Iceland: a nation in the kreppa
A narrative of a modern financial and currency crisis

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The financial crisis which began in 2007 marked a turning point in the history of modern macroeconomics and served as a wake-up call to those who had previously thought that the business-cycle had been tamed. Some of the biggest casualties of the global economic downturn have been the so-called 'developed economies' whose hyper-active banking sector was at the root of the problem. Fintan Ryan critically analyses the financial crisis in Iceland, one of the major victims of the recent economic turmoil. Developing an understanding of just what went wrong is crucial if another such event is to be avoided in the future.

Introduction

Iceland is an island nation of 320,000 people off the North-West of Europe. Despite many cultural links with the continent and Scandinavia, Iceland has so far resisted joining the European Union and the Eurozone; it is a member of the European Economic Area (EEA) which allows for free trade of goods, services and capital across its borders. Iceland's economy is the smallest within the Organisation for Economic Co-operation and Development (OECD)[1]. Gros (2008) compares Iceland to other small open economies and concludes that it is marked by a low degree of international trade integration but a high degree of financial integration.

In the decade up until 2008, Iceland was considered a safe place to invest. It is democratic and politically stable; the economy was growing rapidly with a high quality of life and near full employment; and it offered attractive interest rates to

[1] http://titania.sourceoecd.org/vl=1353542/cl=45/nw=1/rpsv/factbook2009/02/01/01/index.htm

investors when global yields were very low. Government debt was low and the general budget ran healthy surpluses of four to six per cent from 2005 to 2007[2].

The national currency of Iceland is the krona, which has only been allowed to float freely since March 2001; previously it had been pegged to an official exchange rate index. An interbank FX market was only organised in 1993. The initial band was set at 2.25 per cent, but following the deregulation of capital movements in 1995, this was expanded to six per cent, and later moved to nine per cent in 2000. However, as we shall see, the fate of the krona as an independent currency was inextricably tied to the fate of Iceland's overextended banking system.

Financial System and Crisis

The Sedlabanki Islands or Central Bank of Iceland (SI) has control of monetary policy and overall stability. The Financial Supervisory Authority (FME) is in charge of the health and viability of individual financial institutions. Together, these bodies were meant to protect Iceland's economy from endogenous and exogenous shocks. Carey (2009: 41) sums it up best: "macro prudential supervision cannot be effective unless it has access to information from the micro prudential supervisor and can impact supervision to restrain bank behaviour". This did not occur in practice as SI policy decisions often had unintended consequences on the FME-supervised banks.

Iceland has been one of the most prominent victims of the recent global economic crisis. The *kreppa*[3] that the country now finds itself in is a consequence of its own success over the past decade, as well as the global 'credit crunch'. Following the collapse of Lehman Brothers in September-October 2008, the three major Icelandic banks, Landsbanki, Kaupthing and Glitnir were placed in receivership by the FME[4]. In the chaos that ensued, the stock market and property prices crashed, money flows from abroad seized up, the krona plummeted in value against all major currencies, the cost of insuring government debt (CDS) soared, and Iceland was forced to go to the IMF for aid and enact harsh austerity measures of fiscal and monetary controls. According to *The Economist* (2008b), the banking and financial crisis has been the biggest relative to the size of the economy ever suffered by a country.

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[2]http://www.statice.is/?PageID=1269&src=/temp_en/Dialog/varval.asp?ma=THJ05121%26ti=General+government+receipts%2C+outlays+and+finance+accounts+1998%2D2008+++%26path=./Database/thjodhagsreikningar/fjarmal_opinber/%26lang=1%26units=ISK/percent

[3] Kreppa is the Icelandic word for crisis

[4]http://www.publications.parliament.uk/pa/cm200809/cmselect/cmtreasy/402/40206.htm

The Banks

The currency crisis had its origins in a financial crisis centred on the three major Icelandic banks, which accounted for 85 per cent of the banking sector. Over the previous five years, they had expanded their lending until their assets grew to nearly 880 per cent of GDP from 170 per cent upon their privatisation in 2003 (Carey, 2009). They grew rapidly and their risks increased appreciably. These institutions had very high loan-to-deposit ratios by European standards; lax standards of collateral led banks to lend money based on each other's shares and over 70 per cent of their unconsolidated liabilities were to non-residents (Carey, 2009).

Portes (2008) describes the banks in a relatively benign light: "Like fellow Icelandic banks Landsbanki and Kaupthing, Glitnir was solvent. All posted good first-half results, all had healthy capital adequacy ratios, and their dependence on market funding was no greater than their peers'. None held any toxic securities". However, this proved to be insufficient to ensure their survival in the risk averse markets of autumn 2008.

Buiter and Slbert (2008) identify a number of unique characteristics of the banks that contributed to their subsequent collapse. By the first quarter of 2008, half of Landsbanki's assets and two thirds of those of Glitnir and Kaupthing were located abroad. Despite this, combined domestic assets still added up to over four times Iceland's total GDP. Only 21 per cent of all assets and 15 per cent of all liabilities were denominated in krona – most of the business of the banks was done in foreign currency and there was a large currency mismatch between assets and liabilities. One third of the bank's funds came from deposits; the balance came mainly from the international wholesale markets. Landsbanki (Icesave) and Kaupthing had attempted to increase their deposit bases through internet banking in the UK and Dutch markets. There was a maturity mismatch; the banks had many long-term assets, but short-term liabilities which needed to be continually rolled over on the international money markets. This would prove to be their undoing – it was not a run on deposits or insolvency but a liquidity crisis which caused the banks woes.

From boom…

The movement towards deregualtion and liberalisation allowed foreign investors to invest in high yielding Icelandic assets. These capital inflows buoyed demand for the krona. Banks used the inflows of capital to expand their lending, including their own forays into European markets.

The three main banks lent out money based on collateral of their own shares; much of this money was used to buy shares and as a result, the Icelandic stock market, the OMX Iceland 15 soared in value. By the time of the collapse, the

three banks accounted for 76 per cent of the value of the index. On October 7, trading was suspended for three days; when the market opened again on October 13, the index dropped 77 per cent in value, with only six shares actually trading on the day (Lindstroem, 2008). Cheap credit had inflated another asset bubble in residential property, as house prices increased to two-and-a-half times their value from 2000 to 2007. Investment in construction (commercial and residential) grew to levels comparable with the property bubbles of Spain and Ireland, in terms of percentage of GDP (Gros, 2008).

With the availability of cheap money, Icelandic entrepreneurs the 'New Vikings' bought many prominent brands and assets in Europe such as Hamleys, Debenhams and West Ham Football Club (Boyes, 2008). Due to the large portfolio of European investments and extensive reliance on outside leverage, *The Economist* (2006b) described the economy as "a giant private equity fund". Gros (2008) found a worrying correlation, between the stock market i.e. the market value of the banks and the exchange rate, of close to unity.

Many ordinary Icelanders had invested in stock markets or property themselves. In the five years to 2008, average wealth per capita had grown by 45 per cent (Boyes, 2008). Icelandic households were unwitting players in the carry trade. Buiter and Slbert (2008) state that nearly 80 per cent of household loans were denominated in either Swiss francs or Japanese yen, two traditionally low interest rate currencies widely used as funding currencies. This further served to keep the krona strong when foreign credit was freely available; households preserved demand for the currency when converting their francs or yen into krona to buy cars, houses, shares etc.

Most currency positions were unhedged; when the currency collapsed many households found that the domestic value of their income had fallen or was stable, while their foreign liabilities rose dramatically. Many loans to firms and individuals were linked to inflation or the CPI – imported goods make up approximately one third of the index and they soared during the crisis. The price instability caused by the collapse (Thomas, 2008) further increased the debt burden of households. This led many to default or cut back on consumption, which further hit the economy (Boyes, 2008).

…to gathering clouds…

The country had been given warning of an impending crisis. The krona had depreciated 28 per cent against the euro in the four months to April 2008 stoking inflation as fear gripped the markets over the ability of the banks to finance themselves. The banks' credit ratings were downgraded and Icelandic sovereign debt was put on negative watch. The cost of insuring their debt against default, measured in Credit Default Swap spreads, soared to 1,017 basis points. These had

been trending upwards since the first hints of the credit crunch in July 2007 (*The Economist*, 2008a). The SI responded by further raising interest rates (Mortishead, 2008).

In April 2008, Daniel Gros from the IMF highlighted the potential dangers faced by small financially active countries such as Iceland. A floating exchange rate can act as a shock absorber but can also be a source of economic shock during financial crises; a weakness highlighted by Robert Wade (2008). With such a small tax base for such a large financial sector, the central bank or the government did not have the ability to act as a lender of last resort to the banks, when international capital inflows dried up.

…to bust

With the collapse of the banks, trading in the krona effectively ceased. On October 10 it was reported that the bid/ask spread on the krona on the informal market was 300/450 per euro as investors poured out of the currency, amid fears that the SI didn't have the reserves to defend the krona; confidence and the currency tumbled (Lindstroem, 2008). The SI had secured bilateral currency swap agreements in May 2008 with Norway, Sweden and Denmark for €500 million each, but these proved insufficient. The government initially reacted by attempting to unilaterally peg the krona to the euro at a level of 131 on October 7. This was abandoned two days later.

The SI turned to enacting strict currency controls to stem the outflow of funds. It was forced to set up its own auctions for the krona to provide funding for vital international economic activity. Movements of capital in and out of Iceland were severely curtailed and required a license from the SI with priority going to importers of necessities. Residents were obliged to deposit any new foreign currency they received with an Icelandic bank. Credit supplies dried up as importers were unable to get access to foreign currency for purchases, and their suppliers demanded cash up front before delivery (Lindstroem, 2008).

The fallout

In November, the IMF agreed to provide $2.1 billion in aid. Further loans have been provided by Denmark, Sweden, Norway, Finland, Russia, Poland, the UK and the Netherlands; even the Faroe Islands gave $50 million. The total amount will reach $10.2 billion or over half of Iceland's GDP (*The Economist*, 2008b).

There has been much political fallout; Britain invoked anti-terrorism legislation to freeze the British assets of Landsbanki and Kaupthing in early October – Buiter and Slbert (2008) cite this as a main reason for Kaupthing's subsequent collapse. The liabilities have yet to be settled for approximately €4 billion; nearly half of Iceland's GDP and have led to the collapse of the government. Gross

government debt has increased from 29 per cent at the end of 2007 to 109 per cent in 2009 (Economist Intelligence Unit, 2009).

After much volatility, the krona now has settled at a new plateau of 170/180 per euro. The economic consensus is that Iceland must progress towards joining the EU and the euro common currency area because the krona has now been discredited as an independent currency (Lane, 2008), but several stumbling blocks remain (*The Economist*, 2009c).

The Icelandic situation is similar to what occurred in South East Asia in 1997, as described by Paul Krugman (2008). Thailand, Indonesia, Malaysia and South Korea all faced currency crises due to the volatility of capital inflows, high current account deficits (though modest compared to Iceland), the lack of a credible monetary authority and insufficient international capital reserves to defend their currencies.

Trade and the current account balance

The current account deficit soared during the decade to levels that are unsustainable in the long run. In terms of merchandise trade, 78 per cent of exports went to countries in the EEA in 2007, while they were the source of 65 per cent of imports. Most of this was due to the importing of goods and services financed by debt; for example the importing of materials and capital goods to build an aluminium smelter in 2005-06 cost approximately 15 per cent of GDP. Taking advantage of the volcanic island's cheap geothermal energy potential, exports of aluminium had begun to contribute to the closing of the deficit. Iceland's exports of goods and services are small relative to similar-sized open economies and have traditionally consisted of fish and marine products (Gros, 2008).

Monetary policy and explanations

The sole objective of the SI's monetary policy is price stability. Since 27 March 2001, it has formally targeted a level of 12 month CPI inflation of 2.5 per cent. This remit does not allow the SI to apply monetary policy in the targeting of other economic goals, such as lowering the unemployment rate or balancing the current account. The interest rate is the SI's only policy tool; it gave up the use of reserve requirements "because the banks did not want them" (Wade, 2008). Even back in 2001, this 'hawkish' policy was criticised by Joseph Stiglitz (2001), fresh in the wake of the 1997 South East Asian crises, as unwarranted and short sighted. This policy allied to lax regulation, led to an ultimately self-defeating cycle in Iceland, described by Danilesson (2008).

Explanations

Together with the high current account deficit, traditional FX theory suggests that such a currency should decline relative to the euro as relative purchasing power is eroded; but for several years this was not the case. The policy repurchasing rate of the central banks is the rate charged to retail banks on collateral based loans. Until October 2008, this was a variable-bid-tender process, with the quoted number being the minimum bid rate. Subsequently, the process was changed and the quote rate is now fixed. The Icelandic rates up to July 2007 are the nominal yields on the collateralised loans. After this the rates refer to nominal policy interest on the loans.

Inflation differentials alone seem to be a poor predictor of the Icelandic exchange rate; however taken together, a possible explanation for the relative stability of the exchange rate from 2002-07 can be explained by the Fisher effect (Fisher, 1986 [1930]). This states that real rates of return across countries and currencies will be equalised through different interest and inflation rates. As inflation pressures mounted both domestically (almost full employment and easy credit) and internationally (oil and commodity price spikes), the SI was forced to increase nominal interest rates to keep real investment returns stable and competitive. This ensured that capital inflows would continue and the currency would remain stable. Even during the crisis, the SI raised interest rates to 18 per cent despite the fact that this would choke off domestic demand for credit, prevent businesses from rolling over short-term domestic debts and stifle any chance of a domestic led recovery.

Conclusion

Traditional exchange rate theories seem to be inadequate in explaining the dramatic fall of the Icelandic krona during 2008 and its eventual collapse along with the banking system in October. Though Iceland had high inflation and ran persistently high current account deficits, the effects of these factors on exchange rates were muted by interest rate increases, leverage and the continued inflows of foreign capital and investment. Iceland's unique and overextended financial system meant that any weakness in the banks would lead to a sovereign debt and currency crisis, as SI reserves were insufficient to cover banking liabilities.

Once the inflows dried up, the banks and Iceland, could no longer service their debts and an international confidence crisis turned into a local financial and currency disaster. Krugman sums it up, seeing both Iceland and the krona as victims of a wider financial malaise:

> "The failure of hedge funds associated with a French bank [BNP Paribas in August 2007] is generally considered to have marked the beginning of the

crisis; by the fall of 2008, the troubles of housing loans in places like Florida had destroyed the banking system of Iceland"

(Krugman, 2008: 177).

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