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Baltic and Icelandic Experiences of Capital Flows and Capital Flow Measures

Audun Grønn and Maria Wallin Fredholm

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Prepared by Audun Grønn (Executive Director, IMF) and Maria Wallin Fredholm (Economist, Sveriges Riksbank). The paper is based on input from the central banks of Estonia, Iceland, Latvia and Lithuania.

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Abstract

The aim of this empirical study is to describe and provide analysis on the experience of managing capital flows in Iceland and the Baltic countries. During the build-up of the crisis, there were shortcomings in macroeconomic policies and in the policy mix, as well as in financial supervision in the countries covered. While the use of traditional macroeconomic and structural policies was far from exhausted, recognizing that there are no substitutes for sound macroeconomic policies, with an IMF framework on capital flows in place prior to the crisis, it might have been easier for the IMF and national policymakers to identify accelerating problems at an early stage and address them with targeted measures.

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Author's E-Mail Address: AGroenn@imf.org

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I. INTRODUCTION

The sharp decline in international capital flows during the financial crisis and the subsequent rapid resumption of flows into emerging markets put the discussion of policy recommendations on capital flows back on the agenda in various international fora, including the International Monetary Fund (IMF) and the G20. At the Spring Meetings in April 2011, both the G20 and the IMFC agreed to focus work on “coherent conclusions” or “a comprehensive and balanced approach” for the management of capital flows, drawing on national experience.¹ The aim of the IMF framework on capital flows is to guide the Fund in providing consistent and evenhanded policy advice to member countries facing capital flows, and at the same time help member countries by providing predictability of policy advice.² It is not intended to create new obligations for member countries under IMF surveillance since it is not included in the Fund’s Articles of Agreement, which is an issue of a more long-term nature.

The Baltic countries and Iceland have experienced large swings in their capital accounts during the recent economic and financial crisis. This study takes stock of this experience of capital flows and assesses policy responses in the light of the IMF framework for managing capital flows from November 2012³. The authorities concerned have also had the opportunity to comment on possible additional measures that could have been used to curb any unsustainable development. The purpose of this study is to contribute to the ongoing international work in this field. The study concludes with the lessons that may be learnt from the financial crisis in these countries with respect to handling capital flows.

¹ Communiqué of G20 Meeting of Finance Ministers and Central Bank Governors, Washington DC, 14-15 April 2011 and Communiqué of the Twenty-Third Meeting of the International Monetary and Financial Committee of the Board of Governors of the International Monetary Fund, 16 April 2011.

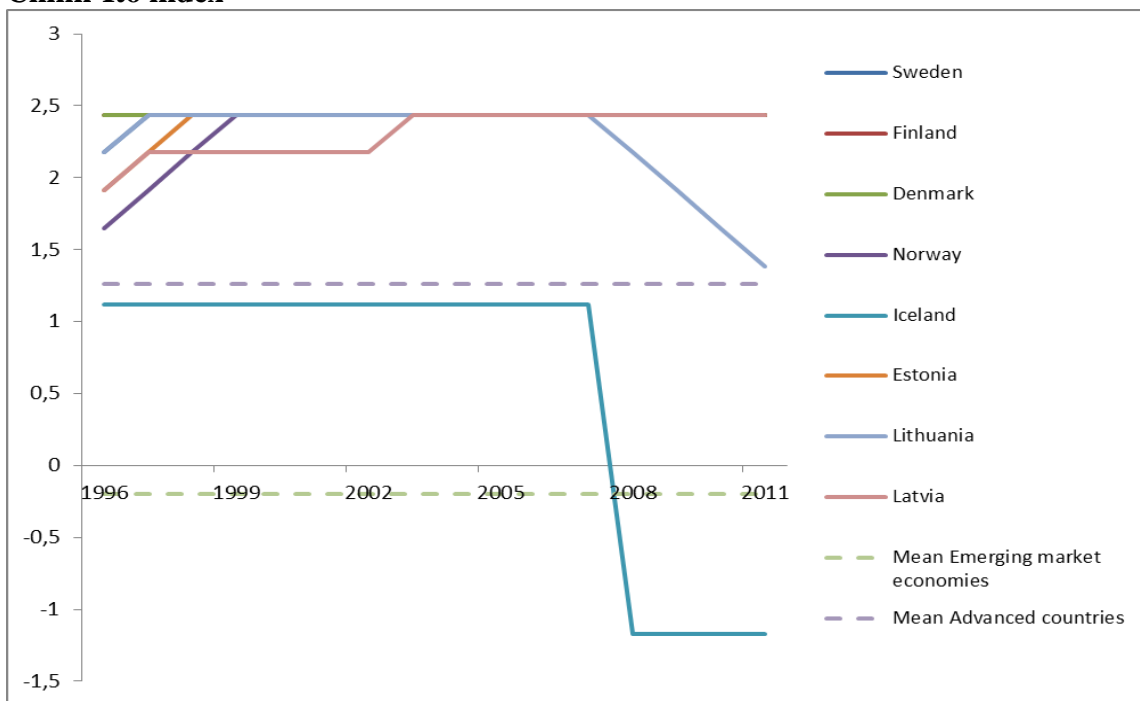
² The key elements of the proposed IMF framework for managing capital inflows are listed in Annex A. A review of possible macroprudential tools for handling capital flows is presented in Annex B.

³ IMF policy paper: The Liberalization and Management of Capital Flows: An Institutional View, November 14, 2012.

II. EXPERIENCE OF CAPITAL FLOWS IN THE BALTIC COUNTRIES AND ICELAND

The Nordic and Baltic countries are, and have been for a long time, convinced of the benefits of free capital mobility. For more than a decade, these countries have had open capital and financial accounts, which can be illustrated by the Chinn-Ito Index of capital-account openness (see chart 1). However, as can be evidenced in Iceland and, to some extent, also in Latvia, there may be times when temporary capital controls have been considered as the only solution.⁴ These capital controls were imposed to prevent large and disruptive reversals in capital flows.

Chart 1. Capital-account openness in the Nordic and Baltic countries illustrated by the Chinn-Ito index



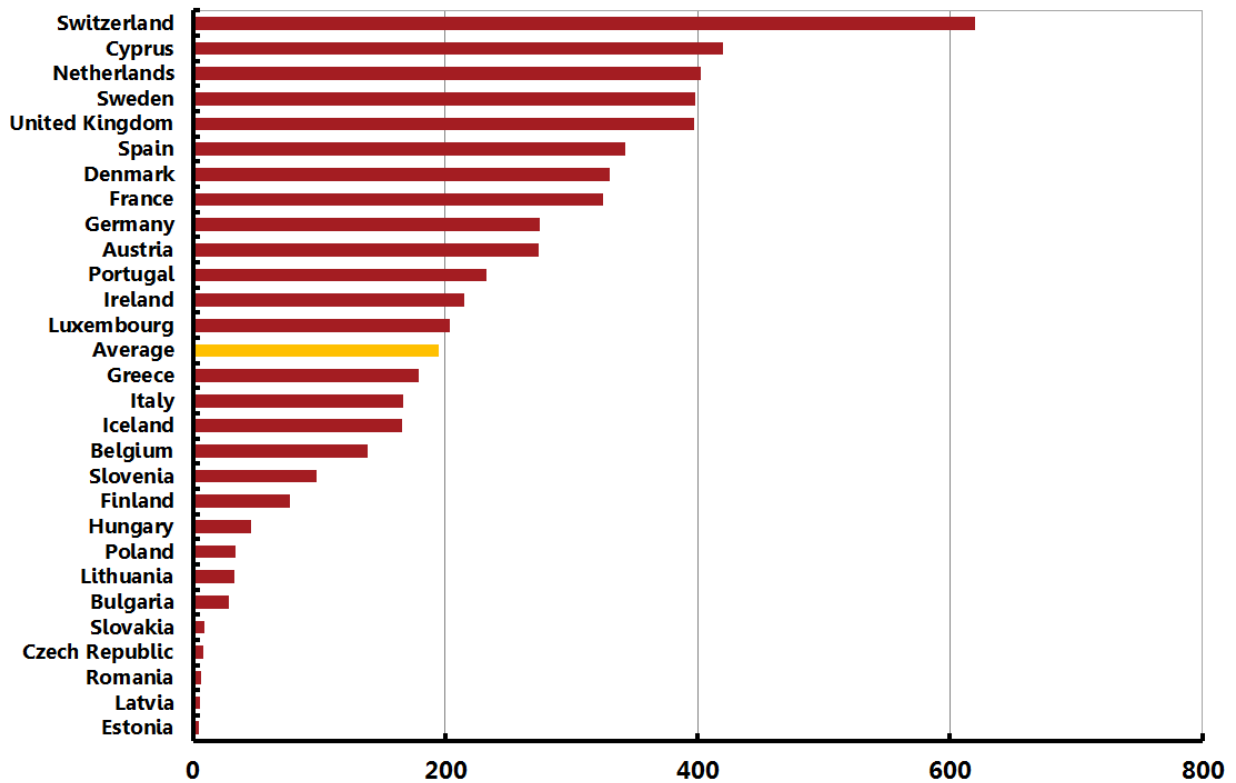
Note. The Chinn-Ito index is based on binary dummy variables codifying restrictions as reported in the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER). Within a possible range of -1.84 to 2.48, a higher score indicates a higher degree of openness.

Source: http://web.pdx.edu/~ito/Chinn-Ito_website.htm

⁴ Iceland imposed capital controls in 2008 and Latvia had a partial deposit freeze on Parex Bank from December 2008 to December 2011.

Over the last 10 years, the Nordic and Baltic financial systems have become increasingly interconnected. The Nordic banks have large cross-border operations in the other Nordic countries, which partly explain the large size of the Swedish and Danish banking sectors in relation to the domestic economy (see chart 2). The Nordic banks also dominate the banking sectors in the Baltic countries to a varying extent.⁵ This means that risks in one country can easily spread to another.

Chart 2. Bank assets in relation to GDP December 2012, percent



Sources: ECB, the European Commission, Swiss National Bank, Statistics Iceland and the Riksbank.
For comparison: In September 2008, the figure for banks asset in relation to GDP was 1047% in Iceland

One important characteristic of the Nordic banking groups is their high dependency on market funding.⁶ The banks in Iceland funded a relatively large part of their activities through short-term market funding and non-resident deposits, and the Nordic subsidiaries in the Baltic countries through parent bank funding. This made them vulnerable to changes in the global environment.⁷ Another characteristic is that many of these banks were exposed to a large share of unhedged borrowers, with income in domestic currency and loans in foreign currency. In this

⁵ See Chart Supplement for further illustrations.

⁶ This can be illustrated by the loan-to-deposit ratio, which shows to what extent lending must be funded by means other than deposits. In 2009 and 2010, Swedish and Baltic banks' lending in relation to deposits ranged from almost 200 to 270 percent. In Lithuania, the loan-to-deposit ratio declined sharply to 152 percent by the end of 2010.

⁷ The Nordic subsidiaries in the Baltic countries were to a considerable extent financed by intra-bank funding, and the Nordic parent banks in turn were financed through short-term market funding.

context, the choice of exchange-rate regime creates different challenges. Iceland had a fully flexible exchange rate arrangement which could have worked as a partial shock absorber if not limited by the fact that a large part of the residents' debt was in foreign currency or inflation indexed. Before the crisis, Iceland's private sector had accumulated a relatively large share of FX-denominated debt as the tightening of monetary policy led to much higher interest rates on loans in krona than in foreign currency. In addition to the macrofinancial risks posed by the FX-denominated debt, a large part of Icelandic household debt was also indexed to inflation. This exposed the financial sector to similar risks as the household balance sheets could be seriously impaired because of the rapid pass-through to the exchange rate. When the exchange rate depreciated, it fed through to inflation and thus reduced the ability of the borrowers to repay the debt which raised risks for the banks, in combination with a significant drop in real estate prices. The effect would have been similar with variable rate unindexed loans but more dampened as long as higher inflation was short lived.

The exchange-rate regimes chosen by the Baltic countries (as small and open economies) were conventional peg and currency board arrangements. The currency risk was regarded as practically non-existent because of the expectation that the countries would soon adopt the euro. However, even if it was not considered a risk by the Baltic countries or the Nordic parent banks, it became a major issue for the investors when the crisis erupted. It should be mentioned that there is no risk as long as the fixed exchange rate is maintained, but can potentially imply large credit losses if the currencies were to depreciate. Since investors had underestimated the potential risks in the Baltic countries, the Nordic parent banks were allowed continued access to cheap funding at a price corresponding to the risk of the banking groups. The consequence of the Nordic parent banks not assessing their own risk properly in turn led to the interest rate offered to the Baltic borrowers being too low. This inadequate risk management contributed to large capital flows to these countries as the Nordic banks underestimated the risks of the exposure in the Baltic countries.

Although regular surveillance was conducted in these countries, the earlier mentioned vulnerabilities were not wholly recognized. One way to improve the analytical framework for detecting various imbalances and unsustainable economic policies would therefore be to analyze the composition, direction and volume of flows. This would enhance the ability to understand how certain flows affect economic developments.

a. Macroeconomic development

i. Global economic environment

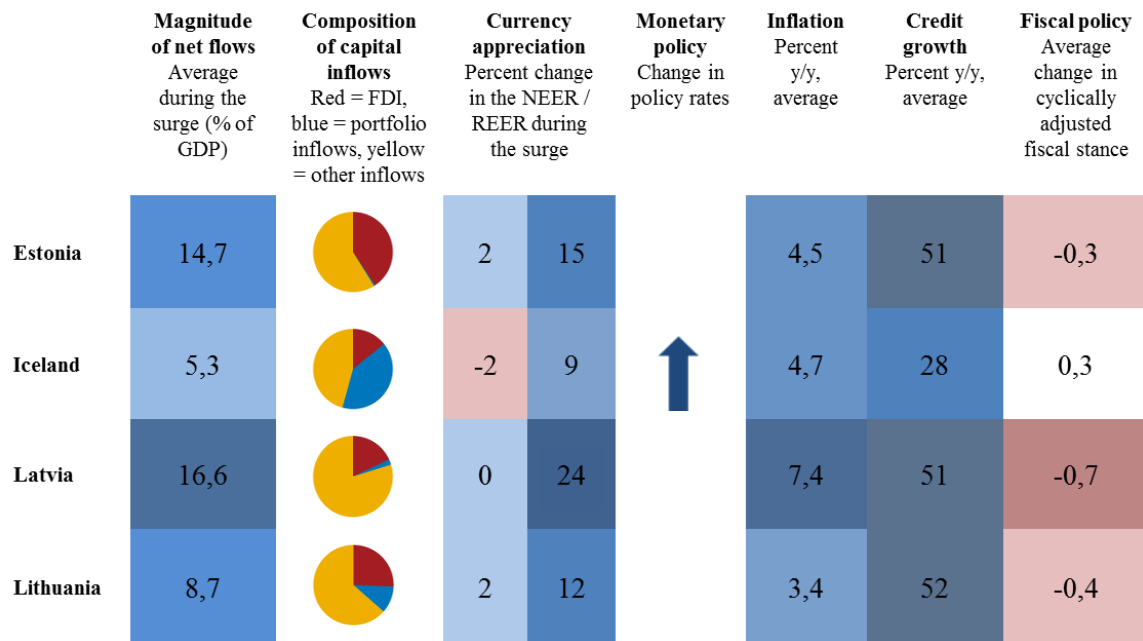
Before the Lehman meltdown, the global economy was characterized by steady economic growth coupled with low and stable inflation, inducing markets to take the buoyant environment for granted and causing risk premia to become very low. In hindsight, this unfavorably nurtured the persistence of high consumption through rapid credit expansion in many advanced economies whilst emerging-market economies enjoyed rapid export-led growth and maintained high domestic savings ratios. During this period, the main concern was that the persistent global imbalances could lead to a sudden reversal of capital flows and a large exchange rate adjustment, when the imbalances would be corrected. Even though the global financial crisis took another form, the global imbalances still played a significant role in the build-up of systemic risk. They contributed to low interest rates and large capital inflows to American and

European banks, which in turn led to a search for yield as well as the creation of riskier assets. The abundance of global liquidity allowed banks to expand faster than the increase of customers' deposits, and in some areas this led to the development of new business models. The new business models, in for example the Nordic and Baltic region, took advantage of the cheap funding provided by the global financial markets. The financial sector regulatory framework was inadequate to prevent the risks related to capital flows stemming from this abundance of liquidity.

ii. The Baltic countries

The Baltic countries shared the same macroeconomic environment during the transition from planned economies to market economies with high growth rates and the deregulation of financial markets. During the early 1990s, the largest contributor to capital flows was foreign direct investments, due, among other things, to the privatization of state-owned enterprises. The three economies experienced a temporary economic slowdown in connection with the Russian crisis in 1998, but economic growth resumed to relatively high levels already the next year. The domestic capital markets were small and underdeveloped, and after accession to the EU, capital increasingly went to investments in the non-tradables sector, in particular the real-estate sector. The demand for loans increased and, as lending opportunities in euro were provided by Nordic parent banks, credit grew markedly, peaking at 60-80 percent year on year.⁸ The cross-border funding of these loans was a major contributor to the surge in capital inflows (see figure 1, chart 3 and 4). As a result, these economies were overheating with increasing inflationary pressures and rapid increases in real-estate prices in the highest instances by more than 50 percent on an annual basis. Imbalances grew and the current account deficit bottomed out at around 20-25 percent of GDP in 2007-2008.

⁸ Bernhardsson, E. & Billborn J. (2010), "*The role of the banking system in financial crises – a comparison between the crisis in Asia and the crisis in the Baltic countries*", Sveriges Riksbank, Economic Review 3

Figure 1. Capital inflows and policy responses during 2004-2007

Note. The change in monetary-policy rates in Estonia, Latvia and Lithuania is a reflection of the euro reference interest rate and is therefore not included in the figure. Iceland's average cyclically-adjusted fiscal stance is based on ex ante estimations prior to the Stand-by request.

Sources: National Central banks and Reuters EcoWin

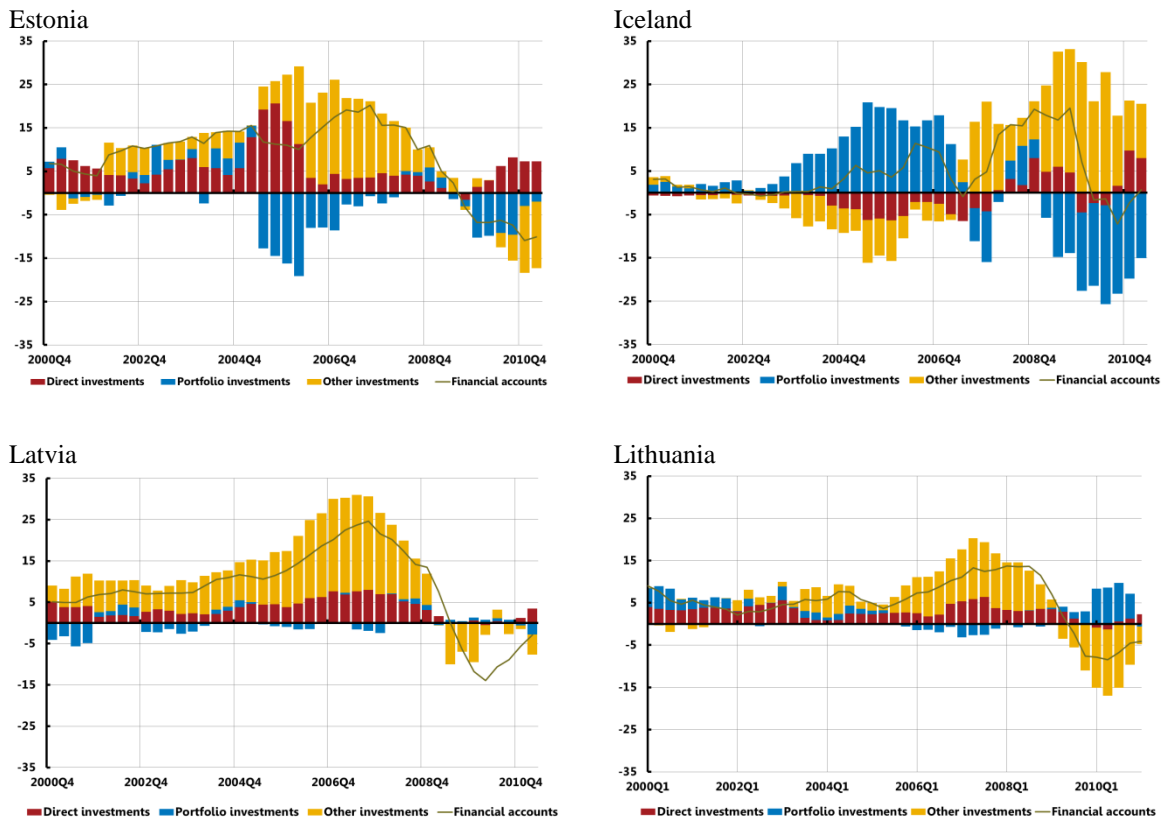
iii. Iceland

In 2001, Iceland adopted an inflation targeting monetary-policy regime and a freely-floating exchange rate. Two out of three large commercial banks were privatized in 2002 and 2003 and consequently the whole banking system was then fully privatized. From 2003-2007, all three banks rapidly expanded their investment banking activities both domestically and abroad and by 2007 the majority of their banking activities took place outside Iceland. The banks' expansion abroad took place in an environment of ample global liquidity and low interest rates and was supported by the banks' strong credit ratings. To finance their expansion, the banks borrowed large amounts of money abroad. In the beginning, marketable bonds and notes were the main source of funding followed by other short-term loans, but from 2006 and onwards deposits became increasingly important, especially for one bank, Landsbanki, through retail accounts in the United Kingdom and the Netherlands. The banks' balance sheets expanded rapidly and at the time of their collapse, assets held by Iceland's three commercial banks amounted to around ten times Iceland's GDP.

During this period, the Icelandic economy experienced rapid growth in domestic demand fuelled by credit expansion, but originally driven by large investments in the traded goods sector (see figure 1). Over time, imbalances grew and the over-expansion became especially pronounced in the non-tradable sector. The large build-up of external imbalances and the expansion of domestic balance sheets coincided with a large increase in asset prices.

An interesting comparison in this context can be made with other countries that have received much attention for their large capital inflows, but maybe even more attention for their efforts to reduce these inflows. Countries like Brazil, Indonesia and South Africa experienced net capital inflows of approximately 3-5 percent of GDP during 2010. It should be highlighted that for the Baltic countries and Iceland net inflows were significantly higher, about 10-20 percent of GDP during the build-up to the crisis (see chart 3). In the Baltic case, it may be possible to explain these large imbalances by the financing model used by the Nordic parent banks. Many investors would probably hesitate to buy bonds originating from countries with such large current-account deficits, but since the subsidiaries were funded through the Nordic parent banks the imbalances could persist longer before they were considered unsustainable.

Chart 3. Composition of capital flows, in percent of GDP, 4 Quarter moving average

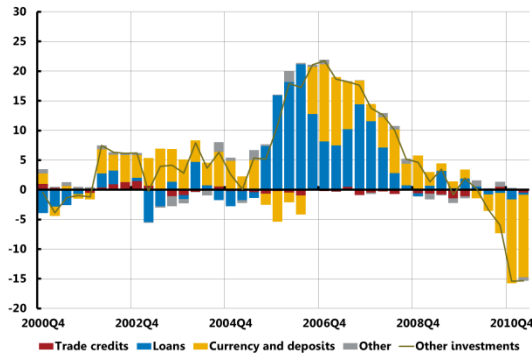


Note. Other investments include loans from parent banks to subsidiaries.

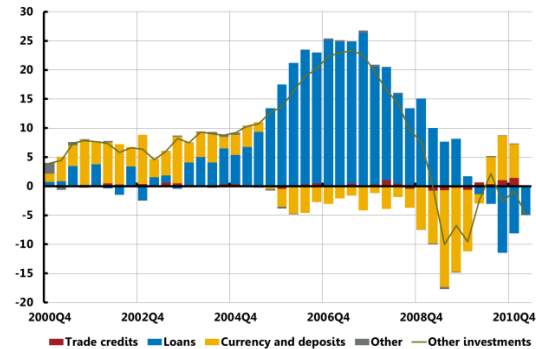
Sources: Bank of Estonia, Central Bank of Iceland, Bank of Latvia, Bank of Lithuania and Statistics Lithuania

Chart 4. Composition of other investments in the Baltic countries, net flows, in percent of GDP, 4 Quarter moving average

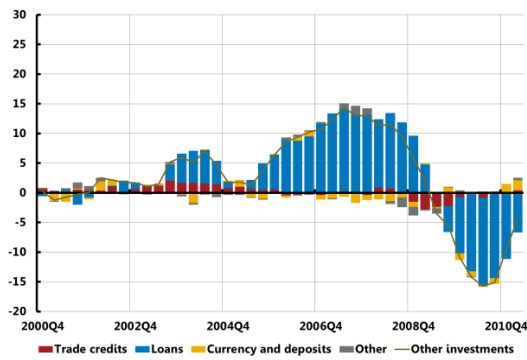
Estonia



Latvia



Lithuania



Note. Blue bars mainly correspond to loans from parent banks to subsidiaries.

Sources: Bank of Estonia, Bank of Latvia, Bank of Lithuania and Statistics Lithuania

iv. The crisis

During 2007, world growth began to slow down, the subprime crisis emerged and financing conditions deteriorated sharply. After the Lehman Brothers' bankruptcy, the Baltic and Icelandic economies suffered severe setbacks and the Icelandic banks collapsed in late 2008. As a result of lower risk appetite, the Icelandic banks had experienced mounting refinancing problems as bond market funding became ever scarcer in late 2007 and 2008. The public debt level had been relatively low before the crisis, but the collapse of the banking system led to an increase of Icelandic public-sector debt to almost 100 percent of GDP. Risk appetite declined all over the world and the economic situation in Iceland and in the Baltic countries was considered unsustainable. GDP fell sharply in all countries, Iceland experienced a large fall in the exchange rate, unemployment increased substantially and public finances were subject to considerable strain. The Baltic countries experienced capital outflows, as the economies deleveraged, and the Nordic parent banks gradually reduced the intra-bank funding of their subsidiaries and branches.

b. Policy responses to capital inflows and IMF recommendations

i. Macroeconomic and structural policies

According to the IMF framework for managing capital flows, the use of appropriate macroeconomic policies must always play its part. If macroeconomic policy adjustment is warranted, it should be carried out regardless of any potential additional measures. In the Baltic

countries, fiscal policy was the main macroeconomic policy tool used to curb overheating. However, there were differences between the three countries regarding to what extent fiscal policy can be considered “too expansionary”. On the one hand, the Estonian authorities managed to maintain stricter fiscal policy than the Latvian and Lithuanian authorities, as they had a positive fiscal balance throughout the studied time period. On the other hand, when taking the cyclically-adjusted budget balance into account, fiscal policy could still have been considered too expansionary in Estonia as well (see figure 1). During most of the boom years, fiscal policy was either not used or used only to a limited extent in the Baltic countries. In this respect it is also worth pointing out that during these years there was some uncertainty about the cyclical position of the economies and it was therefore also difficult to conduct the appropriate fiscal policy (as it was for the IMF to project the right size of the output gap). In 2004, the tax deductibility of mortgage interest payments was reduced in Estonia. In Lithuania, the tax deductibility was restricted in 2006. To further cool down the real-estate market in Lithuania, the IMF proposed a property tax in 2006, however it was not implemented until 2012 due to a lack of political support. The IMF suggested in the 2006 Article IV Report for Latvia, among other things, that the overheating should be contained by implementing tight fiscal policy. At a relatively late stage, in March 2007, the Latvian authorities adopted the Anti-Inflation Plan, which included an increased stamp duty for registering property and a personal income tax on realized capital gains from selling a property that had been owned for less than 60 months and was not the primary residence. However, it was not until after the crisis had materialized that broader austerity measures were implemented and approved by the Latvian government in the general government budget for 2009. The fiscal tightening was a prior action set by the IMF, EU and bilateral lenders.⁹

The Fund warned the **Icelandic** authorities against the possibility of overheating in the 2003 Article IV Consultation. The concern was that over-appreciation of the real exchange rate could cause damage to the export sector as well as dangers of an asset-price boom and unrealistic expectations of income growth. The Fund suggested tighter fiscal policy to counter demand expansion. Subsequent Article IV Consultations place a similar emphasis on the dangers of overheating and a need for fiscal restraint. As inflation started to drift upwards from late 2004, monetary policy was tightened. The monetary policy response was broadly in line with IMF advice. However, the response encouraged capital inflows partly in the form of carry trades, which under the current global settings reduced the effectiveness of monetary restraint. This points to a suboptimal monetary/fiscal policy-mix, as monetary policy carried too large a share of the burden of adjustment. The 2008 Article IV consultation in combination with a Financial Sector Assessment Program (FSAP) update at the request of the authorities (the third for Iceland) took place in the Board on September 22. The 2008 Article IV consultation warned against external liquidity risks and large macroeconomic imbalances and recommended continued tight monetary policy, restraint of the highly expansionary fiscal policy and actions to mitigate financial sector vulnerabilities. IMF staff also stressed that contingency planning, with regards to crisis prevention and resolution, needed to continue in full force, and recommended compiling all the existing elements into a single framework. However, downside risks materialized in 2008 as the krona came under increasing pressure, which culminated in a full-

⁹ Latvia was granted an IMF-supported Stand-by Arrangement (SBA) in December 2008.

fledged currency crisis following the collapse of the commercial banks in the first week of October.

ii. Macroprudential policies

The distinction between Capital Flow Management (CFM) and Macroprudential Policy Measures (MPMs) is not always self-evident. They are often perceived as similar even if their primary objectives are different, where CFMs are designed to limit capital flows and MPMs are prudential tools primarily designed to maintain financial system stability. But there are clearly situations where these objectives overlap, i.e. in cases where capital flows are the source of financial sector risk.¹⁰ The main objective of the prudential measures taken in the Baltic countries was to limit the effects of the capital inflows, i.e. risks associated with the vast credit expansion, rather than to limit capital flows per se. In response to the surge in capital inflows and credit expansion at the end of the 1990s, in 1997 the **Estonian** authorities raised the capital-adequacy ratio from 8 to 10 percent and expanded the reserve requirement base to include net liabilities to foreign banks.¹¹ They also introduced an additional liquidity requirement of 3 percent of the required reserve base. This temporary measure was maintained until 2000, when the required reserve ratio was increased from 10 to 13 percent. With a new wave of credit expansion in sight, in 2002-2003 the authorities used moral suasion to encourage banks to apply appropriate lending standards and sound internal risk-management procedures. As these measures had no discernible effect on credit growth, the Bank of Estonia decided to tighten some of the regulatory measures. In 2006, the risk weight of mortgages was increased from 50 to 100 percent and the required reserve ratio was raised from 13 to 15 percent. With the introduction of Basel II principles, in 2008, however, the risk weights on mortgage lending were decreased to 60 percent and after a two-year transition period harmonized with the EU directive to 35 percent.

With the first signs of overheating in 2004, **Latvian** authorities increased reserve requirements, significantly broadened the reserve base and increased official interest rates. To contain the overheating of the economy the IMF advised the Latvian authorities to enhance supervision and prudential measures. The Anti-Inflation Plan aimed to curb inflation and reduce speculation in the real-estate market. The plan therefore contained several measures, such as an obligation for banks to require borrowers' to provide a statement of legal income and a minimum down payment of 10 percent. However, the minimum down payment requirement was abolished by the authorities already in June 2008, as it was assumed that the effect on capital inflows would be offset by the economic slowdown with the accompanying reduced supply of credit.

Lithuania tackled excessive credit growth by gradually improving financial regulation and supervision, as a first line of defense. A great part of the IMF recommendations has been implemented to mitigate risks in the banking system, such as enhancing the monitoring of borrowers' credit quality, limiting the inclusion of current-year profits in capital and introducing stricter risk weights for commercial real estate. In 2006, IMF staff also drew attention to

¹⁰ More details are presented in Box 2 in the IMF policy paper: The Liberalization and Management of Capital Flows: An Institutional View, November 14, 2012.

¹¹ Later, the reserve requirement base was further expanded to also cover financial guarantees to financial institutions and non-resident credit institutions.

“aggressive lending practices” and encouraged the supervisors to conduct forward-looking analysis as well as to take additional supervisory measures. Furthermore, in 2007, IMF staff suggested identifying and raising bank-specific capital requirements. A further increase in capital buffers was recommended in 2008, as well as closer cooperation with banks, parent banks and home authorities. Although implemented, these measures did not substantially counteract the fiscal incentives, for example residential mortgage subsidies and the absence of a property tax.¹²

Prior to the crisis, few measures other than tighter monetary policy were introduced in **Iceland**, in accordance with IMF ideology. Capital flow management measures, CFMs, were not recommended by the IMF then and were not introduced.

c. Discussion on possible macroprudential tools and CFMs that could have been used

A questionnaire regarding possible macroprudential tools that could have been used to manage the risks from capital flow surges has been circulated among the Baltic countries and in Iceland. The findings are further developed below.

The **Estonian** authorities’ view is that the prudential measures that they took would have been more efficient in combination with other measures, most importantly with joint efforts and support from the home-country authorities. Whether a loan-to-value (LTV) or loan-to-income (LTI) restriction could have improved the situation is judged to be unclear. Prior to the crisis, the authorities did discuss alternatives to the higher risk weights and reserve requirements, but the effect was assessed to be negligible because the large parent banks could overcome them easily. In addition, most macroprudential measures only apply to local banks and subsidiaries and leave the branches untouched. This might harm the level playing field in the local banking sector.

The **Latvian** authorities consider that a restriction on maximum LTV could have been the most powerful tool to curb speculative activities in the real-estate market; unfortunately it was introduced at a very late stage. Also, an earlier introduction of a comprehensive credit register would have prevented the build-up of speculative private debt. Additional capital requirements for specific loans could possibly have been an effective tool to slow down excessive lending.

Apart from the tools that were used in **Lithuania** the authorities admit further regulation could have been effective. According to the authorities’ calculations, limits on LTV and LTI ratios could have reduced the loan for housing purchases portfolio by 8.6 percent. The number of loans granted during the period 2006-2008 would then have been 7,000-8,000 lower. These calculations subsequently led to the introduction of regulations on responsible lending in November 2011.

Iceland’s authorities suggest that measures that deal with the effects of free capital flows must be directed at financial regulation. This measure is also among the ones mentioned as a first line

¹² A tax on household real estate was introduced in 2012.

of defense in the IMF's framework for managing capital flows. Other measures that the authorities mentioned included higher capital and reserve requirements for banks, the limitation of FX-denominated loans to households and non-financial corporates, stricter regulation on currency and maturity mismatches in the banks' balance sheets and stricter liquidity requirements. These measures would have helped to limit the credit expansion.

d. Policy responses to capital outflows and IMF recommendations¹³

Prior to the new policy stance outlined in the IMF's framework for managing capital flows, capital controls as a response to capital outflows were considered as a last resort. As the crisis threatened **Iceland's** balance of payments and a continued fall in the exchange rate, capital controls were enforced in November 2008 to stabilize the exchange rate of the krona and prevent destabilizing outflows. The IMF supported this measure by providing technical assistance on how to optimize the design and make it compliant with Iceland's international obligations, including the one from IMF's Article VIII. This was not an easy step to take but the stabilization of the exchange rate helped to protect the balance sheets of exposed households and businesses and prevented a damaging inflation spiral¹⁴. With IMF's advice, the capital controls were designed to block all capital transactions while protecting an undisturbed currency exchange market for current transactions. At the same time, foreign direct investments (FDI) are not subject to capital controls. While the broader capital controls held, circumvention increased steadily. In October 2009, new rules on capital controls were adopted which enabled the inflow in foreign currency through a so-called "new investment" channel. The same rules introduced new restrictions on inflows in domestic currency (the so-called "off-shore krona"), which are still in place today.

The Foreign Exchange Act was amended in March 2012 to prevent the circumvention of capital controls through the bond market and to tighten control on capital flows related to the winding-up of failed Icelandic banks. In March 2013, the Foreign Exchange Act was again amended whereas the sunset clause was revoked and other structural improvements implemented.

When the **Latvian** authorities bailed out Parex Bank in November 2008, they introduced a partial deposit freeze to maintain financial stability. This was approved by the IMF under Article VIII of the IMF Articles of Agreement. Following the restructuring of Parex Bank, the partial deposit freeze was only attributable to a minor proportion of deposits and was fully removed in December 2011.

Iceland's exit from capital controls

In spite of the IMF's general position of not endorsing capital controls, such measures were listed as temporary measures in the Icelandic authorities' initial Letter of Intent. Officially, however, the IMF consults with member states and evaluates whether exchange controls raise IMF jurisdictional issues, while the controls and their removal are the responsibility of the

¹³ See Annex D for a detailed discussion on Iceland's and Latvia's experience of the IMF's support in the design of and exit from capital flow management measures.

¹⁴ As a large part of Icelandic household debt is indexed to inflation, there was a genuine concern that household balance sheets could be seriously impaired because of the rapid pass-through to the exchange rate.

member states. When the capital controls were introduced the exit strategy had not been designed, although it was stated that controls would be lifted “as soon as a sufficient stability has returned to the foreign exchange market”.¹⁵ About half a year after Iceland, on the recommendation of the IMF, had imposed capital controls, deliberations on the exit strategy commenced, resulting in a document on the exit strategy which was published in August 2009. There was growing pressure from the social partners, and they insisted upon a clear exit strategy at an early stage. The IMF had a more cautious approach than the authorities regarding the sequencing of liberalization. Because of the scale of the problem, it was challenging to identify the appropriate template for the pace and sequencing of the liberalization strategy.

In March 2011, during the fifth review of the IMF-supported program, the authorities and the IMF agreed on a gradual, conditions-based exit strategy and the IMF provided expert advice on the structure of the officially-published strategy and communication. The preconditions for exit relate to the sustainability of public finances, a strengthened banking sector and the building up of sufficient international reserves. A key objective is to lift the controls in stages to avoid jeopardizing foreign exchange market stability. The strategy focuses on systematic measures whereby unstable krona assets are to be transferred into long-term investments. The various stages of the strategy are not time-bound. The strategy is based on certain preconditions that have to be in place before each step is enacted. These include lengthening resident borrowers’ foreign financing, an acceptable settlement of the failed banks’ estates and a permanent channel for non-residents with short term krona positions. The strategy is divided into two main phases; the first involves reducing offshore krona positions and the second will remove controls on onshore krona. The first phase, which commenced in late 2011, includes regular auctions by the Central Bank of Iceland from February 2012 which over a two-year period have significantly reduced the short-term krona positions.

III. LESSONS LEARNT

There are several lessons to be learnt from the Baltic countries’ and Iceland’s experience of capital flows and capital controls. However, it is often easy to point out crucial mistakes ex post, but very hard ex ante due to various uncertainties regarding, for example, the position in the economic cycle or insufficient regulatory frameworks. But in spite of that, there have clearly been shortcomings regarding macroeconomic policies, as well as the supervision of the financial systems in the Nordic and Baltic regions. For example, fiscal policy was the main stabilization tool available in the Baltic countries. They could have exercised a more stringent fiscal policy to compensate for the fact that the policy interest rate is a reflection of the euro reference interest rate. The case of Iceland also shows the dangers of a cross-border banking system expanding and growing amorphyously in relation to GDP. Also because of the high integration of the banking systems in the region, cooperation and dialogue between home and host authorities is essential. It is worth noting, however, that capital inflows in themselves were not considered the thrust of the problem. If the IMF’s¹⁶ policy framework had been put in place before the build-up of the crisis, it may have been easier to pinpoint the potential problems and approach them both at an earlier stage and with the right measures.

¹⁵ Central Bank of Iceland Press Release November 28, 2008.

¹⁶ See Annex A for the IMF’s policy framework for managing capital flows.

With the framework on capital flows in mind, the **first lesson** concerns the use of macroeconomic policies on a national level. Fiscal policy was not used to a sufficient extent to moderate the large inflows of capital. In Iceland, the monetary/fiscal policy mix was suboptimal with too heavy a burden placed on monetary policy. Higher policy rates attracted more short-term capital. Iceland could have used fiscal policy to a larger extent to restrain the growth of aggregate demand and build larger buffers to combat the reversal of capital flows. A lack of fiscal policy measures was also a problem in the Baltic countries where monetary policy was constrained by the currency boards. Fiscal policy should have been tightened at an earlier stage to curb domestic demand, and ultimately credit expansion. Furthermore, structural policies such as tax incentives for debt financing exacerbated the imbalances, and the tax incentives were only reduced in Estonia.

It is not realistic that macroeconomic policy alone could have managed these large capital inflows and enhanced supervision and macroprudential policies could therefore have played a larger role. Countries should endeavor to implement macroprudential measures already at an early stage. Some of the countries found the macroprudential measures taken insufficient, and in other countries additional prudential measures would have been warranted. The implied risk stemming from the large amounts of lending in foreign currency could, for example, have been mitigated through increased risk weights on such loans.¹⁷ Given the suboptimal policy conditions prevailing in Iceland, macroprudential tools could have been used to a larger extent. If macroeconomic policies were considered exhausted (which was not the case) Iceland could have, with the new IMF framework in mind, assessed the scope to increase the capital requirements of the banks. Banking supervision in Iceland also suffered from shortcomings, such as insufficient resources and data gaps. However, these shortcomings have been addressed as part of the SBA program and Iceland has also implemented stricter stress tests. The Lithuanian authorities have also addressed issues to ensure proper risk awareness among banks and borrowers and have introduced regulations on responsible lending for credit institutions.¹⁸

To prevent imbalances from building up countries also need to continuously develop the functioning of institutions and make sure that appropriate regulation and supervision are in place. This is especially important where banking systems are large and based on cross-border activities. In such cases, cross-border banking supervision and liquidity management must be ensured on a cooperative basis. Therefore, the **second lesson** concerns the use of macroprudential policies, enhanced supervision and closer policy cooperation among countries.

During the build-up to the crisis banking supervision in the well-integrated Nordic-Baltic financial market suffered from some shortcomings. Moral suasion, which is one of the central banks' main tools when it comes to financial stability, was not used well enough to exert pressure on the banks to take precautionary measures. For example, although Sveriges Riksbank already in 2005 started to regularly publish assessments of the looming risks in the Baltic

¹⁷ In October 2011, the European Systemic Risk Board issued recommendations that are aimed at reducing the risks associated with lending in foreign currency from financial institutions to households and companies.

¹⁸ According to these requirements the maximum acceptable loan-to-value ratio for pledged assets will be established at 85 percent, the maximum debt service-to-income ratio at 40 percent and other rules relating to the lending process and conditions will be set.

countries in the Financial Stability Report, the Swedish banks continued to fuel the credit growth in the Baltic countries. In 2005, the Estonian supervisory authorities requested the Swedish authorities to impose stricter capital requirements on the Swedish banks' affiliates. But this was turned down by the Swedish Financial Supervisory Authority (FSA) since the bank groups' capital already exceeded the legal minimums on a consolidated basis. The issue was later also discussed between the Riksbank and the Swedish FSA. Another explanation for not requiring further measures was that the parent banks could transfer part of their excess capital to a subsidiary in the Baltic countries, if this was considered necessary.

As suggested in the Fund's framework for policies affecting capital flows, we agree that national authorities should share information multilaterally as well as being prepared to take measures to address risks associated with cross-border activities. Even if the Nordic and Baltic authorities did share information among themselves, and there were discussions regarding the appropriate measures to take, there was no consensus on whether to take any action to stem the financial stability risks. In order to address these and other issues, the Nordic and Baltic central banks, relevant ministries and financial supervisory authorities agreed in August 2010 on a cooperation agreement on cross-border financial stability, crisis management and resolution. Under this agreement the authorities have, for instance, initiated a cross-border stability group, with the objective of preventing financial crises and enhancing preparedness for and facilitating the management and resolution of a cross-border financial crisis. Another initiative is the establishment of the Nordic-Baltic Macroprudential Forum which consists of the central bank governors and the heads of the supervisory authorities. The Forum's mandate includes discussing and coordinating the development and adoption of macroprudential policy frameworks in the Nordic-Baltic region and identifying risks in the region and possible responses to these risks, including the use of macroprudential tools.

To prevent destabilizing outflows of deposits from Parex Bank, the Latvian authorities imposed a partial deposit freeze. The measure was a minor restriction on capital flows and the IMF agreed with the Latvian authorities on the necessity of the imposition. The restriction was fully removed in December 2011.

In Iceland, temporary capital controls were used as a last resort in response to destabilizing outflows. The capital controls have broadly achieved the objectives set out at the beginning of the Icelandic economic program, namely to stabilize the foreign exchange market. In conclusion, Iceland's overall experience of the IMF's support in the design of and exit from capital controls has been a positive experience and in line with the IMF policy of constructive advice and strong domestic ownership of program design and implementation. However, the design and implementation of the exit strategy, including completion of the settlement of the failed banks, has proved to be a more challenging and lengthy process than was probably foreseen at the commencement of the capital controls. When the IMF provides advice on capital controls an exit strategy should be an integral part of the original design.

The IMF has an important role to play in giving advice to countries when it comes to capital-account policies. The experience in the Baltic countries and Iceland supports the main elements of the policy framework as proposed by the IMF. The Fund has a global reach and is therefore uniquely placed to also monitor the volume, composition and direction of cross-border capital

flows to identify associated risks. As financial markets have become closely interconnected there was a need to strengthen the financial sector analysis in the Article IV Reports (which staff have addressed in recent Article IV reports). The increased financial linkages between countries both in our constituency and around the world also underlines the importance of enhanced regional surveillance as well as the inclusion of capital accounts in regular IMF surveillance, as this would be an important step towards enhancing the Fund's global financial stability mandate. The recent Nordic Regional Report¹⁹ was a relevant step towards enhancing regional surveillance. The Nordic-Baltic constituency's view is that it will also be in the best interests of the global economy if the IMF's mandate in the long run also includes an explicit mandate for monitoring policies relating to the capital account.

When it comes to the use of capital controls and when to liberalize capital accounts, the constituency has good experiences of working with the IMF as the Fund can provide expert advice to help countries in designing the appropriate measures and developing strategies regarding preconditions and sequencing for lifting controls. Our experience is also that IMF staff have shared their knowledge and provided our countries with timely advice regarding various proposals following the implementation of capital controls.

As experience is gained, the IMF can inform its advice and develop best practices regarding capital flow management measures, both when it comes to implementing macroprudential measures and when the use of capital controls can be considered appropriate.

IV. CONCLUDING REMARKS

The use of traditional macroeconomic and structural policies was far from exhausted in managing the consequences of capital inflows in the cases examined in this study, and hence it is worth pointing out that there are no substitutes for sound macroeconomic policies. It is also important to remember that there are several prudential measures that can be taken. The IMF should assist member countries to implement the proper policy mix, give advice on when to introduce prudential measures or, as a last resort if it is deemed necessary, when to introduce capital controls.

In hindsight, if the framework for managing capital flows had been in place, the IMF might have been tougher in its recommendations and delivered them at an earlier stage. Assuming that countries follow the IMF's recommendations, the build-up of systemic risks could possibly have been mitigated. However, an institutional view from the IMF was not the only ingredient lacking in the build-up of the crisis and would not have been the whole solution. The international community is currently building on the lessons learned from the financial crisis when developing and implementing macroprudential tools, and this will be an ongoing process for many years to come.

¹⁹ Nordic Regional Report, Staff Report for the 2013 Cluster Consultation, September 2013, IMF Country Report 13/274

While temporary capital controls were recognized as an option in Iceland, the Nordic-Baltic view continues to be that they should be a last-resort measure to maintain macrofinancial stability. It is also our view that a credible exit strategy for lifting capital controls needs to be developed as soon as possible after the introduction of such measures.

Annex A: The IMF's policy framework for managing capital flows²⁰

The aim of the framework is to help Fund staff to provide consistent and evenhanded policy advice to member countries regarding capital flows and policies related to them. It is not intended to create new obligations for member countries under Fund surveillance since it is not yet included in the Fund's Articles of Agreement, which is an issue of a more long-term character. According to the framework, structural reforms and prudential measures designed to strengthen the resilience of the financial sector and increase the capacity of the country to absorb the benefits of the capital flows are always good and can be introduced at any time. Then, in response to a surge in inflows, a country should use macroeconomic policy options as well as appropriate macroprudential policies to counter risks to financial stability (see Annex B). As a complement to these policy responses, and under certain circumstances, i.e. when the room for further adjustment of macroeconomic policies is limited or when they are considered too slow, then "capital flow management measures", or CFMs, may be appropriate. CFMs should be designed to be transparent, targeted, temporary and preferably non-discriminatory. CFMs are defined as tax, prudential or administrative measures specifically designed to influence capital flows for example:

- Allow the exchange rate to appreciate when it is undervalued on a multilateral basis.
- Purchase foreign exchange reserves—sterilizing the impact when inflation is a concern—if reserves are not more than adequate from a precautionary perspective.
- Lower policy rates, or tighten fiscal policy to allow space for monetary easing, consistent with inflation objectives and when overheating is not a concern.
- Use capital flow management measures if (a) the exchange rate is not undervalued, (b) reserves are in excess of adequate prudential levels or sterilization costs are too high, and (c) the economy is overheating (e.g. the inflation outlook is not benign or credit/asset price booms are developing), precluding monetary policy easing, and there is no scope to tighten fiscal policy.
- Conversely, do not deploy CFMs if the exchange rate is undervalued or as a substitute for necessary policy adjustments, such as addressing procyclicality in fiscal policy. However, CFMs could be used to complement fiscal tightening plans already in place, in light of the lags associated with the macroeconomic impact of fiscal consolidation.
- Give precedence to CFMs that do not discriminate on the basis of residency (e.g. currency-based prudential measures) over residency-based CFMs.
- Ensure the intensity of CFMs, whether or not residency-based, is commensurate to the specific macroeconomic or financial stability concern at hand. Lift CFMs when the risks they were designed to address recede, as CFMs are most appropriate to handle inflows driven by temporary or cyclical factors.
- In designing CFMs, consider country-specific circumstances (e.g. administrative and regulatory capacity, degree of openness of the capital account) and effectiveness/efficiency criteria (e.g. whether inflows are intermediated through regulated institutions).
- Strengthen the institutional framework on an ongoing basis. Prudential and structural measures that do not differentiate on the basis of residency or, typically, currency and are designed to strengthen the ability of the financial sector to cope with financial stability risks and the capacity of the economy to absorb capital inflows can be used at any time and before the necessary macroeconomic policy adjustments have been undertaken, provided they are not assessed to have been designed to influence inflows.

²⁰ IMF policy paper: The Liberalization and Management of Capital Flows: An Institutional View, November 14, 2012.

Additional elements covering multilateral aspects²¹

- National policymakers of both source and recipient countries should take into account how their policies affect others.
- National authorities should share information multilaterally on the objectives and implementation of their policies affecting capital flows.
- National prudential authorities should be mindful of the risks associated with the cross-border activities of the markets and institutions in their jurisdictions and be prepared to take measures to address them:
 - The effects of capital flows on financial stability should be considered in macroprudential policy frameworks.
 - The capacity to identify and mitigate risks associated with capital flows – through regulated and non-regulated financial institutions – should be enhanced and the responsiveness of cross-border activities to policies should be monitored.
 - Agreement on “reciprocity” in the application of macroprudential policies should be sought.
- National authorities should complete and fully implement reforms of the international regulatory and supervisory architecture expeditiously and actively minimize the scope for regulatory arbitrage.

²¹ SM/11/277, The Multilateral Aspects of Policies Affecting Capital Flows (13 October, 2011)

Annex B: Review of possible macroprudential tools for handling capital flows²²

Prudential and other structural measures

Capital requirements for specific loans or foreign currency loans. If capital flows are accompanied by a surge in foreign currency lending from domestic banks (e.g. due to interest differentials) increased risk weights or other capital surcharges for such loans will result in domestic banks holding more capital for such loans, thereby resulting in a more resilient financial sector.

The countercyclical capital buffer²³ in Basel III will not in itself limit the size of capital flows, nor is it likely that it will significantly reduce the credit growth associated with asset price inflation arising from the flows. However, the introduction of the buffer will result in a better capitalized financial system that is more resilient to shocks that may arise from large capital flows.

Direct restrictions on credit such as maximum loan-to-income (LTI) or loan-to-value (LTV) requirements. These restrictions may contribute to dampening the growth in credit from domestic institutions in periods of high capital inflows. While LTI and LTV limits may have some effect on credit growth, there is always some scope for circumvention.

Liquidity requirements such as ceilings on banks' net open FX positions or particular liquidity requirements related to FX-liabilities. A potential risk related to large capital flows is that domestic banks may become increasingly dependent on foreign market funding. This is a particular concern if the foreign funding is short term, increasing the maturity mismatch and roll-over risk. The liquidity provisions in Basel III, the net stable funding ratio (NSFR)²⁴ and the liquidity coverage ratio (LCR)²⁵ will to some extent reduce these risks.

Other capital flow management measures

Reserve requirements. Apart from their important role in influencing monetary policy, reserve requirements can be used as a tool to reduce the risk of disruptions in the economy or in the financial system. They are used to affect banks, and indirectly the banks' customers, incentives to borrow in foreign exchange for certain purposes or to hold liquid assets.

Other measures include a *levy on banks' non-deposit foreign exchange liabilities*, as recently introduced in Korea²⁶, which aims to dampen domestic credit growth due to large capital

²² Some of these instruments would put domestic banks at a disadvantage compared to banks that provide currency loans on a cross-border basis, due to well-known home-host issues.

²³ The buffer will apply to both domestic financial institutions and institutions granting credit on a cross-border basis.

²⁴ The NSFR will reduce the possibility of increasing maturity mismatches in the banking sector in periods of abundant foreign capital, thereby making the banks less exposed should the flows abruptly come to a halt.

²⁵ The LCR ensures that the banks have liquid assets to withstand a 30-day interruption in funding liquidity. Increased short-term funding will then have to be matched with an increase in liquid assets, making the banks better prepared for an interruption in the access to foreign funding.

²⁶ <http://www.fsc.go.kr/downManager?bbsid=BBS0048&no=72765>

inflows. Such a levy on foreign funding can also be designed so that shorter maturity liabilities will be subject to higher levy rates. This would further discourage foreign short-term market funding.

Residency-based capital flow management measures

These measures include *reserve requirements on non-resident deposits* and *tax on equity and bond inflows*.

Annex C: Table of measures taken in the Baltic countries and in Iceland

Estonia *July 1997:* Net liabilities of credit institutions vis-à-vis foreign banks were added to the reserve-requirement calculation base to diminish structural deviations caused by the massive foreign capital inflow.

October 1997: The minimum capital adequacy ratio was raised from 8 to 10%.

November 1997: A temporary additional liquidity requirement (amounting to 3% of the reserve-requirement base) was established to prevent banks from expanding their loan portfolios at the expense of liquidity buffers in the deteriorating financial environment. This was maintained until July 2000.

August 1998: Financial guarantees were added into the reserve base to avoid channeling the capital inflow via other parts of financial groups.

July 2000: The required reserve ratio increased from 10 to 13%.

In 2002 and 2003: The authorities used moral suasion and enhanced supervisory focus on credit risks in order to raise public awareness about the risks associated with borrowing and influence banks' credit behavior and risk management. Banks made revisions in credit standards.

In 2004: The tax deductibility of mortgage interest payments was reduced: deductions from taxable annual income were limited to 50,000 kroons or 3,200 euros (previously 100,000 kroons).

March 2006: Risk weight of housing loans was increased from 50 to 100%, implying de facto increase in capital requirement by 13%.

September 2006: The reserve requirement was increased from 13 to 15%.

In 2009: In transition to the Basel II framework, the minimum capital adequacy ratio (CAR) was maintained at 10% and the 100% risk weight was preserved in calculating the floor for the CAR. For housing loans, a two-year transition period was established before the risk weight was to drop to 35%.

Iceland *November 2008:* On the basis of a new temporary law, the Central Bank of Iceland put in place rules on capital controls, with the approval of the Minister of Economic Affairs, which were designed to restrict both capital inflows and outflows. In the case of restrictions on capital inflows, the rules stated that investments in domestic financial instruments with foreign currency were prohibited.

December 2008: The inflow restriction was loosened to allow for the inflow of foreign currency for direct investments by foreigners.

August 2009: the Central Bank announced its strategy for the phased removal of the capital controls. The first phase entails the liberalization of capital inflows and investment. The liberalization strategy ensures that assets thus flowing into the country can be expatriated again, provided that they are registered with the Central Bank. In later phases, restrictions on capital outflows will be lifted, first on long-term obligations and then on short-term assets.

October 2009: The Central Bank again adopted new rules on capital controls, with the approval of the Minister of Economic Affairs, which enabled the inflow in foreign currency through a so-called “new investment” channel. The same rules introduced new restrictions on inflows in domestic currency (the so-called “off-shore krona”), which are still in place today.

March 2011: The government approved a revised strategy for the lifting of capital controls developed by the Central Bank in cooperation with the lead ministries and the Financial Supervisory Authority and in consultation with the IMF.

September 2011: The Parliament approved amendments to the Foreign Exchange Act, the Customs Act and the Act on the Central Bank of Iceland. These changes extended the authority to maintain capital controls beyond August 2011, when the enabling legislation was set to expire, to the end of 2013. The amendments included in the law the regulations that had previously been issued by the Central Bank with the approval of the Minister of Economic Affairs. The amendments also opened the possibility of a progressive discretionary relaxation of the controls.

March 2012: Parliament amended the Foreign Exchange Act, which inter alia rescinded the exemption for payments from a bankruptcy estate and payments of contractual claims in accordance with composition of creditors agreements in domestic currency when payment is disbursed from the payer’s account with a financial institution in Iceland. Also, the amended act entailed that it was no longer permissible to purchase foreign currency for the value of indexation on bond principal. Finally, the amendment rescinded the exemption from the statutory prohibition against cross-border movement of foreign currency, which was previously enjoyed by the resolution committees and winding-up committees of the old banks.

March 2013: Parliament amended the Foreign Exchange Act, where the sunset clause was revoked. Also, included in the amendment was that exemptions from the capital controls amount to 400 bn.kr. or more will be done in a collaboration with the Minister of Finance, who will brief the Parliamentary Committee on Economic Affairs on the economic impact that such an exemption will entail.

Latvia

March 2004: The main refinancing rate is raised from 3% to 3.5%

July 2004: Reserve requirements increased from 3% to 4%

November 2004: The refinancing rate is raised from 3.5% to 4%

January 2005: Reserve base is broadened to include liabilities to foreign banks and foreign central banks with a maturity up to 2 years

August 2005: Reserve requirements increased from 4% to 6%

December 2005: Reserve requirements increased from 6% to 8%

May 2006: The reserve base is broadened to include liabilities with a maturity of more than 2 years

July 2006: The refinancing rate is raised from 4% to 4.5%

November 2006: The refinancing rate is raised from 4.5% to 5%

March 2007: Another set of measures is adopted by the government under the so-called Anti-Inflation Plan to contain overheating of the economy (speculations in the real-estate market, unsustainable allocation of resources and increase in inflation). The main measures included in the plan were as follows:

- introduction of medium-term state budget planning
- limiting wage increases in the public sector
- improvement of the public procurement processes
- formation of the Credit Register;
- increase in stamp duty for registering property;
- commercial banks' obligation to require a statement of legal income to issue new loans;
- minimum down payment of 10%;
- Personal income tax on realized capital gains from selling a property owned for less than 60 months that is not the primary residence;
- fostering savings incentives

March 2007: The refinancing rate is raised from 5% to 5.5%

May 2007: The refinancing rate is raised from 5.5% to 6%

February 2008: In response to the projected economic downturn the reserve requirements are diversified depending on the maturity of the liabilities in order to motivate the financial sector to attract longer-term funding; the reserve ratio for liabilities with a maturity of more than 2 years is set at 7% (for those up to 2 years it remains at 8%, repo 0%).

December 2008: Partial deposit freeze on Parex Bank. Debit operations in any currency, including through online banking, ATMs and by cash related to commercial activities for clients are limited to LVL 70,000 per calendar month. The goal of the restrictions is to prevent the outflow of deposits from Parex Bank.

The restriction is not applicable to payments into the national budget, payments to the state and local government authorities, transactions with the Bank of Latvia, acquisition of the Republic of Latvia treasury bills, payments to commercial companies whose spheres of activity encompass commodity production and the provision of services to the sectors governed by the state and local government authorities; client payments to Parex Bank and its subsidiaries.

Lithuania 2006: Tightened the definition of mortgaged residential property that deserves a 50 % risk weight.

October 2006: Restrictions on tax deductions for mortgage interest; tax deductions are limited to one mortgage loan per person.

2008: To enhance the efficiency of risk-management measures, before the crisis, the Board of the Bank of Lithuania approved legal acts regarding the additional requirements for strengthening the processes of internal control and risk management in banks and other credit institutions.

2009: Internal Capital Adequacy Assessment Process (ICAAP) to assess the underlying risks and calculate capital requirements to cover them. The internal capital adequacy requirements set by banks in Lithuania are higher than the minimum prescribed level.

January 2009: Abolishment of tax deductions for mortgage interest.

2010: The Bank of Lithuania approved legal acts regarding the additional requirements for strengthening concentration risk management in banks and other credit institutions.

May 2011: Announcement of responsible lending requirements for credit institutions. Limitation on the loan-to-value ratio for residential property at 85%, and debt service-to-income ratio at 40%. Effective November 2011.

December 2011: The Lithuanian Parliament approved the introduction of a tax on household real estate, effective in 2012. A tax on the value of a household's real estate that exceeds LTL 1,000,000 will be levied at 1% per year.

Annex D: Iceland's and Latvia's experience of IMF's advice on CFMs

Introduction of capital controls in Iceland

Immediately after the introduction of the Emergency Laws in early October 2008, the foreign reserves of the Central Bank came under pressure as the foreign currency liquidity of the Icelandic banking system had been reduced dramatically. Foreign banks netted deposits of the Icelandic banks against claims and the British authorities froze the assets of Landsbanki under anti-terrorism legislation, and initially also named those of the Central Bank and the Republic, which had serious repercussions for payments and settlement. This order temporarily also applied to assets of the Central Bank of Iceland. Furthermore, proceeds from exports stopped flowing partly because foreign banks became reluctant to transfer money to the domestic banks and partly because exporters chose to keep their money abroad. For a period, this essentially led to a temporary rationing of foreign currency out of the foreign reserves which had already been reduced because of an emergency collateralized loan to the Kaupthing Bank. Foreign currency was rationed in order to secure uninterrupted imports of food, medicine, fuel and other necessities.

The reintroduction of capital controls was not an easy step by the authorities as the capital account had been fully liberalized only as recently as in 1995 when Iceland joined the EEA. Before that, Iceland had a long history of exchange controls that to some extent restricted trade and economic growth in the country.

Based on a significant reduction in reserves as the scale of capital flight became apparent, the Icelandic authorities and IMF staff became concerned that if the krona were to be floated without capital controls, a vicious spiral would be created of a falling exchange rate, sharp balance sheet deterioration and limited access to foreign finance. The situation could resemble the one in Indonesia during the Asian crisis where the exchange rate collapsed, companies became bankrupt and it took two years for the exchange rate to move from the bottom. As most Icelandic household debt is indexed to inflation, there was a genuine concern that household balance sheets could be seriously impaired because of the rapid pass-through to the exchange rate. Technical assistance on capital controls was requested from the IMF in November 2008 and controls were subsequently implemented on November 28, 2008.

The IMF provided expert advice on the introduction of capital controls in 2008, which included the design of legislation and regulations that were compatible with the international obligations of Iceland, especially with regard to the IMF's Articles of Agreement (AoA) but also in relation to the EEA agreement and OECD best practices. The general principle applied was that current transactions would be allowed without restrictions and outward capital transactions of residents would be fully blocked. The IMF underlined the need for equal treatment and non-discrimination of foreign entities in line with the AoA and capital transactions of non-residents would be allowed between non-residents. The essential discrimination against residents, which inevitably followed from capital account restrictions, was not perceived as being unfair or giving privileges to certain parties. An important principal decision was to avoid creating multiple currency practices and prevent official action from causing exchange rate spreads and cross rate quotations to differ unreasonably from those that arise from the normal commercial costs and risks of exchange transactions.

The demarcation between domestic and foreign entities created complications. Initially, only capital account transactions were to be restricted, while trade in goods and services (current account) would be unrestricted. Some complications arose as trade was often conducted in such a way that the proceeds from goods or services trade took on the character of capital transactions to circumvent the capital controls. In this area the IMF supplied expert advice on how to classify transactions and put in place the appropriate conditions and regulations. The IMF also provided expert advice on common methods of circumvention and ways to contain such activities.

Some current transactions in financial markets, as defined by the IMF, were used to circumvent controls. Most notably this included interest payments and moderate amortization of bonds. This practice was subsequently limited following consultation with the IMF. The IMF also provided proposals on the issuance of exemptions, permits and the practical supervision of exchange controls and followed the implementation with timely advice as appropriate.

Iceland's exit strategy

The crisis situation demanded rapid action to stem destructive capital outflows. Initially, the controls were seen as a temporary policy tool to buy time while the authorities tackled the economic crisis. An exit strategy would then be designed as more clarity emerged, including the status of foreign assets and liabilities. When designing the first exit strategy in July 2009, some differences arose between the Icelandic authorities and IMF staff regarding, for example, sequencing. The authorities suggested the use of foreign currency auctions as this would address potential pressure from capital outflows from the lowest pressure point. This measure, in the staff's opinion, should only be used at later stages when long-term legacy krona holdings had been mostly eliminated. The Fund stressed a liberalization strategy as a prior action for the intended review in August 2009. As the Fund would not support an auction process in the first part of a liberalization strategy, a gradual liberalization of long-term assets was chosen.

The views on the exit strategy ultimately converged. The present strategy has been designed by the Icelandic authorities with IMF involvement mostly through Article IV and program review discussions and the IMF has given expert advice on the structure of the officially published strategy and communication. The sequencing and proper conduct of capital-account liberalization has been extensively discussed and presented in various IMF publications. The Icelandic authorities will certainly benefit from the knowledge and experience obtained by the member countries with regard to the capital-liberalization process.

In conclusion, Iceland's overall experience of the IMF's support in the design of and exit from capital flow management measures has been a positive one and in line with the IMF's policy of constructive advice and strong domestic ownership of program design and implementation.

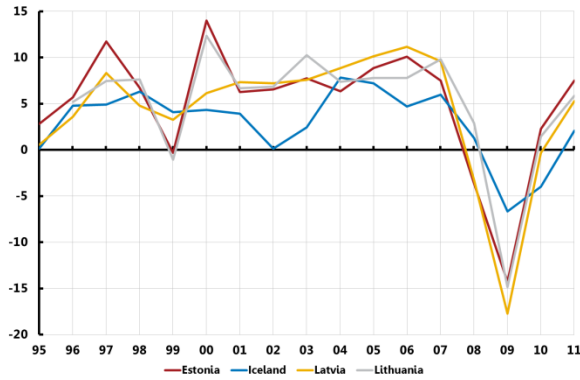
Latvia's partial deposit freeze on Parex Bank

Unlike the case of Iceland, only minor restrictions on capital flows were imposed in Latvia. The partial deposit freeze was the only exceptional measure implemented in the case of Parex Bank. It was proposed by Latvia, and the IMF agreed with the necessity of the measure.

Following the restructuring of Parex Bank, the partial deposit freeze was only attributable to a minor proportion of deposits and was fully removed in December 2011.

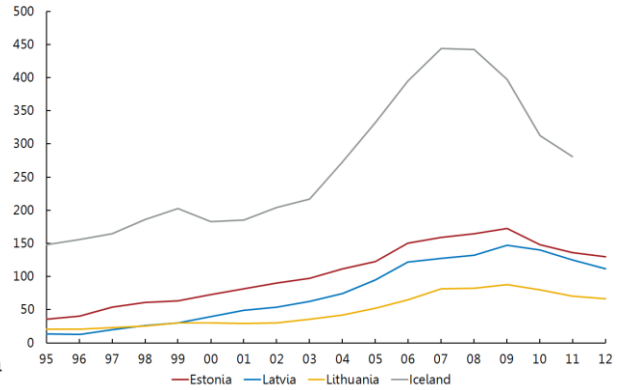
Chart Supplement

Chart 1. Gross Domestic Product
Annual percentage change



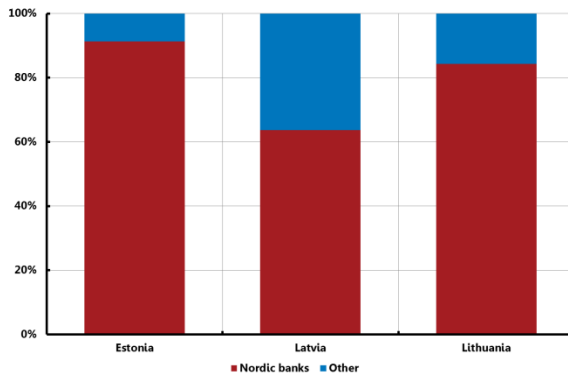
Source: Eurostat

Chart 2. Private sector debt in relation to GDP
Percent



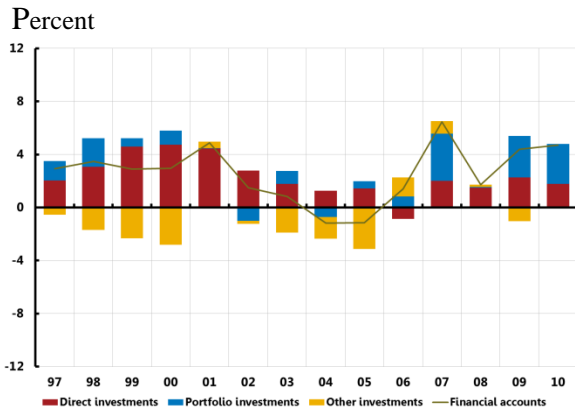
Sources: Reuters EcoWin and Central Bank of Iceland

Chart 3. Market shares of Nordic banks' lending in the Baltic countries March 2011
Percent



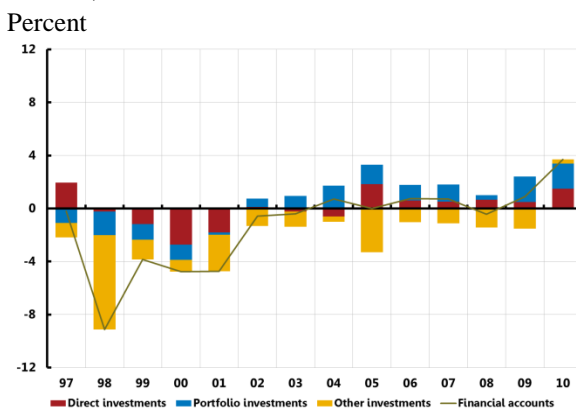
Sources: Bank reports and the Riksbank

Chart 4. Composition of net capital flows in relation to GDP, Brazil
Percent



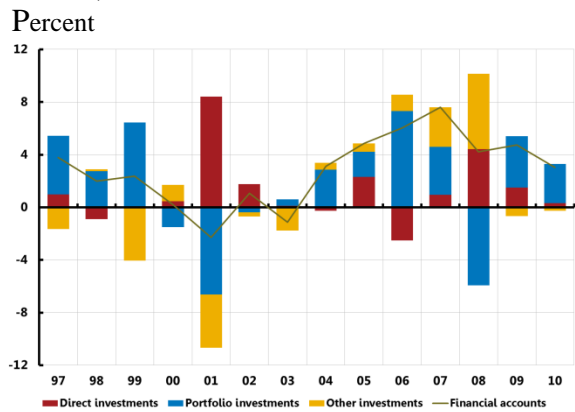
Source: Reuters EcoWin

Chart 5. Composition of net capital flows in relation to GDP, Indonesia
Percent



Source: Reuters EcoWin

Chart 6. Composition of net capital flows in relation to GDP, South Africa
Percent



Source: Reuters EcoWin