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The Role of Macro-Prudential Policies in the Boom and Adjustment Phase of the Credit Cycle in Estonia

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Abstract

The Estonian economy experienced an unusually long business and credit cycle during the first decade of the 21st century. The magnitude of the cycle tested what can be achieved by traditional policy tools and the limits of macro-prudential policies. The country's financial sector, almost fully consisting of foreign banks, displayed the complexities of cross-border regulation and supervision. Capital and liquidity requirements that were stricter than international minimums, as well as the build-up of fiscal buffers, were instrumental to engineering an orderly adjustment. Openness and integration, including well-advanced cross-border cooperation, were equally important in maintaining financial stability throughout the global financial crisis.

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by

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The Role of Macro-Prudential Policies in the Boom and Adjustment Phase of the Credit Cycle in Estonia[1]

The Estonian economy has been well positioned to benefit fully from the post-dot-com recovery of the world economy since early 2000s. Deepening financial and trade integration with the Nordic countries, prospective European Union membership, and a flexible economy boded well for continued income convergence and credit expansion. EU membership acceptance in May 2004 gave an extra boost to the country's confidence, investment, and growth. Estonia subsequently entered into an unusually long business cycle. Between 2001 and 2008, Estonia's gross domestic product (GDP) and incomes grew 2.3 times, GDP per capita reached 68 percent of the EU average, and unemployment reached a low point at around 4 percent.

The almost fully Nordic-owned banking sector was ready to expand and meet the pent-up investment demand of corporate entities and households (figure 1). Bank-based financial groups offered a full range of financial products, using e-banking, leasing, and life insurance subsidiaries as delivery channels. Most important, the return on Estonian and Baltic operations was significantly higher than in the banks' home countries, the market was less penetrated, and risks were deemed comparable to those at home, in particular in conventional mortgage lending. Abundant global liquidity, historically low interest rates, and an ample risk appetite and a search for yield offered a supportive global context in the background.

This combination of factors made the credit supply essentially unlimited and decoupled from domestic deposit growth. Unlimited supply was matched with exceptionally strong demand as financing became increasingly affordable and price competition between the banks increasingly fierce, while disposable incomes and corporate profitability were on the rise. Between 2003 and 2008, credit growth averaged 30 percent for corporations and 45 percent for households, lifting real sector domestic debt-to-GDP figures to 107 percent and the loan-to-deposit ratio to 1.75 at the peak (figure 2).

This remarkable convergence in pace and scope presented the authorities with significant macroeconomic and macro-prudential policy challenges. Openness and a high degree of integration played crucial roles in speeding up the pace of convergence, which inevitably led to excesses in domestic asset prices and tight labor market conditions. However, openness and integration were equally instrumental in maintaining financial stability through the global financial crisis, at no cost to taxpayers, and ensuring that the financial sector is ready to finance a new phase of growth and to support continued convergence post crisis.

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Macro-prudential Roadmap

Under Estonia's currency board arrangement, the soundness of the financial sector has always been the first line of defense against market turbulence. Over the course of the past two decades, the Estonian regulatory framework has as a rule been tighter than international minimum standards prescribe. For example, the minimum capital adequacy requirement (CAR) has stood at 10 percent, and capital has consisted essentially of Tier1 capital since late 1990s. The reserve requirement was set at13 percent with a broad calculation base. With signs of the credit market growing heated and imbalances slowly building up, the Estonian authorities relied on a gradual but proactive policy response.

Figure 1. Market shares in bank lending

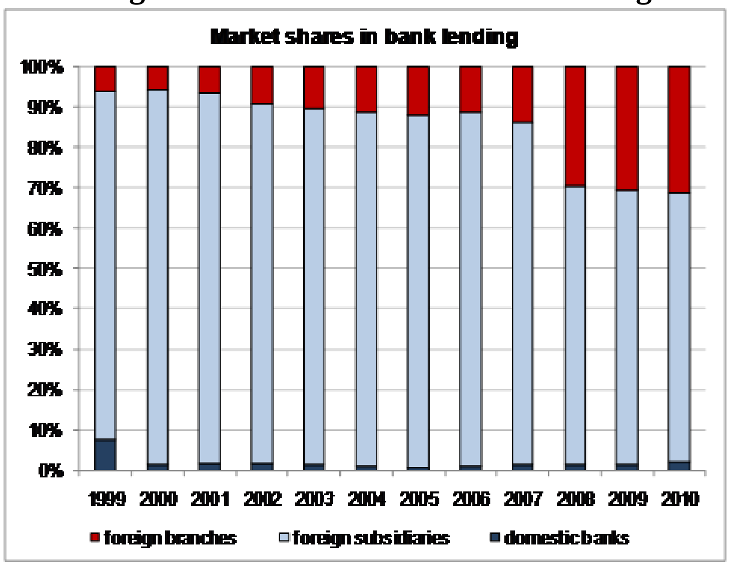
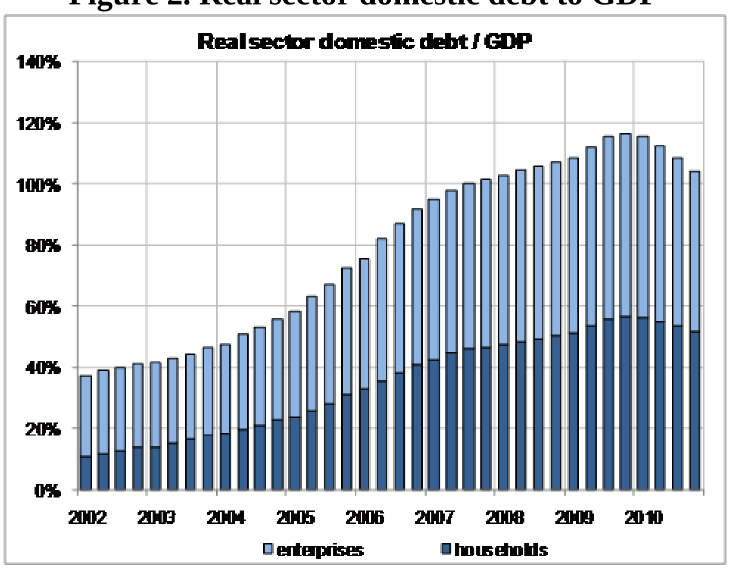


Figure 2. Real sector domestic debt to GDP



Source: Estonian Central Bank and authors' calculations.
Note: In figure 1 the increase in the market share of foreign branches in 2008 reflects the conversion of one subsidiary into a branch.

In 2002 and 2003 the authorities used moral suasion and enhanced supervisory focus on credit risks to raise public awareness about the risks associated with borrowing and to influence banks' credit behavior and risk management. In October 2002 the Bank of Estonia and the Financial Supervisory Authority (FSA) sent a joint letter to the banks, highlighting the risks in the credit market and calling for appropriate credit standards and sound internal risk management in banks. In particular, the recommendations advised banks (1) not to grant housing loans with zero or minimal down payment, (2) to assign more conservative risk assessment than the borrowers' standard rating for commercial real estate loans if the real estate development was not a core business of the borrower, and (3) to require a down payment for consumer loans. The recommendations also stressed the relevance of cyclical factors of the economy to the banks' credit practices. While these recommendations were issued as a "soft-law," the FSA controlled the banks' adherence to the recommendation in the course of on-site inspections. As a response, banks made revisions in credit standards, but the credit cycle was already off to a big start.

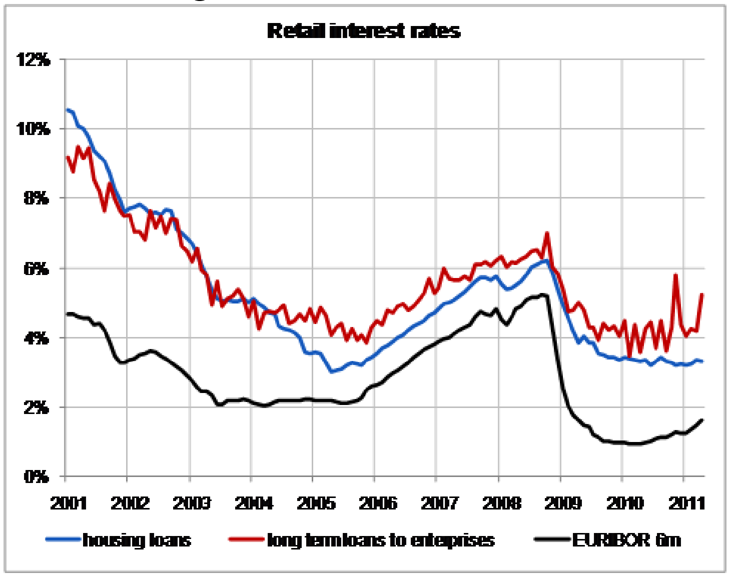
In fall 2003 the central bank recommended eliminating tax deductibility of mortgage interest and phasing out government-sponsored agency KredEx's guarantee scheme for first mortgages, which lowered the required down payment. As the market had developed and banks were offering credit at affordable terms and at competitive rates, the central bank did not see a need to continue with this support scheme. As of 2004 the interest deductibility ceiling was halved to 50,000 kroons and the role of the agency declined as its guaranteeing capacity was capped and market conditions became favorable without KredEx guarantees.

The credit market, however, continued its course, and the impact of moral suasion on the credit market was very limited. Credit growth to households topped 40 percent, financing predominantly mortgages. The number of households with mortgages, nevertheless, stood at a low 10 percent level. Corporate credit became increasingly skewed to the real estate sector and related activities, with about 50 percent of corporate financing from abroad, mostly from parent companies. Banks' capitalization stood healthy at the end of 2003—according to stress tests, the CAR would stay above the statutory minimum of 10 percent even if the banking sector were to sustain additional credit losses equivalent to 5 percent of the total loan portfolio (1 percentage point more than the actual credit losses during the Russian crisis in 1998-1999).

The EU accession in May 2004 was a major milestone and an idiosyncratic positive shock on top of improving global economic conditions. The interest rate differential between the Estonian kroon and the euro narrowed to 30 basis points. The labor market improved steadily, and corporate profit growth was robust. With the EU membership achieved and the euro introduction expected, the euro and the kroon were seen as perfect substitutes under the currency board arrangement. The credit market became increasingly euro-based, with nearly all housing loans being made at a floating rate linked to the six-month Euribor.

Credit activity accelerated again through 2005, with banks' launching aggressive marketing campaigns; risk premia were narrowing, and maturities were lengthening further (figure 3). In addition, the outlook for an increase in euro interest rates was postponed into 2006. The authorities instructed banks not to loosen the credit standards, to properly assess borrowers' repayment capacity, and to apply conservative loan-to-value ratios. To match the growth in risk assets, banks' retained the profits, which led to a higher level of capitalization.

Figure 3. Retail interest rates



Source: Estonian Central Bank and authors' calculations.

In its November 2005 Financial Stability Review the central bank assessed financial stability as good, but warned about the accumulation of credit risks and the overpriced real estate market, which made the economy more vulnerable. Economic and financial integration was advancing fast. It became increasingly evident that credit dynamics in host countries depend on decisions made at the group level. With Estonia offering an attractive risk-return tradeoff from the group perspective, the credit supply was ample and loan-deposit ratios continued to climb (figure 4).

Figure 4. Loan-to-deposit ratio

Source: Estonian Central Bank and authors' calculations.

Further, the International Financial Reporting Standards–driven change prohibited banks from making provisions for potential losses. The authorities' recommendation was to retain economic-cycle-related profits in the banks' own funds.

From moral suasion to active macro-prudential regulation

December 2005 marked a watershed in the macro-prudential approach. Moral suasion was put on the back seat, and the Bank of Estonia took recourse to regulatory measures. Effective March 2006, the risk weight of housing loans was increased from 50 percent to 100 percent, implying a de facto increase in capital requirement by 13 percent. The home supervisors of banks operating in Estonia were asked to apply the same risk weight to housing loans granted to Estonian residents in order to ensure the level playing field between foreign branches and subsidiaries in Estonia and to minimize regulatory arbitrage.

The issue of cross-border regulatory cooperation arose in earnest. At the time, for legal and other reasons, it was not possible for home supervisors to respond positively to Estonia's request. A back-stop measure, that subjected 50 percent of the foreign branches' housing loan portfolio to a reserve requirement in order to level the cost of regulation between foreign branches and subsidiaries, was deemed incompatible with the EU internal market rules and was repealed by the Estonian authorities later. While these developments highlight the complexities of the cross-border regulation and supervision at the time, the stage was set for developing more extensive cooperation.

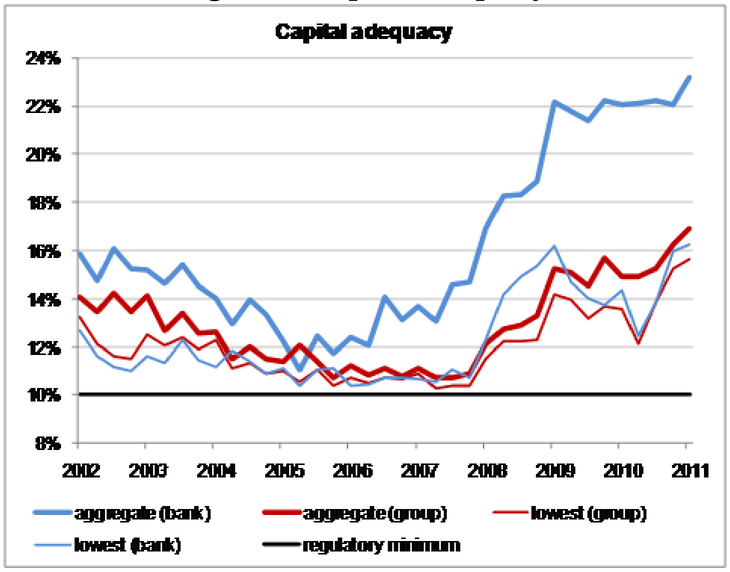
As the regulatory requirements were applied at the group level, it was the home regulation that represented de facto regulatory constraint. In most of home countries of banks operating in Estonia, the minimum capital requirement was 8 percent and the risk weight for housing loans was at or below 50 percent. In increasingly integrated markets, the difference in regulations rose in importance. It also implied a limit on how far host country regulation can go without extensive cooperation with home countries. For example, "excessively high" capital or reserve requirements could have resulted in booking the loans into the home country balance sheet, "solving" the problem statistically at best. As a related point, running stress tests at sub-consolidated levels alone without taking into account the financial strength of an entire group gives only a partial picture of the risks and strengths.

Estonia's economy continued on its course. GDP growth accelerated to a 12 percent annual rate in the first half of 2006; corporate credit growth accelerated beyond 26 percent with nearly half of loans going to real-estate-related activities; the growth of housing loans topped at 60 percent with consumer credit growing very fast; the labor market was very tight; and the real estate market recorded new highs in prices and volumes. Increases in euro area money market rates did little to change credit dynamics. Credit quality remained good, and banks' capitalization remained strong with CAR at 12 percent (figure 5).

A second round of measures was announced, and the reserve requirement was increased from 13 percent to 15 percent effective September 2006. Higher capital charges had shown limited impact on credit growth thus far (figure 6). Further, with the economy running well above potential and the euro adoption in 2008 seen off the table, the soundness of the financial sector and the build-up of fiscal buffers became highly critical.

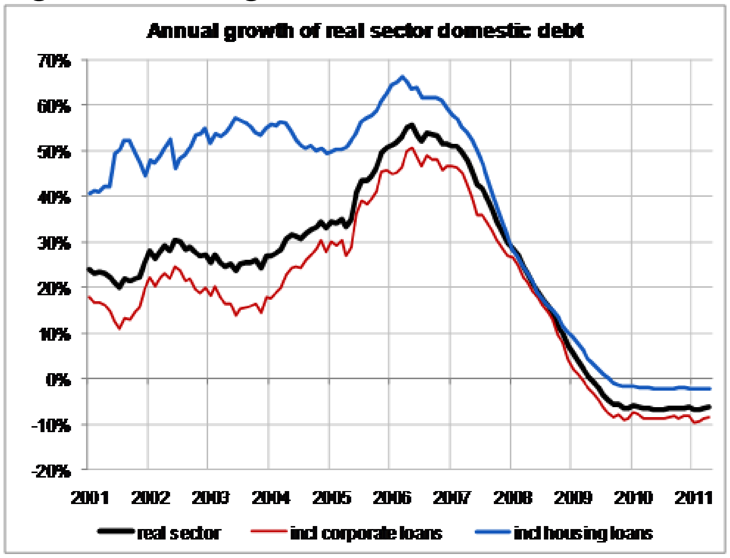
In transition to the Basel II framework, Estonia kept its conservative stance. Minimum CAR was maintained at 10 percent and 100 percent risk weight was preserved in calculating the floor for the CAR. For housing loans, a two-year transition period was established before the risk weight was to drop to 35 percent in 2009.

Figure 5. Capital adequacy



Source: Estonian Central Bank and authors' calculations.

Figure 6. Annual growth of real sector domestic debt



Source. Estonian Central Bank and authors' calculations.

The credit cycle peaked in the second quarter of 2007, giving Estonia a small but important time to adjust before the world financial crisis started in fall 2008. Part of the deceleration was due to a natural course, as real estate became unaffordable for new borrowers, income growth decelerated, and credit standards were tightened as banks started to re-price the risks. Tightened regulations played their part too, most importantly by building sizable capital and liquidity buffers.

Cross-border cooperation

Over the course of 2006, the authorities intensified cross-border cooperation at all levels with Sweden, the most important home country for banks operating in Estonia. Joint crisis management exercises, joint inspections, and regular contacts between central banks, supervisors, and finances ministries, framed by several EU and regional memorandums of understanding, helped to build a strong professional network. This network successfully passed the test during the severe global financial crisis on all critical accounts.

Deep financial integration proved essential for ensuring financial stability during the crisis. Contrary to mainstream expectations, the Nordic banks kept their exposure as the authorities expected. High capital and liquidity buffers in Estonia did not necessitate any capital support to Estonian subsidiaries. Additional liquidity support from parent banks was provided only once, when a major bank faced deposit outflow of about15 percent. Neither depositors nor market participants noticed. Strong liquidity back-stop measures at the home-country level that were available for the group's subsidiaries, including in Estonia, enabled the banks to shift liquidity promptly between headquarters and subsidiaries. Further, high reserve requirements, equivalent to nearly 30 percent of retail deposits, played an instrumental role in the smooth functioning of the banking system through the most difficult episodes of the crisis.

In February 2009 the Bank of Estonia and Sveriges Riksbank signed a bilateral precautionary swap arrangement to foster cross-border liquidity support to the Estonian subsidiaries of Swedish banks if the need arose. The arrangement was never utilized and expired after one year. It marked a novel approach to cross-border cooperation in the financial stability field.

Proactive communication with and outreach to market participants and rating agencies played important roles in maintaining investor confidence. The authorities initiated a series of investor meetings in late 2008 with investment banks, hedge funds, market research firms, and rating agencies in London and elsewhere.

Economic adjustment and the euro membership

Estonia recorded a significant drop in output during 2008-2009; GDP contracted by a cumulative 15 percent over two years. The private sector responded swiftly by reducing labor costs and optimizing processes. Fiscal adjustment amounted to 9 percent of GDP, and unemployment increased to the high teens as a consequence of private and public sector adjustment. Within the budget envelope, expenditures were reprioritized to ensure an adequate safety net for the unemployed and to provide opportunities for retraining. Likewise, the absorption of the EU funds was sped up, increasing public investment and cushioning the fallout in private demand. Government fiscal reserves, accumulated through surpluses in boom years and amounting to more than 10 percent of GDP in 2008, were instrumental in maintaining investor confidence and financing deficits without having to borrow on the market at unfavorable terms.

Seen with the benefit of hindsight, the fiscal decision to further limit mortgage interest deductibility yielded fiscal savings by lowering income tax returns, which, other things being equal, would have increased an already significant consolidation need. Likewise, the government's minimal role in the housing market, by phasing out the guarantee system, helped to avoid potential contingent liabilities.

While painful, this adjustment opened the door to euro membership and made companies competitive to reap the full benefits of the recovery in global demand. General government's budget was back in surplus in 2010, exports hit an all-time high in spring 2011, and unemployment had dropped by more than one-third by summer 2011. The economy has staged a strong V-shaped and job rich recovery with GDP growth in excess of 8 percent year over year in the first half of 2011.

Regulatory and Supervisory Policies: Past, Present, and Future

The recent crisis provides a unique opportunity to revisit the design and *modus operandi* of the crisis prevention, resolution, and cross-border cooperation frameworks. This work is under way in the global and European contexts. Looking forward, more and not less financial and real integration is in the interest of the European Union and its member states. Deepening regulatory and supervisory cooperation should remain a central goal in order to enhance competition and preserve stability in a liberalized capital account environment, where domestic and foreign financial service providers can freely compete. While not without challenges, commitment to deeper integration of markets has delivered tangible benefits for Estonia, as described above, and will do so for Europe at large.

European regulatory architecture

A well-functioning single market for banking and financial services that serves households and companies in Europe and in EU member states should remain a core foundation of the European financial architecture. A task of Europe is to develop such a legal and regulatory framework that

(a) is *supportive of truly single market* in banking and finance, so that all banking services and investment fund assets are freely available across the whole European Union;

(b) *generates long-term savings* by ensuring that depositors and investors receive adequate risk-adjusted returns, and avoids reemergence of the excessive and reckless risk-taking of the past; and

(c) *finances growth*, keeping in mind that the primary aim of the financial sector is to channel savings to productive investments by companies and households.

Such a legal and regulatory framework will ensure that

(a) *banks have adequate capital*—that every institution has enough capital to cover all individual portfolio and credit risks and also macrorisks during an economic downturn;

(b) *banks have enough liquidity*—enough liquid assets to meet demands of their depositors if markets fail; and

(c) *owners live up to their responsibilities*—by running banks prudently, so that there are plans for crises and taxpayer's money is not used to save private owners.

European financial reform should be based on truly European solutions:

(a) Short term: *More cross-border cooperation* among supervisors is essential, and cooperation among the newly created agencies under the European System of Financial Supervisors should be ensured.

(b) Medium term: *European crisis resolution* must complement or replace individual fragmented responses. How to deal with crisis banks and how to share the costs, if needed, must be included. Because of the differences in member states' legislation, greater EU level harmonization of the criteria for starting the insolvency procedure is desirable.

(c) Medium to long term: *European single supervision* will ensure that pan-European financial institutions are matched by pan-European supervision.

Sound and truly pan-European banking is also globally competitive, but there should be no trade-offs between prudence and competitiveness. Banks are likely to stay more important in Europe than in the United States in intermediating savings in the future. Single currency and strong public finances are essential for a strong financial sector. Further, the euro area heads of states meeting of July 2011 made important advances in strengthening a European crisis management framework and ensuring financial stability in the euro area.

Implementing Basel III

Incorporating the Basel III criteria into the EU legislation without substantive alterations should be the goal. It is important to ensure that the new rules are applied across member states in a uniform and timely manner. There could be potential benefits from recasting the Capital Requirements Directive for ensuring a swift and consistent implementation across member states.

It is important that the EU member states retain the ability to set higher capital requirements than the minimum levels of Basel III in specific circumstances in order to protect financial stability. A regulation that would prohibit member states from requiring their banks to hold more capital or enforce other requirements, such as varying risk weights, if such measures are needed to maintain financial stability and consumer protection, would work against the goal of safeguarding financial stability. It is therefore imperative that member states can themselves decide whether to require higher loss-absorbing capacity in their banking system, since it is the member states' public finances that might bear the costs of instability.

The Basel III agreement will, among other things, lead to the changes in regulation concerning the supervision of branches. While the supervision of the branches' liquidity is currently the responsibility of the host state's supervisory authority, in the future the responsibility to carry on all the financial supervision will rest with the home state. In this context it is important to develop a harmonized approach at the European level for several issues concerning cross-border activities—for example, the improvement of legal frameworks and market infrastructure allowing for cross-border transfer of assets would significantly improve for the abilities of the cross-border institutions to utilize available resources and address potential problems (to address potential short- term liquidity shortages of particular group entities).

Early intervention and crisis resolution

A preventive ex ante view is the central element in the banking and financial legislations. That is why the early intervention framework should enhance financial stability within the single market, minimize overall costs, and ensure intervention flexibility. But it also should encourage collaboration between the member states to find the proper and mutually beneficial solutions.

Cross-border transferability of assets and collateral is an essential element of financial integration, most critically at times of stress. It is therefore important to reduce restrictions on asset transfers and remove barriers in national legislations in order to allow quick capital movements between different parts of the cross-border financial group. This would facilitate private sector solutions during crises (for example, with respect to liquidity shortages). It is particularly relevant as the company and insolvency legislation is individual-entity based, while cross-border crisis management is concentrated on group as a whole.

National resolution tools are based on individual entities and do not consider aspects of the entire group. Therefore the cross-border resolution tools should be defined more clearly and precisely than just through memorandums of understandings and voluntary burden sharing agreements, perhaps defined directly by EU legislation. The first best solution would be broad ex ante agreements for sharing crisis resolution costs between the competent authorities of relevant member states, covering specific financial groups operating in their jurisdictions.

However, if group-based burden-sharing arrangements do not materialize, and responsibilities for financial stability and related costs would continue to fall on individual member states, it is important to ensure that member states have sufficient leeway to forestall possible problems and to mitigate potential costs. For instance, as noted above, the authorities need to retain the right to set stricter requirements for the banks if this is required by the need to secure financial stability in a particular member state. Agreeing on legally and operationally sound burden-sharing arrangements among the cross-border groups involving third countries adds another layer of complexity.

Maximum harmonization of the deposit guarantee framework is a desirable goal, particularly in the single market. The recent crisis demonstrated all too well the negative externalities of uncoordinated increases in deposit guarantee coverage limits or other parameters. Deposit flight to foreign branches with higher home-country-provided coverage was a common feature.

In designing the future parametric changes, it is useful to mandate deposit guarantee schemes, either pay box type or with broader responsibilities, with the option to participate in crisis resolution, including in recapitalization. Further, moving toward prefunded and industry-financed deposit guarantee schemes would offer several advantages. First, ex post–financed schemes are likely to place additional burden on already strained public finances at the time of crisis and increase banks’ costs in the post-crisis phase, when their capital base is weak, thereby adding to pro-cyclicality. Second, prefunding and a broad mandate for the involvement of the schemes in crisis resolution would ensure ex ante private sector involvement.

Cross-border supervisory cooperation in practice

In terms of coordination challenges, Estonia has benefited from a "highly concentrated home country" situation, with more than 90 percent of the banks coming from Sweden and Denmark, the two countries of geographical proximity and with long-established cooperation frameworks. Indeed, there were no significant obstacles to cooperation between the Estonian Financial Supervision Authority (EFSA) and the authorities of other countries, including non-European Economic Area countries. For example, the EFSA has already concluded several cooperation agreements with supervisory authorities from other countries. The same statement applies for the central banks and finance ministries.

It is of utmost importance that all relevant authorities are provided with pertinent and timely information should problems develop in international financial groups. To ensure smooth and effective cooperation among the authorities, all parties involved would benefit from further harmonization of indicators and thresholds that, when reached, would call for immediate forwarding of information and coordination of measures to be taken. Therefore, one of the important aspects of effective supervision is to give financial supervision entities the ability to gather all necessary information needed for an efficient supervisory process. Absent information that is necessary to make decisions, it is not possible to apply intervention tools. For the purpose of performing supervision activities, there have to be broad rights to request information, documents, and oral or written explanations concerning facts relevant to exercising supervision. Respective authorities of all countries concerned should also have access at the cross-border level to all necessary information, including the policies and measures taken that could affect markets and institutions in another country. Also, there should be a clear understanding of legal obstacles between national laws in dealing with cross-border issues at the European and global levels.

Conclusions

Strong policies matter and are essential in ensuring macro and financial stability in all corners of the single market. Prudent policies cannot avoid a boom-bust, but they can put a country in a much better position to deal with it. While the macro-prudential measures adopted in Estonia over the boom cycle did not fully succeed in limiting credit growth, they were highly successful in making the banking system resilient—liquid and well capitalized to withstand credit losses without external support and at no cost to taxpayers.

In integrated markets, macro-prudential policy works only if implemented in a coordinated manner in both host and home countries. The cooperation between Nordic-Baltic countries offers useful insights in the field, including insights into the complexities involved and innovative responses implemented. Crisis management exercises (so-called war games) in peace time facilitated greatly inter-institutional cooperation in real crisis situations domestically and in cross-border scenarios. Communication lines were tested from the expert to top-decision-maker levels. In due course, crisis management exercises should become again a standard tool to build and strengthen domestic and cross-border crisis management capacity.

No single policy measure guarantees success—what makes the difference is consistent policy response. It is the combination of countercyclical policies in monetary, fiscal, and macro-prudential fronts that maximizes the impact on aggregate demand during the boom face. Buffers built in the financial sector and fiscal accounts were instrumental in maintaining macroeconomic stability and orderly adjustment of the economy.

The ongoing reform of financial stability and regulatory frameworks should retain the option for the authorities to impose higher than agreed minimum capital or liquidity requirements as preventive policy measures.

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