Real estate price dynamics, housing finance and related macro-prudential tools in the Baltics

By Lina Bukvičiūtė* and Daniel Kosicki**

Summary

Indicators relating to demand forces and the pricing framework point towards the build-up of house price misalignments in the Baltic States in the years up to 2007, with various degrees of correction taking place since mid-2008. However, it seems that this price adjustment is now fading out. Meanwhile, although household-related debt in the Baltic States remains below the euro-area average, its growth was among the strongest in EU countries during the boom years. Deleveraging of the housing sector, which was triggered by the crisis, has recently been bottoming out in Estonia and Latvia.

Lending conditions in the Baltic States remain favourable compared to the EU average. Effective real estate taxation (in particular in Estonia and Lithuania) is below the euro area average and the supervisory constraints are milder that in most of the euro area countries (seemingly with an exception for Lithuania). Currently, real interest rates on mortgages are negative in Estonia and among the lowest in the EU. If no changes were expected, this could also encourage the uptake of mortgage debt. On the back of increasing deposits, the improving liquidity situation of banks puts them in a position to re-launch loan supply.

Given recent market developments and the existing incentives, the Baltic real estate market should be closely monitored, with a focus on the potential risk that unfettered demand and credit expansion could fuel another regional housing boom–bust cycle.

*European Central Bank, Directorate General Economics
**European Commission, Directorate Financial Stability and Monetary Affairs
Recent developments in the housing prices

High and accelerating house price inflation was a characteristic of many European countries during the decade preceding the crisis, with the Baltic States experiencing increases above those of the euro area (Chart 1). The reasons for the emerging imbalances in the real estate sector are manifold. Both supply and demand factors played important roles. Favourable lending standards, the absence of a cap on loan-to-value ratios and low real interest rates created easy access to finance and growing demand for housing. The demand for housing was reinforced by low real estate taxation, partial deductibility of mortgage interest payments, nominal convergence and rather underdeveloped rental markets.

Chart 1: Nominal housing prices in the Baltic States and the euro area (y-o-y % change)

A strong correction in house prices started in 2007-2008 and was particularly pronounced from mid-2008 to mid-2010 (Chart 1). This put pressure on the banking system and, combined with lower disposable incomes, led to a deterioration in the quality of the banks’ loan portfolios. The non-performing loan ratio (NPL) in the real estate sector peaked at 17% in Latvia and 9% in Lithuania in the third quarter of 2011 and has remained close to these levels ever since. In Estonia, NPLs peaked one year earlier at 4.5% and fell to 2.9% in August 2012. Impaired assets were usually written off systematically in the subsidiaries of foreign banks, while the provisions for loan losses remained at prudent levels. In the local banks subject to restructuring and liquidation (the Latvian Parex Bank and the Lithuanian Snoras Bank), impaired real estate assets, although they were not the direct cause of the failure, constituted a significant share of the final losses.

House price dynamics

A commonly applied methodology to evaluate house price imbalances involves an examination of the evolution of house prices with respect to some measures of underlying fundamentals. These could include other assets (for example government bonds), house rent or gross domestic income per capita. By assessing how real estate prices develop in relation to these factors, one can make a broad assessment of whether price increases may be explained by the evolution of these variables. In this context, the impact of other factors like taxation or lending standards should also be considered.

Two indicators of house price misalignment – one relating to housing demand and one relating to an asset-pricing framework – are studied in this analysis. While illustrative, these valuation measures are subject to several caveats, which may be grouped into three categories. First, data uncertainty is particularly high in measuring house prices, given problems of coverage, quality control and representativeness. Data series for the Baltic
countries are also very short, limiting the scope for historical comparison. Second, the problem of structural breaks is particularly acute in housing since changing economic, financial or institutional factors (e.g. non-market distortions in the rental market, the role of tax policies, owner-occupancy rates, etc.) may have induced strong shifts in historical or equilibrium relationships. For these reasons we do not use a regression analysis approach. Third, these methods do not control for the influence of other factors, such as housing supply elasticity or non-market forces, in driving housing market developments.

Chart 2: Affordability index for the Baltic States

Two simple indicators were computed and evaluated:

(i) The adjusted 'housing affordability index': defined here as the ratio of nominal real estate prices to nominal GDP per capita in current prices. We apply nominal GDP per capita in current prices and not disposable income in order to have a quarterly profile. Taking 2004Q1 as the reference point, the affordability index suggests imbalances in housing prices were building up in the years up to 2007 (Chart 2). By 2011, the house price-to-GDP per capita ratio had broadly returned to the reference point levels in Estonia and Latvia, less so in Lithuania. It seems that the adjustment has recently petered out.

(ii) The house price-to-rent ratio is a frequently used asset-pricing-framework indicator. In our case, we compare the house price-to-rent ratio dynamics to the ratio in 2004. The results of the application of this indicator also suggest that house prices have broadly adjusted in the Baltic States by returning to the pre-boom levels (Chart 3).
However, similarly to the first indicator, it seems that the adjustment has faded out. House price increases temporarily exceeded growth rates of house rents, notably in Latvia in the second half of 2010 and the first half of 2011. Overall, the reviewed housing market indicators suggest that the Baltic States experienced a misalignment of house prices up to 2007 with a correction starting thereafter. Yet, it appears that the adjustment is now fading out. House prices increases have started to exceed growth rates of house rents and disposable income. This trend is stronger in Latvia and Lithuania.

**Housing-related debt and lending conditions**

Apart from the examination of house price developments, monitoring household balance sheet developments may be helpful in the detection of imbalances. A steep increase in household housing-related debt can be a sign of emerging imbalances. The Baltic States experienced a strong increase in housing-related debt in the period from 2005 to 2008 (Chart 4).

Chart 4: Lending for house purchase (% of GDP)

The growth rates of credit for housing substantially exceeded the corresponding growth rates in the euro area and in most other EU countries, with the trend reversing from 2009 onwards (Chart 5). The negative credit growth has recently bottomed out in Latvia (summer 2012), while it has been gradually decelerating in Estonia since the beginning of 2011. In Lithuania, after some positive growth in mid-2011, the housing credit growth rate fell quite abruptly towards the end of that year.

Chart 5: Lending for house purchase (% y-o-y)
The recent decline in lending for house purchase in Lithuania (Chart 5) has coincided with the introduction of supervisory restrictions. Lithuania is currently the only Baltic country that has introduced measures aimed at ensuring responsible lending (Table 1). Since November 2011,7 banks – when granting new mortgage loans – have been obliged to respect an 85% cap on the loan-to-value ratio, a 40% cap on the debt-to-income ratio and a 40 year maturity limit. In addition, requirements have been tightened for the assessment of creditworthiness and transparency with regard to possible risks affecting the borrower.

The predominance of adjustable-rate mortgages in the Baltic States makes households more vulnerable to interest rate shifts, as the pass-through from interest rate increases to debt servicing can be sizable. Interest rate changes and potential future house price declines are the main risks facing indebted households. It should be noted that, in the Baltic States, the impact of increasing debt-servicing costs could be particularly strong for many highly-indebted low-income households.

Table 1: Characteristics of loans for house purchase

<table>
<thead>
<tr>
<th></th>
<th>Estonia</th>
<th>Latvia</th>
<th>Lithuania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevailing type of interest rate</td>
<td>Variable</td>
<td>Variable</td>
<td>Variable</td>
</tr>
<tr>
<td>Cap on loan-to-value ratio</td>
<td>No</td>
<td>No</td>
<td>85%</td>
</tr>
<tr>
<td>Cap on debt-to-income ratio</td>
<td>No</td>
<td>No</td>
<td>40%</td>
</tr>
<tr>
<td>Maturity limit</td>
<td>No</td>
<td>No</td>
<td>40 years</td>
</tr>
<tr>
<td>Personal bankruptcy law</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>House tax</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Mortgage interest deductibility</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Source: OECD, national central banks.

Another potential risk stems from foreign currency loans, mainly euro-denominated, which account for almost all housing loans in Latvia and about 80% in Lithuania (Chart 6). While both the lats and the litas are in fixed exchange-rate regimes vis-à-vis the euro, which eliminates exchange rate volatility, such arrangements are not unconditionally risk-free. Since accession to the euro area in 2011, Estonia has practically no foreign currency risk within its mortgage loan stock.

Recently, some steps were taken in order to contain housing demand, including phasing out mortgage interest deductibility in all Baltic States. In Estonia, the limit on deductible interest expenses was reduced by 40% from 2012 onwards.8 In Latvia and Lithuania, mortgage-interest deductibility was phased out. Housing-related taxes, however, remain very low in Estonia,9 Latvia and Lithuania. It can be concluded that real estate taxation remains below the EU average in the Baltic States (Table 2). In addition, it could be mentioned, that among these taxies, transfer tax is not applied in Estonia and Lithuania.
In this context, it is important to consider that income inequality in the Baltic States is also among the highest in the EU. At the same time, the ratio of owner occupied houses is very high in all income groups. Hence, any future real estate tax framework will need to be carefully balanced with regard to financial stability and its impact on income redistribution. In this respect, the recently-introduced tax on up-market real estate in Lithuania is well targeted as it is prudently balanced between supporting financial stability and addressing equity concerns.

Table 2: Tax on land buildings and other structures (% GDP)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU27</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.1</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EE</td>
<td>0.3</td>
<td>0.3</td>
<td>0.2</td>
<td>0.2</td>
<td>0.3</td>
<td>0.3</td>
<td>0.4</td>
<td>0.3</td>
</tr>
<tr>
<td>LV</td>
<td>0.8</td>
<td>0.7</td>
<td>0.6</td>
<td>0.5</td>
<td>0.4</td>
<td>0.6</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>LT</td>
<td>0.4</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td></td>
</tr>
</tbody>
</table>

Source: Eurostat.

It should also be emphasized that during the overheating years, the long-term interest rates on mortgages were strongly negative and significantly below the euro-area average in all three Baltic States, which created a strong incentive for taking out a mortgage (Chart 7). In the period of adjustment, the interest rates exceed the level of the euro area significantly due to negative inflation (as an outcome of a drop in growth), before declining again from 2011. Currently, only in Estonia real interest rates on mortgages are negative and are significantly below the euro-area average. Accordingly, lending conditions remain favourable for the uptake of mortgage debt in Estonia, in particular.

Chart 7: Real interest rates on lending for house purchases, original maturity over 10 years

Source: ECB, and ECB staff calculations. Note: Annual real interest rates are calculated by subtracting annual inflation rates from the annualised nominal interest rates.

**Bank funding in relation to financing housing credit**

In the last few years, housing finance has been a growing and profitable activity for banks in the Baltic States. In the second quarter of 2011, loans to households for dwellings accounted for about 33% of total loans in Lithuania and Latvia, and 39% in Estonia, which was above the euro-area average (21%).

Prior to the crisis, banks in the Baltic States relied extensively on wholesale funding sources, in particular capital flows from the Nordic countries. The funding provided by the parent banks enabled favourable lending conditions by the Baltic subsidiaries, which in turn stimulated the demand for housing credit. After 2008, the trend reversed. The role of external funding diminished as domestic deposits gained in weight in line with increasing savings. This process is illustrated by the change in the relative shares.
of external funding and domestic deposits in total liabilities (Chart 8). This was paralleled by a lending contraction, leading to a general deleveraging by the banking sector.

While intra-group funding was common in the Baltic States, the more volatile types of funding, like securitizations and other debt instruments, were used to a lesser extent. In this sense, the Baltic States differ from some other EU Member States (e.g. Spain, Ireland, UK), where the real-estate-sector boom and bust was accompanied by an extensive use of sophisticated financial instruments. It should be noted, however, that in the Baltic countries a non-negligible part of retail deposits comes from non-residents, which constitutes a specific liquidity risk. Recent experience, in particular with Parex bank in Latvia, has proven that such deposits tend to be very volatile.

Chart 8: Share of deposits and external liabilities in total liabilities

As the funding structure is rebalancing towards retail deposits, the overall liquidity position of the banking sectors in the Baltic countries, as measured by the loan-to-deposit ratios, has been improving (Chart 9). In this regard, the banks should not face particular funding constraints once credit demand picks up and the banks decide to step up residential lending.

Chart 9: Loan-to-deposit ratios
Conclusions

Given past experience and the most recent market trends, the housing market in the Baltic countries requires close monitoring with the aim of preventing a new housing bubble. Despite more restricted funding from their parent institutions, banks in the Baltic countries may be in a position to re-launch lending based on growing deposits. So far, overall credit growth remains negative as deleveraging of the housing sector continues. The crisis has changed the attitude of borrowers, who are in the process of accumulating more savings and reducing their debt. But, over time, credit demand may consolidate and a mortgage lending boom could re-emerge if certain conditions materialise. Effective real estate taxation (in particular in Estonia and Lithuania) is below the euro area average and the supervisory constraints are milder that in most of the euro area countries (seemingly with an exception for Lithuania).

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1 In Latvia, the ratio refers to residential loans over 90 days past due. Source: central bank reporting.
2 In Lithuania, the ratio refers to residential impaired loans and residential loans overdue by more than 61 days. Source: central bank reporting.
3 In Estonia, the ratio refers to residential loans over 60 days past due. Source: Bank of Estonia.
4 Comparing the rent-to-house price ratio to long-term interest rates is another method, which rests on the assumption that the return on housing investment (approximated by the rent-to-house price ratio) should be equal to the returns in the Baltic States on alternative investment opportunities bearing the same risk. It should be noted that long-term interest rates were very volatile in the period under review due to the irregular issuance calendar of government bonds and the absence of benchmark 10-year government bonds in the case of Estonia. Hence, it is difficult to make quantified assessments based on this indicator for the Baltic States and we do not consider this indicator any further.
5 Without prejudice to considerations of whether the 2003 levels were close to equilibrium for the countries concerned.
6 Deleveraging started already in 2009, although housing-related debt as a % of GDP still increased in 2009, due to the denominator effect (shrinking GDP).
7 Resolution No 03-144 of the Board of the Bank of Lithuania of 1 September 2011 Responsible lending regulations.
8 The deductions related to interest, education and donations and gifts are together limited to 1,920 EUR per taxpayer during a period of taxation, and to not more than 50 per cent of the taxpayer's income during the same period of taxation.
9 There is no direct housing taxation in Estonia, only a land tax of up to 2.5% of the cadastral value of the land. Moreover, from 2012 onwards, the land tax requirement has been abolished for natural persons for plots up to 0.15 ha in densely populated areas and up to 2.0 ha in rural areas, provided that the primary residence of the taxpayer is located on this land.
10 Including euro-area residents in the case of Estonia.