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<td>FME</td>
<td>Fjármálaeftirlitsins</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>ISK</td>
<td>Icelandic Krona</td>
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Report on Iceland’s response to their economic and banking crises
Executive Summary

In times before its economic crisis, Iceland developed to a country with one of the highest living standards in the world. This time was characterized by privatisation and liberalisation. Its rise, however, ended abruptly in 2008 with its economic and banking crisis.

This crisis was enabled by an inefficient and deregulated banking sector combined with a weak and powerless supervision, which allowed banks to operate well beyond the capacity of the central bank. Total assets of the banking sector equated to 900 percent of the country’s GDP. With the beginning of the global financial crisis this model was no longer sustainable.

Iceland responded with a mix of partly unorthodox measures:

- Banking reforms were initiated and supervision was strengthened.
- Commercials and Central Bank was recapitalized
- Capital controls were introduced to stop the Icelandic Krona from depreciating
- Monetary policy was tightened to reduce and stabilise inflation
- Public expenditure was reduced and taxes raised to return to a budgetary surplus and a positive current account
- Fiscal deficits were bypassed by credit lines from the IMF and many other countries

Until now these measures had mixed results. It was possible to reduce inflation rate and stabilise the krona. Also did the fiscal balance return to positive, but is significantly lower than expected and planned. Similarly, the current account returned to appositive level, but nevertheless remained very volatile and small. Further did unemployment rate rise as a consequence of the restrictive policies, but has a trend to lower levels.

The measures therefore were partly effective, but their long-term consequences have to be observed further on.
Economic Development and Causes of the Crisis

Regarding Iceland, the question arises whether their banking and eventually economic crisis stems from the same causes and was ultimately just another domino in a bigger chain reaction or not. For this reason the recent economic history of Iceland shall be outlined.

At the end of the Second World War Iceland was characterized by a very regulating and inward looking politic. Their economy mostly profited by the export of a few resources, like cold water fish. Therefore the Icelandic economy consisted of many oligoplies and monopolies. The economic situation changed when David Oddsson and his supporters gained political influence in the Independence Party of Iceland. Being Iceland’s prime minister from 1991 to 2004, his major goal was to introduce neoliberalism to the country. Consequently, privatization and deregulation shaped the economy. (Wade, Sigurgeirsottir 2011, pp. 685–686)

Figure 1: Iceland’s GDP in Comparison

Source: Eurostat

Looking at the development of Iceland’s gross domestic product (GDP) over time (Figure 1) it can be seen that this politics apparently came to fruition. In terms of growth Iceland outperformed the European Union (EU), Ireland, Great Briton (UK) and even the United States of America (USA) in the period from 2004 to 2007, only with a small slowdown in 2006.

However, Iceland’s external debt increased simultaneously by approximately 1100 percent, which includes household debt as well and can be seen in figure 2:
As a result, interest payments became a huge public expenditure, which according to Gylfason (2014, p.11) absorbs five percent of GDP every year at least until 2018. Moreover, this leads to a crowding out of essential expenditures.

As part of Oddsson’s program the two major and state-owned banks were also privatized and deregulated. The sale of the banks excluded foreign investors and subsidised local investors. The creation of a third bank was initiated and fostered by merging several small banks to a bigger one. These three banks controlled most of the Icelandic banking sector and barely face foreign competition (Gylfason 2014, p.13-16). Within a few years these three banks ascended in the international banking sector and became even part of the biggest 300 banks in 2006. By funding internationally it was possible for the banks to grow their assets by 50 percent or more per year. Total assets of commercial banks (figure 3) peaked in 2007 where total group assets were equivalent to about 900 percent of the Icelandic GDP. It is obvious that these banks operated well beyond the capacity of the central bank to rely on it as a lender-of-last-resort (Wade, Sigurgeirsdottir 2011, p.688). Together with a “minor-league currency” insufficiently small foreign currency reserves, this made the whole financial sector increasingly reliant on market financing (Buiter, Sibert 2008, pp.2).

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1 Some of them well connected to political parties
To grow this fast and conspicuous the banks applied to some extent shady practices. Simplified: Bank A borrowed 1 billion from bank B and bank A then gave a loan to bank B amounting to one billion, all without collateral. In reality no money was exchanged, but both banks were then able to take a loan from another nondomestic bank, using the loans they made with each other as collateral. This money was then used to invest into even more assets, which could be used as collaterals for new loans. The problem with these tactics was that by giving loans to each other without collaterals, the Icelandic banks became strongly interdependent (Wade, Sigurgeirsdottir 2011, p.687). If one bank fails, the other was deemed to fail as well. The assets they invested in were mostly denominated in foreign currencies and consisted directly and indirectly (as collateral for loans) of equity, whereas mortgage loans only represented a small share of the portfolio. Since the bank’s own equity was denominated in Icelandic Krona (ISK), even a small depreciation of the krona would lead to a decline in regulatory capital(Centonze 2011, p.138).

Moreover, Iceland’s banks could not really be considered as efficient. Normally, privatisation is used to enable more efficient markets, but in case of Iceland this was not really the case. Oligopolistic structures were established. This can be illustrated by a simple indicator for bank efficiency: the interest rate spread (Gylfason 2014).

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2 Mostly in a foreign currency
3 Assets in foreign currency accounted for 67% to 81% of total assets
Figure 4: Interest Rate Spread

Source: World Bank via datamarket.com

Interest rate spread is the interest rate charged by banks on loans to private sector customers minus the interest rate paid by commercial or similar banks. The more efficient and competitive the financial market, the smaller the interest rate spread. It should therefore be expected that after the privatization the interest rate spread decreases. The contrary happened. In comparison to the European Union and Great Briton, the interest rate spread of Iceland is much higher and volatile (Figure 4). Similarly, the supervisory authority (FME) was ineffective, due to understaffing and little experience.
Course of Events

The first outcomes of these problems came to light in the mini-crisis of 2006.

Figure 5: Iceland’s Credit Rating by Fitch Ratings Inc.

On the 21st February the rating agency Fitch changed its outlook for Iceland from stable to negative (see Figure 5), due to macroeconomic factors (Central Bank of Iceland 2006). As a consequence of this and other negative news the krona (-30%) and stock prices declined (-25%), which had as indicated before substantial effects on the bank’s balance sheets. Investors’ confidence and the banks access to international credit markets diminished from that time on (Centonze 2011, pp.139). Short-term securities and foreign deposits became their main source of funding and became thus very sensitive to market conditions.

When the Krona began to depreciate again from late 2007 on, this caused an increase in inflation to an annual rate of 11.8% and subsequently to a raise in its policy rate to 15.5%. The bank’s need for capital was high, but could not be satisfied due to start of the global financial crisis. By the end of September 2008 the three major banks collapsed and were eventually nationalised (Centonze 2011, p.140). The effects on the real economy were disastrous. Within one year (2008) the GDP dropped by 54% or 23% until 2010. Unemployment rate rose from 1.6% in 2008 to 8.1

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4 One of these was the country’s net external indebtedness as can be seen by the International Investment Position (Appendix)
5 See appendix for illustration
in 2010\textsuperscript{5}. Accordingly, purchasing power was massively reduced (Wade, Sigurgeirsdottr 2011, p.693)

Iceland’s Response

Emergency Credit by Nordic Countries
A first measures to slow down Iceland’s downturn was a swap arrangement of Iceland’s Central Bank (CBI) with the Central Banks of Sweden, Norway and Denmark. This swap facilities enabled the CBI to acquire €500 million per agreement against Icelandic króna (Central Bank of Iceland 5/16/2008). As a result the foreign exchange reserves almost doubled and appreciated the krona by nearly 5% (Centonze 2011, p.141).
Emergency Legislation & Nationalisation
Nevertheless, the liquidity situation heated up globally and the first bank not being able to refinance was Glitnir, which was then nationalised on the 29th of September with ISK84 billion (€590 million) provided by the government. The consequence of this was a downgrade of this and the two other major banks. International attention was drawn to the banking crisis and the ISK began to depreciate once more.

Since the financial crisis was no longer deniable, Iceland’s parliament passed the Emergency Act on the 6th October 2008. Founded on “unusual and extraordinary financial market circumstances”, this act granted the FME nearly unlimited control over banks and similar institutions. One of the most important changes was an adjustment on Act No. 161/2002, more specifically on Chapter XII, which regulated “Financial Reorganisation, Winding up and Merger of financial Undertakings”. By this means, the FME had the possibility to take over control of failing financial institution, which faced bankruptcy and if necessary unwind or merge them (Gunnarsson 2011, pp.4).

In the following three days the FME took over control of the other two major banks: Landesbanki and Kaupthing Bank. Trading of shares was temporarily suspended on the stock exchange. The three banks were then later split in to an old and a new bank each. The new banks are domestic banks, which are funded by domestic deposits and the old banks should contain the international business and external liabilities (Chand 2009, p.26).

Monetary Policy
The next important step was a tightening of the monetary policy. On 28th October the policy rate was increased from 12% to 18%. The motivation behind this was to put an appreciation of the krona into motion. Critical here is that an increase in interest rates can also impede private domestic investments and that an appreciation of the krona might reduce exports as well as domestic consumption in the short run. On the long run however an increase in interest rates lowers Iceland’s overall price level and therefore its inflation. Given the relationship between nominal and real interest rates, this should result in lower nominal interest rate. This effect is also called Fisher effect (Krugman, Obstfeld 2011, pp.421). In reality this also happened: the inflation rate was successfully reduced from its maximum of 18.6% in January 2009 to 1.8% in January 2011, but then rose again to an average of 3.7% throughout 2013. A similar development could be observed by the interest rate movements (see appendix for illustration).

Important in this context are also the temporary modifications in currency outflow on the 10th October 2008, which made it only possible to exchange the krona under certain circumstances (Central Bank of Iceland 2008). These temporary modification were then later replaced by clear capital controls, endorsed by the IMF. This made it possible for the Central Bank to concentrate

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6 Behind this consideration is the assumption that exchange rates adjust to maintain interest rate parity. See appendix for analysis
7 \(i \approx r + \pi, \ i: \text{nominal interest rate}; \ r: \text{real interest rate}; \ \pi: \text{inflation rate}\)
on price stability and to lower interest rates later without accepting huge depredations in the krona.

The IMF Program
The most notable measure was a program initiated by the International Monetary fund (IMF). Due to the economic downturn and the rescue of its banks, Iceland had to face an enormous financial gap. To refinance this gap the IMF granted Iceland a two-year stand-by arrangement of $2.1 billion (ISK 292.7 billion), which equated to 1190% of its quota. Of course the IMF negotiated defined conditions that have to be met. This included the assistance of the IMF and other banking expert in the restructuring of the banking system and what is more assistance in building an adequate regulatory framework. Moreover, fiscal stabilizers had to be deployed and other conditions fulfilled (Centonze 2011, pp.144).

As soon as this arrangement was secured, other countries followed to support Iceland. The emergency credit lines in form of currency swaps by Sweden, Norway and Denmark were extended (Ministry of Finance and Economic Affairs 2008). Other credit lines were offered by Finland, Poland, Germany and Great Briton (Brogger, Einarsdottir 2008).

With this access to funds and incorporating the necessary measures, the Icelandic government passed its stabilisation program the following day.

Nevertheless, it also has to be considered that the loans alone, only treat the immediate symptoms and buys time. Iceland, however, was able to leave the IMF program by August 2011 and return to international debt markets.

Fiscal Policy
In short term most of the fiscal expenditure will account for honouring deposit insurance and recapitalising banks and the Central Bank itself. To prevent the recession, the fiscal deficit would be allowed to increase with the intention to scale back after 2009. (The Icelandic Government's program with the IMF | Prime Minister´s Office 2008).
This can be best illustrated by looking at figure 6, which shows the general government expenditure and revenue. The critical point was hit during 2007 when expenditure exceeded revenues. In relation to the GDP, expenditure increased from 42.3% to 57.7%.

After 2009 a restrictive fiscal policy was applied, to complement the restrictive monetary policy. In fact the current finance minister Steingrimur Sigfusson claimed that the government raised every existing tax, introduced new ones and cut public spending (Bowers 2013). The consequences of this measure is that total demand will decrease\(^8\), resulting in a decline in employment and thus will cause a fall in prices, which in turn translates into a lower inflation. The reason for doing this is to reduce public debt and therefore total debt, which then should facilitate subsequent financing at international markets\(^9\).

Another effect is that lower prices attract foreign demand\(^{10}\) and as a result of this decreases the current account deficit, assuming that the country has a wide range of attractive export products (Chand 2009, p.27). This however is only partly the case for Iceland which it can be shown by the merchandise export diversification index of 0.77\(^{11}\).

For the purpose of the restrictive fiscal policy, primary fiscal balance targets were set by the department of treasury as can be seen in figure 7:

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\(^8\) With it GDP will decrease  
\(^9\) The lower the debt, the lower the risk, that a country cannot pay back its debt and therefore a lower interest rate  
\(^{10}\) Terms of trade are improved  
\(^{11}\) The close this indicator is to 1, the less diversified are a country’s exports
Although the government managed to transform their deficit to a surplus, these numbers were over ambitious and could hardly be met by the government, due to overestimated returns and slow economic recovery.

Similarly, Iceland’s current account is only slightly positive and highly volatile.
Conclusion

Looking at the causes of Iceland’s economic and banking crises, reveals that Iceland was not simply a victim of the global financial crisis. Of course did the tense situation on the interbanking market and the global fall in asset values contribute to Iceland’s downturn, but the main factors were still an inefficient and deregulated banking sector combined with a weak and powerless supervision, which allowed banks to operate well beyond the capacity of the central bank. Iceland’s recovery from this collapse therefore is highly depended on banking and supervision reforms, which they partly implemented already with the help of the IMF.

Moreover, did Iceland forfeit competitiveness due to the crisis. To counteract these immediate problems, it chose a quite unorthodox measures, which already came partly to fruition. Through its monetary policy and its capital controls, it was possible stabilise the country’s inflation rate and exchange rate, although suffering from the short term consequences, such as a higher unemployment rate. Other measures such as the fiscal policy, are depended on their correct application and the governments ability to reduce fiscal imbalances and support export quality in the future, to restore the market’s confidence and gain access to international markets again, as well as to reverse its capital controls.

Long-term effect therefore have to be watched closely.
Appendix

Net International Investment Position

Source: (Central Bank of Iceland 2014c)

Icelandic Krona – Exchange Rates

Source: (Central Bank of Iceland 2014b)
Unemployment Rate in Iceland

Source: (Statistics Iceland 2014)

Inflation Rate

Source: (Central Bank of Iceland 2014a)
Interest Rate Parity

The idea behind the interest rate parity is to find an equilibrium in foreign exchange markets. This equilibrium is reached, when “deposits of all currencies offer the same expected rate of return.” (Krugman, Obstfeld 2011, pp.368)

Transfering this concept on the Icelandic Krona the expression for the interest rate parity equals the following:

\[ R_{ISK} = R_e + \frac{E_{ISK/\epsilon} - E_{ISK/\epsilon}}{E_{ISK/\epsilon}} \]

Where:

- \( R_{ISK} \): return on ISK deposits
- \( R_e \): return on Euro deposits
- \( E_{ISK/\epsilon} \): ISK/EUR exchange rate expected to prevail in \( t + 1 \)
- \( E_{ISK/\epsilon} \): today’s ISK/EUR exchange rate

On the 28\textsuperscript{th} of October Iceland’s Central Bank raised the policy rate by 6\% to 18\%. The predicted effect of this in accordance to the interest parity shall be illustrated by the following figure:

\[ Number\ of\ kronas\ per\ euro \]

\[ 12 \]
Before the raise in the policy rate the equilibrium exchange rate was represented point 1. The return on ISK deposits equaled the expected return on euro deposits. The increase in interest rate is then represented by the right shift of the yellow line. At the initial exchange rate the return on ISK deposits is now by the amount x higher than the expected return on euro deposits. This situation now causes a higher demand for ISK deposits, since this generates higher returns. The result is then an appreciation of the ISK to point 3. This of course only works under the more or less unrealistic assumption that the expected exchange rate stays constant – at least in short term (Krugman, Obstfeld 2011, pp.372).
Interest Rates in Iceland

Merchandise Export Diversification Index

Source: UNCTAD
Publication bibliography


