

The Rise and Fall of Iceland

David Howden¹

Abstract: While the depths of Iceland's recent recession are well studied, the causes as to its origin are still misunderstood. In this paper I look at two factors: blanket guarantees provided to the Icelandic banking system by various public agencies, and a faulty inflation-targeting framework by the Central Bank of Iceland. While the first factor explains why Iceland's banking sector grew as large as it did, the second accounts for the magnitude of the imbalances in both the real and financial sectors.

Keywords: Iceland, crisis, inflation targeting, credit, deposit insurance

¹ St. Louis University – Madrid Campus, Email: dhowden@slu.edu. In addition to participants of the 2nd annual Toronto Austrian Scholars Conference, I would I would like to thank participants of the Summer Austrian Seminar sponsored by the Instytut Misesa of Poland, held in Mąchocice Poland on 13-14 September 2013, where a similar version of this paper was presented. This paper is published in expanded form in Howden (2013c).

Between 2001 and 2008 Iceland's population increased by only 1.66 percent per year while its narrow money supply (M1) increased by almost 34 percent. Consumer price inflation averaged more than 6.6 percent annually over this period. While the stock market boomed, increasing its market capitalization by over 12 percent per year and the average citizen saw his real share of the wealth increase by less than 2 percent per year.

security for all, the HFF imperiled the solvency of the Icelandic state through the reliance on increasing housing prices it engendered throughout the housing boom.

The imbalances bred through the HFF were noted during the housing boom, though often as a side comment on the efficiencies brought by the Fund. Hunt, Tchaidze and Westin (2005: 31), for example, commented that efficiencies in

	2001	2008	Average annual increase (percent)
Population	285,000	320,000	1.66
Real GDP (2005 USD)/capita	\$38,175	43180	1.78
Stock Market Capitalization (percent GDP)	49	111	12.39
Price level	81.75	128.36	6.66
M1 (billions <i>króna</i>)	70.869	542.601	33.96
M3 (billions <i>króna</i>)	342.904	1,626.15	24.95

Table 1: Some stylized facts on Iceland's boom

Somehow there was a disconnect between the impressive growth on the money-side of the economy with the lackluster performance of the real side. In this paper I look at two sources of imbalance.

On the one hand is a wide range of investment guarantees increasing the risk-taking of both Icelandic and international investors. On the other hand is a faulty inflation targeting framework by the CBI. The manipulations to the interest rate at the hands of the central bank caused investors to change their consumption-investment patterns, with the result being an unsustainable boom waiting for its luck to turn.

Investment Guarantees – Narrow and Broad Housing Financing Fund

Iceland's government-owned mortgage lender, the Housing Financing Fund (HFF), was created by 1999 by the Housing Act (no. 44/1998). Its stated goal is to "ensure housing security and equality for all Icelanders through lending and organization of housing affairs ... to increase people's opportunities of obtaining and leasing housing on controllable terms." Unfortunately, by striving for housing

the mortgage market by the HFF had brought positive effects to mortgage interest rate reductions. Icelandic mortgage lending had increased by 63 percent during 2004, and long-term mortgage interest rates fell by 5.10 percent in nominal terms, and 4.15 percent in inflation-adjusted terms. This decline in mortgage rates was not due to any positive effects of lending competition, but rather in an accommodative monetary policy by the CBI coupled with a risk-reduction via HFF-guaranteed mortgages.

While the HFF was the major player in the early stages of Iceland's housing boom, private banks soon followed. Flush with cash, they aggressively sought to meet the HFF's terms in order to secure their main source of banking profitability (Bagus and Howden 2011: 58). Banks increased mortgage maturities from the then-conventional 25 to 40 years. Króna loan limits were increased to allow for more high-end houses to be purchased. The maximum loan-to-value ratio was increased to 80 percent (versus the HFF's maximum which ranged from 65-70 percent throughout the 2000s).

The result of this sustained competition between the public and private lenders combined with artificially imposed state guarantees was a demand

surge for housing. Prices steadily increased, with housing price growth remaining above income growth until the recession was well underway in 2010. If income growth was not responsible for the increase in housing prices, an increased dependence on credit facilitated the growth (Howden2013a).

Investment Guarantees, Narrow and Broad

Deposit insurance solves the immediate problem that the bank run poses, but it exacerbates a larger issue: moral hazard. By removing the threat of losses, deposit insurance also removes the monitoring role that depositors serve with respect to their banks. Instead of seeking the most prudently managed banks, depositors shift their funds to those banks offering them the lowest expenses or highest returns. These criteria, incidentally, also generally indicate that the bank is pursuing riskier activities than its competitors.

To combat the threat of moral hazard, a maximum insurable amount is generally set on deposits, creating the incentive for depositors above this threshold to actively monitor their bank. Foreign-denominated deposits are usually not covered, partly to create another group of depositors to monitor banking activities, and partly to eliminate exchange-rate risk from the insurer.

Icelandic deposit insurance ventured from these guidelines in important ways.

The CBI was given one role in its new inflation targeting mandate, while the financial supervisory role was removed and amalgamated with the deposit insurance provider under a new financial supervisory authority, the FME. The complete removal of any regulatory role from the CBI removed an important policy tool which hindered its ability to actively monitor the extent to which credit creation was destabilizing the growing banking system.

Adding to this problem and further skewing the CBI's incentives was the fact that it was highly politically motivated (Bergmann forthcoming). A history of state intervention in the economy bred an unprecedented bond between politics and business (Jonsson 2009), and in few places was this as engrained as the CBI. Political connections at all

levels in the financial sector made effective oversight and regulation almost impossible (Sibert 2009).

Most deposit insurance plans purposely exclude foreign-denominated deposits from coverage. By insuring only deposits denominated exclusively in domestic currency, the insurance fund can more easily manage its potential payouts. By extending insurance to foreign-denominated accounts, there was an ambiguity as to who was liable for Icelandic banks operating in foreign countries. In one example one of Iceland's largest banks, Landsbanki, opened an online retail bank in the United Kingdom, Icesave. British regulators were uninterested in monitoring the bank's operations as it was presumed to be accountable to the Icelandic authorities. Icelandic authorities had relatively little knowledge of the subsidiaries' operations as they were located in a foreign country. This foreign coverage proved to be one undoing for Iceland's deposit fund during its crisis, as it lacked sufficient foreign currency to honor their accounts (Bagus and Howden 2011: chap. 4).

Furthermore, in order to leave a set of depositors interested in monitoring their bank's operations, most deposit insurance plans mandate a maximum limit on the insurable deposits. There was no maximum limit in the Icelandic plan. Not only did this remove an important set of monitors from the banking sector, but it also exposed the Fund to potentially unlimited losses in the event of a bank failure.

The Icelandic deposit insurance plan was thus a narrow guarantee on deposit-taking institutions. As a consequence of this risk reduction investors, both domestic and later on foreign, continued channeling money to these banks to earn higher risk-adjusted returns.

Iceland Bank Operations

The CBI adopted an inflation targeting program on 27 March 2001. The CBI knew that its inflation-targeting framework was a failure and that the target was regularly overshoot (Central Bank of Iceland 2007: Box I-2). The source of this problem may have been that the inflation target used a much wider range than most countries. This shift was made to

allow for volatile inflation to not unduly influence policy decisions, though it resulted in a lenient approach to inflation control. It also excluded many prices from its calculation, some of which were primarily imported and essential for a realistic modeling of inflation (Hunt et al. 2005).

As the CBI regularly overshot its inflation target, real borrowing rates plunged and remained around

lending practices: depositors. As a result, Icelandic banks were free to engage in what otherwise might have been seen and discouraged for what it was – extreme risk-taking with funds entrusted to them for safekeeping purposes.

Indeed, banks turned from holding debt instruments as assets to taking equity positions in domestic and foreign companies in a bid to bolster

	10-year Government Bond	CPI Inflation	Real Borrowing Rate
2000	5.3	5.1	0.2
2001	5.3	6.4	-1.1
2002	5.2	5.2	0.0
2003	4.4	2.1	2.4
2004	3.8	3.2	0.7
2005	3.7	4.0	-0.3
2006	4.4	6.7	-2.3
2007	5.0	5.1	-0.1
2008	4.3	12.7	-8.4
2009	4.3	12.0	-7.7
2010	3.5	5.4	-1.9
2011	2.9	4.0	-1.1
2012	2.3	5.2	-2.9

Table 2: Icelandic borrowing costs

Source: OECD, "Main Economic Indicators - complete database", Main Economic Indicators (database), <http://dx.doi.org/10.1787/data-00052-en> (Accessed on 05 Sept. 2013).

zero for the entirety of the 2000s (table 2)

With little adherence to an inflation target, the CBI commenced a rapid credit expansion

While inflation remained high a decline in real borrowing costs occurred because of three factors, only one of which was under the direct control of the CBI.

First was an extremely accommodative monetary policy. Narrow measures of Iceland's money supply, such as M1, grew at a feverish pitch of at least 22 percent annually from 2002-08.

Second was through the private fractional-reserve banking system. Coupled with lax regulatory monitoring by the central bank and central government, the comprehensive deposit insurance plan removed the last bastion of monitors of bank

profits (Howden 2013b). This strategy allowed banks significant returns on their equity investments from 2000-07, with all three of the big three Icelandic banks earning more than 24 percent on their equity during 2006 and 2007 (Portes and Baldursson 2007).

As a consequence of this asset appreciation, banks begin to issue more liabilities without endangering their regulatory capital or liquidity requirements. Indeed, from 2000-07, Icelandic banks held more capital relative to their asset base than their European counterparts, and were comparable to those in the American system.

Finally, by 2005, Icelandic banks had more-or-less exhausted the opportunities for organic growth from the domestic market (Portes and Baldursson 2007: 36-38; Jónsson 2009: 107-112). In a bid to

maintain high growth rates and profit margins they begin seeking foreign capital.

High domestic króna interest rates spurred by high levels of inflation pushed banks to foreign markets to access lower-cost funding. Online retail branches were set up in several European countries (primarily the U.K. and Netherlands) to attract foreign depositors. As the incoming foreign funds were converted to króna, the now well-known carry trade (borrowing at low foreign interest rates to invest in higher yielding Icelandic investments) became prevalent. This fresh demand for króna kept the currency strong, and removed the threat that the exchange-rate risk that the foreign-denominated accounts provided would threaten the solvency of the Icelandic banks (Report of the Special Investigation Commission 2010: chap. 21: 30).

The use of foreign funding allowed a rapid expansion of Icelandic banks. By 2007 deposit bank assets were 275 percent the size of the small country's whole GDP. The amount of bank-created credit relative to the deposit base remained above 200 percent for the whole boom of the 2000s in Iceland. By comparison, the same figure in the United States never rose above 84 percent, and averaged around 80 percent.

What Instigated Iceland's Bust?

Iceland's collapse in 2008 has been attributed to various causes, including: 1) an unstable and oversized banking industry (Buiter and Sibert 2008), 2) a central bank ill-suited to serve as a lender of last resort (*ibid.*), 3) as collateral damage of the global liquidity crisis made apparent by the bankruptcy of Lehman Brothers (Friðriksson 2009: 11), 4) from free-market capitalism making bad bets with other people's money (Gumbel 2008), or 5) from a corrupt corporate culture making politically-motivated instead of financially prudent investments (Vaiman *et al* 2010). While these are all appealing explanations, they mainly answer the question of "what went wrong in 2008?" rather than the more relevant question "what caused the events of 2008?"

Iceland's boom can best be defined as an unsustainable credit expansion along the lines of an Austrian business cycle (ABC). This type of business

cycle occurs when a central bank artificially sets its policy rate below a sustainable level.

Overconsumption occurs as consumers take advantage of low interest rates to increase their borrowing (Mises 1949; Garrison 2004). They are also demotivated from saving through either high inflation rates or low real returns. Malinvestment occurs whereby investment expenditure is skewed to longer-dated projects that will not yield a return until a further date in the future (Hayek 1935; Mises 1949; Garrison 2001, 2004). Finally, as the financial sector is the initial beneficiary of any newly created credit, it will grow in size and importance relative to the real production-oriented sector (Howden 2010). The Icelandic economy from 2000-08 illustrates each of these effects.

The primary source of the increase in private consumption was in real estate. This was facilitated by the HFF, as outlined above, though the HFF could only work within the confines of the base interest rate set by the CBI. While housing consumption increased dramatically as Icelanders went from a country of renters to home owners, it was the ostentatious displays of wealth that defined the boom (Bagus and Howden 2011: 68-71).

The primary malinvestment during the boom was the expansion of the aluminum smelting industry (Bagus and Howden 2011: 54-55). Aluminum smelting is a time-consuming process which is dependent in large part on low interest rates and high aluminum prices. Both were fostered during the boom as the CBI allowed for cheap borrowing while the global expansion of liquidity promoted high commodities prices.

Overconsumption and malinvestments can both be rectified in reasonably short order by shifting preferences and resources to a more sustainable array. The financial shift that resulted in the growth of the banking sector was more damaging, both in terms of the magnitude of the shift and the resources necessary to return it to sustainability.

The financial sector became so large that the best talent was poached from other areas of the economy. Young Icelanders turned away from learning about the traditional employment paths, such as fishing, and registered *en masse* in both domestic and foreign Universities to prepare themselves for a

brighter future in finance.

The reallocation of labor from the real to financial sectors of the economy could not proceed unabated, nor was it sustainable even they remained at their 2008 levels. At some point the current account deficit that the loss of export capacity created would result in bills that needed to be paid. Overconsumption had left the country with little savings (indeed, the rate was negative by 2006), and income growth was reliant on unsustainable patterns of investment. By financing its longer-dated investments by continually rolling over short-term financing, the Icelandic economy was able to survive but was fully dependent on the continual availability of cheap short-term credit (Bagus and Howden 2011: chap. 2).

The liquidity shock created by Lehman Brothers may have proved to be one cause of Iceland's collapse, though it was not the only one capable of doing so. Indeed, even in the absence of a "sudden stop" type end to liquidity the Icelandic economy would still have floundered (although perhaps at a slower pace). The reason is that the debt buildups throughout the 2000s were not consistent with sustainable growth necessary to service these debts into the future. The disjointing of savings from investment gave rise to an unsustainable situation

that could only persist in the era of the artificially low interest rates that beget it. Whether rates increased from an exogenous liquidity shock or endogenously by rising risk premia or decreasing by the continued lack of savings, the end result would have been the same: the failure of investments built upon a base of underpriced credit as risk-adjusted borrowing costs increased.

Conclusion

As we assess the causes of Iceland's collapse, there are four important lessons.

First, blanket investment guarantees sow the seeds of unintended consequences, some of which may not materialize until years into the future. Second, central bank controlled interest rates impose an important price on the market which is potentially inconsistent with underlying savings and investment preferences. Third, certain banking laws engender large amounts of credit creation which may fuel an unsustainable boom. Finally, credit based booms such as Iceland's are not necessarily brought to an end because of liquidity shocks. They sow the seeds of their own destruction by breeding unsustainable consumption, production and financing plans

References

- Bagus, Philipp, and David Howden. 2011. *Deep Freeze: Iceland's Economic Collapse*. Auburn, AL: Ludwig von Mises Institute.
- Bergmann, Eiríkur. forthcoming. *Iceland and the International Financial Crisis: Boom, Bust & Recovery*. London: Palgrave Macmillan.
- Buiter, Willem H., and Anne Sibert. 2008. The Icelandic banking crisis and what to do about it: The lender of last resort theory of optimal currency areas. *CEPR Policy Insight* no. 26.
- Central Bank of Iceland. 2007. *Monetary Bulletin* 3.
- Friðriksson, Ingimundur. 2009. The Banking Crisis in Iceland in 2008. Paper prepares for seminar the Bank of Finland, 6 February, (accessed 9 Sept. 2013). [Available] <http://www.bis.org/review/r090226d.pdf>
- Garrison, Roger W. 2001. *Time and Money: The Macroeconomics of Capital Structure*. London: Routledge.
- Garrison, Roger W. 2004. Overconsumption and Forced Savings in the Mises-Hayek Theory of the Business Cycle. *History of Political Economy* 36(2): 323-49.
- Gumbel, Peter. 2008. Iceland: The country that became a hedge fund. *CNN Money*, Dec. 4, (Accessed 10 Sept. 2013). [Available] http://money.cnn.com/2008/12/01/magazines/fortune/iceland_gumbel.fortune/
- Hayek, Friedrich A. [1935] 1967. *Prices and Production*, 2nd edition. New York: Augustus M. Kelly.
- Howden, David. 2010. Knowledge Shifts and the Business Cycle: When Boom Turns to Bust. *Review of Austrian Economics* 23(2): 165-182.
- Howden, David. 2013a. [Separating the Wheat from the Chaff: Icelandic and Irish Policy Responses to the Banking Crisis](#). *Economic Affairs* 33(3): 348-60.
- Howden, David. 2013b. The Icelandic and Irish Banking Crises: Alternative Paths to a Credit-Induced Collapse. *Independent Review* 18(3): 1-19.
- Howden, David. 2013c. The Rise and Fall of the Icelandic Economy. *The Journal for Social, Political, and Economic Studies* 38(4).
- Hunt, Benjamin, Robert Tchaidze, and Ann-Margret Westin. 2005. Iceland: Selected Issues. IMF Country Report no. 05/366. [Available] <http://www.imf.org/external/pubs/ft/scr/2005/cr05366.pdf>
- Jónsson, Ásgeir. 2009. *Why Iceland? How One of the World's Smallest Countries Became the Meltdown's Biggest Casualty*. New York: McGraw Hill.

- Mises, Ludwig von. [1949] 1998. *Human Action: A Treatise on Economics*. Auburn, AL: Ludwig von Mises Institute.
- Portes, Richard, and Friðrik Már Baldursson. 2007. *The Internationalisation of Iceland's Financial Sector*. Reykjavik: Iceland Chamber of Commerce.
- Sibert, Anne. 2009. Undersized: Could Greenland be the New Iceland? Should it be? *VoxEU*, 10 Aug. (Accessed 10 Sept. 2013). [Available] <http://www.voxeu.org/article/could-greenland-be-new-iceland>
- Vaiman, Vlad, Throstur Olaf Sigurjonsson, and Páll Ásgeir Davíðsson. 2010. Weak Business Culture as an Antecedent of Economic Crisis: The Case of Iceland. *Journal of Business Ethics* 98(2): 259-272.