



# 12

## Iceland's Capital Controls

Fridrik M. Baldursson

### Introduction

Capital and current account transactions were halted when Iceland's banks collapsed in the first week of October 2008.<sup>1</sup> Iceland soon started negotiations with the International Monetary Fund (IMF) on a so-called Stand-By Arrangement, which boosted Iceland's foreign exchange reserves to avoid balance of payments problems. The negotiations were completed two weeks later: Iceland's IMF programme was announced on October 24 and approved by the IMF Executive Board on November 19.<sup>2</sup>

---

<sup>1</sup>For broad accounts of the crisis see e.g. Benediktsdottir et al. (2011) and Baldursson and Portes (2013).

<sup>2</sup>See IMF (2008) for the details and Baldursson and Portes (2018) for a more general description and assessment of the IMF program.

---

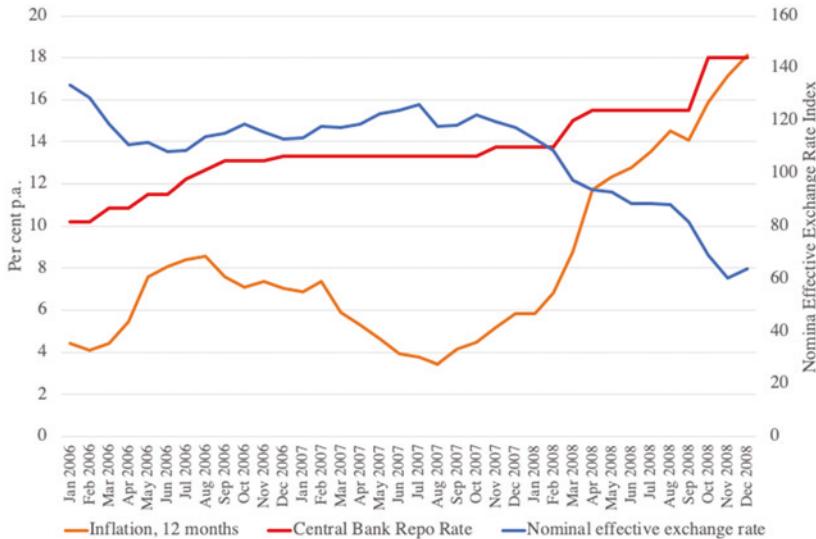
F. M. Baldursson (✉)  
Reykjavik University, Reykjavik, Iceland  
e-mail: [fmb@ru.is](mailto:fmb@ru.is)

Controls on capital flows were a part of the conditionality of the IMF programme for Iceland and they were soon enacted and implemented in Central Bank rules and regulations on foreign exchange. The de facto closing of the capital account had now been formalized. This was a remarkable reversal of previous policies of the IMF and a total turnaround for Iceland which over the previous decade had experienced a huge rise in capital transactions along with the rapid growth of its financial sector. The banks were now collapsing and threatening to pull the entire economy along in their fall. The capital controls were part of a set of policies intended to prevent such a collapse.

In this chapter, we examine the capital controls and their impact. We start in section “[The Imposition of the Controls](#)” by considering what led to the imposition of the controls and place them in context of the Asian crisis a decade earlier, where Malaysia had imposed controls on outflows, but countries that sought the assistance of the IMF had either not done so (Korea) or only to a limited extent (Thailand). It turns out that macroeconomic policies implemented in Iceland were much more similar to those pursued in the IMF programme countries than in Malaysia, the controls notwithstanding. Section “[Did the Controls Work?](#)” asks the question of whether the controls “worked” and replies in the affirmative based on an examination of some economic indicators. Section “[Macroeconomic Impacts](#)” considers the macroeconomic impact of the controls and, again, compares developments in Iceland with those in the aforementioned Asian crisis countries. Section “[Lifting of the Controls](#)” briefly discusses the removal of the controls and subsequent developments in the foreign exchange market. Section “[Conclusion](#)” concludes.

## The Imposition of the Controls

In the years before the crisis, Iceland’s economy had been booming, driven by the rapidly growing Icelandic banks as well as big investment projects. Inflation rose well above the official target of 2.5% and the Central Bank of Iceland (CBI) raised interest rates to high levels (Fig. 12.1). This attracted short-term capital inflows—carry trade—which at peak amounted to roughly Iceland’s annual GDP (Baldursson



**Fig. 12.1** Inflation, exchange rate and policy rate in Iceland 2006–2008 (Source IMF International Financial Statistics, Central Bank of Iceland)

and Portes 2013). With the onset of the global financial crisis in August 2007, confidence in Iceland's banks and the Icelandic economy waned and the carry trade inflows gradually slowed down and then reversed. This put downward pressure on the exchange rate which the Central Bank tried to support by raising its policy rate still further. Still, outflows persisted and the krona depreciated by 40% over the first three quarters of 2008 (Fig. 12.1). The stock of carry trade funds stood at 40% of GDP when the banks collapsed. Inflation, driven by pass-through of import prices, was then approaching 20% and inflation- and exchange rate-linked debt—widely used forms of loan contracts in the highly leveraged Icelandic economy—was rapidly rising. It was important to stop capital flight and stabilize the exchange rate to prevent a full-scale implosion of the economy.

In the days prior to the collapse of the banks, the Central Bank had intervened in the foreign exchange market to try to stem the collapse of the krona. By the end of October currency reserves, standing at approximately 16% of GDP in the months before the crisis, had been depleted

to the extent that net reserves—gross reserves minus known contractual outflows over the next twelve months—had turned negative.<sup>3</sup>

This policy could clearly not be sustained. The traditional tool of the IMF for supporting the domestic exchange rate in currency crises—e.g. in Korea and Thailand in the mid-1990s—had been to raise the interest rate. This was certainly done in Iceland: the CBI's policy rate was raised to 18%. But in a surprising reversal of previous policy, the Fund also mandated the imposition of controls on capital outflows.

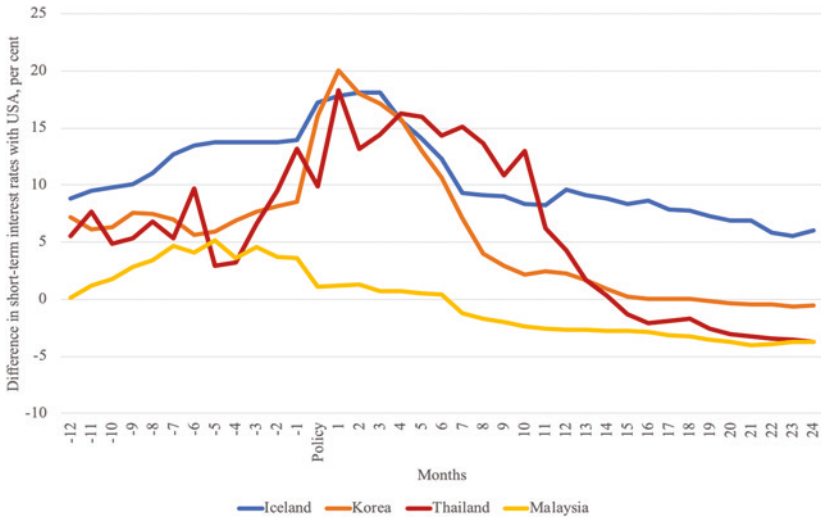
As noted earlier all foreign exchange transactions in Iceland had been halted since early October 2008 when the banking crisis struck. Following on the approval of the IMF programme in late October, the current account was reopened. Capital transactions, however, remained in place both on outflows and inflows and the Foreign Exchange Act was amended giving the Central Bank authority to close the capital account. Restrictions on inflows were gradually relaxed over the duration of the controls. Restrictions on outflows were, however, in place until March 2017, far longer than originally planned and were tightened several times as new loopholes were found by market participants. There were some exemptions. In particular, foreign investors were allowed to exchange interest payments on Icelandic bonds and bank accounts for foreign currency. The controls also authorized payments related to contracts entered into before they were imposed. In particular, Icelandic firms and individuals did not default on such contracts due to the capital controls per se.

Ten years earlier, during the Asian crisis, the IMF had prescribed its usual medicine of high-interest rates combined with fiscal consolidation for Korea and Thailand. Thailand had also imposed selective limitations on capital flows in 1997. Malaysia, on the other hand, had opted not to seek help from the IMF but had dealt with its crisis independently, lowering interest rates, but imposing capital outflow controls, reaping widespread international criticism as a result (e.g. Dornbusch 2002).<sup>4</sup> In the words of Kaplan and Rodrik

---

<sup>3</sup>See Fig. 6.2 in Baldursson and Portes (2013) and the discussion therein for details.

<sup>4</sup>See citations on this issue in Kaplan and Rodrik (2002), pp. 400–401.



**Fig. 12.2** Short-term interest rates in the Asian and Icelandic crises (Note Money market overnight rate differential with USA. For Korea, Thailand and Malaysia the “policy” month is determined as in Kaplan and Rodrik [2002] [For Korea and Thailand, the policy month are defined as the month each country sought the assistance of the IMF: December 1997 for Korea; August 1997 for Thailand. For Malaysia the policy month is September 1998, the month the capital controls were imposed]; for Iceland the policy month is October 2008. Source International Financial Statistics, Central Bank of Iceland, author’s calculations)

(2002) the IMF “did not openly condemn Malaysian policies, but it did not hide its views about their inappropriateness either” (p. 400). Notwithstanding its recommendation (or demand) that Iceland should impose capital controls, the IMF did not change its official position on capital controls until four years later when the Fund stated that in “certain circumstances, capital flow management measures can be useful”, although it also then underscored that they should not substitute for necessary macroeconomic adjustment (IMF 2012a).

So, were the capital controls in Iceland part of a radical departure of previous IMF policies, indicating a “softening” of the Fund’s approach? Not really. As shown in Fig. 12.2, controlling for higher US interest rates during the Asian crisis, the monetary policy dictated by the IMF in Iceland was broadly in line with the policies followed a decade earlier in Korea and Thailand. Malaysia, on the other hand, followed a

drastically different approach and brought interest rates down to, and subsequently below, US levels at the same time as controls on outflows were imposed. The Fund's policy in Iceland was clearly not modelled on the Malaysian approach. The outflow controls in Iceland can rather be seen as an added precautionary measure due to the relative magnitude of the Icelandic banking crisis. In other respects, including fiscal measures, the IMF policy imposed in Iceland was similar to earlier programmes designed by the Fund.

## Did the Controls Work?

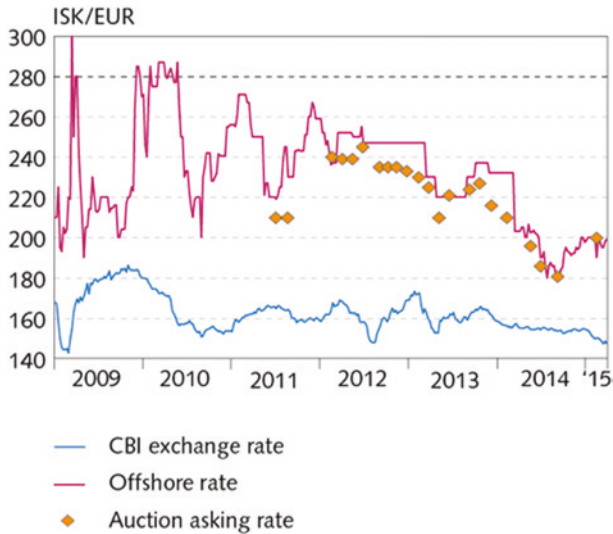
Existing research on capital controls indicates that, in general, they have not been very effective although there are exceptions (Edison and Reinhart 2001; Glick and Hutchison 2005; Magud et al. 2018; Miniane and Rogers 2007; IMF 2012b; Forbes and Warnock 2012; Straetmans et al. 2013).<sup>5</sup> In particular, the Malaysian controls are usually found to have been effective, while those imposed in Thailand appear to have had a short-lived impact only (Ariyoshi et al. 2000). The limited research existing on the case of Iceland (IMF 2012b) also indicates that capital controls were effective in reducing outflows, especially after the closing of loopholes during the first twelve months they were in operation.

There is evidence that can be brought to bear on the question of whether the Icelandic controls “worked”. In particular, even if the remainder of the carry trade in ISK, i.e. liquid krona-denominated financial instruments held by foreign investors, had been effectively ring-fenced when the controls were imposed, there was an offshore market in Icelandic kronas (ISK) during most of the controls period. Moreover, the CBI ran auctions in 2011–2015 where kronas could be exchanged for euros.<sup>6</sup> Figure 12.3 shows the exchange rate in these markets as well

---

<sup>5</sup>Cross-country studies generally show limited impact of capital controls, but it is difficult to take country-specific circumstances into account in such studies.

<sup>6</sup>See Baldursson and Portes (2014) for details.



**Fig. 12.3** Central Bank of Iceland exchange rate, offshore rate and auction asking rate (Source Central Bank of Iceland [2015])

as the official exchange rate. After an initial period of volatility and lax enforcement of the controls followed by a narrowing of the gap between the offshore and official rates in late 2009,<sup>7</sup> there was a consistently wide wedge between the two, with the offshore rates 30–40% weaker than the official rate. This certainly indicates that the controls were effective in stemming outflows, at least from 2010 and onwards.

An in-depth econometric study of the effectiveness and impact of the controls in Iceland along the lines of e.g. Edison and Reinhart (2001) is beyond the scope of this chapter. Two indications that the controls effectively cut Iceland off from international capital markets are, however, worth reporting. First, the statistical characteristics of the exchange rate series were radically altered from the heyday of the carry trade to the controls period. This is shown in Table 12.1 which shows volatility, skewness and excess kurtosis for daily changes in the exchange rate of the ISK; for comparison these descriptive statistics are also reported for

<sup>7</sup>See Gudmundsson and Zoega (2016) on this issue.

**Table 12.1** Statistical characteristics of exchange rates. Daily log-changes in USD against each currency

	ISK	SEK	NZD
<b>1/4/2001–31/12/2003</b>			
Daily volatility (%)	0.71	0.67	0.67
Skewness	−0.11	−0.06	−0.26
Excess kurtosis	2.46	1.15	1.01
<b>1/1/2004–30/6/2007</b>			
Daily volatility (%)	0.83	0.64	0.74
Skewness	−1.09	−0.05	−0.55
Excess kurtosis	9.44	0.71	1.56
<b>1/1/2010–31/12/2014</b>			
Daily volatility (%)	0.55	0.74	0.76
Skewness	0.04	−0.22	−0.40
Excess kurtosis	1.45	1.33	2.59

Source Central Bank of Iceland, author's calculations

the Swedish krona (SEK) and the New Zealand dollar (NZD), both, like the ISK, currencies of inflation targeting countries with floating currencies. Three periods are demarcated: first, the period from April 2001, after the ISK was floated, until the end of 2003, when it started to attract the attention of carry traders; second, the heyday of the carry trade, from January 2004 to mid-2007; third and last, from January 2010, when loopholes and leakage through the controls had been closed off, until the end of 2014.

In the first period, all three currencies exhibited similar behaviour, although the ISK was the most volatile and had the heaviest tails (indicated by high excess kurtosis). In the second period—2004 to mid-2007—the ISK and NZD became target currencies for the carry trade and the statistics—high volatility, skewed distributions and heavy tails—are typical of the “up the staircase, down by the elevator” behaviour of such currencies<sup>8</sup>; the ISK is rather extreme in this regard during this period, in all likelihood due to the “mini banking crisis” of early 2006 when it suffered a period of very high volatility.<sup>9</sup>

<sup>8</sup>See Anzuini and Fornari (2012) for an empirical analysis of the carry trade, its macroeconomic determinants and the behaviour of exchange rates of target currencies.

<sup>9</sup>See Baldursson and Portes (2013) for details on the 2006 “mini crisis”.



Finally, during the controls period (here the years 2010–2014 are used in order to exclude the beginning and end of the controls) the ISK behaves completely differently: it is the least volatile and has lost all the characteristics of a carry trade currency. It behaves much like the SEK, but fluctuations are perfectly symmetric and less volatile. By comparison, the NZD retained the carry trade characteristics during this period.

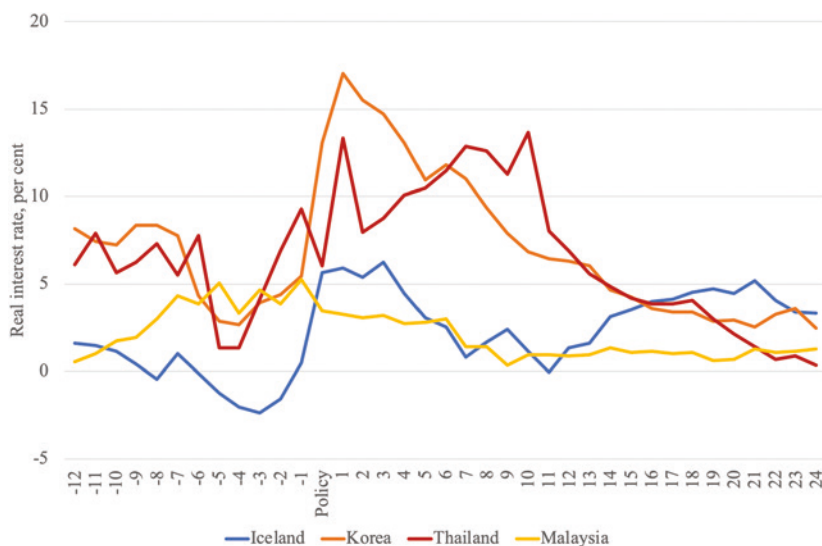
A second statistical indication that the Icelandic controls were effective is provided by the relationship of Icelandic government bond yields to those on US government bonds: when monthly changes in bond yields for Sweden, New Zealand and Australia (yet another inflation targeting economy) are regressed on corresponding changes in US government bond yields over 2004 to mid-2007 the slope of the regression line for Iceland is estimated at 0.56 and is of a similar magnitude as in an analogous regression for government bonds (local currency) for Sweden (0.67), New Zealand (0.52) and Australia (0.70) indicating that all these countries are well linked to international capital markets in this sense.

When a similar regression is run for the period 2010–2014 the regression coefficients for the three latter countries rise to approximately 0.8, whereas Iceland's coefficient drops to virtually zero (0.02). Thus, Sweden, New Zealand and Australia were even more strongly linked to international capital markets during this period, whereas Iceland's connection was severed.

While much more research is needed on this issue, it seems reasonable to conclude from these indications that the capital controls were quite effective in limiting outflows, reducing exchange rate volatility and creating a room for manoeuvre allowing the pursuit of an independent monetary policy.

## Macroeconomic Impacts

It has been argued that the controls were helpful in softening the macroeconomic impact of the crisis in Iceland. For example, Baldursson and Portes (2018) argue that the controls “helped recovery after the crisis by shielding the economy from international financial shocks, reducing market volatility, helping to keep domestic interest rates down and



**Fig. 12.4** Real short-term interest rates in Asian and Icelandic crises (Nominal rates and periods as in Fig. 12.2) (Note Real rates calculated by using 12-month centred inflation. Source International Financial Statistics, Central Bank of Iceland, author's calculations)

supporting asset prices". The statistical analysis of the previous section underpins those claims to a certain extent—especially the first two. The question arises, however, whether the controls could have been used even more effectively in this regard. In particular, as shown in Fig. 12.2, interest rates were raised to very high levels similar to those the IMF had been criticized for during the Asian crisis. Was this really necessary?

Figure 12.4 compares the real policy rate in Iceland to real short-term rates in Korea, Thailand and Malaysia during their crises. While the nominal interest rate in Iceland was set to a similar level as in Korea and Thailand when the crisis hit and the IMF programme was entered into (cf. Fig. 12.2), inflation was considerably higher in Iceland.<sup>10</sup>

<sup>10</sup>Inflation as measured by the CPI ran at 7–12% over the first year of the IMF program, but was driven by import prices; wage inflation was much lower at 0.5%. The headline CPI inflation could therefore be more appropriately seen as macroeconomic adjustment to a new equilibrium via a change in relative prices.

Real rates were thus much lower initially in Iceland than in those countries. Still, the real rate was raised rapidly from a negative level immediately before the crisis to a level at around 5% over the first few months of the programme period. The real rate then came down, close to zero (and close to Malaysian levels at the same stage in their crisis). Inflation then subsided and real rates rose again to around 5%. Over much of the second year the real rate in Iceland was considerably higher than in Korea and Thailand where the Fund had earlier been criticized for its tight monetary policy. For an economy in deep recession, this was very counterproductive. This can be contrasted with Malaysia which used the shelter provided by its capital controls to rapidly lower real interest rates to a sustained level of 1–2%.

A comparison of the development of real exchange rates in the same set of countries reveals that Iceland was by that measure also much more similar to Korea and Thailand than to Malaysia: while real exchange rates against the US dollar came down by approximately 30–40% from pre-crisis levels<sup>11</sup> in the IMF programme countries (Korea, Thailand and Iceland) and only rose slowly over the next two years the real exchange rate was slightly raised and stable over that period in Malaysia.<sup>12</sup>

What about the bottom line, economic growth? Figure 12.5 shows year-on-year economic growth in Iceland and the Asian crisis countries. As above, the timing in Kaplan and Rodrik (2002) is used to centre each Asian crisis on a “policy” quarter.<sup>13</sup>

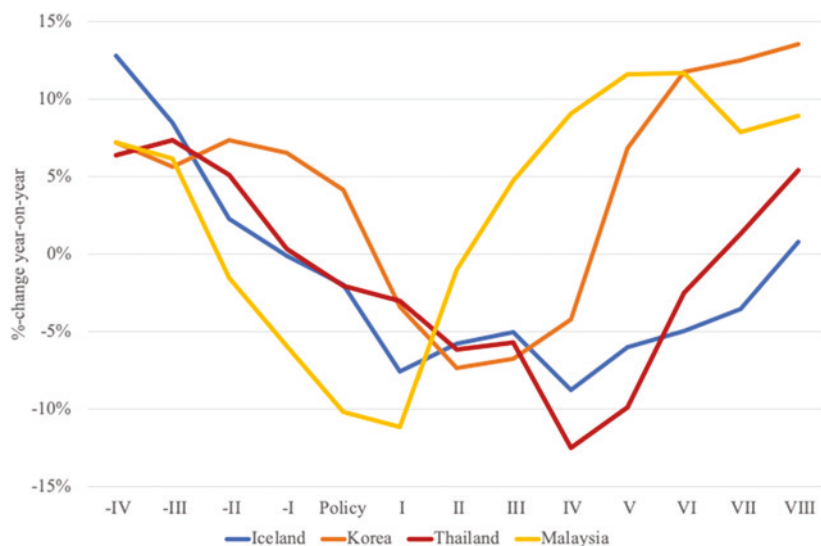
Here the picture is more complicated than in previous comparison figures: Malaysia's economy had begun contracting half a year before it imposed its capital controls, but it rebounded soon after; Korea's recession started in the same quarter as the IMF programme was started and

---

<sup>11</sup>More precisely, the average of the 12-months immediately preceding the crisis in each case.

<sup>12</sup>To some extent this result for Malaysia is a result of the “policy” timing adopted here from Kaplan and Rodrik (2002); Malaysia's real exchange rate had depreciated in 1997 by 15–20%, but setting the policy month at September 1998 “hides” this depreciation. See Ariyoshi et al. (2000) for a detailed overview of developments in countries that employed controls on capital outflows at this time.

<sup>13</sup>Thus, the “policy” quarters are: Korea: 1997: IV; Thailand: 1997: II; Malaysia: 1998: III; Iceland's policy quarter is 2008: IV.



**Fig. 12.5** Economic growth during Asian and Icelandic crises (Note Quarterly data, %-change from same quarter the previous year. Source International Financial Statistics, author's calculations)

then deepened, but its economy soon recovered; in fact, Malaysia and Korea had both returned to pre-crisis levels of output after five quarters.

By contrast, it took two years for Iceland and Thailand to return to growth; Iceland was still about 10% below pre-crisis output levels after three years and GDP exceeded pre-crisis levels only in 2015, seven years later.

One should be careful not to over interpret these comparisons. Circumstances were different in each country and this affected the policies implemented as well as economic outcomes. Iceland suffered the biggest banking crisis in history (in relative terms) as well as a domestic debt crisis. Moreover, the global financial crisis was raging at the same time making external circumstances much more difficult than in the Asian crisis. No doubt this was the main reason why the Icelandic recession was so deep and prolonged. The fact remains, however, that interest rates were pushed to high levels as a result of IMF demands. This unavoidably contributed to the observed collapse in investment and private

consumption. Moreover, the domestic debt crisis must have been exacerbated by the high nominal and real rates, resulting in even lower demand and deeper recession. It was obvious in October 2008 that demand would contract drastically. But rather than utilizing the leeway provided by the capital controls for following a slack monetary policy supportive of demand and growth, as was done in Malaysia, a highly restrictive monetary policy, much like that in Korea and Thailand, was pursued. This was no doubt highly damaging and costly and contributed to making the economic crisis in Iceland even longer and more painful than it needed to be.

The purpose of the high-interest rate policy historically pursued by the IMF in balance of payments crises is to attract capital inflows and limit capital outflows in order to support the exchange rate. This policy was also pursued in Iceland and the capital controls were introduced in a supporting role only. The question inevitably arises whether the high-interest rate was necessary to support the exchange rate. Or did the capital controls suffice? Gudmundsson and Zoega (2016) shed light on this issue and study the effects of the domestic policy interest rate on the onshore and offshore exchange rates of the ISK. They find only a very weak impact of the interest rate on the exchange rate and highlight the importance of the effective enforcement of controls for supporting the exchange rate.<sup>14</sup> Moreover, research on the Asian crisis had indicated that high-interest rates were counterproductive, i.e. weakened the exchange rate rather than supporting it (Caporale et al. 2005); Goldfajn and Gupta (2003) studied a large cross-country dataset for the period 1980–1998 and found that tight monetary policy was conducive to reversing post-crisis exchange rate undervaluation, but note that the results are not robust for economies that were facing a banking crisis. We conclude that the tight monetary policy pursued in Iceland was not only damaging but also unnecessary, at least after the controls were properly enforced.

---

<sup>14</sup>They point out that apart from the supporting impact of high interest rates there was an opposing effect due to the “leakage” of interest payments through the current account: foreign investors in offshore ISK were allowed to exchange interest payments on Icelandic bonds and bank accounts classified for foreign currency.

## Lifting of the Controls

As was noted earlier in this chapter, the original underlying reason for the imposition of the controls was the remainder of the carry trade, some 40% of GDP in foreign-owned, but ISK-denominated liquid assets. This stock of assets was gradually reduced, mostly by auctions run by the CBI where offshore ISK could be exchanged for foreign currency at a discount to the official exchange rate; Icelandic pension funds were the main suppliers of foreign funds in these auctions. However, another, even more problematic, set of assets was “discovered” in early 2012 in the form of a large amount of ISK assets inside the estates of the failed Icelandic banks. If these assets had been paid out from the estates the offshore ISK overhang would have been effectively doubled. The authorities responded by changing the Bankruptcy Act, effectively locking all assets—ISK as well as foreign—into the estates. Assets could only be paid out of the estates with the approval of the Icelandic authorities. It took a few years—until mid-2015—to negotiate a restructuring of those assets.<sup>15</sup> Interestingly, the capital controls proved to be an effective negotiating device employed by the Icelandic authorities in these negotiations (Baldursson and Portes 2018). A similar approach to restructuring the remainder of the carry trade funds, then amounting to some 14% of GDP, was attempted in 2016. This was not as successful and as of this writing some hold-out investors remain; the funds involved amount to about 3% of GDP.

The capital outflow controls were, however, lifted in March 2017, almost nine years after they were introduced. The removal was executed by a change to the CBI’s rules on foreign exchange; the changes made to the Foreign Exchange Act when the controls were imposed and during their lifetime are still mostly in place so the controls can in principle be reintroduced at short notice if the Icelandic authorities deem it necessary. Some restrictions on foreign exchange transactions—or capital account management measures—remain in the form of a reserve requirement on

---

<sup>15</sup>See Baldursson and Portes (2014) for details on the ISK overhang as well as for a blueprint for how to deal with it.

**Table 12.2** Statistical characteristics of exchange rates in the post-controls period

	ISK	SEK	NZD
Daily volatility(%)	0.78	0.58	0.53
Skewness	0.08	-0.16	0.12
Excess kurtosis	3.13	0.86	0.16

*Note* Daily log-changes in USD against each currency, 1/4/2017–2/11/2018

*Source* Central Bank of Iceland, author's calculations

flows into liquid financial instruments (bank accounts, T-bills, bonds etc.). There are also restrictions on derivatives trading in the ISK.

The lifting of capital controls proceeded without major disruptions. The circumstances could hardly have been better: since 2013 the economy had been growing robustly, the exchange rate had been appreciating and foreign exchange reserves had been accumulating on the back of strong export revenues from the fast-growing tourist sector. There was little reason to fear capital flight once the problem of the ISK overhang had been resolved. Iceland had in fact begun seeing renewed foreign flows into interest-bearing financial instruments well before the removal of controls; in 2016 the CBI felt compelled to introduce a reserve requirement on foreign inflows in order to reduce those flows, enhance the transmission of monetary policy and stem the appreciation of the krona.

There have, however, been some episodes of exchange rate volatility since the controls were lifted. The foreign exchange market is extremely small and thin and the Central Bank has had to intervene several times as a “circuit breaker” to prevent excessive intra-day changes. Table 12.2 shows the same descriptive statistics for the ISK, SEK and NZD as are shown in Table 12.1, but for the post-controls period. Clearly, ISK volatility has returned to pre-crisis levels and is again the most volatile among these three currencies. The ISK also exhibits a distinct degree of excess kurtosis, indicating a heavy-tailed distribution where there is a significant probability of very large day-to-day fluctuations. The carry trade characteristic of negative skewness has, however, not returned—the swings can go either way. Hence, the fluctuations seem to be the outcome from a shallow and illiquid market which can experience large changes in price due to comparatively small amounts coming into the market.

## Conclusion

The capital controls in Iceland were dictated by the IMF as a part of its conditionality in relation to Iceland's programme with the Fund. The controls were effective in limiting outflows and reducing exchange rate volatility and—in principle—they allowed the pursuit of an independent monetary policy. Overall, they were helpful in aiding Iceland's recovery after the 2008 banking crisis. Too much, has, however, been made of the IMF's reversal of earlier policies: a comparison with some of the Asian crisis countries of the late 1990s reveals that the monetary policy prescriptions of the IMF then were almost identical to those given a little over ten years later in Iceland. The controls were a precautionary device lending support to the restrictive monetary policy meant to reduce capital outflows and support the exchange rate rather than a policy intended to support the exchange rate while also allowing for a monetary policy supportive of demand and growth. This was in all likelihood a costly mistake. Even if Iceland was bad at overseeing its banks during the banking boom it had a strong institutional structure and—after a “learning” period—proved to be good at enforcing the capital controls effectively over almost a decade. Unfortunately, the monetary policy independence afforded by the vigorous enforcement of the controls was not put to appropriate use in the deep recession that the economy fell into after the banking crisis.

In early 2017, the controls were lifted for the most part. Economic circumstances were benign and the removal was brought about successfully. The foreign exchange market is, however, still illiquid and immature and the exchange rate has been rather volatile, even if the Central Bank intervenes from time to time to prevent excessive market movements. Vestiges of the controls still remain: restrictions apply to some aspects of foreign exchange trading and reserve requirements are in place on foreign inflows into debt instruments. As in some other respects, Iceland still has a way to go to be rid of this legacy of its banking crisis.



## References

- Anzuini, A., & Fornari, F. (2012). Macroeconomic Determinants of Carry Trade Activity. *Review of International Economics*, 20(3), 468–488.
- Ariyoshi, A., Habermeier, K., Laurens, B., Okter-Robe, I., Canales-Kriljenko, J., & Kirilenko, A. (2000). *Capital Controls: Country Experiences with Their Use and Liberalization* (IMF Occasional Paper No. 190). Washington: International Monetary Fund.
- Baldursson, F. M., & Portes, R. (2013). *Gambling for Resurrection in Iceland: The Rise and Fall of the Banks* (CEPR Discussion Paper No. 9664).
- Baldursson, F. M., & Portes, R. (2014). Capital Controls and the Resolution of Failed Cross-Border Banks: The Case of Iceland. *Capital Markets Law Journal*, 9(1), 40–54.
- Baldursson, F. M., & Portes, R. (2018). *Capital Controls as a Bargaining Device: The Case of Iceland*. Mimeo.
- Benediktsdóttir, S., Danielsson, J., & Zoëga, G. (2011). Lessons from a Collapse of a Financial System. *Economic Policy*, 26, 186–235.
- Caporale, G. M., Cipollini, A., & Demetriades, P. O. (2005). Monetary Policy and the Exchange Rate During the Asian Crisis: Identification Through Heteroscedasticity. *Journal of International Money and Finance*, 24, 39–53.
- Central Bank of Iceland. (2015). *Financial Stability 2015:1* (Vol. 16), 22 April 2015. Reykjavik.
- Dornbusch, R. (2002). Malaysia's Crisis: Was It Different? In S. Edwards & J. A. Frankel (Eds.), *Preventing Currency Crises in Emerging Markets* (pp. 441–460). Chicago: University of Chicago Press.
- Edison, H. J., & Reinhart, C. M. (2001). Stopping Hot Money. *Journal of Development Economics*, 66, 533–553.
- Forbes, K. J., & Warnock, F. E. (2012). Capital Flow Waves: Surges, Stops, Flight, and Retrenchment. *Journal of International Economics*, 88(2), 235–251.
- Glick, R., & Hutchison, M. (2005). Capital Controls and Exchange Rate Instability in Developing Economies. *Journal of International Money and Finance*, 24(3), 387–412.
- Goldfajn, I., & Gupta, P. (2003). Does Monetary Policy Stabilize the Exchange Rate Following a Currency Crisis? *IMF Staff Papers*, 50(1), 90–114.
- Gudmundsson, G. S., & Zoëga, G. (2016). A Double-Edged Sword: High Interest Rates in Capital Control Regimes. *Economics: The Open-Access, Open-Assessment E-Journal*, 10, 1–38. ISSN 1864–6042 (Kiel: Kiel Institute for the World Economy [IfW] [2016–2017]). <http://dx.doi.org/10.5018/economics-ejournal.ja.2016-17>.

- International Monetary Fund. (2008, November 25). Iceland: Request for Stand-By Arrangement.
- International Monetary Fund. (2012a, November 14). *The Liberalization and Management of Capital Flows—An Institutional View* (IMF Policy Paper).
- International Monetary Fund. (2012b, March 16). *Liberalizing Capital Flows and Managing Outflows—Background Paper*.
- Kaplan, E., & Rodrik, D. (2002). Did the Malaysian Capital Controls Work? In S. Edwards & J. A. Frankel (Eds.), *Preventing Currency Crises in Emerging Markets* (pp. 393–440). Chicago: University of Chicago Press.
- Magud, N., Reinhart, C. M., & Rogoff, K. S. (2018). Capital Controls: Myth and Reality—A Portfolio Balance Approach. *Annals of Economics and Finance*, 19(1), 1–47.
- Miniane, J., & Rogers, J. H. (2007). Capital Controls and the International Transmission of U.S. Money Shocks. *Journal of Money, Credit, and Banking*, 39(5), 1003–1035.
- Straetmans, S. T. M., Versteeg, R. J., & Wolff, C. C. P. (2013). Are Capital Controls in the Foreign Exchange Market Effective? *Journal of International Money and Finance*, 35(C), 36–53.