Macroprudential policy in the Nordic-Baltic area

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In this article we provide an introduction to and overview of macroprudential policy implementation in the Nordic-Baltic area. The Nordic-Baltic region is one of the most tightly integrated regions in the world, not least in terms of financial integration. This has spurred the need to cooperate and tackle common risks and the region has a long history of cooperation in the financial stability area. Macroprudential policy, a fairly new field in economic policymaking, aims at reducing the build-up of risks in the financial system as a whole. For a region with strong financial links, and where microsupervision is divided between countries, macroprudential policy will therefore be of particular importance. Our overview shows that significant steps have been taken on the cooperative front and a number of macroprudential measures have been implemented. At the same time, it is too early to conclude how efficient the macroprudential measures have been in mitigating systemic risk.

A region with strong financial integration

The Nordic-Baltic banking system is highly integrated and concentrated, and is dominated by a handful of large banks. Six regional banks make up 90 per cent of the total assets of the regions publicly-listed banks.[1] Four of these banks, Handelsbanken, Nordea, SEB and Swedbank are headquartered in Sweden. The consolidated banking assets of the four Swedish banks, i.e. taking into account their cross-border assets as well, is equivalent to almost four times the size of Swedish GDP.[2]

The financial integration of the Nordic-Baltic region started in the latter part of the 1990s. It was during these years that the Swedish bank Nordbanken merged with the Finnish bank Merita, forming the largest banking group in the Nordic countries under the name Nordea. Financial integration continued in the 2000s with Nordea, SEB, Swedbank, DNB and Danske Bank merging with local banks in the Baltic countries, soon to dominate the Baltic banking market (see Chart 1). The cross-border linkages are mainly through subsidiaries. This is, for example, the case for Swedbank and SEB's operations in the Baltic countries. Nordea's Baltic operations are organised in branches while its operations in

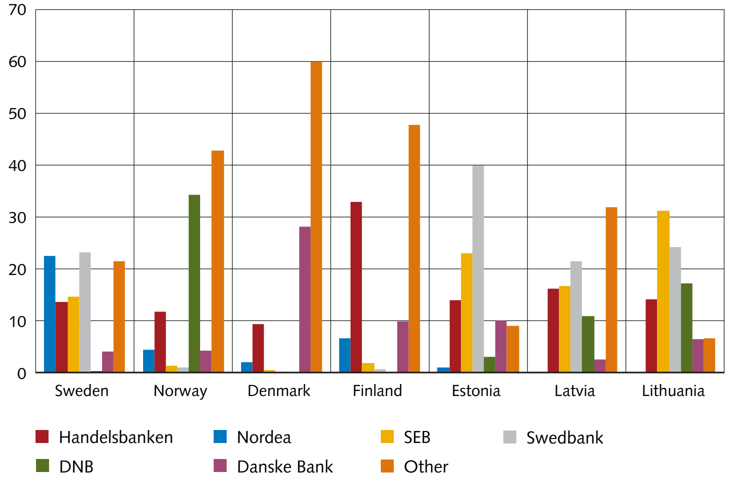
* This article is based on an article published in the Financial Stability Journal of the SEACEN Centre (Farelius, (2015)). The opinions expressed in this article are the sole responsibility of the authors and should not be interpreted as reflecting the views of Sveriges Riksbank.

1 IMF (2013).

2 The Riksbank (2015).

the Nordic countries are subsidiaries. However, Nordea has initiated preparatory work to simplify its legal structure by changing the Norwegian, Danish and Finnish subsidiary banks into branches[3].

Chart 1. Bank integration in the Nordic-Baltic area: share of lending to the public
Per cent



Sources: Statistics Sweden, Norges Bank, Statistics Norway, Statistics Finland, Association of Latvian Commercial Banks, Association of Lithuanian banks, Estonian Financial Supervision Authority, bank reports and the Riksbank (2009)

Financial integration and challenges

RISK OF CONTAGION

There are several advantages with financial integration. Among these is increased competition that in turn leads to a greater variety of financial products for companies and households, as well as lower prices and interest rates. However, financial integration means that financial systems become increasingly woven together which increases the risk that a problem in one country and in one bank can easily spread to other banks and across borders.

All eight Nordic-Baltic countries have recently experienced financial crises in various forms. Norway, Finland and Sweden were hit severely by banking crises in the late 1980s and early 1990s, all three ranked as part of the “big five” advanced economy crises according to Reinhart and Rogoff[4]. In those days, the banking systems were almost exclusively domestic as were the crises. The crisis in the Baltic countries in 2008-2009, on the other hand, showed how problems in the subsidiaries spread to the Swedish parent banks and thus quickly became an issue for systemic stability in Sweden.

3 Nordea (2015).
4 Reinhart and Rogoff (2008).

In 2008, as the global financial crisis hit Europe, domestic demand collapsed in the Baltic countries following the burst of a property bubble. Fear of a deep recession and abandonment of the fixed exchange rates against the euro, which would result in large loan losses, made investors lose faith in the Baltic banks and consequently in their parent banks.

The parent banks in Sweden and in the other Nordic countries fund themselves to a large extent through the wholesale market. During the crisis in the Baltic countries, market funding for the Swedish parent banks became both more expensive and scarcer. Due to the fact that the Swedish banking system is highly concentrated and interconnected, banks with small or non-existing exposures to the Baltic countries also felt this effect.

Despite the adverse economic development in the Baltic countries, parent banks continued to roll over a large share of their loans to their subsidiaries, acknowledging that cutting credit would probably lead to a worse outcome.[5] Hence, while the risk of contagion is high in an integrated financial system, the close connection also helped to stabilise the financial system, at least in the case of the Baltics.

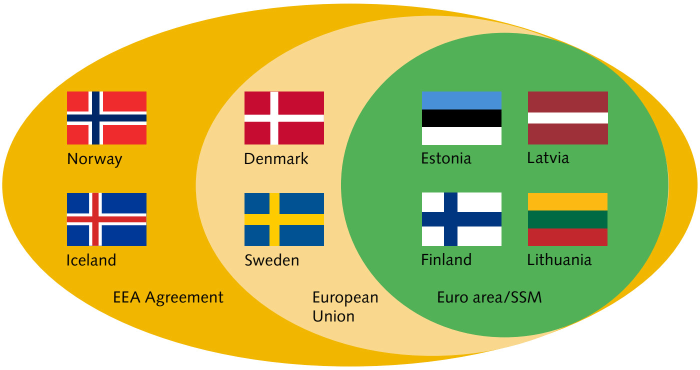
Since the financial crisis of 2008-2009, all three Baltic countries have joined the euro area, and the Nordic banks' subsidiaries in the Baltic States increasingly fund themselves through domestic deposits.

HETEROGENEOUS COUNTRIES

Although the financial links are strong in the Nordic-Baltic region, there are significant differences between the countries. The level of GDP per capita is, for example, larger in the Nordic countries compared to the Baltic countries (Chart 2). Six of the countries participate in the European Union. Four of these countries are also euro area members and therefore participate in the Single Supervisory Mechanism (SSM) and are hence under the supervision of the European Central Bank's (see Figure 1). For those countries outside the euro area, three countries (Norway, Iceland and Sweden) are inflation-targeters with floating exchange rates while one country (Denmark) pursues a fixed exchange rate regime against the euro.

5 Committee on the Global Financial System (2010).

Figure 1. Classification of type of membership (EEA, EU, SSM)

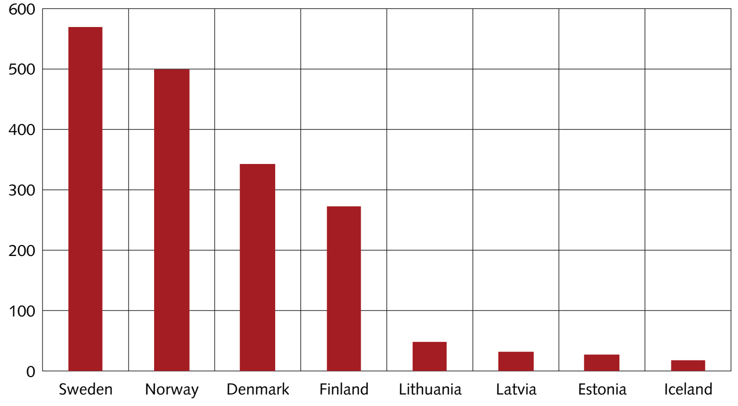


Source: Nordic-Baltic central banks

These differences pose some challenges. One such challenge is that the responsibility for supervision lies with the country where the bank is legally domiciled. That means that parent banks and their subsidiaries are regarded as independent entities and that supervision of a banking group is shared between several countries. When it comes to branches, the supervisory responsibility lies with the home authority, regardless of how large the bank's foreign operations are. Thus, should Nordea change into a branch structure, the sole responsibility would fall on the Swedish FSA while the bank plays an important role for financial stability in other countries.

The fact that the banks with branches also operates in countries with different currencies also poses a challenge should the bank need liquidity assistance in a currency other than that of its home country. That is because the central bank only has unlimited access to its own currency. Furthermore, should there be a need to restructure the bank; the costs associated with such a measure would fall on the home country.

Chart 2. GDP in 2014 for the Nordic and Baltic countries
USD billion



Source: IMF (World Economic Outlook)

Macroprudential policy implementation

Following the global financial crisis of 2007-2009, extensive international regulatory work started in order to remedy weaknesses in the financial system and its oversight. A new area called macroprudential policy was developed. The aim of macroprudential policy is to prevent the build-up of risks in the financial system as a whole, thereby safeguarding financial stability and the real economy. Macroprudential policy thus takes a systemic perspective as opposed to microprudential supervision, which focuses on single institutions.

In the years that have followed, countries have set up institutional frameworks for conducting macroprudential policies, and on an EU-level, the European Systemic Risk Board (ESRB) was established in 2010.[6] Macroprudential tools have also been introduced via the Capital Requirements Regulation and Directive (CRR/CRD IV), including the counter-cyclical capital buffer and the Systemic Risk Buffer[7]. Though macroprudential tools were available before the financial crisis, these were mainly aimed at reducing credit growth. CRR/CRD IV has thus paved the way for more diverse means of tackling both cyclical and structural risks.

MACROPRUDENTIAL POLICY IN THE NORDIC-BALTIC AREA

All the countries in the Nordic Baltic region have taken decisions to formally designate a domestic authority or body in charge of macroprudential policy. How the countries have chosen to implement the institutional set-up differs however (see Table 1). In some countries (Estonia and Lithuania), the central bank is in charge of macroprudential policy. In Finland and Sweden, the Financial Supervisory Authority has this role while in Norway; the

6 ESRB is mandated with macroprudential oversight of the financial system within the European Union in order to contribute to the prevention or mitigation of systemic risks to financial stability in the EU. The ESRB is part of the European System of Financial Supervision (EFSF).
7 See Niemeyer (2016) for a background to the Basel III framework.

Ministry of Finance is the designated macroprudential authority. In Denmark, the Minister for Business and Growth has the role as designated authority. Domestic cooperative bodies (councils) have been formed in Denmark, Iceland, Latvia and Sweden, bringing together relevant authorities in the macroprudential area. In the Icelandic and Swedish councils, the Ministry of Finance is the chair, while in Denmark; the Central Bank Governor chairs the Systemic Risk Council. Some countries also make a difference between the designated authority and the competent authority for macroprudential policy. For example, in Denmark, the Minister for Business and Growth is the designated authority for the countercyclical capital buffer, while the supervisory authority is the competent authority for risk weights.

Table 1. Institutional responsibility for macroprudential policy

	DENMARK	ESTONIA	FINLAND	ICELAND	LATVIA	LITHUANIA	NORWAY	SWEDEN
Central bank		×				×		
Supervisory authority			×		×			×
Government	×						×	
Council	×			×				×

Sources: Central banks and supervisory authorities in the Nordic and Baltic countries

With an interlinked banking system and the crisis of 2008-2009 in mind, the Nordic-Baltic countries established the Nordic-Baltic Macroprudential Forum (NBMF) in 2011, under the chairmanship of Stefan Ingves, Governor of the Riksbank[8]. With the NBMF, a high-level forum was created, bringing together both central bank governors and heads of supervisory authorities in the whole region for the first time.[9]

While the NBMF is an informal body with no decision-making authority, the Forum has a mandate to discuss risks to financial stability in the Nordic-Baltic countries and the implementation of macroprudential measures. The NBMF has also discussed a number of separate topics such as the application of risk weights in the Nordic-Baltic area, and reference rates. Separate work streams have also been established for more in-depth examination of various topics on, for example, the introduction and analytical frameworks of the countercyclical capital buffer and reciprocation of macroprudential policy.

CHOICE AND DESIGN OF INSTRUMENTS

As is generally the case elsewhere, macroprudential policy is a fairly new concept in the Nordic-Baltic area. Prior to the financial crisis in 2008, macroprudential policy implementation was limited to a few cases involving instruments aimed at dampening

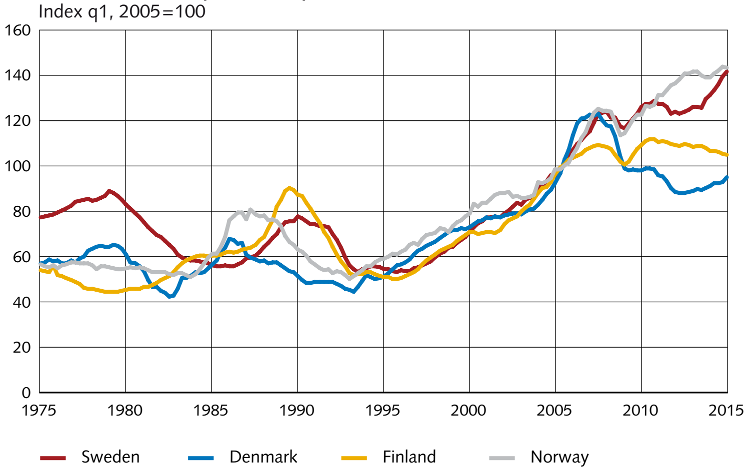
8 Farelius (2015).

9 Prior to 2011, Nordic central banks meet in various forms and different levels of seniority, for example the Nordic central bank governors, who have regular meetings. The heads of the Nordic supervisory authorities also meet regularly. However, there was no high-level forum for both central bank governors and heads of supervisory authorities in the Nordic and Baltic countries prior to NBMF.

credit growth, for example the increase of risk weights for housing loans from 50 per cent to 100 per cent in the calculation of capital requirements in Estonia in 2006. Another example is a loan-to-value (LTV) limit implemented in Latvia in 2007.

The implementation of macroprudential instruments in different countries should be seen in the light of different stages of financial cycles and different structural characteristics. The Nordic and the Baltic countries are at present faced with both domestic and regional risks to financial stability. Domestically, elevated house prices and household debt levels could make it more likely that house price or interest rate shocks could quickly lead to reduced aggregated demand[10]. Chart 3 shows that house prices have been on the rise in all Nordic countries during the last ten years. In Norway and Sweden, the rise has been particularly prevalent.

Chart 3. Real house price developments in the Nordic countries
Index q1, 2005=100



Source: The Riksbank

From a regional perspective, given the financial openness of the Nordic economies, spillovers from the pan-Nordic banking system are potentially large. From a structural perspective, the large size of the banking system relative to GDP could increase the potential severity of a crisis. Moreover, the relatively heavy dependence on wholesale funding in some countries adds to risks. Concerning instruments targeted towards imbalances in the housing market, the loan-to-value limit is the most prevalent in the Nordic-Baltic region. As can be seen from Table 2, the LTV limit is now in use or being phased-in in all Nordic-Baltic countries with levels ranging from 85 to 95 per cent. Also in the European Union, the LTV limit is the most commonly used macroprudential tool[11]. Other instruments targeting the housing market are loan-to-income (LTI) limits or debt-

10 IMF (2013).
11 ESRB (2015).

service-to-income (DSTI) ratios. A few countries combine LTV limits with income-related limits. For example, in 2015 Estonia introduced a LTV limit of 85 per cent combined with a DSTI limit of 50 per cent as well as an amortisation period of 30 years[12].

Table 2. Macroprudential policy implementation in the Nordic and Baltic countries

	LTV RESTRICTION	DSTI	COUNTER-CYCLICAL CAPITAL BUFFER	SECTOR SPECIFIC RISK WEIGHT, RISK WEIGHT FLOOR	SYSTEMIC RISK BUFFER (SRB)
Denmark	X		X		X
Estonia	X	X	X		X
Finland	X*		X		
Iceland	X				
Latvia	X		X		
Lithuania	X	X	X		
Norway	X		X	X	X
Sweden	X		X	X	X

	CAPITAL CONSERVATION BUFFER	ADDITIONAL CAPITAL REQUIREMENTS FOR SYSTEMICALLY IMPORTANT INSTITUTIONS	LIQUIDITY COVERAGE RATIO	NET STABLE FUNDING RATIO	AMORTIZATION REQUIREMENTS/ MAXIMUM LOAN MATURITY
Denmark	X*	X**	X		
Estonia	X		X		X
Finland	X				
Iceland			X	X	
Latvia	X		X		
Lithuania	X		X		X
Norway	X	X			X
Sweden	X	X	X		X*

*= planned measure. **= SRB used for additional capital requirements for systemically important institutions.

Note. Announced measures as of September 2015. The table shows both implemented measures as well as the implementation of the legal framework for each measure. For example, in some countries, the legal framework for the countercyclical capital buffer is in place but the buffer is not activated above 0 per cent. The systemic risk buffer (SRB) is intended to increase the resilience of the financial sector to non-cyclical risks that could have a serious negative impact on the national financial system or the real economy.
Sources: Nordic and Baltic central banks and supervisory authorities

A few countries have also implemented measures in the risk weight area to address risks related to household debt and housing markets. In view of the very low risk weights resulting from the banks internal models, both Norway and Sweden have taken measures to raise the floor on risk weights for mortgages[13, 14].

The countercyclical capital buffer is also in the process of being implemented. Norway and Sweden are the sole countries in the region to have activated and implemented the buffer above zero per cent while all countries will have introduced the legal framework for the buffer by 2016. Further, an amortisation requirement will be implemented in Sweden

12 Eesti Pank (2014).
13 Finanstilsynet (2014).
14 Finansinspektionen (2014).

in 2016 in the face of rapidly increasing household indebtedness. These amortisation requirements were originally to be implemented in 2015 but due to uncertainties regarding the mandate of the Swedish FSA to implement these restrictions, implementation was postponed[15]. Amortisation requirements have been in place in Norway since July 2015.

Tax incentives for borrowing are also fairly common in the Nordic countries although in a few countries there are discussions on reducing them (Sweden) while reductions of tax deductibility have been adopted in both Denmark and Finland.

The exact design of the macroprudential instruments varies across the Nordic and Baltic countries. In some cases they are designed as a strong guideline from the supervisor. For example, this applies to the LTV limit in Sweden[16]. On the other hand, in the three Baltic States, the LTV limit is a legal requirement.

THE EFFECTIVENESS OF MACROPRUDENTIAL MEASURES

The limited research on the effectiveness of macroprudential measures so far shows that the measures with the most effect on credit growth and house prices are reserve requirements, increased risk weights and LTV limits. Exactly how the instruments work differs from country to country. In some cases the level of the instrument is important while in other cases the change in level is more important. Kuttner and Shin (2012) have examined the effectiveness of non-interest rate policies and macroprudential policy in a sample of 57 countries during 1980-2011. They find that housing credit responds in the expected way to changes in the maximum DSTI ratio, the maximum LTV ratio, exposure limits and housing-related taxes. Of the policies targeted on the demand side of the market, the evidence indicates that reductions in the maximum LTV ratio do less to slow credit growth than lowering the maximum DSTI ratio does. According to Kuttner and Shin, this may be because during housing booms, rising prices increase the amount that can be borrowed, partially or wholly offsetting any tightening of the LTV ratio.

The IMF (2015) has studied the use of macroprudential policies for 119 countries over the period of 2000-13, covering many instruments. The conclusion is that emerging economies use macroprudential policies most frequently; especially foreign exchange related ones, while advanced countries use borrower-based policies more. Usage is generally associated with lower growth in credit, notably in household credit. Effects are less in financially more developed and open economies, however, and usage comes with greater cross-border borrowing, suggesting some avoidance. And while macroprudential policies can help manage financial cycles in booms, they work less well in busts.

South Korea has quite considerable experience in using macroprudential tools and how effective they are. The LTV and DTI limits are considered to have contributed to a dampening of house prices and household indebtedness in the country[17].

15 The original proposal introduced in the spring of 2015 included a requirement to amortise down to a LTV of 50 per cent and would be applicable to new loans only. Finansinspektionen (2015).

16 Prior to July 2015, the LTV in Norway was part of a soft guideline for prudent mortgage lending.

17 Kang (2014).

The effectiveness of the measures in the Nordic-Baltic region

As stated above, it is only after the introduction of Basel III in Europe (via the CRR/CRD IV) that a broad range of macroprudential instruments has become available. Thus given the relatively limited experience with macroprudential instruments in the Nordic-Baltic region, it is too early to draw any conclusions as to how effective the measures have been. Latvia introduced a LTV limit of 90 per cent in 2007, just prior to the onset of the financial crisis, which affected the country severely and caused rapidly falling house prices. While it is difficult to draw any firm conclusions as to the effectiveness of the measure, there was anecdotal evidence that the measure helped to reduce the speculative features of the housing market.

Lithuania introduced a number of measures in 2011 targeted towards the housing market[18]. The measures included a LTV limit in combination with a DSTI limit and an amortisation requirement. These measures do not seem to have had a significant effect on credit growth, probably because the demand for housing credits was low after the financial crisis in 2008. Norway introduced a LTV limit of 90 per cent in March 2010 as a soft guideline from the FSA. This limit was subsequently tightened to 85 per cent in December 2011 and has recently been introduced in a regulation which also includes requirements for amortisation[19]. While the increase in the rate of growth for mortgages in Norway has fallen since 2012 and there are some signs that the share of debt with very high LTV has been reduced somewhat, it is not possible to draw any firm conclusions as to the role of the LTV recommendation in this development, especially since it was only a soft guideline up until July 2015. Sweden introduced a LTV limit of 85 per cent in October 2010. The measure is deemed to have contributed in curbing the recent trend in rising loan-to-value ratios in Sweden. The mortgage cap has dampened household indebtedness and unsecured loans have become less common[20].

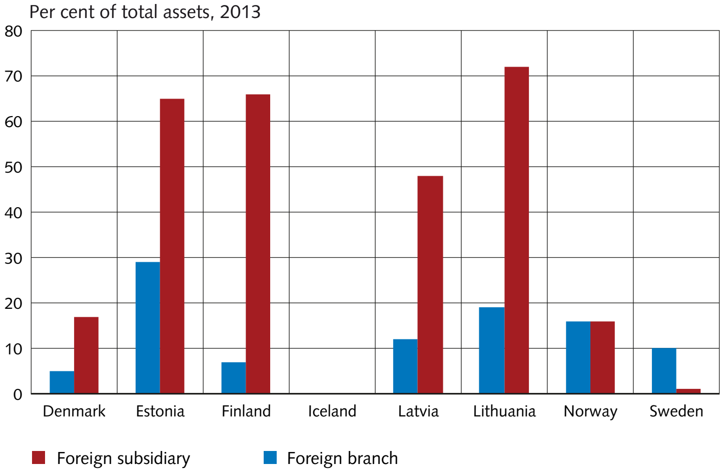
RECIPROCATION OF MACROPRUDENTIAL POLICY

Reciprocity of prudential requirements is widely regarded as a mechanism aiming to address the negative consequences caused by the differences in prudential requirements in various countries for the same exposure in one of these countries. The term reciprocity refers to an arrangement whereby the authority in the home country recognises the prudential requirement set by the authority in the host country, for exposures through a foreign branch or directly from the home market. This means that for countries with important branches abroad, reciprocity agreements with the home supervisors of these banks will be important for the effectiveness of macroprudential policy. For example, consider a supervisor in a country with a banking system dominated by foreign branches that decides

18 Bank of Lithuania (2011).
19 The regulation includes an amortisation requirement of 2.5 per cent per year for loans with a LTV higher than 70 per cent, a LTV limit of 85 per cent and a stress test for borrowers (borrowers must be able to manage a 5 percentage point interest rate hike) (see Finanstilsynet 2015).
20 Finansinspektionen (2015).

to activate a specific buffer (e.g. the countercyclical capital buffer) for domestic exposures. In order for the measure to be effective, a decision to reciprocate that measure from the home supervisor of the foreign branches would be needed. In the absence of such reciprocity decision, the buffer will only apply to domestic exposures of institutions that fall under the supervision of the host supervisors and, hence, cover fewer exposures and become less effective. Chart 4 shows the relative importance of foreign branches and subsidiaries in the Nordic-Baltic countries. As can be seen, reciprocity for macroprudential policy will be important in for example Estonia, with around 30 per cent of assets in the hands of foreign branches.

Chart 4. Relative importance of foreign branches and subsidiaries in the Nordic-Baltic countries
Per cent of total assets, 2013



Sources: Nordic-Baltic central banks

Reciprocity is mandatory for some instruments in the CRR/CRDIV such as the countercyclical capital buffer (up to 2.5 per cent) and some measures aimed at increasing risk weights and loss-given-default rates. For other measures, such as the systemic risk buffer, reciprocity is voluntary. There are already examples of voluntary reciprocity arrangements in the Nordic area. For example, both Denmark and Sweden have reciprocated a measure to make the calibration of Norwegian IRB-banks' risk weight models for mortgage loans stricter.[21]

Given the importance of reciprocity in some of the Nordic-Baltic countries, work on reciprocity issues started in the NBMF in 2013. This work was later fed into work at the EU level and efforts to design a voluntary framework for reciprocity within the EU have recently been concluded. An underlying principle will be that measures targeting exposures

21 The letter from Finanstilsynet (in Norwegian), the note describing the proposed calibration (in English) and the answers from the Danish FSA (in Danish) and the Swedish FSA (in Swedish) are available at Finanstilsynet's website: http://www.finanstilsynet.no/no/Artikkelarkiv/Aktuelt/2014/2_kvartal/Okte-risikovekter-for-boliglan--nordisk-samarbeid/.

(such as mortgages) should be reciprocated while there would be less of a presumption to reciprocate measures targeting institutions (such as buffers for systemically important institutions). ESRB will be given an essential role in the framework. In the context of this framework, which will be implemented as a recommendation of the ESRB, the EU member state activating a measure will have to notify the ESRB and ask for the measure to be reciprocated. The countries with banks having exposures in the activating country will have to reciprocate or explain the reason for not reciprocating.

One future development that could potentially have important consequences for reciprocity of macroprudential policy is an announced change to the legal structure of Nordea.[22] Should this change be implemented, it will imply that reciprocity issues will become even more important for the Nordic-Baltic area, not least for Finland, as its largest domestic bank now would be in the form of a foreign branch.

CONCLUSIONS

Macroprudential policy implementation in the Nordic and the Baltic countries is a fairly new concept with limited empirical experience. The introduction of the CRR/CRD IV in national legislation has increased both the availability and use of macroprudential instruments. In addition, the institutional responsibility for macroprudential policy has now been clarified and decided in all eight countries. Concerning macroprudential instruments, the LTV limit is the most prevalent instrument, followed by the increased use of the countercyclical buffer. It is too early to draw any conclusions as to the effectiveness of the macroprudential policy measures given the limited empirical experience. Reciprocity of macroprudential policy is important in the Nordic-Baltic context due to strong financial integration and, in some countries, a large share of foreign banks operating through a branch or subsidiary network.

In a financially integrated region such as the Nordic-Baltic, cooperation in the macroprudential area has been promoted, not least with the creation of the Nordic-Baltic Macroprudential Forum (NBMF). The informal nature of the Forum has been promoting good discussions. The fact that the group is relatively small, with less than 20 persons around the table, has also likely helped. Work in the NBMF has also been effective. For example, the work on reciprocity issues was initiated in the NBMF before work at the European level. As the work in the ESRB on reciprocity issues started, the EU could benefit from the work that was already done in the NBMF.

For the future, a number of challenges will have to be tackled. One such challenge is that not all designated authorities of macroprudential policy are part of the Forum. As can be noted in Table 2, both Denmark and Norway have decided that the Government is the

22 "As communicated in the Q2 2015 report, Nordea is working on simplifying its legal structure with the aim of changing the Norwegian, Danish and Finnish subsidiary banks into branches of the Swedish parent company by means of cross-border mergers. The preparations are progressing as planned, including the ability to present a proposal to the Annual General Meeting in March. The changes to the legal structure depend among other on regulatory approvals and a satisfactory outcome of discussions with the local authorities." Nordea (2016).

designated authority. While this challenge should not be overemphasized, this fact will most likely mean that the Forum will remain informal in the future as any strengthening of the mandate of the group would require changes to its composition.

Another challenge is the fact that some countries of the Forum are members of the euro area and hence are in the recently introduced single supervisory mechanism (SSM) among the euro area countries. The SSM assigns some macroprudential responsibilities to the European Central Bank (ECB) for countries in the euro area. The ECB is currently not taking part in the discussions in the Forum and given that it is an informal group, participation will most likely remain unchanged in the future as well. At the same time, as the implementation of macroprudential policy evolves, and given the role of the ECB in the implementation of macroprudential policy in the euro area countries, the question is whether there will be a future need to somehow involve the ECB in the Forum.

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