalities are as of year-end 2008, and figures for businesses are as of June 2009.
Source: Central Bank of Iceland.

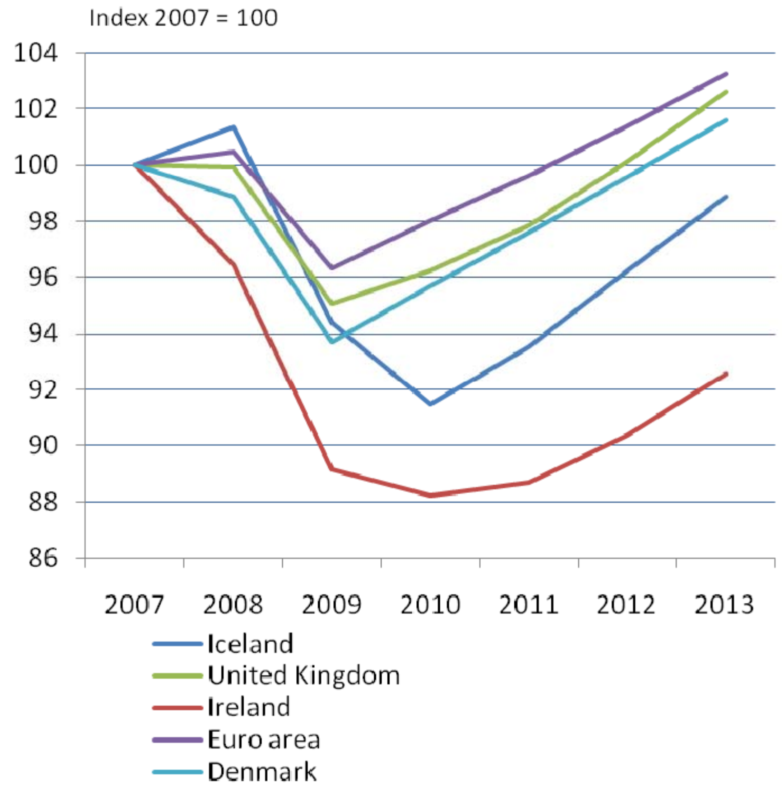
IMF programme

- A Stand-by Arrangement was initiated in November 2008 (USD 2.1 bn)
- External financing from IMF, the Nordic countries, Poland and others (USD 3 bn)
- Three key policy goals:
  - Exchange rate stability
  - Fiscal sustainability
  - Financial sector reconstruction
- Comphrehensive capital controls a key element in the programme

The recession

The recession in international comparison

Economic recovery in international comparison[1]
2007 - 2013

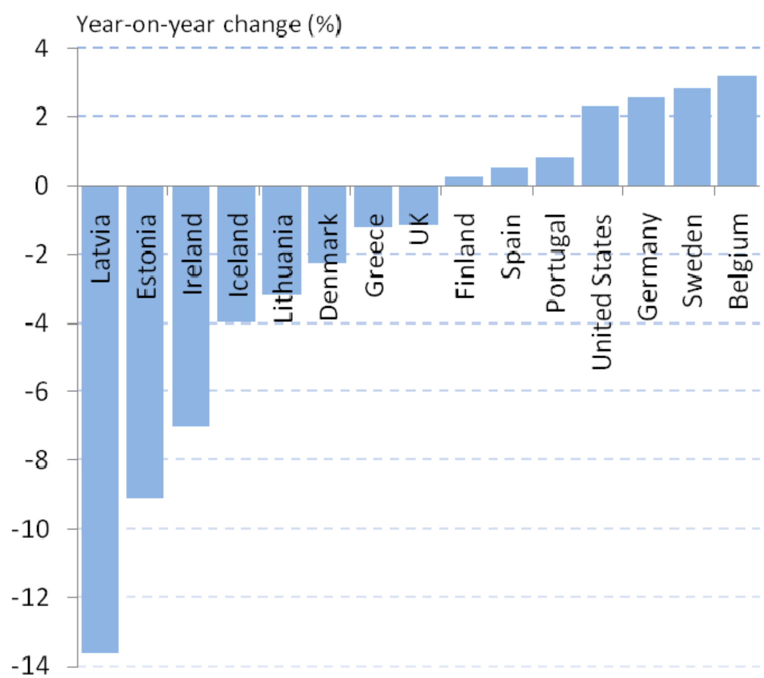


1. Figures for Iceland are from Central Bank of Iceland baseline forecast.

Sources: IMF World Economic Outlook April 2011, Central Bank of Iceland.

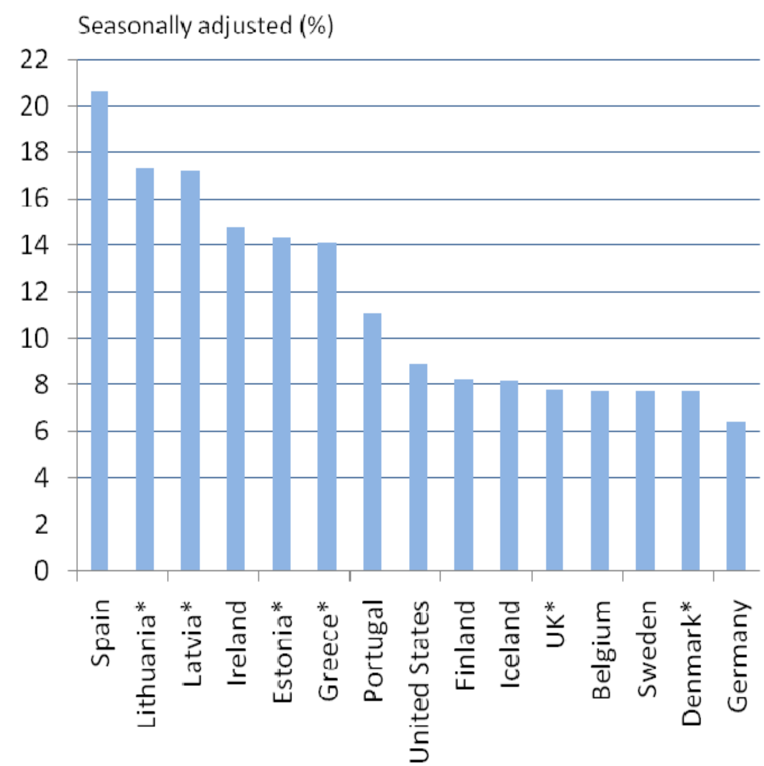
Iceland has not been the hardest hit

Percentage change in GDP from the average of 2005-2007 to 2010



Source: Eurostat.

Unemployment rate
Q1 2011[1]



1. Data for countries with an asterisk are only available for Q4/2010.
Source: Macrobond, Central Bank of Iceland.

The stabilisation and recovery

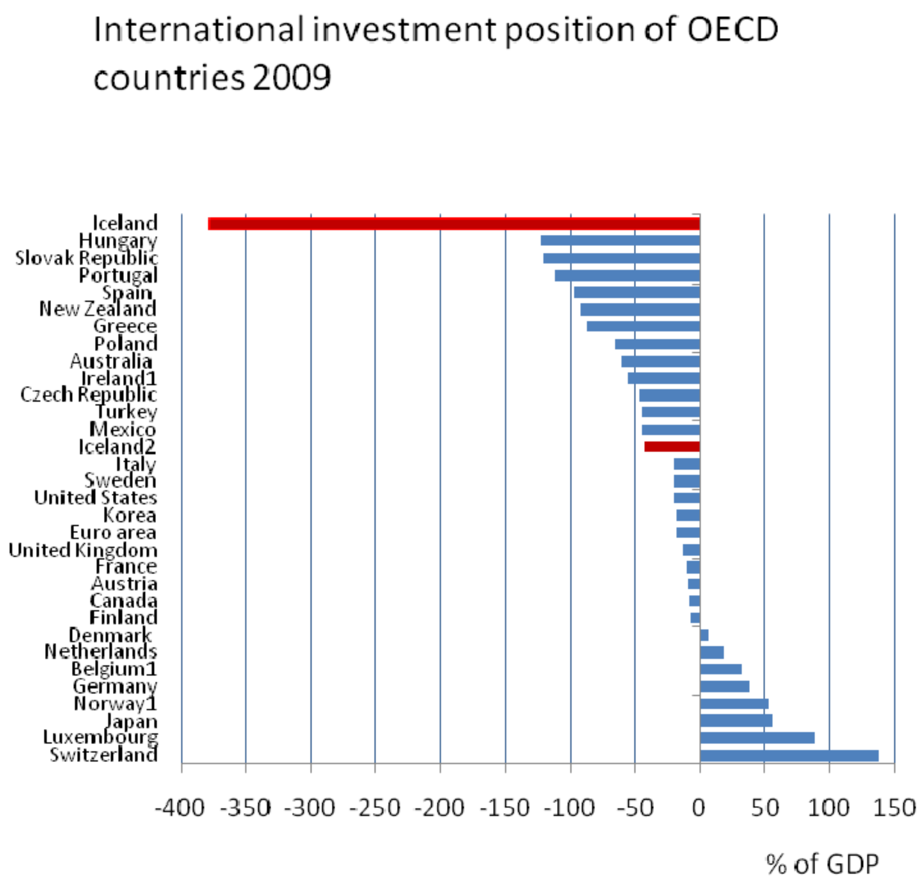
Stabilisation

- The underlying current account has swung into a significant surplus (around 8% GDP in 2011 and 2012).
- This contributed to stabilisation of the exchange rate in the second half of 2009 and then appreciation in 2010 (12%).
- Exchange rate still 20% below 30-year average in real terms.
- Inflation has been close to the 2½% target recently.

Recovery

- GDP seems to have begun growing again in Q3/2010.
- The recovery is still weak, however, and unemployment is still close to peak.
- Investment rate is at a historical low.
- Iceland faces the task of re-integrating into global capital markets.
- Lifting capital controls and demonstrating market access of the sovereign are important elements in the process.

International investment position



1. Figures are for 2008. 2. IIP excluding DMBs undergoing winding up proceedings.
Sources: IMF and various central bank and statistics websites.

- When the failed banks have been wound up, Iceland will not be an outlier in terms of net foreign debt.
- Figures do not include the unsettled Icesave issue.

Some lessons

Exchange rate regime

- In Iceland, the floating exchange rate contributed to the problem but is also a part of the solution.
- Membership in the euro area would have prevented the currency crisis and greatly reduced the problem of FX balance sheets without LOLR => the banking crisis would have been less severe.
- But it is no panacea, and banking crises and sovereign debt crises can still take place.
- Iceland's recent experience in this regard is a factor behind its EU application.

Cross-border banking

- Cross-currency risk and maturity mismatches in terms of foreign currency (=> rollover risk) was underestimated prior to the crisis =>
- Under-regulated and insufficiently backed by capital or safety net facilities (e.g., LOLR).
- EU/EEA framework is flawed and entails particular risk for small countries outside the euro area.
- We need to move towards EU supervision, deposit insurance, crisis management and resolution regimes for cross-border banks. Domestic banks could remain within the national safety net.