DISCUSSION PAPER SERIES

DP11185

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FINANCIAL ECONOMICS and INTERNATIONAL MACROECONOMICS AND FINANCE

ISSN 0265-8003

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Discussion Paper 11185
Published 23 March 2016
Submitted 23 March 2016

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Iceland's capital controls were imposed in October 2008 in order to prevent massive capital flight and a complete collapse of the exchange rate. The controls have not been lifted yet; until recently this was primarily because of the risk of large outflows of domestic holdings of the failed Icelandic banks. As argued in a precursor to this paper (Baldursson and Portes, 2014), significant restructuring of domestic holdings of foreign creditors of the banks was required before the controls can be lifted. Such a restructuring was finally accomplished in January 2016 and gradual lifting of the capital controls now appears to be within reach. Broadly in line with the recommendations of Baldursson and Portes (2014), the resolution involved a voluntary – in much the same sense as the Greek debt restructuring was voluntary – restructuring of the banks' debt, under which most of the Icelandic krona assets of the banks were relinquished to the state or tied up in Iceland. Resolution of the old banks will cut Iceland's public debt, but it will still be substantially higher than before the crisis. The net international investment position of Iceland is, however, stronger than it has been in decades.

JEL Classification: E58, F31, G21

Keywords: capital controls, cross-border banking, Icelandic banks, resolution of failed banks

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This version: 14 March 2016

Abstract

Iceland's capital controls were imposed in October 2008 in order to prevent massive capital flight and a complete collapse of the exchange rate. The controls have not been lifted yet; until recently this was primarily because of the risk of large outflows of domestic holdings of the failed Icelandic banks. As argued in a precursor to this paper (Baldursson and Portes, 2014), significant restructuring of domestic holdings of foreign creditors of the banks was required before the controls can be lifted. Such a restructuring was finally accomplished in January 2016 and gradual lifting of the capital controls now appears to be within reach. Broadly in line with the recommendations of Baldursson and Portes (2014), the resolution involved a voluntary – in much the same sense as the Greek debt restructuring was voluntary – restructuring of the banks' debt, under which most of the Icelandic krona assets of the banks were relinquished to the state or tied up in Iceland. Resolution of the old banks will cut Iceland's public debt, but it will still be substantially higher than before the crisis. The net international investment position of Iceland is, however, stronger than it has been in decades.

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1. Introduction

The case of Iceland illustrates the difficulty of resolving large cross-border banks situated in a small currency area. Iceland's capital controls were imposed in October 2008 in order to prevent massive capital flight and a complete collapse of the exchange rate, after it had already fallen by 25% during the week before the banks collapsed. The controls have not been lifted yet; until recently this was primarily because of the risk of large outflows of domestic holdings of the failed cross-border Icelandic banks. As argued in a precursor to this paper (Baldursson and Portes, 2014), significant restructuring of domestic holdings of foreign creditors of the old banks was required before capital controls can be lifted; even if the controls are damaging, the gains from lifting them are likely to be much lower than the costs associated with a potential currency crisis following a premature liberalization of capital outflows.[1] Simply scrapping the capital controls after a short 'emergency' period was never a serious option.

The restructuring of the failed Icelandic banks was finally accomplished in January 2016 after an understanding was reached between creditors and the Icelandic authorities half a year earlier; gradual lifting of the capital controls now appears to be within reach. The Government of Iceland was not directly a legal party to deliberations regarding resolution of the old banks. It was the role of winding-up committees and creditors to resolve the banks, and Icelandic authorities were always adamant that under no circumstances could the Icelandic state take on liabilities or subject itself to risk related to the resolution. The authorities' role is to safeguard legitimate Icelandic interests; financial stability, the solvency of Iceland and lifting capital controls. The Government did, however, have considerable legal powers to influence the resolution of the failed banks: provisions of the Foreign Exchange Act allowed it to block payments out of the banks' estates, indefinitely.

Broadly in line with the recommendations of Baldursson and Portes (2014), the resolution involved a voluntary – in much the same sense as the Greek debt restructuring was voluntary

[1] A contrary view is in Danielsson and Arnason (2011): '…the imposition of capital controls was both unnecessary and unjustified…causing significant short-term and long-term economic damage.' We note that Iceland's real GDP growth rate 2010-2015 has been slightly under 3%, well above the average for advanced countries during this post-crisis period.

– restructuring of the banks' debt, under which most of the Icelandic krona assets of the banks were relinquished to the state or tied up in Iceland. In particular, the Icelandic state is left holding two commercial banks – one as a consequence of restructuring. Ownership of Iceland's banks has come full circle: the Icelandic banking boom began with privatization of two state-owned banks in 2003. There is much to be learned from this experience (Baldursson and Portes, 2013).

Resolution of the old banks will cut Iceland's public debt, but it will still be substantially higher than before the crisis. The net international investment position of Iceland is, however, stronger than it has been in decades.

This paper explains how capital controls have permitted orderly resolution of the failed banks and some of the implications for Iceland. There are broader lessons for emergency capital outflow control policies, their consequences, and the process of scrapping them. The first two sections following this Introduction give a brief background explaining why the capital controls were imposed initially, describe the creation and financing of the new banks and explain the winding-up procedure of the old banks. The next two sections give an overview of the Icelandic krona overhang within the failed banks' estates and document the resulting overall balance of payments problem. Section 6 describes the strategy of the Icelandic authorities and the economic incentives involved. Section 7 documents the actual resolution. Section 8 is a very brief discussion of the external and public finance consequences. Section 9 concludes.

2. Capital controls and offshore *kronas*

Iceland's capital controls were put in place during the banking crisis of October 2008. Almost eight years later, they are still in force. The controls were imposed to prevent massive capital flight, especially outflows of carry trade money.[2] These funds had come into the small Icelandic economy seeking high returns during the boom period preceding the crisis. The Central Bank of Iceland (CBI) was holding interest rates high to dampen inflationary

[2] A comprehensive account of the carry trade in Iceland before the crisis and, more generally, the Icelandic banking crisis, is given in Baldursson and Portes (2013). For an empirical study of carry trade and its determinants, see Anzuini and Fornari (2012).

pressures and support the exchange rate. As the banks were going under, the tide quickly turned, and the exchange rate of the Icelandic *krona* fell rapidly. Initially, the CBI continued to support the exchange rate, purchasing kronas out of foreign exchange reserves. Within a few days this became untenable as net reserves became negative; in other words, Iceland did not have enough currency to cover known contractual outflows over the next twelve months, let alone other potential outflows.

Although foreign exchange transactions were effectively halted during the banking crisis, the controls were implemented formally in November 2008 as a part of the conditionality of a IMF Stand-By Arrangement for Iceland (IMF, 2008). The Foreign Exchange Act was amended to allow current account transactions only;[3] it has been modified several times since, mainly for closing loopholes and tightening the controls. The most important change was made in March 2012, severely limiting possibilities for cross-border transactions of the estates of failed financial institutions.

Initially it was thought that the main challenge in lifting the controls would be the remainder of the carry trade money – the so called *offshore kronas*. Even if much of these funds had already left the economy by the time the controls were imposed,[4] there was a substantial amount, equivalent to 40% of GDP, locked in. This stock, which is held in cash or invested in liquid assets, has been reduced to approximately 14% of GDP by various means.[5] In particular, the CBI has held auctions, matching investors that want to sell offshore kronas and those willing to buy kronas. The latter have mostly been domestic pension funds who – even if they have not been allowed to invest abroad since 2008 – are in possession of foreign assets amounting to a third of GDP. The krona exchange rate in these auctions, which were

[3] While the foreign exchange act was changed so capital movements were restricted, it leaves current account movements free, at least in principle. Hence imports of goods and services are unrestricted. Factor payments (*i.e.* wages, interest and dividends) to non-residents are also allowed. The controls therefore mainly affect investors and firms seeking capital.

[4] At the end of September 2008 the net forward currency position of the banks, was approximately 70% of GDP. Forward contracts were used for hedging foreign exchange risk of intermediaries in the carry trade, so this statistic gives an indication of the amount of carry trade funds.

[5] A part of the relative reduction is due to growth in nominal GDP, which was approximately 35% over the period 2008-2015.

discontinued in early 2015, was considerably weaker – 25% or more – than the official exchange rate. This was sufficient to entice domestic institutional investors to participate in the auctions, even if, in the slightly longer term, the purchases went against a preferable portfolio allocation, i.e. to reduce their weighting on ISK assets.

Considered in isolation it should have been possible to solve the problem of the offshore kronas by now. Since 2010, Iceland has enjoyed robust economic growth, driven by the growth of tourism, which continues at a double-digit annual pace. Export earnings have increased rapidly, there has been a consistent surplus on the underlying[6] current account and the CBI has accumulated krona-financed (i.e. not borrowed abroad) reserves amounting to 20% of GDP.[7] Prior to the resolution of the banks, the underlying international investment position was estimated at a negative 33% of GDP, which was better than it had been for the last quarter century.[8] Public debt is moderate at 75% of GDP and is projected to fall further, with a surplus on the public budget for 2016. Overall, the outlook is good and should attract foreign investment. So it should have been feasible to let funds amounting to 14% of GDP out – perhaps over a period of time and at a premium to the official exchange rate – without risk of destabilizing the economy.

But things were not this simple. It has been clear since March 2012 that the largest obstacle to lifting the capital controls was in fact not the offshore kronas, but the estates of the failed Icelandic banks that were still unresolved. We next consider this issue.

3. Creation and financing of new banks; winding-up of old banks

When virtually the entire Icelandic banking sector began to collapse in early October 2008, several pieces of legislation were passed through Parliament to contain the foreseeable costs

[6] Until very recently, the current account as well as the international investment position of Iceland needed to be adjusted for the impact of the old banks' estates and other failed international investments which were listed as liabilities in official statistics, but were eliminated as failed banks and investment companies were wound up. Hence the phrase 'underlying current account' and a corresponding prefix for the international investment position. The official international investment position at the end of the third quarter of 2015 was negative by 350% of GDP.

[7] More than half of this amount, 12% of GDP, are purchases in 2015.

[8] The net position was -33% in 1989; it has been further into negative territory since then.

to the economy of Iceland.[9] Among this legislation was the so-called Emergency Act (Act no. 125/2008), entering into force on 7 October 2008. Prior to these legislative changes, which were accomplished in a matter of hours on 6 October, deposits and deposit insurance claims were considered to be ordinary, non-priority claims and therefore had the same standing as for example (senior) bonds. The Emergency Act, *inter alia*, gave priority to deposits and deposit insurance over ordinary claims and also gave the Icelandic Financial Supervisory Authority (IFSA) extensive powers to intervene in failing banks. The Emergency Act entailed various amendments to legislation, relating to financial activities and supervision thereof, granting the IFSA further powers as described below.

As each of the three large Icelandic banks failed on consecutive days, the IFSA created a new bank on the basis of *domestic* assets and liabilities of the failing bank.[10] All the banks were cross-border banks, large relative to the Icelandic economy,[11] so there was a large nominal amount of *foreign* assets and liabilities left in the 'old' failing banks.

The three major Icelandic banks were all subject to winding-up proceedings until they entered into composition agreements with their creditors at the end of 2015.[12] Under

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[9] The crisis was nevertheless extremely costly for Iceland: GDP contracted by 12% from peak (2007:IV) to bottom (2010:I) and total debt of all sectors – homes, firms and the state – as a percentage of GDP peaked at almost 500% in 2010, up from (an already excessive) 400% at the end of 2007. Total debt is now estimated to be well within 300% of GDP, near the level in 2005.

[10] The constitutionality of the Emergency Act and legality of subsequent IFSA intervention were of course challenged in the courts. Iceland's Supreme Court confirmed the constitutionality of the Emergency Act in 2011 (Case 340/2011). The EFTA Surveillance Authority had determined earlier that the banking intervention did not violate EEA law (Dec. No. 501/10/COL). The basis for both findings was that these actions were within the government's legal room to manoeuver under the circumstances and proportionate to their aims. For further discussion, see Helgadottir (2012).

[11] Their combined balance sheets before the crisis – including foreign subsidiaries – were approximately tenfold GDP.

[12] Act no 161/2002 on Financial Undertakings applies, *inter alia*, to financial reorganization and winding-up of financial undertakings. These measures were introduced into the Act via the implementation of the so-called Winding-up Directive (Directive 2001/24/EC), whose aim is to guarantee the mutual recognition of reorganization measures and winding-up proceedings.

Icelandic law, composition with creditors refers to an agreement on settlement and/or relinquishment of debts concluded between a debtor and a certain majority of his creditors, which is subsequently confirmed in court. A composition agreement is binding upon the debtor's other creditors which have so-called composition claims.[13] The composition agreements will be further discussed in Section 7.

Hence, three new banks were created, each on the basis of a failed 'old bank' parent:

- Arion banki was created on the basis of Kaupthing,
- Islandsbanki was separated out of Glitnir, and

"Reorganization" refers to moratorium and composition according to Icelandic law. On the basis of the Act on Financial Undertakings, resolution committees were appointed for all three major Icelandic banks in October 2008. In November 2008, the District Court of Reykjavík granted them a moratorium. Under Icelandic law, moratorium proceedings are a financial reorganization measure, affording a debtor in financial difficulties temporary protection from creditors and suspension of payments, under the supervision of an assistant, in order to reorganize its finances. On 22 April 2009, Act no. 44/2009 entered into force, further amending the Act on Financial Undertakings. The Act prescribed a commencement of winding-up proceedings of financial undertakings, currently in moratorium under the control of resolution committees, with immediate effect upon the Act's entry into force. The role of the then winding-up committees is in essence similar to that of an administrator of an estate during bankruptcy proceedings. The same rules apply to the winding-up of financial undertakings as apply generally to insolvency liquidation – normally referred to as "bankruptcy" under Icelandic law – for example concerning reciprocal contractual rights and priority of claims.

[13] In essence, composition claims are those that are affected by composition, and not cancelled by composition. In deciding which claims are composition claims one needs to decide 1) which claims are not affected by composition and 2) which claims are cancelled by it. Those claims which are not affected by composition are i) claims originating after a court order has been issued granting the debtor licence to seek composition, ii) claims for performance other than payment of money, which can be performed in substance, so-called claims *in natura,* iii) claims that would be ranked as provided in Art. 109, 110 or 112, so-called priority claims, if the debtor had been declared bankrupt at the date when a court order providing the debtor with a licence to seek composition was issued, iv) claims secured by an asset of the debtor, v) set-off claims, vi) claims particularly exempted from composition under the terms of the composition agreement by reason of their full payment, so-called small claims.

- New Landsbanki out of Landsbanki Íslands.[14]

Initially, the Icelandic state was to refinance all the new banks. In 2009, when the financial structure for the new banks was being finalized this plan was largely abandoned for Arion banki and Islandsbanki; creditors of Kaupthing and Glitnir, respectively, became indirect majority owners of the new banks, through holding companies; the state became a minority shareholder (5% and 13%, respectively) and also provided additional funding in the form of subordinate loans. This had the benefit of ameliorating the rise in gross sovereign debt after the crisis, as well as improving relations with international creditors. The creditors were dissatisfied with the Emergency Act and the restructuring process. Leaving them as majority owners offered a possible upside if things would turn out better than seemed likely for Iceland and, hence, the loan books of the new banks; loans had been transferred to the new banks at substantial discounts due to expectations of large overall losses.

The state did, however, provide 81% of the equity for the New Landsbanki, amounting to 8% of GDP. The reason for this different strategy for Landsbanki was that its largest creditors were official – i.e. the deposit insurance funds of the UK and the Netherlands – and held priority claims, whereas at Kaupthing and Glitnir they were private bondholders holding general unsecured claims. There was, however, an excess of assets over liabilities transferred to the New Landsbanki, even after the old bank (now called LBI[15]) had received a 19% share in the new bank. This excess was eliminated by bonds issued by the new bank to the old bank. The bonds were denominated in foreign currencies and amounted to 19% of GDP at end-2009 exchange rates. These bonds were to be redeemed in 2015-2018.

The financing structure of the three new banks that emerged after negotiations with creditors in 2009 is summarized in Table 1.[16] Total investment of the state amounted to ISK 190 bn, or 12% of GDP; 8.5% was in equity and 3.5% in the form of subordinate loans, which counted

[14] The New Landsbanki quickly reverted to the old name, Landsbanki Íslands, which has a long history in Iceland.

[15] The new legal name for the old bank, see www.lbi.is.

[16] See Ministry of Finance (2011) for details on rebuilding of the Icelandic banking sector after the crisis.

as part of regulatory capital and helped bring capital adequacy ratios up to the high level set as a minimum after the crisis.[17] Initially, the state also provided the new banks with cash. Creditors provided equity amounting to 9.8% of GDP. As indicated in Table 1, the state took full ownership of New Landsbanki in 2013 with the purchase of the 19% creditor equity share.

Table 1. Financing of new banks by Icelandic state and creditors

Amounts in ISK bn. Numbers in parentheses are the corresponding percentage of 2009 GDP

Old bank	Glitnir	Kaupthing	LBI
New bank	Íslandsbanki	Arion banki	(New) Landsbanki
Assets	717 (45%)	757 (48%)	1,061 (67%)
Thereof loans	490 (31%)	358 (23%)	667 (42%)
Liabilities	625 (39%)	667 (42%)	904 (57%)
Deposits	340 (21%)	495 (31%)	453 (29%)
FX bonds to old bank			306 (19%)
Subordinate loans from state	25 (2%)	30*) (2%)	
Equity	92 (6%)	90 (6%)	157 (10%)
State equity share	5%	13%	81% → 100% (2013)
Creditor equity share	95%	87%	19% → 0% (2013)

Source: Ministry of Finance (2009), Statistics Iceland, authors' calculations

Table 1 shows assets after revaluation.[18] The total nominal amount of assets transferred to the new banks was ISK 4,000 bn, which were written down by approximately 50%. It can be inferred from the table that the assets of the three new banks amounted to 160% of 2009 GDP, so Iceland still had a sizable banking system after the crisis.

[17] The regulatory capital adequacy ratio was set at 16% of risk-weighted assets. Liquidity requirements were also made stricter and raised to 20% of deposits.

[18] The valuation of assets transferred to the new banks was performed by Deloitte LLP of London, UK. The premise was that the new banks would be running, fully financed domestic concerns so no fire sales would need to take place. The valuation was also to take into account future expected economic conditions in Iceland rather than the dire conditions in 2009 when the valuation took place (Ministry of Finance, 2009). Even so, the valuation turned out to be very conservative.

This financial set up for the new banks – in particular the creditor stakes – alleviated some problems at the time it was created, but it subsequently led to new challenges as we shall see below.

4. The old bank overhang

Until they were resolved, a large part of the ISK holdings of the old banks Glitnir and Kaupthing consisted of equity in the new banks, Íslandsbanki and Arion banki, respectively. Happily, the Icelandic economy recovered faster than envisaged in 2009. As a consequence, the valuation of loans transferred to the new banks in 2008 turned out to be conservative and the new banks have continuously reported profits due to better recovery of loans than expected. Equity has increased as a result, more than doubling, overall, in nominal terms from end-2008 to the third quarter of 2015.[19] Together, equity in Arion banki and Íslandsbanki grew from 12% of GDP in 2009 to 18% at mid-2015.[20] The old banks also held loans denominated in ISK which have – at least in part – been recovered, as well as FX loans to domestic borrowers, many of which have no FX income. So the old banks held a large amount of assets (relative to the Icelandic economy) denominated in ISK or assets that required purchases out of foreign exchange reserves for ISK.

Table 2 gives a breakdown of the assets and liabilities of the three old banks at mid-2015. Domestic assets of the banks were close to 45% of GDP in total. More than half of these assets, 25% of GDP, were ISK-denominated, the major part (15% of GDP) being creditor share of equity in new banks. Claims on domestic parties denominated in foreign currency were almost 20% of GDP, two-thirds of this being the FX-denominated Landsbanki bonds (now 14.3% of GDP).[21]

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[19] See financial reports of the new banks available at www.arionbanki.is, www.islandsbanki.is and www.landsbanki.is.

[20] Recall that the state holds all the equity in Landsbanki. This amounts to 12% of GDP, but obviously this holding poses no threat to the balance of payments.

[21] These numbers are slightly different from those reported in Baldursson and Portes (2014), mostly due to value appreciation and exchange rate changes.

Table 2. Assets and liabilities of old banks

Book value, 30 June 2015, as per cent of GDP

	Glitnir	Kaupthing	Landsbanki	Total
Assets				
Domestic ISK	15.3	8.1	1.6	25.0
Thereof equity in new banks	8.5	7.0	0.0	0.0
Domestic FX	2.3	3.1	14.3	19.7
Foreign	29.1	28.6	6.1	63.9
Total assets	46.7	39.9	22.0	108.6
Claims				
Priority claims	0.0	0.0	10.0	10.0
General claims	108.3	134.5	76.8	319.6
Total claims	108.3	134.5	86.8	329.6
Estimated recovery to general claims	*43%*	*30%*	*16%*	*31%*
Foreign assets as percentage of total assets	*62%*	*72%*	*28%*	*59%*

Source: Central Bank of Iceland, authors' calculations

In addition to the ISK-denominated assets, FX claims on domestic parties without FX income created a problem. As explained in Baldursson and Portes (2014) these assets could be taken to be roughly equal to the Landsbanki bonds. Here the problem – prior to renegotiation of these bonds in 2014 – was the short redemption period.

Foreign holdings constituted the majority of assets at Glitnir and Kaupthing, 62% and 72%, respectively. This share was much smaller at (old) Landsbanki, but by this time (mid-2015) Landsbanki had already paid out a large portion of its foreign assets – the equivalent of more than 50% of 2015 GDP - to priority creditors.[23] In principle, foreign holdings could be paid out to creditors without any pressure on the Icelandic FX market and the exchange rate.

[23] In January 2016, after the composition agreement of LBI became binding, LBI fully settled all priority claims, including deposits and claims of deposit insurance funds (LBI, 2016). Glitnir and Kaupthing had previously paid all their priority claims, approximately 11% of GDP.

The large holdings of assets denominated in Icelandic kronas would have been added to the offshore krona overhang if they had been paid out to creditors. These assets amount to 25% of GDP and lie mainly within Glitnir and Kaupthing. Approximately 94% of the claims are held by foreign creditors.

Taking the ownership of claims against the old banks (94% foreign) into consideration, the overall balance of payments overhang due to the old banks is of the order of 38% of GDP. Of this 24% of GDP lies in ISK-denominated assets and 14% in the Landsbanki FX bonds.

It was first in 2012 that the Icelandic authorities realized that the estates of the old banks could create a serious balance of payments problem and even pose a major threat to financial stability if they were allowed to proceed through insolvency resolution unchecked. Hence, in March 2012 the Parliament tightened the Foreign Exchange Act in respect of the estates of the old banks; provisions which had enabled them to pay creditors in foreign currency were restricted. Moreover, the bankruptcy act was changed, restricting provisions for paying out Icelandic kronas from domestic insolvency estates. Since these changes to the law the estates have been required to obtain exemptions from the Foreign Exchange Act in order to conclude winding-up proceedings. The CBI grants such exemptions and is required to consult with the Ministry of Finance for large transactions.

The debt of the old banks is *private*. The Icelandic state is therefore not a direct party to their winding-up process. This process is the responsibility of winding-up boards and creditors. The state is, however, responsible for safeguarding legitimate Icelandic interests and can and should do this, using means proportionate to the aims. The legislative changes of March 2012 in all likelihood passed that requirement.

5. The overall balance of payments problem

If resolution of the old banks had been allowed to proceed without intervention, the overall amount of kronas likely to seek conversion into foreign currency due to foreign ownership would have increased drastically. Until late 2014 the foreign overhang came in three components:

- Offshore kronas already in circulation
- The Landsbanki bonds
- ISK holdings of the old banks

In mid-2015 these three components were 14%, 14% and 25% of GDP, respectively.

In addition, there is pent-up demand from domestic investors, both private and institutional. On the basis of a constructed 'desired' portfolio (mean-variance optimisation), the IMF (2013) has estimated that resident outflows, following liberalization of the capital account, could be in the range 30-45% of GDP. But this is probably an overestimate, since it disregards the tendency to home bias of portfolio investments.[24] For example, prior to the crisis Icelandic pension funds – with a total of 150% of GDP in assets they are the largest institutional investors in Iceland – never allocated more than 30% of their assets to foreign holdings. Moving to that ratio would imply a 12% outflow from pension funds, rather than the 18% estimated by the IMF. Nevertheless, potential resident outflows, from pension funds and others, are considerable, perhaps in the range 20-25% of GDP. Iceland has, however, liberalized the capital account in similar circumstances before without problems – this was done when Iceland entered the European Economic Area in 1994.[25]

Still, the problem of the foreign overhang has to be dealt with before opening up for foreign investment by residents. Since the underlying international investment position is quite good in historical terms, this is a refinancing problem rather than a problem of national solvency: what is needed are inflows matching the outflows from the overhang. But these outflows are likely to be rapid and large relative to private capital inflows. Iceland lost access to international capital markets during the banking crisis and has regained it only to a limited extent. Full access seems unlikely while the capital controls and the foreign overhang are in place. The one party able to borrow abroad at reasonable rates, the Icelandic state, has been adamant that it will not borrow abroad to bail out foreign holdings of ISK. Thus, the refinancing problem turned into a balance of payments problem.

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[24] 'Home bias' is the tendency in international capital markets for investors to hold a disproportionate share (relative to mean-variance optimisation) of their wealth in local assets. See Coeurdacier and Rey (2012) for a review of the open economy financial macroeconomics literature on home bias.

[25] Portfolios were more unbalanced then than they are now with practically no foreign portfolio investment.

There was the technical possibility of financing the outflows from a surplus on the current account. Letting these funds out would either have to be done over a long period of time – probably on the order of a decade or more – or consumption would have to be reduced drastically in order to create a huge surplus on the current account. Most likely this would have happened through a devaluation, a reduction in purchasing power and a weakening of the real exchange rate. This was not politically viable; the Icelandic public would – perhaps reasonably – have asked why it should reduce consumption – private and/or public – in order to create a current account surplus for the purpose of repaying debt of private banks to foreign creditors. And the controls would remain in place in the meantime, over a duration of years. So this possibility was ruled out.

The remaining and only viable option was that of restructuring the foreign overhang.[26] The first stage was a restructuring of the Landsbanki bonds. While the bonds are a holding of LBI (the old Landsbanki) and therefore subject to the same restrictions as other holdings of the failed banks' estates, had they not been honoured, the new state-owned bank would have been in default. So even if the March 2012 legislation gave the Icelandic authorities the tools to hold up payments out of the LBI estate to creditors, it was clear – with governments effectively controlling both the debtor (Iceland) and the main creditors (the UK and Netherlands) – that this was not a desirable outcome for either party. So with mutual political goodwill renegotiation must be the desired outcome on both sides.[27] Indeed, in 2014 the Landsbanki bonds were renegotiated, extending the redemption period by eight years, to 2026. As a *quid pro quo* LBI was granted exemptions from the capital controls to pay priority creditors (LBI, 2014). Priority creditors, including the UK Financial Services Compensation Scheme (FSCS), had been paid 85% of their claims at the end of 2014 and have now been fully paid.[28] The restructuring reduced the payments on the bond from approximately 4% of GDP p.a. to 1.5% p.a. which was manageable.

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[26] This was argued strongly in Baldursson and Portes (2014)

[27] Cf. Baldursson and Portes (2014).

[28] See Footnote 22 and FSCS (2015). As of 11 January 2016 the FSCS has recovered all of the principal on its Icesave claim on LBI. As an aside, the FSCS also expects to recover 95-100% of the principal on its claim on a UK subsidiary of Landsbanki, Heritable Bank, and 85-86% of its claim on a UK subsidiary of Kaupthing, Singer & Friedlander. In comparison, the FSCS expects to recover 57-

6. Strategy for resolving the krona overhang

As noted above, until late 2014, the krona overhang could be divided into three categories: offshore kronas, the Landsbanki bonds and ISK assets of the failed banks' estates. At the beginning of 2015, after the Landsbanki bonds were renegotiated, the offshore kronas and ISK assets remained. These two categories have different characteristics, leading to different bargaining positions and requiring different approaches. To stand a chance of success, any approach, however, must be based on two pillars:[29]

1. Economic incentives, sequenced so that they become progressively stronger with time, for creditors of the old banks and offshore krona owners either to exit the krona or tie up their holdings for the long term, on terms consistent with a sustainable balance of payments profile and economic and financial stability in Iceland.
2. A legal framework that supports and is consistent with such incentives, but does not overextend into the territory of expropriation. In other words, the framework must be based on the principle of proportionality.

The initial strategy for lifting the controls (Central Bank of Iceland, 2009, 2011) was flawed and failed on both the above points: as regards the first point it actually set up incentives for retaining offshore kronas by suggesting that terms for exiting would become better as time passed, rather than the opposite; the second point was absent.

For consistency with the principle of proportionality, it is also extremely important to be clear on the proper role of the authorities:

59% from London Scottish. For Bradford & Bingley – by far the costliest bank failure for the FSCS during 2008/09 at £15.7 bn, approximately tenfold the Icesave cost – the FSCS reports nil recoveries received to date, but notes: 'B&B's management forecast fullrepayment of FSCS's loan but timing remains uncertain.' London Scottish and Bradford & Bingley are unrelated to Iceland. The comparison suggests that the British outrage against Iceland at the time was exaggerated.

[29] These principles seem to have been first laid out in Baldursson (2012a, 2012b) and Baldursson and Portes (2014).

> … The claims in question are on private parties – not the government or the Central Bank – so the Icelandic authorities are not in the position of a debtor negotiating for a restructuring with its creditors. The banks are in formal bankruptcy proceedings under Icelandic law, which in ordinary circumstances would be left to the winding-up boards and the creditors. … The role of the authorities is first and foremost to look out for legitimate Icelandic interests; this includes both safeguarding financial stability and the solvency of Iceland and working towards the lifting of capital controls.[30]

It took some time for the Icelandic authorities to formulate a policy based on the principles of properly sequenced economic incentives and proportionality. In the meantime, proposals were made for forcing the old banks into bankruptcy (rather than composition),[31] based on the idea that creditors would then get paid in kronas; foreign currency from sales of the foreign assets of the banks would then have to be sold for kronas and could be used for buying out all offshore kronas (including those in the hands of creditors following liquidation). This approach gained some currency as it was lent support by influential commentators.[32] The weight of this argument fell, however, after a decision by the Supreme Court where it was found that even if claims on insolvency estates have to be made in Icelandic kronas, the estates can distribute assets in any currency (Hæstiréttur Íslands, 2014). The point of forcing bankruptcy on the estates thus evaporated.

Indications of the strategy that eventually emerged were first given by the Icelandic Minister of Finance in March 2014. The Minister noted what the role of the Icelandic authorities should be in the insolvency proceedings, but also indicated that incentives would be created for completing the insolvency process sooner rather than later:

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[30] Baldursson and Portes (2014) p. 48.

[31] If the old banks would have been forced into bankruptcy proceedings, their existence would have been brought to an end and their assets distributed to creditors. By way of composition agreement, the old banks are able to negotiate payments to creditors, including the currency in which they are disbursed. Following a confirmation of a composition agreement, the old banks will resume existence as normal solvent entities, free from any legislative encumbrances of deriving from the winding-up proceedings. Nonetheless, the entities can still be subject to legal actions brought by their creditors.

[32] See e.g. Pétursson (2013)

> Icelandic authorities are not negotiating directly with the creditors of the old banks – their claims are on domestic financial institutions in bankruptcy process but not on the Icelandic state. It is the responsibility of winding-up boards and creditors to negotiate agreements on composition. Neither the Central Bank nor the Icelandic authorities have any direct role in these negotiations. On the other hand, the responsibility of the Icelandic authorities is to ensure that the exemptions from the capital controls that the [old banks'] estates are seeking in relation to payments to creditors do not have adverse consequences for the Icelandic economy and those who remain inside the controls. … Nevertheless, it must be noted that the life of the estates cannot be indefinite. … If creditors do not finalize composition agreements [within 3-5 years] the only option [for the authorities] is [to force them] to enter bankruptcy.[33]

In June 2015, after much work by Icelandic government authorities and advisors, a 'comprehensive strategy for capital account liberalization' (Ministry of Finance, 2015a) was announced. The measures proposed, however, concerned mostly how to deal with the offshore kronas and the ISK holdings of the estates – there is virtually no discussion of how to lift the controls once this has been accomplished. The approach was two-pronged, with separate measures for each category of problematic assets.

The strategy for the offshore kronas must take into account that they are are not part of insolvency estates. Rather, they are deposits and other liquid assets directly held by various private parties and, while they are of course subject to the capital controls, they are not locked in to the same extent as assets in the banks' estates. The room for maneuver by the Icelandic authorities is therefore more limited in the former case. Hence, giving offshore krona owners a 'menu' of options, letting these funds out at a premium to the official exchange rate, imposing an exit tax or tying them up in long-dated ISK or FX bonds seems a

[33] Ministry of Finance (2014). Since we were unable to find an English translation of this speech, the translation from Icelandic is ours. It is interesting to compare this text to the citation from Baldursson and Portes (2014) above.

reasonable approach. The details are yet to be released, but according to press releases the authorities' plan is indeed to give the offshore krona owners three options:[34]

1. Currency auction at a premium (equivalent to an exit tax),
2. Long-term Treasury bonds (ISK or EUR denominated), or
3. 'Locked' non-interest-bearing accounts.

Taking the current volume of these assets (14% of GDP) into consideration this approach seems eminently sensible. It eliminates this part of the overhang, but also gives the owners of offshore kronas some choice. In sheer amounts, however, the ISK holdings of the old banks (25% of GDP) were the biggest problem. The 2012 changes to the bankruptcy code and Foreign Exchange Act, which blocked payments out of the banks' estates, were an extremely important step towards the solution of this problem. Had these changes not been made the estates would in all likelihood have distributed assets, foreign and domestic, to creditors. The ISK denominated assets would have been added to the offshore krona overhang, increasing it to about 40% of GDP. In addition, foreign assets would have been paid out to creditors. The Icelandic authorities would have been left with no strategic power in their dealings with creditors.

The June 2015 measures vis-à-vis the estates of the old banks created strong economic incentives for creditors to finish composition agreements. Parliament passed a law on a so-called *stability tax* of 39% to be imposed in 2016 on the book value of assets of failed bank estates, subject to certain deductions. This would imply tax revenues amounting to some 40% of GDP and would certainly ensure that liquidation of the estates' assets would not cause balance of payments problems. The estates were, however, given another option, *viz.* to enter into composition agreements before the end of 2015 that would meet *stability conditions* laid out by the CBI (2015a). The agreements were to:

- 'adopt measures that sufficiently reduce the negative impact of distributing the proceeds of the sale of the assets in Icelandic [kronas];

[34] These options are virtually identical to a proposal first made in Baldursson (2012b).

- convert other foreign-denominated domestic assets owned by the failed banks into long-term financing to the degree required; and
- where applicable, to ensure the repayment of the foreign-denominated loan facilities granted by the authorities to the new banks following the financial market collapse.'

Provided the CBI found these conditions to be met, the estates would be allowed to enter into composition agreements, and an exemption to the Foreign Exchange Act would be granted.

7. Resolution

There was evidently a prior understanding between creditors and the authorities on how to proceed: immediately following the announcement of the June measures, major creditors sent letters to the Ministry of Finance (2015b, 2015c, 2015d) stating their intention to enter into composition agreements[35] and outlining how the stability conditions were to be met by various 'voluntary stability contributions'. In October, agreement had been reached among creditors on composition agreements and stability contributions. On the basis of drafts for composition agreements, winding-up boards applied to the authorities for exemption from the relevant articles of the Foreign Exchange Act in order to be able to conclude winding-up proceedings. Exemptions have been granted and the District Court of Reykjavik has confirmed all composition agreements. Virtually all votes cast at creditors' meetings were in favour of the composition agreements.[36]

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[35] Cf. Section 3. By using the method of composition agreements the creditors will be shareholders. If, however, the banks had gone into bankruptcy proceedings the procedure had concluded with distribution of all assets of the estate to the creditors, ending the existence of the bankrupt entity. It should be noted that a composition agreement only affects general claims leaving priority claims, for example deposits, unaffected. Further, a composition agreement has the effect of cancelling certain claims, such as interest accrued after the winding-up was issued, claims for gifts and claims made subordinate to all other claims by agreement.

[36] According to Icelandic law a composition agreement may provide for total relinquishment of debts, proportional relinquishment, deferred dates of payment, changes in form of payment, or the three last mentioned arrangements jointly. A composition proposal from a debtor shall be deemed to be approved if it is supported by the same proportion of votes, counted by the amounts of the claims of voting creditors, as the proportion of composition claims to be relinquished according to the proposal, provided that this corresponds to a minimum of 60% and maximum 85% of those votes and also 60%

Amendments were also made to the Act on Financial Undertakings to facilitate the Icelandic banks entering into composition agreements with their creditors.[37] On the grounds of the composition provisions in the Act on Financial Undertakings, as amended on July 2015, each of the three old banks entered into composition agreements with creditors which is a large step in the process of lifting the capital controls in Iceland. The three agreements were similar and provided for:

- *De minimis* cash payments. All three composition agreements prescribe a *de minimis* payment as allowed by Icelandic law. With respect to Glitnir the amount of the payment added up to ISK 3.5 million, with respect to Kaupthing ISK 4.6 million and with respect to Landsbanki ISK 1.7 million.[38]

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of the votes counted by the number of all voting creditors. Therefore, if the composition provides for an offer to pay creditors 20% of the claims that are affected by the composition agreement 80% of the amounts of the claims have to vote for the agreement as well as 60% of all voting creditors.

[37] The main amendments were, *inter alia*, the following:

1. The requirements made to the subject of composition proposals were reduced so to enable a prescription of payments depending on the realization and redemption of assets.
2. The authority to prescribe a *de minimis* cash payment in the composition proposal was further clarified. With respect to the old banks this was extremely relevant considering their large groups of creditors. By explicitly allowing for the prescription of *de minimis* cash payments adding up to 25% of the total sum of payments offered to creditors under the proposal, many of the creditors received full payment of their claim and were therefore unaffected by the composition. As a result, those creditors did not have the right to vote on the proposal.
3. The formal requirements made to the process of voting on the composition proposal were reduced, allowing creditors to vote electronically.
4. The rules on proportional support of votes were altered as previously described.

An exemption from the rules regarding the confirmation of composition agreements was granted so to enable the winding-up committees to submit composition proposals, despite the fact that the priority claims had not been paid, secured or agreed on in another way, as long as the proposal clearly prescribed that those claims would enjoy the same priority to funds deriving from the realization of assets (Alþingistíðindi A-deild, þskj. 1401 – 787. mál. [Icelandic Parliaments' explanatory notes, document 1401 – case no 787]).

[38] See Footnote 41 for the relevance of the *de minimis* cash payments

- Composition entitlements. As previously discussed, payments under composition agreements, so-called composition entitlements, include some type compromise to the benefits of the debtor. The compromise towards the old banks varied as the entitlements were structured differently in each of the old banks' composition agreements. However, they all have in common that entitlements involve the issue of shares in the entities so the creditors hereafter own the old banks. The proportional shareholding of each creditor depends on the amount of his claim.

Table 3 gives a simplified overview of the stability contributions and the outcome of the composition agreements in regard to the balance of payments problem discussed above. For ease of comparison with Table 2 we cast the results in terms of 2015 GDP.

Table 3. Stability contributions and other countervailing measures in composition agreements

Per cent of 2015 GDP, unless specified otherwise

	Glitnir	Kaupthing	Landsbanki	Total
Stability contribution plus bank tax	11.3	6.5	1.5	19.3
Thereof equity in new banks	8.8	0.0	0.0	8.8
Long-to-medium-term financing of new banks	2.6	4.6	0.0	7.2
Impact on FX reserves	-1.3	2.6	0.7	2.0
Per cent of total reserves at end-2015	*-4.3*	*8.4*	*2.3*	*6.4*

Source: CBI (2015b) and author's calculations

These measures are of two types. One is a direct stability contribution (in which we include a special bank tax imposed on the estates) where assets are relinquished to the state. The other is in the form of long-term financing of the new banks, both converting foreign currency deposits to medium-term loans and refinancing the subordinate loans originally made by the state when the new banks were established.

The stability contribution totals 19% of GDP, with the largest contribution made by Glitnir; this is to be expected, since Glitnir held the greatest amount of ISK assets (cf. Table 2). This contribution came in the form of cash, equity and bonds; in particular, Glitnir handed all

equity in Íslandsbanki to the state.[39] Recall that ISK assets of the banks were a total of 25% of GDP, so the stability contribution amounted to about 77% of the ISK assets of the banks.

Long-to-medium-term financing of the new banks totals just over 7% of GDP. In total the countervailing measures are 26.5% of GDP, i.e. slightly larger than the 25% overhang. The net impact on reserves is positive though small, *viz.* 2% of GDP.

An important part of the understanding reached with creditors was that they would commit to refrain from litigation against the Icelandic state pursuant to the composition agreements and would be granted exemptions for cross-border transfers.

Why should creditors be willing to enter into an agreement like this and relinquish a good portion of the assets of the estates? Consider the case of Glitnir. According to financial information from Glitnir for the first half of 2015 (Glitnir, 2015), the book value of assets of Glitnir amounted to 43% of claims. This would be the approximate recovery ratio if assets were simply distributed without intervention. The stability contribution of Glitnir reduces this ratio to 33%. The stability tax of 39% of assets, however, would have reduced it even further to approximately 27%. Hence, the hedge funds that hold most of the claims on Glitnir had a choice of two options:

1. Make the stability contribution, conclude winding-up proceedings and receive 33% of the nominal value of claims in foreign currency.
2. Do not make the stability contribution, contest the stability tax in court and wait for several years for conclusion. Meanwhile, assets are locked into the estate. If you lose the case then 27% of assets will be paid out eventually. If you win, then the game starts over.[40]

[39] Glitnir could have reduced its stability contribution by finding foreign buyers for Íslandsbanki.

[40] There are precedents from the 1950s where property taxes up to 25 per cent were imposed twice over a 7 year period – in other words a cumulative 44% tax – on certain Icelandic citizens and found by the Supreme Court not to violate the constitution (Helgadóttir, 2006).

The first option gives a certain, imminent payoff with certainty. The second option, on the other hand, leads to a protracted delay and an uncertain outcome.[41] Taking discounting and risk aversion into account it is not surprising that the first option was overwhelmingly preferred by creditors. It was probably also supportive of this outcome, that a majority – 71% based on 2013 numbers – of current creditors purchased their claims at a price lower than 33% of nominal values (Glitnir, 2013). These creditors stand to make a certain accounting profit if they choose the first option.[42]

One may also ask why the Icelandic authorities were willing to make such a deal: why accept stability contributions amounting to 19% of GDP when the stability tax would have netted at least 10% of GDP more in revenues for the state? The analysis is similar as for the creditors: closure now opens the possibility of lifting the capital controls, provides immediate fiscal benefits and all but eliminates litigation risks, be it in Iceland or abroad. Moreover, the banking system is provided with long-term private financing replacing the subordinate loans provided by the state during the crisis.

So the option of resolving the old bank overhang now by means of the stability contributions and other measures, rather than entering into a drawn-out legal battle with an uncertain outcome, was better for both parties. With rational, skilled actors,[43] the actual outcome was to be expected.

8. External and public finance consequences

Due to the reduction in foreign-owned ISK-denominated assets, the underlying international investment position has improved by 17% of GDP following the resolution. Another consequence of the resolution is that underlying and official debt is now the same so the official net foreign debt of Iceland dropped from 350% of GDP to 15% of GDP between the

[41] A similar analysis holds for Kaupthing and Landsbanki.

[42] Many of the creditors purchased their claims at prices reflecting a much lower recovery ratio than 33% – estimated recovery in closure of CDS contracts on Glitnir bonds in November 2008 was 3%. Many of the original buyers, however, locked in profits by selling the bonds.

[43] Iceland was helped by the advice of some highly skilled and experienced experts, including Anne Krueger and Lee Buchheit.

third and fourth quarters of 2015. This is by far the best position Iceland has been in on this measure for several decades.

The public finance consequences are also positive. Public debt will eventually decrease by an amount similar to the international investment position, i.e. by about 17% of GDP. But this will take time, as assets – e.g. the equity in Íslandsbanki – need to be sold off to realize the gains. With sensible fiscal policies, gross public debt could fall to well below 50% by the end of 2017. This is a comparatively low public debt ratio, although it is higher than before the crisis.

Rating agencies raised Iceland's sovereign debt rating after the announcement of the strategy in June. Yet it is still only two notches above non-investment grade. Ratings seem very likely to rise further with the conclusion of composition agreements, the resulting elimination of uncertainty regarding the resolution of the banks, and the improvement in Iceland's macroeconomic finances. Financing costs of the sovereign and corporations should decrease as a result.

9. Conclusion

Iceland was one of the first casualties of the financial crisis of 2008/09. With no effective lender of last resort for its large cross-border banks situated within the small currency area of the Icelandic krona and no access to external funding there was no option other than to let the banks fail. Rather than letting this happen in a disorderly manner and in a way that would have imposed losses of an unprecedented scale on Icelandic households and corporations, the Emergency Act was enacted, virtually in real time. Many of the features of this legislation were later adopted in European legislation on bank resolution.[44] In particular, Iceland let shareholders and creditors take first losses, converted debt in part to equity, protected

[44] Bank Recovery and Resolution Directive (BRRD) (European Commission, 2014). See Carmassi (2015) for a discussion of the BRRD.

deposits and deposit insurance schemes, and avoided putting the burden of bank bailouts on taxpayers.[45]

Once the line was drawn in the sand, it became a firm principle that the Icelandic public should not bear additional losses from the failure of the banks.[46] This principle was successfully employed in the final stage of the resolution of the banks as the Icelandic krona overhang was restructured without costs to taxpayers.

Thus Iceland is emerging from the 'perfect storm' in surprisingly good shape. Public debt never rose to the high levels predicted at the time of the crisis (IMF, 2008), in part because creditors rather than the state refinanced two of the new banks, but also because of consolidation of public budgets. The sovereign managed to stay current on its debt and hold on, even if barely, to its investment grade rating. Even before the restructuring of the old banks the underlying net debt of the country was lower than before the banking boom started in 2003, due to a low real exchange rate and consistent surplus on the current account. All sectors – households, government and corporations – have reduced debt, so gross debt in relation to GDP is approaching the levels at the beginning of the boom. This is the result of sensible economic policies, but, admittedly, also a bit of luck.[47] Still, the counterfactual without capital controls seems to us unlikely to have given such good results.

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[45] There are of course many additional features in the BRRD. Choices were also made that differ from the provisions of the BRRD, such as splitting the banks along the lines of domestic vs. international assets and liabilities rather than good vs. bad assets. Most of the bad assets were left in the old banks, but also many good assets.

[46] In the notorious Icesave case (see Baldursson and Portes, 2013), the heated rhetoric notwithstanding, it seemed rather a question of *which* taxpayers – Icelandic or British and Dutch – should bear the costs of deposit insurance for Landsbanki depositors in the UK and Netherlands. As it turned out the assets of old Landsbanki sufficed to cover the deposit insurance. Costs to taxpayers are negligible. Historians will assess the political costs to the British and Dutch governments of their injudicious response. But there may also have been a financial cost – a more sensible UK policy might have allowed Kaupthing to survive.

[47] It is difficult to see the boom in tourism as a result of a conscious policy, although it was certainly helped by the devaluation of the krona.

The resolution of the failed Icelandic banks is nearly over, and the lifting of capital controls is in sight.[48] Once accomplished, this will be a major milestone for the small Icelandic economy, marking the end of the economic crisis that began in 2008. By contrast, in some other advanced countries, the banking systems have still not recovered from the crisis.

In an ironic twist of fate, the state comes out of the crisis as the owner of two commercial banks. So in this respect, as in many others, Iceland is returning to the state of affairs before the banking boom started with the privatization of two state-owned banks in 2003. The circle has been closed and a new round can begin. One can only hope that this time it really will be different.

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