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Capital Controls and the Icelandic Banking Collapse: An Assessment

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Abstract This chapter assesses the causes and consequences of the Icelandic banking collapse of 2008. It examines the reasons behind the rapid growth of the banks over the subsequent few years following their privatization, the lack of prudential regulation and the high-risk loan strategy of the banks. These, together with the failure of the Central Bank of Iceland to act as a lender of last resort of foreign currency, made the collapse of the financial system almost inevitable. The IMF was called in and a notable aspect of its rescue package was the imposition of capital controls. This can be seen as the culmination of a secular change of the IMF's attitude to the regulation of cross-border financial flows. The chapter presents an assessment of how effective this strategy has been. It concludes with a more general discussion of the political economy of capital controls.

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6.1 Introduction

For a small country, with a population of only about one-third of a million (about the size of the city of Cardiff), Iceland has, since the global financial crisis, attracted a great deal of attention from economists. In some ways, it presents a microcosm of much that went wrong with the financial system prior to the subprime crisis. The privatization of the Icelandic banking system in 2002 led to its explosive growth. A risky banking strategy was followed in the face of ineffective regulation, either directly by the regulatory body (the Financial Supervisory Body or FME) or indirectly by the financial markets, per se. Consequently, Iceland's complete collapse of its banking system in 2008 and the causes behind it present an informative case study of a financial disaster (Wade and Sigurgeirsdóttir 2012). Not least, this is because there is available perhaps the most complete explanation of reasons behind any banking collapse. This is contained in the nine-volume report of the Special Investigatory Commission (SIC)[1] to the Althingi (the Icelandic Parliament) published in 2010, which was the antithesis of a whitewash.

What is remarkable is both the rapidity of the growth of a banking system where, in seven years, the banks grew twentyfold and also the speed with which they collapsed. This led to their nationalization. The collapse of "the Icelandic banks, taken together, would be the third largest corporate failure in history behind only Lehman Brothers and Washington Mutual" (Danielsson and Kristjánsdóttir 2015).

The collapse led to the intervention of the IMF and what is surprising is the institution's reaction to the capital controls that the government had rushed into place. The IMF's hostility over the last quarter of a century, or so, to any form of control on cross-border financial flows

[1] Only short, but informative, excerpts are available in English. Johnsen (2014) has provided a detailed account of the crisis.

had, after the Asian Financial Crisis, mellowed to some degree. However, this was the first time the IMF had actually consented to their introduction. Some economists (Grabel 2015) saw this as a volte face when compared with other recent IMF rescue programmes. And, in many ways, the Icelandic crisis did mark a turning point to the IMF's attitude towards capital controls.

This paper proceeds as follows. In the next section, we discuss the spectacular growth of the Icelandic banking system. Then we analyse the reasons for its collapse and also the aftermath. The next section, 'The Crisis in Retrospect', looks at some competing explanations for the collapse. We next consider the effectiveness of the introduction of capital controls; although it is perhaps still too early to come to a definitive conclusion (see also Carmona 2014; and Sigurgeirsdóttir and Wade 2015). This is especially true as at the time of writing (April 2016) the capital controls are still in place after eight years. A short report by the research department of the Danske Bank in 2006 was a major factor in raising international awareness of the precarious position of the Icelandic banks. In the course of doing so, the report compared Iceland to Thailand on the eve of the Asian Financial Crisis in 1997. We look briefly at the evidence for this and find that there are indeed striking similarities. Finally, we conclude with a more general discussion of the political economy of capital controls.

6.2 The Rise and Fall of the Icelandic Banking System

For many years, the small economy of Iceland was dominated by its fishing industry and the production of aluminium. However, for a few years, relative to its size, Iceland had become an important international financial centre. The effectiveness of the deliberate policy of rapidly expanding the banking sector meant that it came to overshadow the Icelandic economy. For a few years, the banking sector made Iceland one of the wealthiest countries in the world in terms of per capita income and consumption, both of which exceeded those of the USA. At its financial zenith, shortly before the banking collapse, the consolidated financial assets of the three big banks (Glitnir, Kaupthing and Landsbanki) were

over nine times the size of Iceland's GDP (Dwyer 2011). By way of contrast, in 2003, the ratio was less than two. Comparisons were drawn with other small prosperous countries dominated by finance, namely Ireland, Luxembourg, and Switzerland.

It is interesting to note from the beginning that the rapid growth of the banks was such that they were almost certain eventually to fail, even if there had been no world financial crisis in 2008 (Flannery 2009). The report of the SIC emphasized the excessive growth of the banking system and lack of effective regulation by the financial regulatory authority (FME). The remarkably small FME simply had neither the resources nor the expertise to cope with the rapid growth of the banks. Furthermore, the Central Bank of Iceland (CBI) pursued lax monetary policy and the three banks themselves engaged in widespread lending practices that were imprudent, and indeed possibly illegal, especially with respect to loans to their owners and their associates. Jännäri (2009) presents a detailed assessment of the performance and failings of the regulatory system.

Wade and Sigurgeirsdóttir (2010) have traced the close ties of the political parties to commerce and finance in the early post-war period where "market transactions became political and personal, as credit and jobs were allocated by calculation of mutual advantage" (p. 11). The financial deregulation and the privatization of the banks were no exception. Financial deregulation began in 1993 when Iceland, as part of the European Free Trade Area, joined with the countries of the European Economic Community to form the European Economic Area (EEA), a European free trade area. This required the free movement of capital as well as goods and services. It was at this time the FME was established and the CBI became nominally independent; 'nominally', that is, because it still had close links with the political parties. In the 1990s, the financial sector played only a small role in the Icelandic economy. It was small and consisted mainly of publically owned banks, but this was to radically change in the early 2000s.

The banks were privatized in 2002 with one of the big three, the Landsbanki, allocated to the leaders of the Independence Party and another, the Kaupthing, allocated to those with influence in the Center Party, the Independence Party's coalition partner. The investor group Samson, which was owned by these politicians, and associated groups,

obtained a 45 percent interest in the Landsbanki, then the country's largest bank. There was no foreign competition in the privatization process as foreign banks were effectively barred from tendering for political reasons, even though at least one expressed an interest (OECD 2009, p. 19). This was the opposite of the stated intention, which was to encourage foreign banks to take a share in the privatized banks and hence bring with them their considerable banking experience. The third bank was formed by the coalescing of a number of smaller ones with a single dominant shareholder. The new owners set up private equity companies that, in turn, bought large numbers of shares in the banks. Thus, the Icelandic banking system became highly concentrated with a few large shareholders and with close ties to the political elite. Boyes (2009) estimates that at this time the size of the Icelandic financial elite was as small as 30 people. As Wade and Sigurgeirsdóttir (2012) note, it was a curious mix of free market deregulation and crony capitalism, the former enhancing the latter. By 2003, the Icelandic banking system began to grow at an extraordinarily fast rate, aided by low world interest rates and free capital mobility.

The Icelandic banks initially attracted high ratings from the international rating agencies, primarily because of the banks' close political links and their implicit government support. There was also a hybrid merger of the investment banks with the commercial banks, with no sharp demarcation drawn between them. Given Iceland's previous reliance on fishing and aluminium, this could be seen to be an attempt to diversify the economy and to turn Iceland into a financial centre. The rapid growth of the banks was enabled by their access to the international wholesale financial markets aided by their membership of the EEA. Their explosive growth came over the period 2003 to 2007, or, in other words, some years after financial deregulation.

As the SIC (2010) report notes, in 2005 alone, the big three banks raised around EUR 14 million in foreign debt securities, a figure slightly larger than Iceland's total GDP. Iceland followed an inflation-targeting policy (Danielsson 2008) and the inflation rate during the 2000s led to higher interest rates compared to other countries, which increased the carry trade (Sigurgeirsdóttir and Wade 2015). The belief that these loans were covered by government guarantees and the fact that Iceland

was subject to European banking regulation and oversight made Iceland attractive to overseas lenders of foreign currency.

The strategy of the banks was to borrow heavily in the international short-term capital markets in order to take advantage of the interest rates there, which were relatively low when compared with the Icelandic domestic rate. However, these borrowings went on to finance loans made largely to a few Icelandic highly leveraged investment companies, such as Baugur and Samson. As we have noted, these companies were controlled by the main shareholders of the banks. The investment companies, in turn, used these loans to buy substantial equity stakes in foreign firms and assets. By the end of 2007, the three largest banks relied on short-term financing for some three-quarters of their funds, nearly all obtained from abroad. 58 per cent of their overall income was derived from branches located abroad, which had been set up in Britain, the Netherlands, Germany, Scandinavia, and Luxembourg.

The net external debt increased to 142 percent of GDP over the next four years and most of this was due to the banks' overseas borrowings. The net equity assets as a percentage of GDP grew to 99 percent of GDP, an extraordinarily large figure by international standards. The OECD (2009), not a body prone to hyperbole, likened Iceland's international investment position to the "balance sheet of a hedge fund, with large debt–finance equity positions" and observed that the banks pursued a "highly risky core strategy" (p. 22).

There were two problems inherent with this strategy. First, a collapse in the price of both foreign and domestic equities would leave the banks open to a serious loss on their loans. This was because much of the lending was to the investment companies that had bought up foreign equity. The banks also purchased shares on behalf of clients, but with forward contracts to sell the securities back to the clients. This posed serious problems if the counterparty could not buy the shares back, and, to make matters worse, many of the shares were in the banks themselves.

Secondly, rather than basing their expansion on the growth of deposits, as we have noted, the banks initially relied heavily on the international short-term financial markets. The borrowings from the latter are generally more short term in nature, having to be rolled over at regular intervals. Deposits, short of a run on the bank, are generally much more

stable, but take longer to mobilize. Hence, in the dash for growth, the Icelandic banks initially concentrated on the former. The banking system would be in trouble if, for any reason, it did not have easy access to these international financial markets which, of course, happened as a result of the subprime crisis and the Global Financial Crisis of 2007/2008.

As we have noted, there was a widespread conflict of interest in the newly privatized banking system right from the start. The owners of all the big three banks also became the major borrowers from the banks, at low rates of interest. They also received preferential treatment from the banks' subsidiaries (see Johnsen 2014, Chaps. 10 and 11 for a detailed discussion). As the SIC (2010) noted, "the largest owners of all the big banks had abnormally easy access at the banks they owned, apparently in their capacity as owners" (Chap. 2, p. 2). Thus, the owners were the principal borrowers and their debts in many cases exceeded the total equity of the banks. The investment banks also gave loans to the owners on preferential and favourable conditions, acting in their interests, rather than that of the ordinary small shareholders. "It is difficult to see how chance alone could have been the reasons behind the investment decisions" (SIC 2010, Chap. 2, p. 3). The SIC (op. cit.) also noted with characteristic understatement: "Generally speaking bank employees are not in a good position to assess objectively whether the bank's owner is a good borrower or not" (SIC, op. cit., Chap. 2, p. 3).

The activities of the bank owners may be likened to a case of Ponzi finance. The owners bought shares in each other's banks, which is known as 'cross-financing'. They also borrowed to purchase shares in their own banks. Both these activities increased the value of the banks' shares, but not their ability to withstand financial shocks (SIC 2010, Chap. 2, p. 8). As the crisis unfurled, so the owners resorted to even larger purchases of their banks' shares in order to try to stem their collapse in value.

The SIC (2010) came to the conclusion that this and the excessive leverage threatened the stability of the banking system long before the collapse. But there was also a related effect. The apparently larger equity base provided the foundations for rapid growth, but one that led to an increase in operational risk. The fall in the banks' share price was not the fundamental cause of the crisis; it was a consequence of the risks already inherent in the Icelandic banking system.

This was also aided and abetted by expansionary policies of the government, which cut both direct and indirect taxes and its relaxation of the guidelines for housing loans in 2004 was one of the biggest mistakes in macroeconomic policy. These led to major macroeconomic imbalances in the economy, which, by itself, would have led to a hard landing. The rapid inflow of capital led to both a stock market and a housing bubble. The collapse of property and construction bubble was a major factor in the subsequent collapse of the banks. The Board of Governors of the CBI followed a reckless expansionary monetary policy, even taking decisions against the advice of the Bank's chief economist. The SIC (2010) comes to the damning conclusion that the CBI knew of the weaknesses of the banks, yet did nothing to prevent them and continued to make huge loans to the banks against the weak equity that was barely compatible with the legal provision of valid collateral. The SIC (op. cit.) report considers that 2006 was probably the last chance the government had to take decisive action to prevent the crash, principally by curtailing the size of the banking system.

It was then that there was an economic mini-crisis in Iceland, the so-called 'Geyser crisis'. In spite of its explosive growth, the size of the financial system was still relatively small in absolute terms. Thus, it fell under the radar of the international financial media and international markets until about 2006. It was then that concerns of the rating agencies, based on macroeconomic indicators that suggested severe imbalances, triggered the mini-crisis. As the SIC (2010) noted, this was successfully weathered for a short time, not because of the introduction of corrective policies (in spite of concerns from the CBI, which were not communicated to the government), but because the international *perception* of a weakness in the Icelandic banks passed, at least momentarily. However, "it appears that the banks did not adequately address the questions outside analysts had raised in early 2006 about the quality of their loans" (Flannery 2009, p. 103). The Icelandic response was mainly window dressing; it was an attempt to convince the international financial markets that the fundamentals were sound. This was aided by the exceptionally favourable reports by Mishkin and Herbertsson (2006) and Portes et al. (2007) on the state of the Icelandic banking system, paid for by the Icelandic Chamber of Commerce. These, and especially the former, had a notable effect of bolstering confidence in the banks, given the publicity surround-

ing them. Nevertheless, it is difficult to justify the complacent conclusions of both of these reports, even on the basis of what was known at the time and without the benefit of hindsight (McCombie and Spreafico 2014).

Of course, even if the underlying structure of the banking system had been prudently developed and solvent, critical and speculative comments could have still caused a damaging financial run. This could have serious economic consequences, especially given that the size of the banking system meant that the CBI did not have the financial resources to act as an effective lender of last resort in terms of foreign currency reserves. Buiter and Sibert (2008) highlighted this problem and suggested that the only long-term solution was for Iceland to become a member of the Eurozone.[2] The problem of the lack of a lender of last resort itself should have been a substantial cause for concern for the government, as was increasingly the case with regard to the international financial markets.

Consequently, by 2006, it should have been clear, *pace* Mishkin and Herbertsson (2006) and Portes et al. (2007), that Iceland was in financial difficulties, even if it was not apparent that there would be a complete banking collapse (McCombie and Spreafico 2016). The government set up an ad hoc coordination committee, although this proved largely ineffective. A possible solution was for the banks to switch away from borrowing on the wholesale money market and to increase retail deposits. In this regard, in October 2006 the Landsbanki set up the internet bank Icesave in the UK. This paid the best market interest rates available to UK savers and the deposits flooded in. The strategy was a remarkable success and represented a fundamental difference in the way the bank was financing itself. However, it brought attendant, but different, risks to the whole of the Iceland banking system. Icesave was a branch of the Landsbanki, which meant not only was it regulated by the Iceland authorities (the FME), but that its deposits were also guaranteed by the Iceland government, through the Depositors' and Investors' Guarantee Fund (DIGF). If its legal entity had been a UK subsidiary, then it would have been regulated by the UK and, more importantly, would have been

[2] This has proved to be a politically contentious issue in Iceland. In 2009, Iceland made an application to join the European Union, but at the time of writing (April 2016) had already withdrawn it.

covered by the UK deposit insurance scheme. The reason this was set up as a subsidiary was that under the UK regulatory authority, it would have been far more difficult to transfer the funds to other parts of the Icelandic banking group. The fact that they were branches led to a long and acrimonious legal dispute with the UK and the Netherlands, as the Icelandic government initially did not feel obliged to honour the guaranteed to non-residents. However, eventually all the deposits were repaid. The problem with Icesave and related accounts was that if there was a run on the deposits, these would have to be paid for in pounds sterling whereas the DIGB could only pay in króna, with severe implications for the exchange rate and the CBI's foreign exchange reserves.

The Kaupthing bank followed with a similar scheme not only in the UK, but also in a large number of European countries where it made use of subsidiaries. In spite of the success of these internet accounts, however, the inflow of funds from the retail depositors could not offset the outflow from the wholesale deposits.

Nevertheless, the Icelandic banks continued their rapid growth in providing loans, increasingly to those institutions that could no longer obtain them from their normal sources because of the impact of the subprime crisis. With the collapse of Northern Rock in February 2008, the British media turned its attention to other possible banking risks and Iceland, with its rising CDS spreads on the banks, came under increasingly intense scrutiny. By March 2008, the CEO of Landsbanki was quoted in the CBI draft minutes as saying "the likelihood of the Icelandic banks getting through this is very, very little" (SIC 2010, Chap. 18, p. 42). But there were no contingency plans put into place by the Icelandic government, even though it had been told that the CBI could only withstand a run for six days. The various Iceland regulatory authorities had very little understanding of the seriousness of what was transpiring.

6.3 The Banking Collapse and Its Aftermath

By 2007, the króna, always volatile, was considerably overvalued (Tchaidze 2007), and this was due to the carry trade. Speculators, such as foreign hedge funds, were borrowing in offshore currencies, such as

the yen, where interest rates were low and they were using this to purchase financial assets in króna in Iceland, where the interest rate (and returns) were much higher. During the two years before the crisis, the difference in interest rates between the króna and currencies such as the Swiss franc and Japanese yen was over 10 percent, reaching 15 percent just before the crash. An assumption of this is the exchange rate will not subsequently depreciate to the extent that it more than wipes out the difference in the interest rates. As Williamson (1983), however, points out "A ten percent devaluation one week hence would require an interest rate at an annual rate of about 14,000 percent to compensate a holder for not selling!" (p. 181, omitting a footnote). This shows just how volatile these short-term capital inflows are, a fact that was neglected by both the FME and the CBI in the run-up to the collapse. By 2007, this was a highly risky investment strategy as the króna was, according to some estimates, overvalued by as much as 15–25 percent. Hence, the carry traders were taking a huge speculative gamble. As we have seen, many foreign depositors also put their savings in the high interest Icelandic online accounts and many Icelanders took out low interest rate loans denominated in a foreign currency.

The proximate cause of the crisis occurred when the Icelandic banks could not refinance their debts using foreign currency, with the freezing of the international money markets in 2008. The banks held foreign debt to the tune of EUR 50 billion compared with a GDP of EUR 8.5 billion. By 2008, annual inflation was 14 percent compared with the target of the CBI of 2.5 percent and the interest rate was 15.5 percent. The carry trade went into reverse in 2008 and the króna depreciated by over 35 percent during the first nine months of that year. The Icelandic banks found it impossible to roll over their loans on the international financial markets or to find other sources of foreign exchange. Because of the mismatch in the length of the loans, the banks could not simply call in the loans that they had made in foreign currency. As Buiter and Sibert (2008) noted: "With most of the banking system's assets and liabilities denominated in foreign currency, and with a large amount of short-maturity foreign-currency liabilities, Iceland needs a foreign currency lender of last resort and market maker of last resort to prevent funding illiquidity or market illiquidity from bringing down the banking system" (p. 1). As they predicted and

noted above, the CBI was unable to act as the lender of last resort in foreign currency (as it just did not have nearly enough foreign currency reserves) and so the collapse of the banking system was inevitable.

The immediate consequence was that Iceland went into a severe recession, the worst of any of the other OECD countries. Between 2007 and 2010, the fall in income was 12 percent compared with the next worst experiences of New Zealand and Greece, where income fell by about 8 percent. Falls of one percent, or less, were experienced by the other Nordic countries.

The immediate response by the CBI was both to raise interest rates, in the hope that this would stem the outflow of foreign currencies, and to introduce capital controls.[3] The Icelandic government was initially reluctant to call in the IMF, presumably because of the possibility of unpalatable conditions that would be associated with any loan agreement. The króna began its collapse with disastrous effects for households and firms that had debt denominated in foreign currencies. As we have seen, there was a further problem that much of Icelandic mortgages were index-linked and a rapid depreciation of the króna was driving up the inflation rate (it reached 20 percent in early 2009).

Russia temporarily flirted with providing support for Iceland, but lost interest when the IMF was called in. This was the first time the IMF had been called in to rescue an advanced country since the UK sterling crisis of 1976. Thomsen (2011) who led the IMF rescue mission commented that in 2009 "the sense of fear and shock were palpable—few, if any, countries, had ever experienced such a catastrophic economic crash". He termed it a "near-death experience" in his 2011 IMF blog. The IMF considered that there was no option but to support the use of capital controls introduced by the CBI to prevent a complete collapse of the króna, and to ensure an orderly depreciation.[4] Before the controls were imposed on the capital account, there was the danger that there would be no foreign currency to purchase necessary imports on the current account, especially as the overseas importers were beginning to refuse trade credit. Current

[3] Carmona (2014) and Sigurgeirsdóttir et al. (2015) also discuss the impact of Icelandic capital controls.

[4] Because the capital controls were introduced as a result of a severe balance-of-payments crisis, they were not in breach of either EEA or IMF regulations.

account transactions were not subject to controls with the exception that domestic residents were required to deposit with the banks any foreign exchange earnings (Sigurgeirsdóttir and Wade 2015).

While the use of capital controls was unequivocally supported by the IMF team in Iceland, there was less enthusiasm by some of the IMF Executive Directors; nevertheless, however, the controls were persevered with. Over time, there were subsequent changes in, and tightening of, the regulations relating to capital controls in order to prevent the inevitable attempts to circumvent them. In this respect, the legislation was remarkably successful. However, the expectation that the capital controls would be of a temporary nature was overoptimistic, as it was only in 2016 that measures were initiated to dismantle them.

Consequently, the IMF recommended a dual policy to defend the exchange rate by raising interest rates (to 18 percent), while keeping capital controls in place, but not on the current account. Current account convertibility meant that interest payments in króna could be converted into foreign currency. The policy of raising interest rates in an attempt to defend the exchange rate, under these circumstances, is seen by Gudmundsson and Zoega (2016) as a 'double-edged sword', as reflected in the title of their article. The reason for the use of high interest rates to keep the exchange rate up, given the presence of capital controls, is that it reduces the incentives of foreign holders of domestic assets from attempting to bypass the capital controls and sell the króna in the offshore markets. At the same time, however, high interest rates could have the opposite effect. If these interest payments are converted into foreign currency via the current account, they could drive down the exchange rate. Gudmundsson and Zoega (2016) review the empirical evidence covering a large number of countries and find "that the effect of high interest rates on exchange rates does not lend strong support to the argument that high interest rates defend the value of the currency" (p. 2). They use a Vector Error Correction Model (VECM) between interest rates and the exchange rate to test the effect of the higher interest rates. Their findings show, perhaps unsurprisingly, that prior to the crisis, when there was full capital mobility, the high interest rates had a significant impact in maintaining a high exchange rate. But the effect is barely statistically significant in the crisis years. They conclude that "cutting interest rates from a very high

level is not likely to make a currency depreciate in an effective capital control regime, highlighting the importance of the effective enforcement of controls" (Gudmundsson and Zoega 2016, p. 20). The corollary is that rising interest rates on their own are unlikely to stabilize the currency.

An 'event study' by Arnórsson and Zoega (2015) comes to a slightly different conclusion. They find over the period 2009 to 2015 for Iceland that interest rates may have had a role in maintaining the exchange rate when capital controls were not effective, but played a much more limited role when they were effective. Thus, cutting the interest rate from about 18 percent in 2009 to 4 percent in 2011 was unlikely to depreciate the króna, given the presence of the capital controls. These findings are reinforced by Sigurgeirsdóttir and Wade's (2015, p. 114) similar observation that the interest rate fell once the capital controls were tightened and they began to bite and increased export revenues bolstered the CBI's foreign exchange reserves.

The major policy weapon, if only *faute de mieux,* was the introduction of capital controls. The intention was that the capital controls would be a short-term measure, expiring after about, say, six months. This was because of the perceived adverse effects that capital controls can have in the long term. These include deterring foreign investment in the country and preventing domestic investors, especially the Icelandic pension funds, from diversifying their portfolios internationally. However, it took seven years before a capital liberalization strategy, drafted with the help of the IMF, was presented by the CBI in 2015. This compares, for example, with the mere two years during which Cyprus imposed capital controls. By the beginning of 2011, the position of those who thought that controls should be kept for longer won the argument (Sigurgeirsdóttir and Wade 2015). The reason was straightforward. There was great uncertainty how the financial system would cope with the outflow of capital once the controls had been lifted. "It has been estimated that Iceland's 'balance-of-payments overhang'—that is, the net outflow of króna that would eventually be needed to bring domestic and foreign asset holdings to the desired levels—amounted to 70 % of GDP in late 2014" (OECD 2015, p. 51).

One of the problems with the imposition of capital controls in Iceland's case is that by themselves they cannot solve the financial crisis. They merely prevented a complete financial meltdown and provided a breath-

ing space for other measures to be implemented. This is in contrast with the use of capital controls on inflows for which the justification has been made that they may prevent a crisis from occurring in the first place. The difficulty of relaxing the controls is to ensure that they have not merely postponed the damage to the financial system. The problem is that it is extremely difficult to predict the outcome of the liberalization of capital controls. This is highlighted by the attempt of the IMF (2015) to determine the likely effects. They used the CBI's Quarterly Macroeconomic Model (QMM) but, like many central banks' models immediately prior to the crisis, it has severe shortcomings. It does not model household and firm behaviour; neither does it have a financial sector nor does it model the capital account. The only way the effect of relaxing the capital controls in the forecasting model can be simulated is to simply assume that they lead to an exchange rate depreciation and to trace the effects of that. It is difficult to agree with the IMF (2015, p.10 emphasis in the original) that the QMM is an "ideal model to run an *illustrative* rapid capital account liberalization scenario" rather than to precisely quantify the effects. The IMF models the effect of the liberalization by assuming that there is a 25 percent real depreciation of the króna relative to the euro in 2015. The resulting impacts are not surprising. Household balance sheets are adversely affected and consumption falls by 6 percentage points, but the effect is not so great as in 2008 as foreign-denominated debt has been reduced. Inflation increases. The fall in demand reduces investment and corporate profits, but the removal of the capital controls could eventually induce new investment. Again, as in 2008, the depreciation and the fall in demand improve the trade balance, but the extra growth in exports is not enough to offset the fall in demand. The great problem with this exercise is that the crucial possible impact on the banks' balance sheets and depositor behaviour are excluded, as are most of the financial ramifications. As the IMF admits, a more comprehensive model would allow for, e.g. a tax on outward capital flows, or a substantial haircut on offshore residents' holdings of Icelandic financial assets and changes in the risk premium.

In June 2015, the Icelandic parliament voted to end capital controls, although with some immediate tightening of restrictions immediately prior to this liberalization. Given the problems of securing an orderly transition, there are, at the time of writing, negotiations with the boards

overseeing the estates of the failed banks with the intention that a large group of creditors (largely hedge funds who have bought up the distressed debt) will have to take a haircut, which looks like the likely outcome. This will allow the creditors to take approximately the equivalent of 20 percent of Iceland's GDP out of the country in foreign currency. Alternatively, if negotiations fail the creditors will face an exit tax of 39 percent.

The IMF also considered the heterodox nature of the policy measures that were used in a positive light. The Icelandic government let the banks fail rather than having the public sector absorb their losses and fiscal austerity was not imposed. The banks were divided into 'new' banks that handled domestic loans and deposits and 'old' banks that were eventually to be liquidated. The 'new' banks were to enable the domestic banking system to continue to function, which it did. The 'old' banks were to reimburse the creditors of the former banks for any net assets that were transferred. A budget deficit was run initially to help offset the fall in per capita incomes, but following the recovery this turned into a small surplus. Iceland recovered more quickly than other small economies that had been hit by the subprime crisis, such as Ireland, which did not use capital controls. Krugman (2015) attributes much of this to the depreciation of the exchange rate.

6.4 The Crisis in Retrospect

Wade et al. (2012) have argued convincingly that one cannot understand the lead up to and the reasons for the collapse of the Icelandic banking system without taking what may be best termed a political economy approach. The rapid growth of the banking system, the inadequate regulation, and the reckless loans to the owners of the banks were all the result of a flawed privatization process that was designed to benefit the extremely small elite who had links with the political parties. See Johnsen (2014, Chap. 5) for a discussion of just how flawed the privatization process was.

However, Gissurarson (2013), who, it should be noted, had served on the supervisory board of the CBI from 2001–2009, attempts to place the blame for the collapse of the Icelandic banking system on the general

collapse of the international banking system in the wake of the subprime crisis. This overlooks the evidence that the Icelandic banks would probably have collapsed, irrespective of the unfolding of the crisis. While it is not possible to be definitive, Flannery (2009) concludes that "one is left with the strong suspicion that some or all of the banks were insolvent [by October 2008]—and hence the market's unwillingness to lend was rational" (p. 106). The Icelandic mini-crisis of 2006, for example, occurred even before the subprime crisis. While Gissurarson (2013) points out that a large banking system is not unsustainable in a small country, for example, Ireland, Luxembourg and Switzerland, he overlooks the fact that the lost two countries have a long experience of international banking. Moreover, the situation of Iceland differs in one significant respect from the other three countries. In Luxembourg, the banks' assets largely belong to the branches of foreign banks and, as such, the banks' deposits are guaranteed by their respective foreign countries. In Ireland, for example, this applies to about 40 percent of the banks' assets. The Swiss banking system is much larger, but it is so interconnected with the international financial system that there would almost certainly be a worldwide response if any of its banks were in any danger of failing (the reason why this did not happen to the Icelandic banks is discussed below). These banking systems did not have an explosive growth over three or four years for which the regulatory institutions were unprepared and which they did nothing to address. The Iceland financial system was indeed "overbanked and undersized" in the words of Sibert (2011), an assertion which Gissurarson disputes.

It is also unconvincing to lay the blame for the crisis on "the systematic error in the legal and regulatory framework for the European financial common market" (Gissurarson 2013, p. 7). The problem here lay with the failure of the Icelandic institutions such as the FME, the CBI and the government effectively to implement these regulations. It is also disingenuous to blame the customers. "If the Icelandic banks were reckless, were their foreign customers not reckless as well?", Gissurarson (2013, p. 7) rhetorically asks. However, the whole point of the banking regulatary framework is to overcome the problem of asymmetric information. The banks are able to apply due diligence to the issue of loans and the credit worthiness of borrowers (whether or not they actually do so is another matter). Individual investors do not have the resources or information to undertake a detailed assessment

of a financial institution's financial stability. That is the whole reason for the regulatory framework. This is, namely, to ensure that banks act prudentially on behalf of the investors and the government, who ultimately provides the depositors' guarantees. It was here that the FME and the CBI proved totally inadequate to the task, and the credit rating agencies for a short period got it (nearly) right. Moreover, Gissurarson (op. cit.) attributes much of the blame for the collapse to the fact that "the Icelandic banking sector was only unsustainable because in its hour of need nobody was willing to help" (p. 7), whereas other countries received help from the US Federal Reserve Bank, inter alia. It is sufficient to quote the SIC (2010) on this:

> After the G10 Summit of the central bank governors in Basel on 4 May 2008, it became clear that neither a currency swap with the agreement with the Bank of England nor the other central banks, with the exception of the Danish, Norwegian and Swedish ones was on offer to the CBI. In a letter to the Investigation Committee, Stefan Ingves, Governor of the Central Bank of Sweden, makes it clear that unclear ownership, along with the banks' rapid balance sheet growth had led to a dangerous situation and that the Icelandic government did neither seem fully to grasp nor understand how to deal with it. (p. 15)

The Bank of England was likewise so concerned with the fragility of the Icelandic banks that it also refrained from even discussing a swap, but merely gave advice that the size of the banking system should be reduced. So Gissurarson's (2013) argument that the whole crisis primarily was due to the lack of diligence of the largely foreign investors in the banks and the inexcusable failure of the other central banks to rescue the Icelandic banks is not a compelling one.

Nor can the banks' actions as the crisis unfurled be considered to be 'gambling for resurrection', as Baldursson and Portes (2013) assert. Gambling for resurrection is where a bank or financial institution gets into serious financial difficulties and makes risky loans which will, if successful, bring a high return and rescue the bank, but the probability of this occurring is extremely low. Black (2014a and b) argues that the banks engaged in reckless behaviour from the time of their privatization, acting solely in the interests of the few large shareholders, as evidenced

by the SIC (2010). The banks' behaviour was not 'gambling for resurrection', but rather 'looting' in Akerlof and Romer's (1993) sense of the term or engaging in 'accounting control fraud' (Black 2014a).

6.5 How Effective Were Capital Controls in Iceland?

It is difficult to establish with any certainty the impact of the capital controls on Iceland's recovery, given the difficulty of determining the counterfactual—what would have happened without the controls? Krugman (2015), for example, attributes the rapid recovery in employment in Iceland, compared with, for example, Ireland, to the fact that the króna did depreciate, whereas Ireland is a member of the Eurozone and could not, therefore, benefit from a depreciation of its currency. However, if we were to consider time-series data for Iceland, we would find that the imposition of capital controls was associated with a depreciation, rather than an appreciation, of the króna, as might have been expected. The problem is the counterfactual that without capital controls, the rate of depreciation would have been catastrophic and the controls prevented this.

Nevertheless, Iceland made a remarkable recovery from its 'near-death experience'. By 2015, inflation had been tamed, full employment had been restored and public debt had been greatly reduced, with the budget deficit eliminated. The only cloud on the horizon was the large nominal wage increases that were in the pipeline, due to Iceland's largely collective bargaining system. The current account had moved back into surplus, initially as the result of the collapse of demand, but, consequently, tourism emerged as a significant foreign exchange earner with the depreciation of the króna. Nevertheless, in spite of this rapid recovery, the level of per capita income was below that of the other Nordic countries (Yglesias 2015).

It is interesting to note that the OECD (2015), like the IMF, now also advocates the selective use of capital controls "to address large swings in capital flows unrelated to fundamentals, while respecting international commitments" (p. 11).

We may distinguish two ways of viewing the use of capital controls. The CBI and IMF view is that the controls should be relaxed gradually, after preventing a total collapse of the currency: They would provide a cheap way of financing the budget and the cost would be shared between residents and non-residents, with the larger burden falling on the latter. The financial repression effect of capital controls enabled Iceland to experience a sharp fall in public debt yields from 2008 onwards (Carmona 2014, p. 490). This is similar to the 'policy space' argument of Grabel (2013, 2015). Capital controls enabled some macroeconomic policies to be carried out that might not otherwise have been possible, with the need for, say, very high interest rates, to try to prevent the uncontrollable depreciation of the currency. It is also similar to the 'buying time' approach identified by Carmona (2014, p. 496), with the exception that in this case capital controls lasted longer, to a certain extent ossifying ineffective policies that they were meant to be replaced.

The second view was that the controls should have been lifted as soon as possible even at the risk of some dislocation in the financial market. This is because Icelandic companies need access to foreign markets and its influential fishing industry wished no imposition of controls on where it could spend its foreign exchange earnings. Investment may be reduced, not least by the possibility that capital controls may be introduced in the future, thereby generating uncertainty. This view sees Iceland's future as lying in the European Union and the euro area and its proponents were dismayed when the government abandoned its application for membership. It is shared by most neoclassical economists because of the supposed serious price distortions and the misallocation of resources that exchange controls bring with them. There is also concern that the failure to lift capital controls will increase the disparities in wealth. The CBI holds auctions where owners of foreign currency can buy króna at a good discount, compared with the separate auctions for domestic residents, and then the foreigners can use the króna to buy up Icelandic real estate and other assets.

Much discussion of capital controls focuses on curtailing destabilizing capital inflows, especially if there is speculative or herd behaviour (Ostry et al. 2010). Clearly, with the benefit of hindsight, there should have been some restriction on these flows into Iceland prior to the crisis. However,

as they were part of, and indeed the cause of, the rapid growth of the banking sector, no concern was expressed, not least by the understaffed and ill-equipped FME or the CBI.[5] When the crash came, the IMF saw no alternative to capital controls, particularly with regard to outflows. Sigurgeirsdóttir and Wade (2015) express concern that the government did not use the breathing space given by capital controls to "strengthen the financial system's prudential controls and carry through other institutional reforms" (p. 126) with a view to entering the EU. However, the OECD (2015) is more optimistic considering that "the Icelandic authorities are already at—or close to—the international frontier in prudential regulation" (p. 25). Worryingly, Sigurgeirsdóttir and Wade (2015) note that there may be a tendency to backsliding with recent greater political interference in the governance of the banking system and a return to rent seeking. Prior to 2009, monetary policy was set by three politically appointed governors who were then replaced by a board of experts. The OECD (2015) bluntly states that "To protect macroeconomic stability the central bank should remain independent from political interference. The monetary policy committee introduced in 2009 should be retained" (p. 23).

But we agree with Sigurgeirsdóttir and Wade (2015) when they argue that the Icelandic case has undermined the view that a rapid growth of capital inflows is a sign of a strong economy (typified by the question, why else would investors move their money there?) and any restriction is likely to only produce both microeconomic and macroeconomic distortions. Indeed, now the opposite is the case. Large inflows of short-term foreign capital (as opposed to FDI) can well be the harbinger of a damaging currency crisis.

Nevertheless, there was not unanimity about the appropriateness of introducing capital controls in Iceland. An alternative view is presented by Danielsson and Kristjánsdóttir (2015) who subscribe to the orthodox objections to capital controls. Capital controls should not have been used. They assert that it leads to a deadweight loss of one percent of GDP per year in Iceland. The imposition of capital controls destroys

[5] At the time of writing, April 2016, there is concern about the sudden increase in capital inflows and discussions about whether or not to limit these.

trust in the Icelandic financial system (although one may legitimately ask whether there was any trust left in 2008) and may lead to a significant risk premium in future years. "Thus capital controls do not only undermine the long-term health of the Icelandic economy, in the long run they also undermine their own objective of maintaining the exchange rate." They further express the opinion that capital controls give more powers to the government, through exemptions, and so on, that allow rent seeking, a not unreasonable concern given Iceland's post-war history when there was a great deal of rent seeking prior to the crisis.

Let us consider the static misallocation of resources argument. The one percent of GDP, even if it is correct and it is not clear how they arrive at this figure, has to be set against the possible disastrous consequences of a free-falling currency, as occurred to the Indonesian economy as a result of the collapse of the rupiah in the 1997 Asian crisis. But is there any evidence that capital controls in a world of path dependency, financial crisis and increasing returns to scale actually led to a major misallocation of resources in Iceland? Certainly, there is little evidence that financial liberalization leads to a significant increase in growth.

A number of studies of the effect of financial deregulation and capital liberalization show that generally this improves stock market efficiency in the allocation of capital resources to the most productive sectors of the economy (see the references in Graham et al. 2015). However, it does not necessarily follow that in periods of economic crisis, such as Iceland went through, the imposition of capital controls necessarily *reduces* stock market efficiency. The counterfactual is that the failure to impose capital controls with the likelihood of economic meltdown may actually considerably worsen the efficiency of the stock market.

Graham et al. (2015) test the weak form of the efficient market hypothesis for the Icelandic stock market over this period. The weak form is that over time the returns to shares will follow a random walk. The conventional wisdom is that, given the usual assumptions, the imposition of cross-border capital controls would make the Icelandic stock exchange less efficient. Hence, the paper looks at the effect of this policy on the efficiency of the Icelandic stock market. As an attempt to test for the counterfactual, they also test the weak-form stock market efficiency hypothesis for Denmark, Finland, Norway and Sweden, using data for

the period 1993–2013. They concentrate on the periods January 1993 to December 1994 and October 2008 to December 2013 for Iceland, when there were capital controls in Iceland, and from January 1995 to October 2008, when there was not. Interestingly, the authors find no evidence in Iceland of weak-form efficiency in the period of deregulation, but that, perhaps paradoxically, the period of capital controls actually improved the efficiency of the stock market (the other four Nordic countries showed greater weak-form efficiency over this period).

What are the implications to be drawn? One possibility is the widespread manipulation of the stock prices in the period of deregulation did *not* improve the efficiency of the stock market, but worsened it. The crash brought an end to the stock market manipulation, especially in the shares of the banks, and consequently, under capital controls, the efficiency of the stock market increased. It may not necessarily be the case that the imposition of capital controls improved stock market efficiency, per se, but their effects were not adverse enough to worsen the situation.

As for the investment–savings nexus, a work by Raza et al. (2015) studies the Feldstein and Horioka (1980) hypothesis for Iceland. This is that with restricted capital mobility, there should be a close correlation between savings and gross domestic investment. The converse is that with free capital mobility and investors seeking to invest in those countries, which have the highest returns, the correlations should be nonexistent, or at least very weak. They found that the correlation between saving and investment is higher during the first period of capital restrictions (1960–1994) and becomes lower when the free capital mobility regime is included in the sample, as is to be expected.[6] However, the introduction of controls in response to the global financial crisis did not increase the correlation between savings and investment. The cause is that the deep recession curtailed both the rate of investment and the savings ratio, but the latter recovered much more quickly. Raza et al. (2015) conclude: "The implications of the results we obtain for policy makers are clear: real interest rates matter for small open economies, and closely monitoring the rate of growth of both saving and investment is vital. Institutional and structural changes can have far-reach effects on the development of

[6] Iceland entered the European Single Market in 1994.

all economies, but for small open economies, capital controls in particular can alter their potential growth rates, both positively and negatively, in both the medium and long run" (p. 14).

To summarize: Iceland constitutes a case of unorthodox policies, the most interesting of which has been the imposition of capital controls that not only was greeted with approval by such economists as Krugman and Stiglitz, but also defined "a dramatic precedent" (Grabel 2013, p. 19). It is seen as a remarkable change of view from IMF's orthodox long-standing defense of unfettered international financial markets. Iceland is the first developed country where the IMF recommended the introduction of capital controls. What happened in Iceland matters as it induced a rethink of the economic orthodoxy that disapproves the limits on cross-border capital flows (Sigurgeirsdóttir and Wade 2015). Krugman (2011) expressed the view at a conference that "Iceland's heterodoxy gives us a test of economic doctrine". In fact, the conventional wisdom before the global financial crisis was that free movement of capital allows financial markets to allocate the resources efficiently and they are capable of correctly valuing financial risks. Huge increases in capital inflows are also seen as evidence of strong fundamentals and that the less state intervention, the better. The case of Iceland shows that all these are not necessarily true. It constitutes a good example of how financial markets cannot always accurately assess the risks and how huge speculative capital inflows may well ruin an entire economic system (Sigurgeirsdóttir and Wade 2015; Carmona 2014).

The Icelandic case is the culmination of a move to the acceptance of capital controls, at least in the short term, in response to a severe financial crisis and as part of a package of other policy measures. This compares with the earlier neoliberal period when capital controls had no role to play. As we have seen, the recovery in Iceland in terms of employment and the reduction of unemployment has been faster than in, for example, Ireland that went down the more traditional austerity route.

However, the imposition of capital controls in Iceland should not be seen as a panacea. Given the length of time that they have been in place, the OECD (2015, p. 53) sees evidence that they are now leading to distortions. The króna has been trading at a discount in the offshore markets compared with the CBI official domestic rate. Capital controls

exempt new foreign investment, but FDI is modest compared with the pre-2008 period. This is partly due, according to the OECD (op. cit.), to uncertainties and the possible costs of gaining permission for the investment. Icelandic businesses see the controls as the single most important factor impeding their economic performance, particularly with respect to start-up firms that had previously benefitted from foreign capital and expertise. The OECD (op. cit.) also points to the fact that Icelandic pension funds are unable to diversify their portfolios (and risk) using foreign assets to a prudent extent. At the moment foreign assets holdings comprise 22 per cent of the portfolio, compared with a target of between 40 and 50 percent set by the domestic pension funds (the maximum share in 2006 was about 30 percent).

Nevertheless, there is no denying that there has not been a change in the IMF's 'institutional view' about the efficacy of capital controls. However, this does not mean that there has been a return to the Keynes–Dexter position on capital controls.

6.6 A Comparison of the Thai (1997) and Icelandic (2008) Financial Crisis

As we have noted, one of the turning points in the perception of the fragility of Icelandic banking crisis was a short report by the research department of the Danske bank in 2006, which coined the term 'Geyser Crisis' for Iceland. The report looked at the financial indicators in Iceland and came to the alarming conclusion that the imbalances were even larger than those of Thailand in 1997 (and Turkey in 2001). The only indicator that was not worse in Iceland was public finances. Of course, there are significant differences between the structure of the two economies and the króna was freely floating, whereas the Thai baht was a pegged currency that closely followed the US dollar. Nevertheless, allowing for all the differences, the report comes to the conclusion that "a possible Icelandic crisis could follow much the same lines as in Thailand" (p. 7). In this section, we pursue this comparison further and look at the implications for the use of capital controls.

On the eve of the Asian Financial Crisis, Thailand was seen as one of the region's great success stories. Growth was rapid and the country was running a budget surplus, although there was a substantial current account deficit. However, many institutional failings were hidden by this fast growth. The fundamental cause of the crisis stemmed from the substantial amount of foreign capital that poured into Thailand, partly from the carry trade and partly because Thailand was seen as an exceptional investment opportunity. A major factor was the financial liberalization that began in the 1990s. This was part of an attempt to turn Bangkok into a regional financial hub with the opening up of the capital account in 1993 and the creation of the Bangkok International Banking Facility (BIBF). Like Iceland, Thailand's financial system was dominated by the banks.

The Asian Financial Crisis commenced with the collapse of the previously pegged Thai baht in July 1997. In the previous months, there was growing concern about the financial viability of some of Thailand's property companies and the crisis was precipitated by the collapse of Finance One, Thailand's largest financial institution. The financial strategy of Finance One, which was followed by many other financial institutions, was to borrow short-term US dollars by issuing Eurobonds and using the funds to lend long-term notably to Thailand's property developers, leading to a boom in real estate finance. "Thus, greed fed speculation and then into Ponzi-type financing. Projects were launched in the expectation that they could be listed in the stock market so that the promoters could take an instant profit in the bull market. In a rising market, financial institutions agreed to provide short-term bridge loans repayable on successful listing. When the bull stopped, the projects stopped, and the banks were left with bad loans on their books" (Sheng 2009, p. 140). Moreover, as in Iceland, banks such as the Bangkok Bank of Commerce (BBC) gave huge loans, without undertaking due diligence, or insisting on collateral, to senior BBC executives and other individuals. It became clear that the Thai banking system did not have the experience to deal with this rapid explosion in financial intermediation and also did not have the capacity to effectively regulate the rapidly growing banking system.

As in Iceland, risk management in the Thai banks became weak and the financial institutions took advantage of the differential in interest rates; in this case between the USA and Thailand. However, in the case of

Thailand, the proximate cause of the crisis was the collapse of the property market and the fact that the property developers could not pay back the loans they had received from Finance One and other financial intermediaries. The causes of the Asian crisis did not fit into the traditional explanation of currency crisis. These include the attempt of governments to peg the exchange rate with only limited foreign exchange reserves. If the market believes such a defense of the exchange rate is futile then there could be a run on the currency, even leading to a self-fulfilling prophecy. But, as Krugman (1998) emphasized, this was not the case of the Asian crisis. He states that "The Asian victims did not have substantial unemployment when the crisis began. There did not, in other words, seem to be the incentive to abandon the fixed exchange rate to pursue a more expansionary monetary policy that is generally held to be the cause of the 1992 ERM crisis in Europe." The causes bear a marked similarity to those of Iceland in spite of the vast difference in the level of economic development and the fact that Iceland had not pegged its exchange rate. Thailand, the first of the Asian countries to collapse, had liberalized in the 1990s. Foreign exchange controls had been relaxed so that it was possible to borrow from foreign markets and these borrowings could be passed on to Thai customers. The cause of the Asian Financial Crisis was the search by speculative investors for high returns in these markets. Non-bank financial intermediaries borrowed short in foreign currency (largely dollars) and lent to the speculators who invested in assets (largely real estate), causing an asset bubble. The financial intermediaries were encouraged in this by the implicit guarantees from what were seen as the close political connections with the Thai institutions, who were supplied with these funds. Hence, it was a classic case of moral hazard as these led to excessively risky investments. The rapid rise in asset and real estate prices made the financial situation of the intermediaries seem more solid than they actually were. It does not take much to cause an asset bubble to collapse. The collapse of Finance One sent a strong signal to the financial markets that the Thai government could not always be relied on to bail out failing banks. Once this became clear, and with a continuation of the fall in asset prices, there was a run on the baht by the currency traders who came to the conclusion that the rate at which the baht was pegged was unsustainable and who therefore sold the currency short. The exchange

rate became unsustainable in the face of this speculative attack, because most of the Thailand's foreign exchange reserves ($33 billion) had been tied up in forward contracts, with only $1.14 billion available. However, it is doubtful even if the remainder of the reserves had been readily available, the peg could have been saved.

The IMF was called in on 28 July 1997. Tight monetary and fiscal policies were imposed, resulting in a downturn in output of over 10 percent in 1998. In 2003, in its evaluation report, the IMF conceded that the first-phase policy recommendations had exacerbated the economic situation. Capital controls were not used.

As in the case of Iceland, it was clear that part of the problem of the Thai, and, more generally, the Asian financial crisis was that the financial intermediaries were not always able to use commercial criteria when deciding whether or not to issue a loan when dealing with politically powerful or well-connected potential borrowers. As Krugman (1998) puts it, the financial intermediaries were often owned by 'Minister's nephews'. A further similarity was that the rapid growth disguised the extent of the risky lending, but once doubts were raised these economies would become extremely vulnerable to a financial crisis.

What is clear in the case of both the Asian and the Icelandic financial crisis is that the primary cause was the excessive growth in foreign borrowings and lack of effective oversight by the regulatory authorities. In such circumstances, there is a case for capital controls on inflows. We have seen that the liberalization of the Thai capital account occurred too rapidly and there was not the mechanism to limit the excessive borrowing of foreign exchange by the financial intermediaries.

One of the causes of the IMF's change in view towards capital controls is the development of theoretical models within the prevailing neoclassical paradigm, which provide a theoretical rationale for them. This has led to the so-called 'new economics of capital controls', of which Korinek (2011) provides a useful overview. He starts with the observation that there is a close correlation between the degree of market liberalization and financial instability. One of the reasons is the widely accepted view that rapid inflows into the emerging economies are excessive and can lead to financial instability, as evidenced by the Asian financial crisis. The question is: how to prevent this?

The case for capital controls for prudential reasons is based on the typical sequence that there is a shock to a financial variable. This leads to a fall in aggregate demand and a depreciation in the exchange rate and a collapse in asset prices. This has adverse balance sheet effects due to the declining value of collateral and net worth with the increase in the value of the foreign debt in terms of the domestic currency. With imperfect capital markets, this leads to reduced access of agents to finance and/or greater credit spreads leading to a further cut back in spending. Hence, there is an amplification effect on the initial shock and a vicious circle develops. A key assumption is that agents, when taking a decision to borrow on the foreign exchange markets, take the exchange rate and asset price, or the level of financial fragility, as given. They ignore any effect that their decision may have on increasing the fragility. But their actions have a 'pecuniary externality' effect when there is a borrowing constraint.

This means that the agents take on too much risk when borrowing, which leads to an excessive degree of fragility. Consequently, in this model, Pigouvian taxes on the stock of financial liabilities to reduce the overall level of risk will make all agents better off. In particular, this would reduce the amount of short-term dollar-denominated debt. Korinek (2011) illustrates this argument with a two-period representative agent model. Clearly, this presents a theoretical argument for capital controls in the case of Thailand; but in the case of Iceland it is a second best argument. This is because effective prudential banking regulation and risk assessment of loans and stress testing by the CBI should have been in place to prevent the excessive growth in loans.

6.7 The Political Economy of Capital Controls

The hostility of the IMF, and indeed other international organizations such as the OECD, to the use of capital controls from about 1980 until the Global Financial Crisis of 2007/2008 has been well documented. Yet during the first three decades of the post-war period, capital controls had been seen as integral part of the financial system, a position based largely on the experience of the interwar period. When the IMF's Articles were

drawn up at Bretton Woods in July 1944, they emphasized the need for current account convertibility. But, at the same time, they recognized that countries may have to impose capital controls. Both Keynes and White drew a distinction between *speculative* and *productive* capital flows, and agreed that the speculative flows (or hot money) need to be carefully monitored and if necessary restricted (Abdelal 2007; Gallagher 2011).

A major problem was the so-called trilemma or 'impossible trinity', namely the impossibility of having an independent monetary policy, a fixed exchange rate and unfettered capital mobility. This was at a time when it was taken as axiomatic that, for example, the UK government may have, from time to time, to take policy measures to ensure full employment (e.g., the 1944 White Paper on Employment Policy).[7] In the words of Helleiner (1994), this was a time of 'embedded liberalism', where markets were seen to be important, but they needed to be embedded in proper institutions to be effective. Many economists at the time thought that an open trading system and an open financial system were fundamentally incompatible in a regime of fixed exchange rates (Eichengreen 2007).

Nevertheless, even at this time, the influence of the financial sector in the US, and its desire for minimal regulation, was to be seen. The use of capital controls turned out only to be temporary, rather than, in certain cases, permanent as Keynes and White had proposed. The UK maintained capital controls until 1979 and full capital account liberalization occurred in the other advanced countries at this time. A number of reasons have been put forward to explain this change in policy. Undoubtedly, the gradual breakdown of the Bretton Woods system over the period 1968 to 1971 and the move towards floating exchange rates played its part. Ghosh and Qureshi (2016) also point to the rise of the multinational corporations that made it difficult to impose capital controls because of, *inter alia*, transfer pricing. Moreover, the IMF considered that it was relatively easy to bypass the capital controls, which is why it considered that they would be effective for only, say, six months. In addition, the USA

[7] The US 1946 Full Employment Act was much weaker and did not commit the US government to such an extent as in the UK.

and the UK financial sectors saw that their dominance of world financial markets would be enhanced under capital liberalization. These became a powerful pressure group and Wade and Veneroso (1998) and Bhagwati (1998) coined the term 'Wall Street–Treasury complex' to describe the origins from which these pressures to pursue freedom of capital movements at all costs emanated, and from which the IMF was not immune. The rational for the liberalization of cross-border flows was undoubtedly enhanced by the demise of Keynesian economics and policies and the rise of neoclassical, and later New Classical, economics. The 'embedded liberalism' was replaced by 'neoliberalism', an ideology, or paradigm, which sees the unfettered working of the market (including the financial market) as generally leading to the optimal allocation of resources.

Thus, during the 1960s and 1970s there was a gradual movement to the liberalization of capital flows, although the converse was the case with developing countries, where there was greater use of capital controls. But why was there such hostility during the 1980s and 1990s to capital controls, per se? As Ghosh and Qureshi (2016) imply, capital controls are just like any other macroeconomic policies, the costs and benefits of which should be assessed depending upon the exact circumstances. One answer, they suggest, is that most capital controls are likely to be most useful in curtailing speculative capital *inflows*. However, in practice many developing countries used them to control capital *outflows*. Curtailing financial outflows was closely associated with autocratic governments (see Ghosh and Qureshi 2016, p. 33, for the evidence) and concomitant rent seeking. According to Ghosh et al. (op. cit.), the distinction between the effectiveness of controlling capital inflows and the ineffectiveness of controls on capital outflows became lost in policy discussions, and, as a consequence, the former suffered from 'guilt by association'.

The change in the IMF's attitude towards capital controls first occurred during the Asian Financial Crisis of 1997, as we have seen. The latter was largely caused by the excessive short-term capital inflows into the region and then their rapid reversal. The Asian Financial Crisis led to a reassessment of capital controls and the IMF changed its attitude towards them, but not to such a degree as might be imagined. As Ghosh and Qureshi (2016) note, after the Asian Financial Crisis, restrictions on, especially, capital inflows were seen as having a role to play. Rather incon-

sistently, however, capital controls were "not encouraged or viewed favorably" (p. 27), but merely tolerated. Nevertheless, this did not prevent several developing countries imposing them in the 2000s. In this they were opposed by the financial markets, which actually caused a change in policy as in the case of Thailand. But if the IMF could largely dismiss capital controls in the 1990s, the subprime crisis and the resulting Global Financial Crisis was another matter. The Global Financial Crisis led to a massive outflow of funds from the developing countries in 2008, followed by a sharp reversal by mid-2009 when, as a consequence, several developing countries introduced capital controls.

Grabel (2015) identifies five crucial reasons why capital controls are now seen in a more favourable light than they once were. The first concerns the increased autonomy of several developing countries, which now can rely on official reserves and sovereign wealth funds. The second stems from the ability of the policymakers of the developing countries to have dealt with, and responded better to (than several advanced countries), the challenges offered by the Global Financial Crisis. This has made them more confident and assertive when dealing with the IMF, etc., which is indicated by the counter-cyclical policies pursued, the expansion and the creation of financial institutions, and by the funds committed to the IMF. Countries such as China that are not hostile to capital controls also play a larger political role in the international organizations. The third concerns the restriction of the IMF's geographical influence and its financial dependence on its former clients. The fourth is that the need of capital controls for 'countries at the extremes' (that is, not only those that were facing an economic collapse, such as Iceland, but also those that were performing well under the crisis, such as Brazil) became stronger. Finally, there was a change of ideas within the IMF, not least based on research by the IMF economists.

The changes in the range and kind of policies that have been adopted since the Global Financial Crisis have been subsumed by Grabel (2011) into the concept of 'productive incoherence', which has replaced the 'neoliberal coherence', typical of the neoliberal era (Grabel 2013): "By productive incoherence I refer to the many responses to the crisis by national governments, multilateral institutions (particularly the IMF), and the economic profession that to date have not congealed into any

sort of consistent strategy or regime. The term is intended to signal the absence of a unified, consistent, universally applicable response to the crisis—either in the domain or rhetoric of policy making" (p. 564). In particular, she argues, "the responses to the current crisis range from those that reflect substantial continuity with neoliberalism to those that represent pronounced discontinuity. In this sense, the present incoherence is productive, signaling as it does not the death of neoliberalism, certainly, but the erosion of stifling consensus that has secured and deepened neoliberalism across the developing world over the past several decades" (p. 564).

There may be a temptation to consider the change in the IMF's position, as a result of the Global Financial Crisis, a complete reversal of its previous position. But this would be a mistake. The broad policy changes with respect to capital controls have been most clearly set out in the IMF's (2012a, b) 'institutional' view. It starts by reaffirming the overall importance of capital flows, although there is a 'threshold' level of financial and institutional development before the liberalization of capital flows becomes beneficial. However, it is clear that capital controls are seen as very much an adjunct to the use of traditional macroeconomic policies as may be seen by the discussion and flow chart in Ostry et al. (2010, Figure, p. 7; see also Habermeier et al. 2011; IMF 2010, 2011, 2012a, b; Ostry et al. 2011, 2012). Moreover, the emphasis is on restricting capital *inflows*. The limited use of capital controls and the conditions under which they are effective is typified by the following passage:

> A key conclusion is that, if the economy is operating near potential, if the level of reserves is adequate, if the exchange rate is not undervalued, and if the flows are likely to be transitory, then use of capital controls—in addition to both prudential and macroeconomic policy—is justified as part of the policy toolkit to manage inflows. Such controls, moreover, can retain potency even if investors devise strategies to bypass them, provided such strategies are more costly than the expected return from the transaction: the cost of circumvention strategies acts as 'sand in the wheels'. (Ostry et al. 2010, p. 5)

The IMF itself has contributed a number of recent econometric studies on the efficacy of capital flows. It has found, for example, that those countries that used capital controls in the run-up to the current crisis fared better than those that did not (Ostry et al. 2010). However, the IMF evidence is not as overwhelmingly in favour of the efficacy of capital controls as some, such as Gallagher (2011), suggests. "A key issue of course is whether capital controls have worked in practice. Our sense is that the jury is still out on this, and it is difficult to get the data to speak loudly on the issue" (Ostry et al. 2010, p. 5). They find that controls are effective if there already exists a comprehensive system of restrictions, but it is not so clear cut if the current account is open. Moreover, they concentrate on controls for capital *inflows* and find that they do not reduce the volume, but do have an effect on influencing composition of capital inflows towards instruments that are less fragile. For example, greater debt liabilities (fixed obligations for the borrower but limited risk for the creditor) and financial FDI are associated with countries with the worse growth slowdown.

The fact that the jury is still out is typified by a recent paper of Klein (2012), who finds that capital controls are generally ineffective in restricting capital flows. Klein (op. cit.) examines the effects of capital controls on a number of financial variables (such as the change in the ratio of credit to GDP) drawing a distinction between 'episodic' or short- term capital controls (the 'gates') and long-term controls (the 'walls'). He uses panel data estimation for 44 countries over the period 1995–2010, 16 of which are persistently open (largely the advanced countries), 10 are persistently closed (all are emerging market nations) and 18 are episodic. He finds that, once one allows for differences in the logarithm of per capita income, neither type of capital controls is statistically significant in explaining differences in financial vulnerabilities (as proxied by, for example, the change in the credit to GDP ratio). The closed economies grow faster than the open economies over this period (the dummy variable for 'persistently closed to capital inflows' is statistically significant). However, again this becomes statistically insignificant when the log of GDP per capita is introduced as an explanatory variable. This is not surprising as the dummy variable is also capturing whether or not the country is a developing country, which is also closely correlated to the logarithm of

GDP per capita. Indeed, the reason why the advanced countries as a group grow more slowly than the emerging markets is that the latter have the benefit of technological catch up and other favourably supply-side factors missing from the estimating equation. In a shorter time frame, the advanced countries were also hit harder by the subprime crisis. Moreover, there are the usual limitations to this econometric approach. The panel imposes the same coefficients on each of the countries in the sample, ignoring their heterogeneity. The use of dummy variables for capital controls ignores the effectiveness of their implementation, which is likely to vary quiet considerably between countries. Consequently, it may be that detailed case-studies are likely to be more informative as to the effectiveness of capital controls than such cross-country regressions.

Jeanne et al. (2012) undertake a meta-regression approach and confirm what a large number of other studies have found. Free capital mobility has a little impact on economic development, although FDI and stock market liberalization may have some short-run effect. But they caution against interpreting this as having no need to be concerned about capital controls. They point out that some countries have used capital controls to keep the exchange rate devalued and to generate export-led growth. The classic example of this is China which imposes controls on capital inflows (with the exception of FDI) as well as outflows. They further argue that capital controls should be subject to international rules and agreements.

Ostry et al. (2010) also stress the potential serious multilateral consequences. The adoption of controls may slow down other much-needed reforms and may lead other counties to adopt them. "Widespread adoption of controls could have a chilling longer-term impact on financial integration and globalization, with significant output and welfare losses" (p. 5). Capital controls may lead to the crowding out of other less distortionary policies. This is a view held in more emphatic form by Olson and Kim (2013) who question even what we see as the limited IMF's concessions towards capital controls. "The IMF's new position on capital controls encourages countries to use direct controls as a politically convenient excuse to put off necessary economic reforms that are critical to enhancing efficiency and productivity. More notably, the IMF's recent promotion of capital controls in sovereign bailouts threatens to leave a permanent trail of capital restrictions."

These statements seem to suggest that, above all, the goal of liberalization is still seen as the norm (Vernengo and Ford 2014) and that any kind of restrictions or deviations from that goal should be seen as provisional and exceptional. It may be explained by the Grabel's (2013) concept of 'productive incoherence', i.e., as a sign that the policy space is really developing. But it may also actually mean that things seem to have changed so that everything can stay the same (Vernengo and Ford 2014). Only time will give the answer. But the case of Iceland shows that when all other measures have been exhausted, the IMF bows to the inevitable.

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