

# Implementation of macro-prudential tools

## Some examples from Iceland

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*Teaser:* Some macroprudential tools have been implemented in Iceland by the Central Bank and the Financial Supervisory Authority, some through their cooperation in the Financial Stability Council. It is speculated here that rather than looking at the effects of macroprudential tools in dampening effects of financial swings on the economy (or of economic swings on the financial sector) the financial supervisor may be inclined to measure their success by their effects on the resilience of individual banks while the central bank focuses on the effects on monetary policy transmission.

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*Disclaimer:* Views expressed in this chapter are those of the author and should not be taken as the views of the Central Bank of Iceland.

### **[A] Introduction**

A consensus formed following the 2007 global financial crisis among those working in financial stability that something had to be done to prevent this from happening again. A plethora of instruments were suggested as tools to battle systemic financial risk under the banner of macro-prudential policy. Some of the tools were new, some had been in use, some even for different purposes. Following guidelines from the European Systemic Risk Board (ESRB) new

policy institutions are being equipped with tools and given legal powers to interfere with the workings of the financial markets for mitigating systemic risks and preventing its concentration. This is done before it is clear whether to mitigate the effects of swings in financial markets on the real economy or to dampen the effects of economic swings on financial institutions (Haldane 2014). It is also done before there is a consensus on which are more appropriate, quantity restrictions or price incentives, or if that varies given some conditions.

The Central Bank of Iceland (CBI) published in 2012 a report called *Prudential rules following capital controls* (Central Bank of Iceland 2012). It addressed the changes in financial rules and legislation related to the foreign exchange market deemed necessary in order to prevent a repetition of the events that culminated in the fall of 2008 when the three international Icelandic banks were taken over by the Financial Supervisory Agency (FSA). The report focussed on liquidity of the banking sector, foreign currency mismatches on their balance sheets and foreign currency lending to unhedged parties. Instruments for curbing capital inflows were also suggested as well as temporary speed limits on pension funds' accumulation of foreign assets.

Similar suggestions had been made in a report on the failure of the Icelandic banks by a special parliamentary commission (Hreinsson et al. 2010). The commission suggested that the Central Bank needed to use other methods than merely its policy rate for mitigating the risk from carry trade. For example it should have applied liquidity rules to foreign currency financing at the banks or introduce special reserve requirements on their foreign funding.

The commission also suggested implementation of tools that would be useful in stemming excessive growth in mortgage lending, such as regulating the maximum loan-to-value (LTV) ratios for mortgage lending. It even suggested countercyclical LTV ratios which would thus be lowered during expansions and raised again during downturns in the economy.

## **[A] Macroprudential institutions**

The Icelandic Financial Stability Council (FSC) was established in 2014. It is headed by the finance minister and other members are the governor of the central bank and the general director of the financial supervisory authority. The council meets at least three times a year and makes decisions based on input from the systemic risk committee, which includes the governor and deputy governor of the central bank, director general and deputy director general of the financial supervisory authority and a specialist appointed by the minister of finance. The systemic risk committee assesses the state and prospects of the financial system and systemic

risk and financial stability, based on joint analysis by the central bank and the financial supervisor.

The FSC makes suggestions to the implementing agency (financial supervisor or central bank) on their policy actions. The macro-prudential objectives include four objectives laid out by the ESRB, i.e. preventing and mitigating systemic risks that may arise from: 1. excessive credit growth and leverage, 2. excessive maturity mismatch and market illiquidity, 3. direct and indirect exposure concentrations, and 4. misaligned incentives with a view to reducing moral hazard (European systemic risk board 2014). In addition the Icelandic financial stability council has adopted two more objectives: 5. to mitigate undesirable effects of excessive cross-border capital flows which can exacerbate the business cycle, and 6. combat contagion and other weaknesses in financial infrastructure.

The CBI has also started, in collaboration with the FSA, to impose annual stress tests on the banks in order to gauge the resilience of the banking sector. The results of the stress tests are used for assessing risks to financial stability and as a reference for setting macro prudential tools such as capital buffers (Kaloinen et al. 2017).

## **[A] Macroprudential tools and examples of implementation**

### **[B] *Capital buffers***

The FSC makes suggestions on three capital buffers, due to systemic importance, systemic risk and the counter-cyclical capital buffer (which is changed in a pro-cyclical manner). The cyclical buffer is revalued quarterly and the systemic importance buffer at least annually. The FSA decides the level of the buffers in accordance with the suggestions made by the council.

So far the FSC has on five occasions made suggestions on the counter-cyclical capital buffer (currently at 1.25%), twice on the buffer for systematically important financial institutions (2%) and once on the systemic risk buffer (3%).

### **[B] *Loan-to-value caps***

Evidence identifying excessive credit growth as a key driver of financial crisis abound and increased leverage has been shown to amplify the effects, particularly when leverage builds up in the private sector (Reinhart and Rogoff 2009). A temporary rise in housing demand, e.g. due to easing of financial conditions, could be mitigated by shifting the demand curve back,

e.g. by lowering mortgage LTV ratios, or by increasing the cost of supplying mortgages, e.g. by raising capital requirements when mortgage credit growth increases (Eliasson 2018).

Since April 2017 the FSA has power to limit mortgage LTVs and either debt-to-income or debt-service-to-income (DSTI) ratios. The purpose is to limit mortgage lending when house prices are rising rapidly and reduce the risk of a housing asset bubble. If successful this reduces the risk of defaults and the size of potential bank losses. These tools are, however, also useful in implementing various elements of housing policy.

LTVs and DSTIs are different from other instruments for limiting credit in that they address the borrower rather than the banks who supply credit. In the context of overall macroeconomic policies Gelain et al. (2013) found limits on debt to income to be a more effective tool to dampen volatility in the economy than e.g. changing the central bank's policy rate in response to asset prices or credit growth.

In July 2017 the FSA imposed an 85% cap on mortgage LTVs (90% for first time buyers). This was at or close to the maximum ratios seen in years and was introduced at the height of a housing boom which seemed to be driven by a supply-and-demand mismatch rather than credit growth. The FSA justified the LTV caps such that it is intended to mitigate the adverse effects of excessive credit growth in an upswing which later, when house prices fall, could destabilize the financial system. The LTV regulation is also intended to increase the resilience of the household sector against lower future house prices and limit expected loan losses of mortgage lenders. The main explanation for the currently high house prices is, however, said to be a lagged response of supply in the housing market rather than growing credit.

## **[B] *Capital flow management***

In the spring of 2016 the CBI introduced a new policy tool, intended to dampen and affect the composition of capital flows to the country. Foreign currency investors in certain types of bonds and interest bearing deposits were required to make term deposits which were controlled by the CBI and held for twelve months at zero interest rate.

The effects of this tool depend on the investment period, the term of the reserve, the interest on the reserve account and the interest rate differential between the countries. The return on the investment also depends on the exchange rate movements during the investment period.

The composition of inflows, with respect to the asset-type, changed significantly following the introduction of the capital flow management tool (CFM). For the twelve months prior to the introduction of the CFM bond investments accounted on average for 72% of

inflows. For the twelve months following the introduction of the CFM 6% of inflows were on average invested in bonds. Total inflows into registered bonds fell from 81 b.kr. (3.3% of GDP) to 8 b.kr. in twelve month periods before and after the introduction of the CFM. Total registered inflows counting all asset types increased from 107 b.kr. to 134 b.kr. between the two periods. Dropping an outlier in March 2017 due to non-residents' acquisition of holdings in a domestic commercial bank the total twelve month inflow in the second period is 85 b.kr. The CFM is primarily effective in diverting inflows from bonds to other types of assets. The fall in inflows in the bond market and the possible effect on long-term interest rates is the main measure of effectiveness.

## **[A] Summary and a critique**

The experience of the macro prudential framework and setting macro prudential tools in Iceland is short. The CFM set by the CBI appears to be somewhat successful. It succeeded in diverting foreign investment from long term government bonds, facilitating transmission of monetary policy. It is, however, unclear whether it affected the size of inflows and thus if it functioned well as a macroprudential tool. The LTV set by the FSA may have been successful. It appears to have been introduced at the height of the housing boom, albeit close to historical maximum levels. It remains to be seen if it will be loosened during the next downturn or if the FSA will be tempted to tighten the LTV in order to support the banks' performance rather than dampening the cycle.

The FSC was set up swiftly after the financial crisis of 2007 and 2008 as a cooperation forum for the ministry of finance, CBI and FSA on matters of financial stability. It makes suggestions on some macroprudential tools to the relevant institution, the FSA or CBI. There is a risk that in effect the FSA and the CBI will specialise in the tools they are most used to, providing the bulk of the supporting research, steering the discussion and then implementing the decision.

The CBI's stress tests for the banking sector have not yet been actively used to support implementation of macro prudential policy tools. There is a risk that these stress tests will eventually move into supporting other stress tests conducted on the bank level by the FSA which are currently used in determining the appropriate capital requirements for the banks. It is tempting to interpret the stress tests for the banking sector in a similar way and use them for determining the level of system wide capital requirements, such as the buffers suggested by the FSC.

If there is a severe negative shock in financial or economic conditions, and the banking sector fails, it would be interesting to see if the policy institutions (such as central bank, financial stability authority, deposit insurance fund, resolution agency etc.), can provide sufficient support or if they fail in doing so, and in that case how they might be strengthened. That would be a different approach to stress testing the financial system.

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