



# EBA THEMATIC NOTE – RESIDENTIAL REAL ESTATE EXPOSURES OF EU BANKS: RISKS AND MITIGANTS

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## 1. Executive summary

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**Over two-thirds of people in the EU live in households who own their home.** In all Member States, homeownership is most common - the sole exception being Germany where 50% of the population are tenants<sup>1</sup>. Lending for house purchases has also been an important business for banks. More than one-third<sup>2</sup> of bank loans in the EU are collateralised with residential immovable property. Since the outbreak of the Covid pandemic, banks increased their mortgage exposures by almost 10%, which is more than the increase in other household lending or loans to Non-financial Companies (NFCs).

**Strong demand for housing coupled with sluggish supply has driven house price increases.** Low interest rates, expectations of continued increases in real estate prices and liquidity accumulated by households during the pandemic as well as changes in preferences have resulted in higher demand for housing in recent years. Accommodative monetary policies and ample liquidity meant that EU banks were able to meet the resulting increased demand for mortgages. In some member states, demand for housing was also driven by institutional investors and foreigners. The main reasons for the limited growth in the supply of dwellings include the lack of housing investments during the previous decade, construction constraints as well as supply-chain disruptions during the pandemic. House prices have been outpacing inflation for some years. In many regions house prices recorded double-digit growth rates during the last 2 years. Reflecting this, market participants as well as authorities have been concerned about over-heating housing markets<sup>3</sup>.

**Following a long period of very low to negative interest rate environment, inflationary pressures have prompted central banks across Europe to increase interest rates in an aggressive manner.** The mix of heightened geopolitical uncertainty, high energy prices and increasing rates is expected by forecasters to slow down economic growth. These developments could affect housing markets by even inducing an abrupt decrease in housing prices.

**Given the materiality of the mortgage portfolio for EU banks, an abrupt decline in house prices combined with an increase in default rates could well become a challenge for EU banks.** This note analyses these potential vulnerabilities and seeks to identify risks stemming from residential real estate exposures, also using country specific examples.<sup>4</sup>

**Several mitigating factors are currently present in EU residential real estate markets (RRE).** Enhancements to the regulatory framework have ensured that banks apply prudent standards for the origination, risk management and monitoring of mortgage loans. In addition, many countries have introduced borrower- or capital-based macroprudential measures in the RRE market. Lower loan-to-value (LTV) ratios were generally reported in recent years. A broad-based lengthening of

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<sup>1</sup> European Commission “House or flat – Owning or renting”  
<https://ec.europa.eu/eurostat/cache/digpub/housing/bloc-1a.html>

<sup>2</sup> The share of mortgage loans may be underestimated due to the absence of French guaranteed residential real estate loans, which are included in other household loans. According to ACPR data the French guaranteed residential real estate loans represented 62% of housing loans in France as of 2021.

<sup>3</sup> ESRB issues new warnings and recommendations on medium-term residential real estate vulnerabilities  
<https://www.esrb.europa.eu/news/pr/date/2022/html/esrb.pr220211~9393d5e991.en.html>

<sup>4</sup> The note relies on EBA’s supervisory data along with some external data sources. In some areas, limited data availability, non-harmonised definitions and national specificities impose limits on both country specific analyses as well as cross-country comparisons.



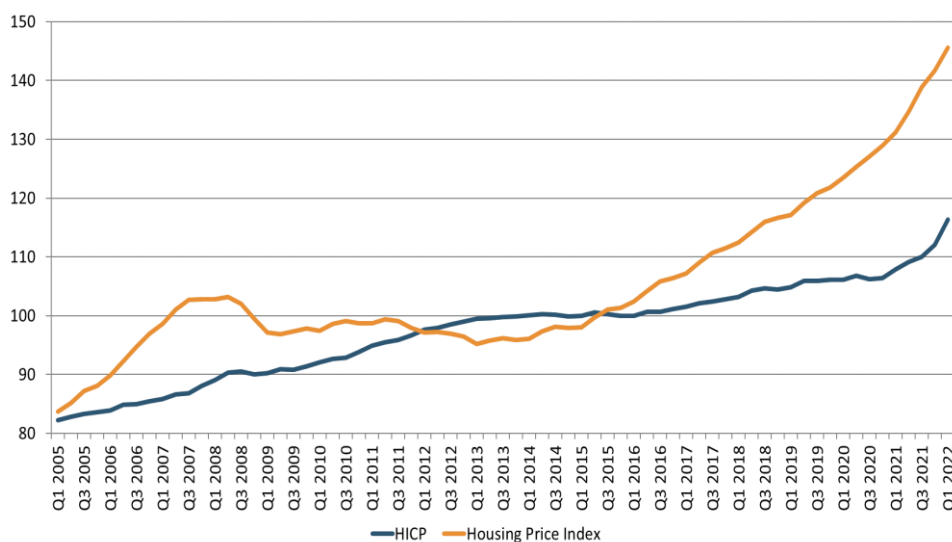
mortgage interest rate fixing periods should protect borrowers from a sudden surge in interest rates, yet it increases the interest rate risk that needs to be managed by banks.

**Assuming the current level of downside risks stemming from residential real estate exposures, supervisors and banks should continue to closely monitor developments in the market and in mortgage portfolios.** Early detection of debtors and exposures in distress, adequate provisioning policies and timely recognition of loan losses remain important and the first-line of defence. The banking sector should continue to adhere to good underwriting standards. While experience from the covid pandemic indicates that temporary repayment suspensions and other proactive forbearance measures have proved helpful for borrowers, banks' decisions related to forbearance should remain in line with existing EBA's guidelines on management of non-performing and forborne exposures.

## 2. Overheating residential real estate markets

**Over the past decade RRE prices have increased substantially across the EU/EEA.** During the last few years, European housing prices have outpaced overall inflation rate by a wide margin. In fact, house prices grew by around 10 percent during 2021, the highest annual price growth in fifteen years. The EU-wide growth rate has exceeded the rate reported of before the 2008 global financial crisis. (Figure 1).

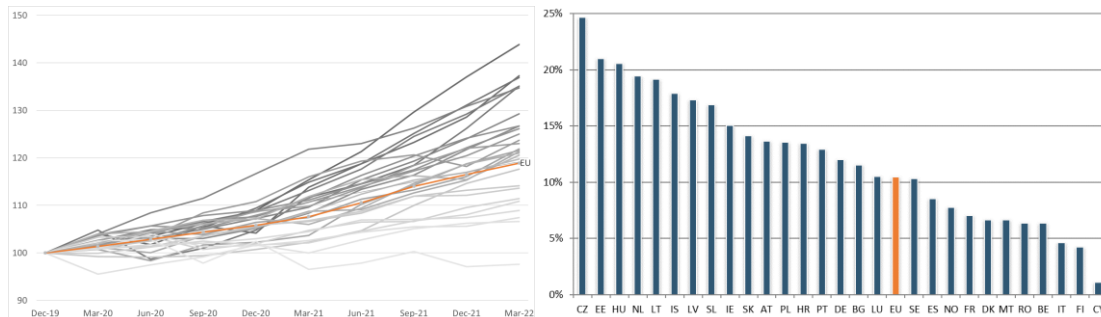
Figure 1: EU housing house price index vs Harmonised index of consumer prices (2015 =100)



Source: Eurostat

**The increase in house prices has been broad based, yet the growth in prices varies widely across Europe, and in many cases is quite heterogeneous within countries or even cities.** Following a short break during the onset of pandemic in which average house prices reported a temporary halt - mainly due to the lack of transactions – they quickly gathered speed again exceeding the pre-pandemic growth rates. In fact, most of the countries witnessed double-digit growth between Q1 2021 to Q1 2022, with the fastest growth reported in Czech Republic (25%), Estonia (21%) and Lithuania (21%), while fifteen other countries reported at least 10% increase in 2021. Nevertheless, some countries that were challenged by sovereign crisis and have gone through deep restructuring of their banking sectors have only seen moderate increases in housing prices (Figure 2).

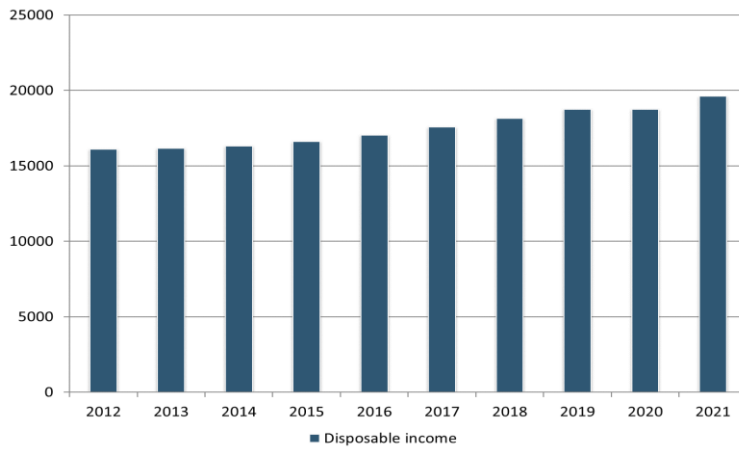
Figure 2: EU housing price index growth by country (Q4 2019 to Q1 2022) (left) and % change in housing prices by country (Q1 2021 to Q1 2022) (right)



Source: Eurostat

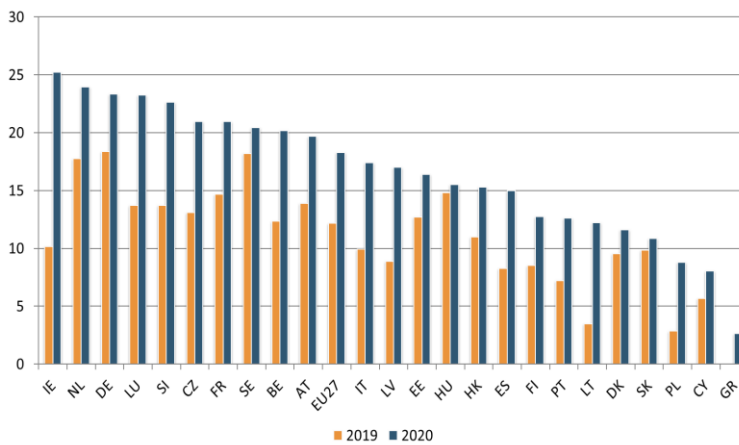
**Several demand-side factors have contributed to the strong house price growth in the EU.** These include long-term factors such as demographics, household income and property tax systems. Yet there have been some factors that have had a strong impact on the demand side in the latest years, as demand seems to have strengthened even during the Covid-19 pandemic. This was not least a result of the extensive support measures of governments which have helped to put a floor to households’ disposable income and other temporary support measures such as moratoria on loan repayments or similar forbearance measures which provided breathing space to borrowers impacted by the pandemic. These supported households’ creditworthiness and ensured continuous access to mortgage finance, mainly for those who had been directly affected by the pandemic. At the same time, households accumulated additional savings as they reduced their expenditures as a result of the lockdown measures and uncertainty, strengthening their purchasing capacity (Figure 3 and Figure 4). Yet, amidst lockdowns, the need for larger dwellings increased, driving demand for bigger flats or housing in suburban areas. Accommodative monetary policies kept the cost of borrowing low, contributing to favourable financing conditions, although this has abruptly changed in the recent months (Figure 5). This may have also contributed to the increased demand by foreign investors who have reallocated their capital to the RRE market, given the relative consideration of “safe haven” asset in times of high economic and financial uncertainty. Ex-ante the choice of investment in RRE provided a good alternative for investors, given the heightened risk premia of other asset classes. In effect, ex-post they have so far provided decent returns against a low interest rate environment. As a result, purchases of residential properties by institutional investors grew over time and remained resilient during Covid (while for example, investment in general commercial real estate assets declined, with the exception of some parts such as data centres and warehouses). In this regard, in some member states there was increased demand for housing by foreign or non-resident investors.

Figure 3: Disposable income per inhabitant in the EU (EUR)



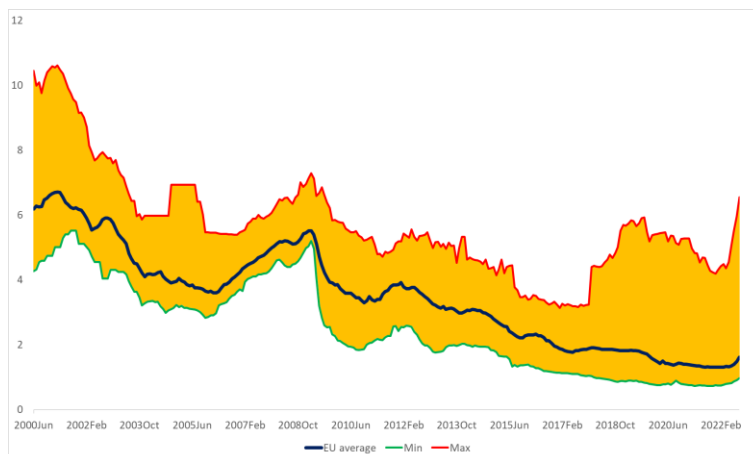
Source: Eurostat.

Figure 4: Household saving rate (% of disposable income)



Source: Eurostat.

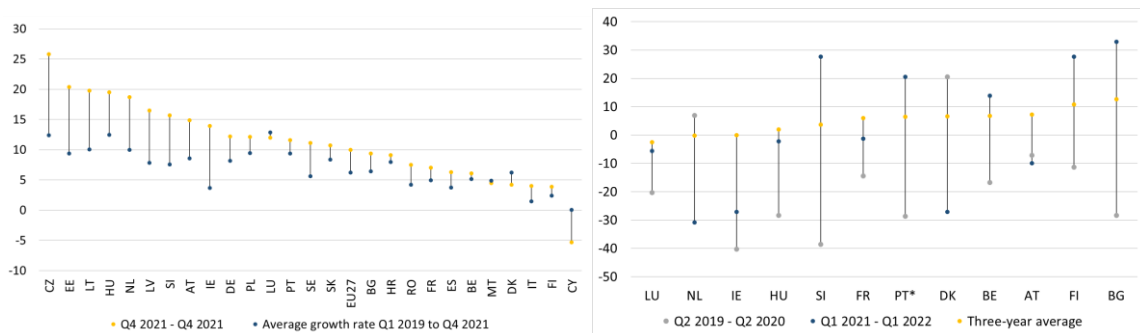
Figure 5: Interest rates for house purchase in the EU



Source: ECB SDW

**The pandemic only paused the increases in housing prices for a short period, amidst a pause in the number of transactions.** As a result of the demand dynamics outlined in the previous paragraph, in the outset of the pandemic the number of transactions fell sharply because of economic uncertainty and associated lockdown measures. However, market activity recovered rather quickly (Figure 6).

Figure 6: Annual growth rate in EU house prices in 2021(%) (left) and annual growth rate number of transactions<sup>5</sup> (%) (right)



Source: Eurostat.

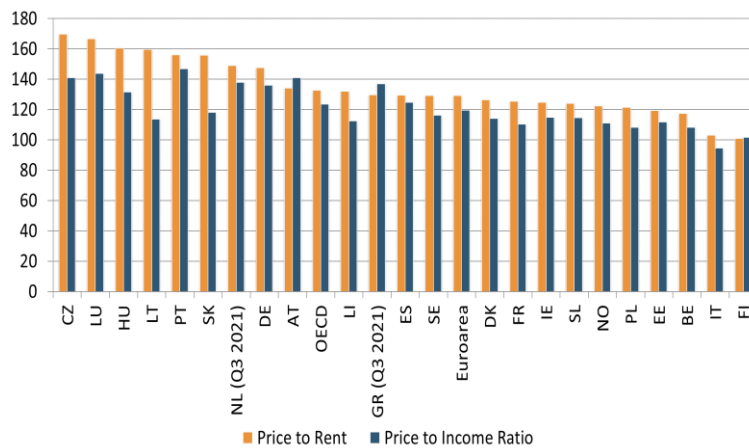
**While demand increased, in many member states supply of housing remained subdued in the past few years.** Price increases were also a result of the limited supply due to low investment in the previous years coupled with the generic inelastic behaviour of the supply side as houses take time to be built and offered in the market. Construction bottlenecks have put further pressure on the supply side. This effect was more pronounced during the pandemic, in which the EU overall the number of granted building permits decreased and investments in residential real estate declined, albeit with some notable differences across countries. While increasing the supply is considered as a priority in many overheated markets, construction is currently delayed due to supply bottlenecks, as a result of amplified supply chain constraints caused by the Russian unprovoked war of aggression in Ukraine and China’s zero covid policy. Increase in construction material prices, due to inflationary pressures and heightened energy prices have also contributed to delays or postponement of construction in the recent months. Also, in some markets, labour shortages and climate regulations pose additional supply-side challenges.

**Several indicators point to possible overheating in housing markets,** and housing has become less affordable over the last years. Price-to-income ratio which is used to measure affordability of purchasing a house, has increased by more than 20% since 2015 in the Euro area, with some countries reporting up to 40% increase. The possible overheating in housing markets may be also inferred by the trend in price-to-rent ratio. This is widely used as an indicator for fairly valued housing markets and is used to indicate the affordability to either own or rent a house. Although the ratio is expected to remain rather constant over time, as it may change consumers’ decisions, yet the ratio has increased close to 30% in the Euro area since 2015, while several member states reported at least 40% increase in this indicator. Less affordable housing not only makes it more difficult or exclude first-time buyers to purchase a house, but it also indicates a possible overheating effect in housing markets, as house prices have risen much faster than income and rents. (Figure 7).

<sup>5</sup> Portugal annual growth rate of transactions is Q4 2021



Figure 7: Growth in price-to-income and price-to-rent ratios in selected countries Q4 2021 (Q1 2015 = 100)



Source: OECD

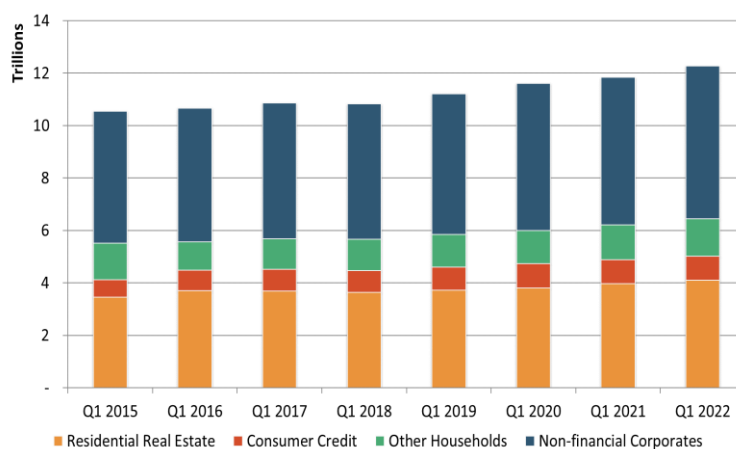
Although the Russian unprovoked war of aggression in Ukraine and the uncertain macroeconomic environment may have slowed down the pace of housing price growth, which is already evident in some regions such as in Sweden, there are overall concerns for overheating residential real estate markets around Europe. In order to confront the rising risks stemming from the housing markets, the ESRB has published recommendations and warnings to countries, even before the war aggravated the situation, in which the policies have not been fully appropriate or sufficient to mitigate the identified vulnerabilities<sup>6</sup>.

<sup>6</sup> Please read ESRB: Vulnerabilities in the residential real estate sectors of the EEA countries – February 2022.

### 3. Mortgage loans are a significant part of bank portfolios

A substantial part of EU banks’ exposures is made up of loans and advances collateralised by residential real estate properties. As of Q1 2022, EU/EEA banks reported EUR 4.1 trillion of outstanding mortgage loans<sup>7</sup>. These loans represent 33.5% of the total loans towards NFCs and households and they are one of the most important loan segments for EU banks. The share of mortgage loans increased by 0.7 p.p. compared to March 2015 (Figure 8).

Figure 8: Trend of outstanding loans by segment in the EU banking sector – (Dec-14 to Mar-22)

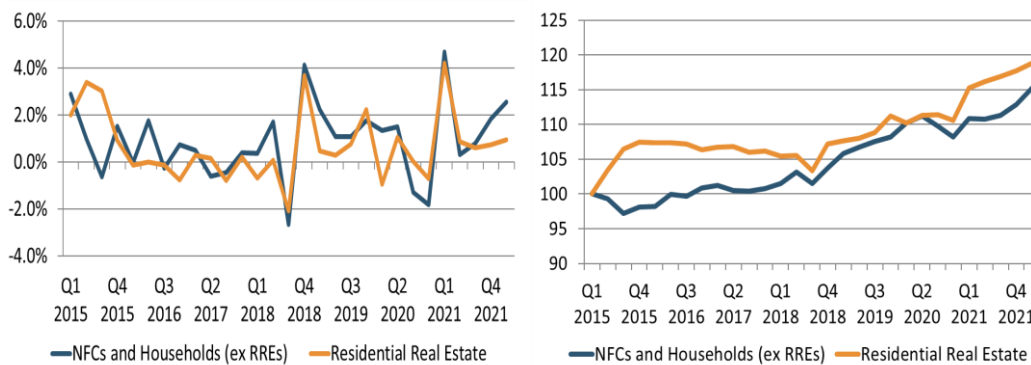


Source: EBA Supervisory Data

Since the outbreak of the pandemic mortgage loans grew considerably fast, with banks reporting an increase of 8% in outstanding mortgage loans, or EUR 300bn. In comparison, other loans towards NFCs and other household loans excluding RRE have just increased by 5.7% in the last two years. EU/EEA banks’ have been increasing for some years their exposures towards mortgage loans at a faster rate than NFCs and other household loans, despite some profound heterogeneity across banks. Since the beginning of 2015, mortgages have increased by close to 20% while other loans increased by 15% (Figure 9).

<sup>7</sup> Loans and advances at amortised cost collateralised with residential immovable property. The sample of banks used throughout this report is aligned with the sample reported in the quarterly EBA Risk Dashboard.

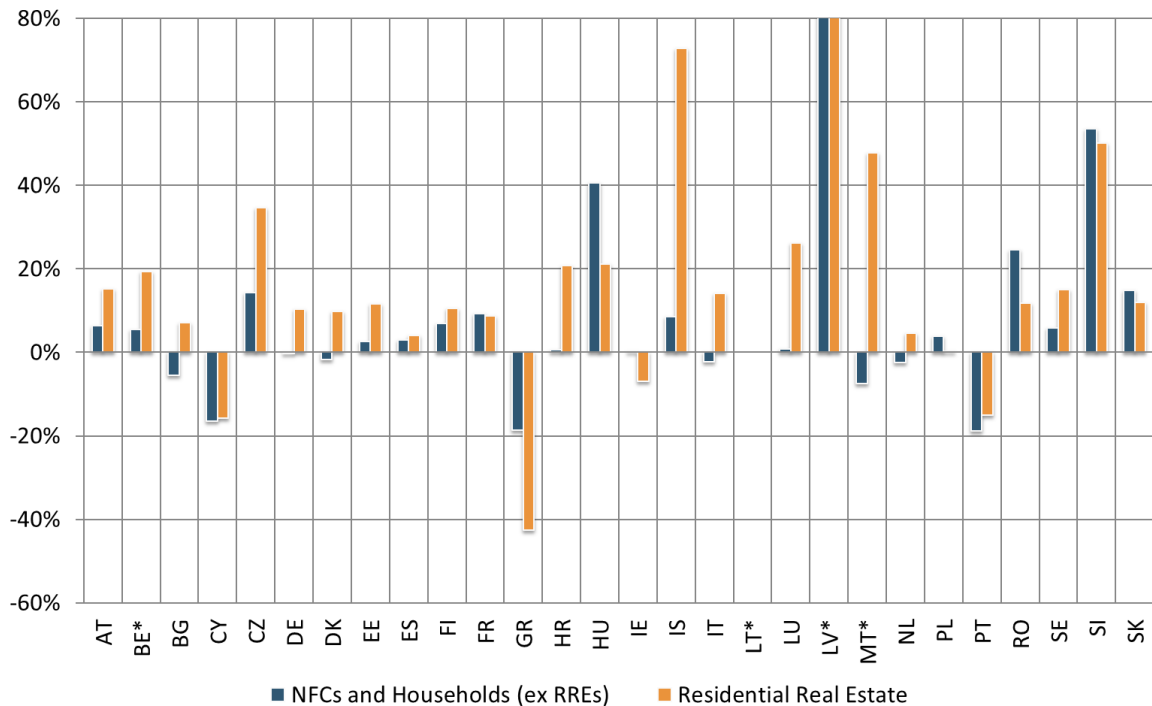
Figure 9: Quarterly growth of mortgage and other loans (left), level of mortgage and other loans (right)



Source: EBA Supervisory Data

During the last two years, the increase in banks’ exposures towards mortgage loans had a broad reach, with the exception of a few countries in the periphery whose banking sectors are still deleveraging and/or being restructured. For these countries, the disposal of loans through sales and NPL securitisations for the clean-up of NPL portfolios, has been one of the main drivers of the decline in loans. At least seventy banks increased their exposures towards mortgage loans during the last two years by more than 10%, while thirty of them reported at least 10% growth in the last year (Figure 10 and Figure 11).

Figure 10: Growth in mortgage loans and other loans by country<sup>8</sup> since the beginning of the pandemic (Mar-20 to Mar-22)

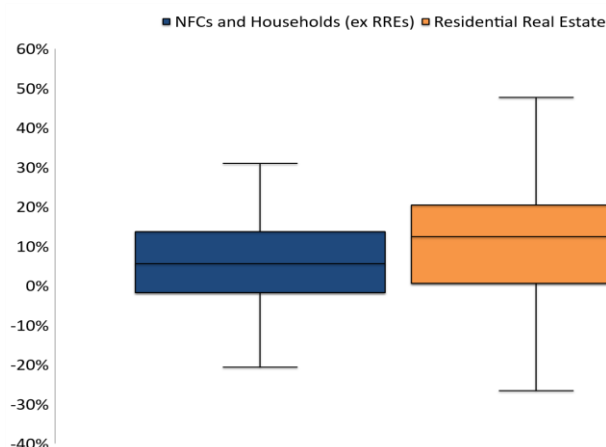


Source: EBA Supervisory Data

<sup>8</sup> The sample of banks is reported on a consolidated basis. This may include foreign subsidiaries which are not active in the country where the parent is domiciled. Changes between the two periods and some of the country figures may be affected.

1. For Belgium there has been a substantial change in the sample of banks, with the inclusion of one bank in the sample for the latest period.
2. Latvia reported an increase of 286% in RREs exposures and 159% in other loans. This is the result of a change in the consolidation level concerning one bank in Latvia.
3. The figures for Malta are affected by the change in business model of one of the foreign subsidiaries which is not active in Malta. The Central Bank of Malta indicated that the growth in mortgage loans would around 25% should individual figures be considered.
4. Lithuania's growth rates between the two periods cannot be shown and calculated, as it is affected by the change in the sample between the two periods with the substitution of a significant bank with a less significant bank, which has a major impact on the results.

Figure 11: Growth rates distribution in mortgage loans and other loans since the beginning of the pandemic (Mar-20 to Mar-22)



Source: EBA Supervisory Data

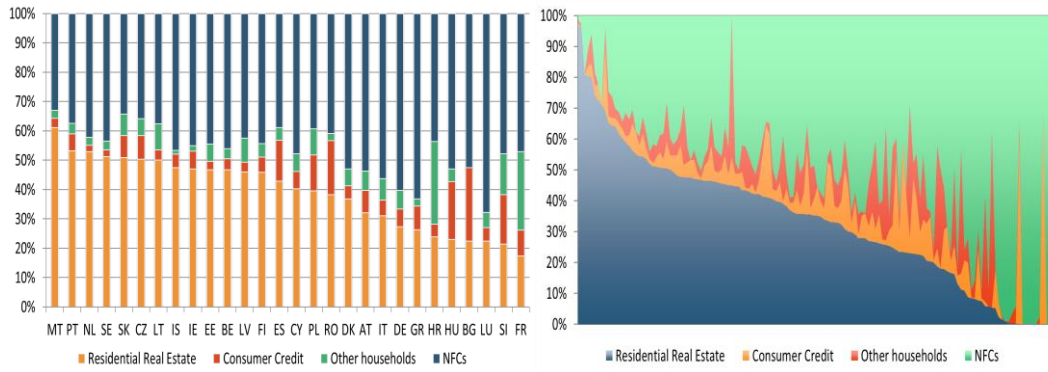
**The share of mortgage loans substantially varies across countries.** For example, French banks report a share of mortgage loans as low as 17%<sup>9</sup>, while this share increases to more than 60% for banks in Malta<sup>10</sup>. Several other banking systems in countries report that more than 50% of their total loans are mortgage loans. In addition, several banks, mainly domiciled in CEE countries, have high share of exposures towards consumer credit and other household loans. These exposures are in effect strongly interrelated to the performance of mortgage loans, and therefore an adjustment in housing markets might cause spill over effects to these portfolios. The degree of banks’ reliance to mortgage lending is not only driven by banks’ business models of each jurisdiction, but this may also be impacted by the specificities in housing markets. For example, factors such as traditional home ownership against rental housing or the behaviour of rental markets could drive demand for house purchase higher and thus affect banks’ asset mix (Figure 12).

<sup>9</sup> Mortgage loans of French banks may be also reported under “Other Households” due to national specificity of guaranteed RRE loans. These guarantees protect banks against borrower default. The protection offered to the banks is similar to the protection they may have under loans collateralised with residential property. Due to the material volumes of French guaranteed loans, growth rates of mortgage loans for EU/EEA may be also underestimated.

<sup>10</sup> Data is based on consolidated figures, which also include foreign subsidiaries which may not be active in the country where the parent is domiciled. For example, data for Malta is significantly affected by the change in business model of one bank that reports on a consolidated level loans granted in countries other than Malta. The Central Bank of Malta indicated that the share of mortgage loans would be more contained at around 40% should individual figures be considered.



Figure 12: Distribution of loans by segments by country (left) and bank by bank (right)- Q1 2022



Source: EBA Supervisory Data

## 4. High inflation and increasing mortgage rates may pose significant challenges for both consumers and banks

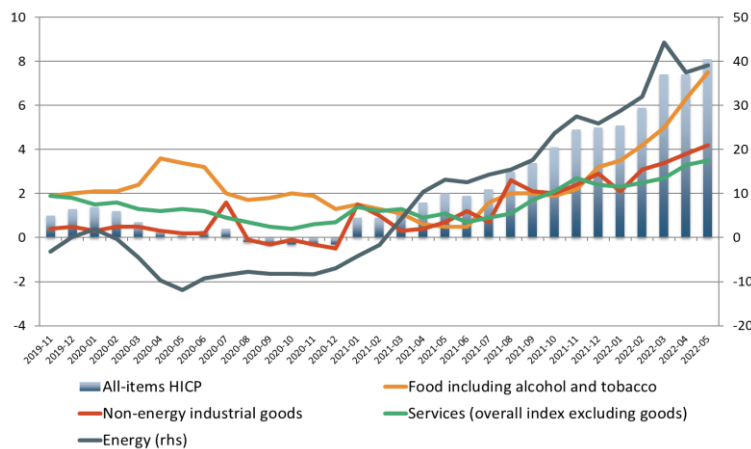
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**Although the pandemic has not caused a material increase in credit losses for banks, looming vulnerabilities in certain parts of the economy have created several pockets of risks.** The recent rise in inflation also due to high energy prices, the increasing interest rates and the ongoing uncertainty have amplified downside risks for economic growth. Given the rate of housing prices increases in the previous quarters a slowdown in economic growth along with an increase in unemployment rates could also negatively affect prices in residential real estate markets going forward. These may lead to an intensification and even potential materialisation of pre-existing vulnerabilities in these markets.

**The value of the house makes up an important part of household wealth, therefore an abrupt decline in house prices would reduce it.** This would in turn impair consumer confidence and their overall expenditure, dampening economic activity further. A slower economic growth and rising interest rates and an increase in unemployment could potentially increase default rates. Additionally, to the extent that search-for-yield behaviour has been a significant driver of demand by institutional investors, domestic RRE are more exposed to a sharp adjustment if investors withdraw following changes in relative returns. Coupled with the rising non-performing loans volumes, banks will also be challenged by diminishing collateral valuation, as mortgage loans are collateralised, the value of collateral will also decrease and could potentially reduce the recovery value in case of default.

**Higher energy and food prices may additionally compromise borrowers' debt servicing capacity in existing mortgage loans.** Especially for the over-indebted borrowers relative to their income level, the rising cost of living could result in increasing repayment difficulties. In addition, with inflationary pressures triggering further (expectations of) interest rate increases, mortgage borrowers with a variable interest rate will face an increase in their interest charges. Low income borrowers will be probably mostly affected, as higher portion of their income goes against food, energy and debt repayments. Additional pressure on the budget of already highly indebted households may lead to repayment problems in case of abrupt significant interest rate increases, without comparable increase in their incomes. In those cases where credit standards were softer, also due to the lack of borrower-based measures, the debt servicing capacity of borrowers could be materially lower.

Figure 13: HICP – monthly data (annual rate of change) – by classification of individual consumption

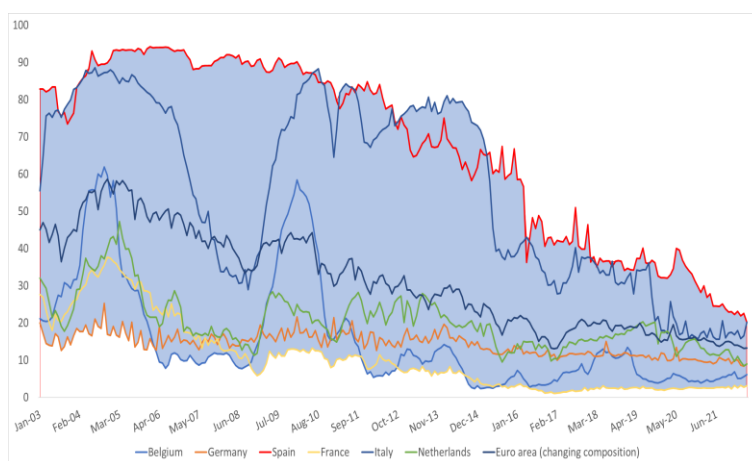


Source: Eurostat

**Loans extended at very low initial interest rates and with short interest rates fixation periods are the most sensitive to the interest rates changes.** Although the share of loans in the EU with variable interest rates has decreased over the last years, in some countries this remains significant. There are also large differences across countries with regards to the typical interest rate fixation periods offered (Figure 14).

**Along with the broad use of variable mortgage loans, banks for example have been also offering mortgage loans with interest-only payment.** These loans are not amortising and have an attached balloon payment at the end of their maturity, increasing the interest rate risk bared by borrowers. This increases the risk for rising loan defaults and potential credit losses for banks.

Figure 14: Share of variable loans in total loans for house purchase (new business; floating rate or initial rate fixed for a period of up to 1 year)



Source: ECB SDW and EBA calculations

**Higher interest rates and cost of living could also reduce households' borrowing capacity in new mortgage loans.** As such – and all other things equal (including lending standards) – the likely surge in mortgage interest rates could reduce demand for house purchases, reversing, at least partly, what happened in the low interest rate environment when the interest rate decline generally allowed borrowers to borrow higher amounts of debt. While these developments may result in a

downward pressure on house prices and ultimately translate into lower loan volumes, other factors might still support further house price growth, such as the attractiveness of real estate as an investment in a context of high economic uncertainty and rising inflation.

**Box on RRE vulnerabilities in the Netherlands: a financial stability risk<sup>11</sup>**

**The Dutch housing market faces a risk of overheating as it has been characterised by elevated price growth over the past years.** For more than five years, house prices have risen by an annual average of 8%. Since July 2021, growth has accelerated to more than 15% (YoY), peaking at 21.1% in January 2022. This is the fastest growth recorded by Statistics Netherlands (CBS) since the start of their index in 1995. The high growth rates were initially only observed in the major cities, but price growth across the country has been high for over two years now. 80% of the houses are being sold above the asking price and the average transaction period is 23 days nationally (NVM).

**The strong price developments have been driven by both demand and supply factors.** As in many other European countries, changes in households’ spending preferences, additional savings due to lockdown measures and a search for yield in the low interest rate environment pushed up demand further. Due to the loan-to-value limit of 100%, the borrowing capacity of households has increased in line with house prices. Furthermore, the borrowing capacity under the debt-service-to-income limit increased due to low interest rates and wage increases. Tax breaks applying to owner-occupied housing have also helped demand side. This has contributed to the relatively low cost of living in an owner-occupied home. According to DNB, for first-time buyers, the cost of living in an owner-occupied home is on average lower than that of a comparable rental home, despite the strong price growth. At the same time, supply was limited and hindered by bottlenecks. The construction sector has been facing challenges related to labour shortages, limited availability, and higher prices of construction materials.

**Vulnerabilities from the housing market not only relate to the high mortgage debts but also to the borrowing behaviour of Dutch households.** With more than 100% household-debt-to-GDP, Dutch households have the second highest debt position in Europe (2021, Eurostat). Around 95% of this debt comprises of mortgage loans. Moreover, homebuyers are showing increasingly a risk-take borrowing behaviour. Firstly, loan-to-income ratios of new loans have gradually increased over the past years and an increasing share of new contracts is close to the regulatory Debt-Service-to-Income (DSTI) limit. As a result, half of first-time buyers and 40% of home-movers were taking out mortgages exceeding 450% of their gross annual income at the end of 2021, compared to 31% of both groups at the end of 2018. Such high debt-to-income ratios pose a financial risk to households – and hence to their mortgage lenders – if their disposable income unexpectedly decreases. Secondly, although loan-to-value ratios of new loans have been decreasing due to materialising home equity as a result of the price growth, still nearly half of the mortgages to first-time buyers have an LTV-ratio at or above 90% which makes them vulnerable to price declines.

**Like in other countries, vulnerabilities also arise from rising interest rates.** The fixed-interest period on 23% of outstanding mortgage debt is due to expire in the next five years; and 57% it is due to expire in the next 10 years. Due to rising mortgage interest rates, households with a variable rate contract – representing only about 4% of Dutch mortgage debt – or an expiring fixed-interest period will probably face higher interest rates and possibly also higher monthly costs. 60% of the newly issued mortgages had a fixed interest rate period of longer than 10 years and the average fixed period was more than 15 years at the end of 2021. Dutch households that have taken out or

<sup>11</sup> The box has been drafted in collaboration with the De Nederlandsche Bank

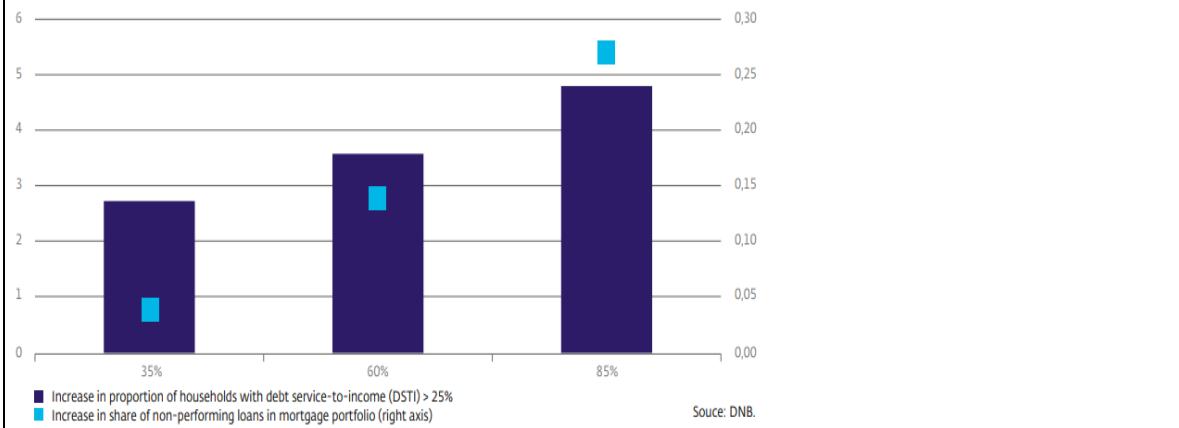
refinanced their mortgages in recent years are generally less vulnerable to interest rate rises as they have fixed their interest rates for a relatively long period.

**While higher energy prices also affect credit risk of mortgage portfolios, no significant default increases are anticipated.** Higher energy prices will increase homeowners' energy costs, leaving them with less disposable income to meet other expenses such as mortgage payments, affecting the credit risk of banks' mortgage portfolios. DNB conducted a stress test on the impact of rising energy costs to credit quality of banks' mortgage portfolios. Figure 15 shows the relationship between the consequent rising energy costs, households' debt service capacity (expressed in the DSTI ratio) and the likelihood of payment arrears, based on a number of stress scenarios. The scenarios assume a decrease in Dutch households' average net disposable income of 0.7%, 2% and 4% respectively as a result of energy price rises of 35%, 60% and 85% in 2022 compared to the average price level in 2021 respectively. Depending on the energy price rise, the number of households whose monthly mortgage costs exceed a quarter of disposable income increases by between 2.7% and 4.8%. These households fall behind with their financial commitments relatively quickly and have limited room to absorb financial shocks. The increase in defaults due to higher energy costs remains however limited (rise of between 0.04% and 0.27%), which also consistent with previous analyses of DNB showing that Dutch households continue to meet their mortgage obligations even in times of crisis. In combination with other negative macro-economic developments, however, the share of non-performing mortgages may increase further.

**To ensure resilience for potential corrections in the housing market, DNB introduced a floor for the risk weighting of mortgage loans on 1 January 2022.** With the measure, DNB has introduced a minimum average risk weight for the calculation of regulatory capital requirements applicable to loan mortgages, based on Article 458 of the Capital Requirements Regulation. The stricter requirement is applicable to banks that use the Internal Ratings Based (IRB) approach for calculating regulatory capital requirements. DNB has argued that the IRB-models do not take sufficient account of increasing vulnerabilities in the housing market. While the systemic risk posed by the housing market has increased over the past years, the risk weights of IRB-banks' mortgage portfolios have decreased. The risk weight floor implemented by the measure ensures that banks maintain a certain minimum capital amount for their mortgage portfolios and prevents ever-increasing house prices from leading to ever-decreasing risk weights, as rising house prices cause LTV ratios to decline.



Figure 15: Correlation between energy price increases, repayment capacity and arrears in banks' loan portfolios (p.p.)

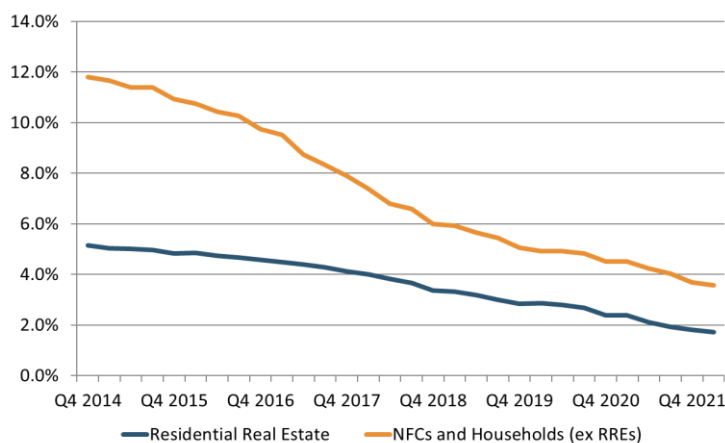


Source: De Nederlandsche Bank

## 5. Are banks prepared for higher credit risk in the mortgage loan portfolio?

**Given the importance of the mortgage loans portfolio for the EU/EEA banking sector, the asset quality of this portfolio weighs significantly on their credit risk.** The total volume of mortgage NPLs was close to EUR 71bn in March 2022, a decrease of more than EUR 100bn compared to December 2014 (EUR 174bn), corresponding to a decrease of 59%. The NPL ratio for the mortgage loan portfolio had a steady downward trend during the last years. In Q1 2022 the NPL ratio for mortgage loans stood at 1.7%, down from 5.1% in end of year 2014. This compares favourably against the NPL ratio for loans towards NFCs and other households excluding RREs. The gap between the two segments' NPL ratios has diminished considerably during the last few years, as the NPL ratio for NFCs and non-RREs household loans dropped from 11.8% in Q4 2014 to 3.6% in March 2022. De-risking of the EU/EEA banking sector was achieved through mainly NPL sales and securitisations deals, but also organic cures and write-offs. The measures taken, notably at the supervisory level, the low/negative interest rate environment during the previous years, the deepening of secondary market liquidity and the state guarantee schemes offered as part of securitisation transactions, widely have helped towards this. (Figure 16).

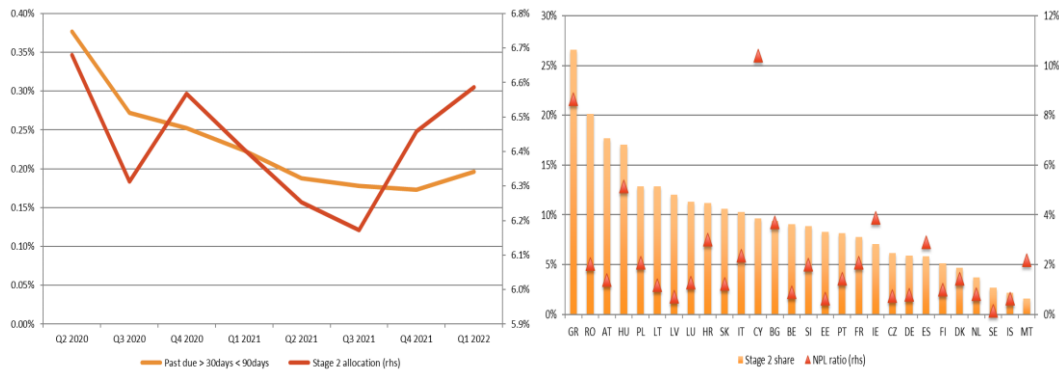
Figure 16: Trend in EU/EEA NPL ratio by segment



Source: EBA Supervisory Data

**There are however some early warning signs of deterioration in the asset quality of mortgage loans portfolios.** Since Q3 2021 there has been an increase in the allocation in stage 2 loans of more than 0.5 p.p. (or close to 9% increase in volume). As of March 2022, 6.6% of mortgage loans were allocated in Stage 2 (or EUR 270bn). This increase has coincided with the phasing-out of fiscal and other support measures provided as a response to the pandemic. During the first quarter of 2022, there has also been a marginal increase in the past-due loans of more than 30 but less than 90 days. Although in absolute volumes this is insignificant, this should be closely monitored as highly indebted households may have difficulties in meeting their debt obligations on time. Forborne mortgages amounted to EUR 80bn (1.9% of total loans), substantially lower than one year ago (EUR 94bn, 2.3%) which was also the reported peak since the outbreak of the pandemic. Around 60% of the forborne loans were classified as performing (Figure 17).

Figure 17: Trend Early warning asset quality signals for mortgage loans (left) and Stage 2 allocation and NPL ratio for mortgage loans by country – March 2022 (right)

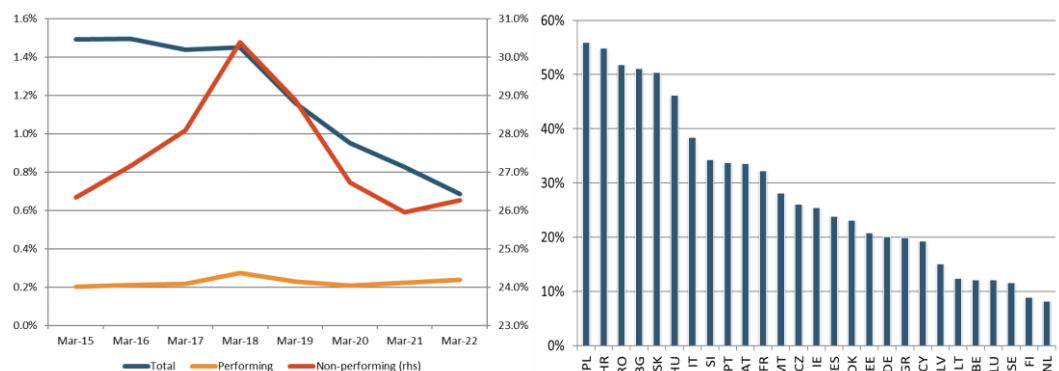


Source: EBA Supervisory Data

**The slight deterioration in forward looking asset quality indicators, have not yet been reflected in rising NPL volumes.** Although, supervisory data show a steady inflow of new NPLs averaging EUR 7bn each quarter, in the last two years, these were more than offset by a higher NPL outflow (average EUR 11bn).

**Provisioning levels differ not only between countries but also between segments.** Because of the higher levels of collateral compared to other portfolios, the mortgage loan portfolio is one of the least provisioned portfolios. The EBA report on benchmarking of national insolvency frameworks shows that collateralised lending, including RRE and CRE, generally present higher recovery rates, but they have longer recovery times than other loans, yet pointing out wide divergence among countries which may also be influenced by the heterogeneity across countries in the sample considered in the study<sup>12</sup>. Although provisioning levels for performing loans are rather comparable across countries, there are prominent differences on the coverage ratios of mortgage NPLs. In general, banks in CEE countries report higher levels of provisioning against mortgage NPLs, with a few of them even reporting more than 50% coverage ratio for these loans. (Figure 18).

Figure 18: Trends in Coverage ratio for EU/EEA banking sector (left) and NPL Coverage ratio for mortgage loans by country (right)



Source: EBA Supervisory Data

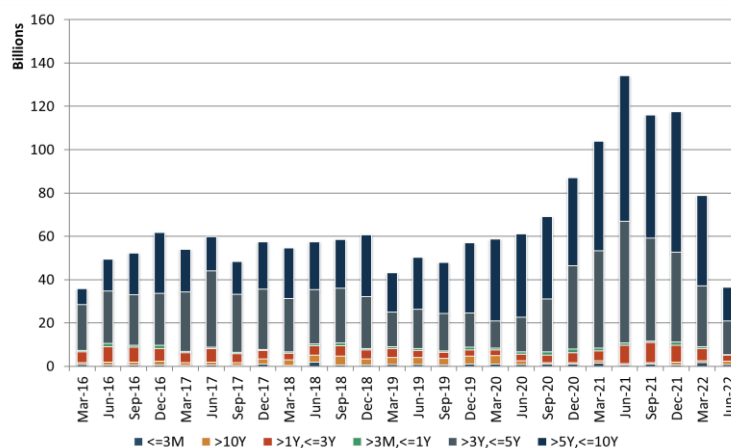
<sup>12</sup> Report on the benchmarking of national loan enforcement frameworks <https://www.eba.europa.eu/eba-publishes-report-benchmarking-national-insolvency-frameworks-across-eu>

**Box: Risks and risk mitigants in the Czech RRE market in light of recent developments<sup>13</sup>**

**In previous years, the Czech RRE market has been characterised by rapid growth of mortgage loans.** This was driven by combination of several factors, which include low interest rates, increased demand to own house amidst growing income as well as subdued supply. Signs of slowing growth have been already visible since August 2021, due to tightening monetary policy that attempts to dent growing inflation.

**The key vulnerabilities for RRE portfolios in the Czech Republic arise from the already visible abrupt increases in cost of living.** This is predominantly driven by energy, food and beverages, transportation costs coupled with high interest rate risk associated with mortgage loans. As the most common interest rate fixation period in the Czech Republic is 5 years, during 2022, banks expect to re-fix interest rates of those loans initiated or previously refixed in 2017. For these loans, there is increased risk of cliff-edge effect, as average rate was around 2%, while current interest rates are above 5%<sup>14</sup>. This would further impair borrower’s repayment capacity.

Figure 19: Mortgage new volumes excluding internal changes and fixation periods (CZK)



Source: Czech National Bank

**Nevertheless, the impact on repayment capacity could be mitigated by several factors.** Firstly, there is elevated level of customers’ savings supported also by relatively high growth of wages (above inflation) in the pre-pandemic period and the state support provided during the pandemic. However, it is doubtful the number of mortgage debtors that have accumulated sufficient volume of deposits to withstand higher expenses for several months. Secondly, consumers may be able and willing to reduce their current levels of consumption, as mortgage loans granted by Czechian banks are towards households with above-average income. Therefore, there is some room for reducing consumption despite of growth of prices mainly in indispensable goods and services. In addition, unemployment rate in Czech Republic is close to historically lows (2.5% in May according to Czech Statistical Office) providing room for bargaining power to employees for increasing their income. Lastly, there is ongoing discussion for state support and social benefits provisions that could support household income, despite the heightened uncertainty as regards to the trajectory of RRE prices in the Czech Republic in the near future. On the one hand, there are signals for slowing

<sup>13</sup> The box has been drafted in collaboration with the Czech National Bank.

<sup>14</sup> However, the impact of re-fixation will be rather limited as the share of mortgages with variable interest rate and interest rate fixation period below 3 years is negligible.

demand from home buyers, yet on the other hand the lower demand could be offset by rising demand from real estate funds' investments into flats for buy-to-rent flats.

**Banks with exposures in Czechian mortgage market face challenges.** Given the ongoing worsening situation and the challenges faced in Czech Republic housing markets, there is elevated risk that there will be an increase in forborne loans (both performing and non-performing), as well as new inflows of delinquencies. According to estimations of Czech National Bank these could translate to an increase in NPL ratio and some material migration in Stage 2 loans, which would nevertheless be not expected to exceed 10%. The expected impact could be lower due to micro and macro-prudential supervisory measures (e.g. Loan-to-value (LTV), Debt-to-income (DTI) and Debt service-to-income (DSTI) limits that are in place since 2015) and persistently low unemployment rate in the Czech Republic.



## 6. Additional mitigants provide some comfort

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**Increasing mortgage rates and higher living cost affect borrowers' repayment capacity ability to service their mortgage loans.** Although real rates are at historically low levels, as long as inflation is not fully passed on to household nominal incomes, their ability to repay their debt might be impaired. An abrupt correction in residential real estate prices may also have other spill over effects on banks' capital positions through lower collateral valuations, as well as affect consumer confidence which would in turn translate into slower economic growth, which may have a spiral effect causing a further reduction in housing prices.

**Several safety nets have been put in place during the past years by different stakeholders that may mitigate the impact on banks' asset quality in their mortgage portfolio.** The regulatory framework concerning the provision of mortgages has been enhanced during the last years shielding consumers (and banks) from predatory lending or excessive risk-taking. This is also due to the introduction of the Mortgage Credit Directive<sup>15</sup> (MCD) as well as the EBA's Guidelines on loan origination and monitoring<sup>16</sup>. The MCD was adopted in 2014 and lays down a common framework concerning credit agreements for consumers which are secured by a mortgage. Among others, the MCD includes an obligation for creditors to carry out a creditworthiness assessment before concluding a credit agreement, as a basis for the development of effective underwriting standards in relation to residential immovable property in the Member States. In addition, the EBA's Guidelines on loan origination and monitoring specify the internal governance arrangements, processes, and mechanisms for granting and monitoring of credit facilities throughout their lifecycle. They introduce requirements for borrowers' creditworthiness assessment and bring together the EBA's prudential and consumer protection objectives. The Guidelines aim to ensure that institutions<sup>17</sup> have robust and prudent standards for credit risk taking, management and monitoring, and that newly originated loans are of high credit quality. In parallel, other supervisory initiatives took place such as the SSM credit underwriting standards exercise<sup>18</sup>.

**Countries have also used a wide range of macroprudential measures to address rising vulnerabilities in the RRE markets.** A wide reach of borrower-based-measures have been in place in several countries, such as limitations of loan-to-values and maturities of the loans, or debt-to-income and debt service-to-income (DSTI) ratios. At the same time capital-based measures such as risk-weight requirements or floors for RRE exposures have been put in place in a number of EU countries. In addition, countercyclical capital buffers (CCyB) or systemic or sectoral-specific risk buffers (SyRB) have been part of the toolbox used in several countries to dent vulnerabilities in the RRE markets. This also follows the ESRB's assessment which has identified several vulnerabilities in the residential real estate markets across Europe, increasing financial stability risks, and calling for some national authorities to introduce or tighten macroprudential measures, while others were identified as having adequate measures in place. Going forwards, macroprudential policy action

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<sup>15</sup> Mortgage Credit – Directive 2014/17/EU: [https://ec.europa.eu/info/law/mortgage-credit-directive-2014-17-eu\\_en](https://ec.europa.eu/info/law/mortgage-credit-directive-2014-17-eu_en)

<sup>16</sup> EBA guidelines on loan origination and monitoring: [https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Guidelines/2020/Guidelines%20on%20loan%20origination%20and%20monitoring/884283/EBA%20GL%202020%2006%20Final%20Report%20on%20GL%20on%20loan%20origination%20and%20monitoring.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Guidelines/2020/Guidelines%20on%20loan%20origination%20and%20monitoring/884283/EBA%20GL%202020%2006%20Final%20Report%20on%20GL%20on%20loan%20origination%20and%20monitoring.pdf)

<sup>17</sup> Institutions as defined in point 3 of Article 4(1) of Regulation (EU) No 575/2013.

<sup>18</sup> Trends and risks in credit underwriting standards of significant institutions in the Single Supervisory Mechanism (2019).

should seek to further enhance resilience against residential real estate vulnerabilities accumulated or further accumulating in some countries. Capital-based measures should be tightened to address accumulated stock vulnerabilities (e.g., house price overvaluation or household indebtedness). Borrower-based measures affect the flow of new lending and thus help build safer household loan portfolios gradually over time. At the same time, the macroprudential policy response should consider near-term headwinds to economic growth, including those related to energy price developments and broader confidence effects, and should not result in an unintended tightening of credit conditions.

**During the last few years borrowers have increasingly made use of fixed interest rate mortgage loan, took advantage of low interest rates, and therefore protected themselves from increases in interest rates.** As of end-of-year 2021, just 15% of the total new loans had a variable rate or fixed rate of up to 1 year (Figure 14). However, the use of fixed interest rate as well as the duration of fixation varies substantially across countries. For example, there are still banks in some countries that offer solely variable rate mortgage loans, while at the other extreme in other countries interest rates are often fixed for more than 20 years. A high share of mortgage loans has an interest rate which is only fixed for some years, and which is then converted to a variable rate or borrowers re-negotiate another fixation. To this end, borrowers bear an interest rate risk, and might be challenged with a cliff-edge effect on their interest rate payments.

**As an immediate response to rising risks in RRE markets, banks have slightly tightened their credit standards.** The Q2 2022 ECB bank lending survey<sup>19</sup> (BLS) finds that euro area banks reported a slight net tightening of credit standards for loans to households for house purchase mainly driven by an increase in risk perceptions, which were reported as increased for the first time since the fourth quarter of 2020. At the same time, banks tightened moderately the terms and conditions on mortgage loans. Similarly non-eurozone countries also report tightening credit standards. For example, a number of non-euro area authorities, including Denmark, Poland and Hungary, reported tighter credit standards or terms on mortgage loans in their last survey results. In addition, an important risk mitigation factor for banks is that in some EU countries, mortgages granted by domestic banks did not seem to be the main driver of RRE prices' increase, with the share of RRE transactions being financed by domestic credit being much lower than in years before the Great Financial Crisis. At least for countries like Portugal, this is also related with the role that non-residents have been playing in the RRE markets.

**Rising housing prices have pushed average loan-to-values lower on the stock of outstanding loans, shielding banks' balance sheets from an immediate impact due to house price corrections.** The distribution of loan-to-value (LTV)<sup>20</sup> ratios also points towards de-risking of the mortgage loan portfolio of EU/EEA banks. Yet, to some extent the increasing share of lower LTV values is driven by the material increase in valuations. Cognisant of the fact that for some countries house prices are overvalued, the lower reported LTV ratios does not necessarily infer lower risk for the banks. Still, this decrease could presumably also be driven by tightening credit risk standards induced by macroprudential policies such as borrower-based measures in several countries<sup>21</sup>. As of Q1 2022, 55% of the mortgage loans had an LTV value of less than 60%. This share has increased by 6p.p.

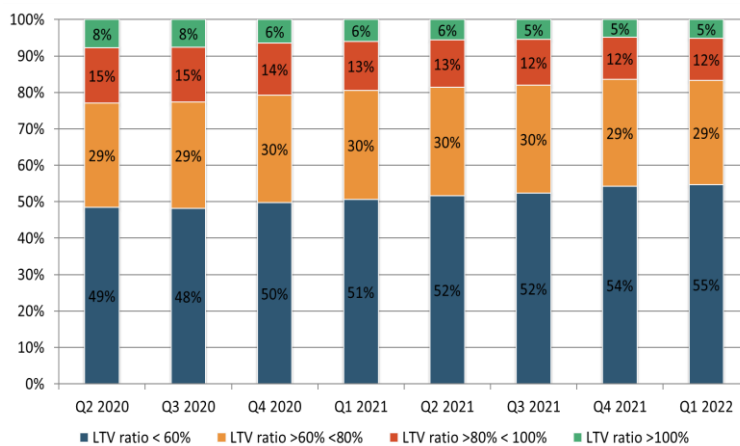
<sup>19</sup> Euro area bank lending survey (Q2 2022).

<sup>20</sup> Loan-to-value calculation methods are not necessarily comparable across banks or countries. This concerns e.g. collateral/real estate valuation methods (market values vs more conservative concepts like mortgage lending values) or collateral allocation (only real estate collateral or financial collateral as well, multiple objects as collateral vs. only the financed property).

<sup>21</sup> For an overview of macroprudential measures in EU countries please refer to ESRB publication: [https://www.esrb.europa.eu/national\\_policy/shared/pdf/esrb.measures\\_overview\\_macroprudential\\_measures.xlsx](https://www.esrb.europa.eu/national_policy/shared/pdf/esrb.measures_overview_macroprudential_measures.xlsx)

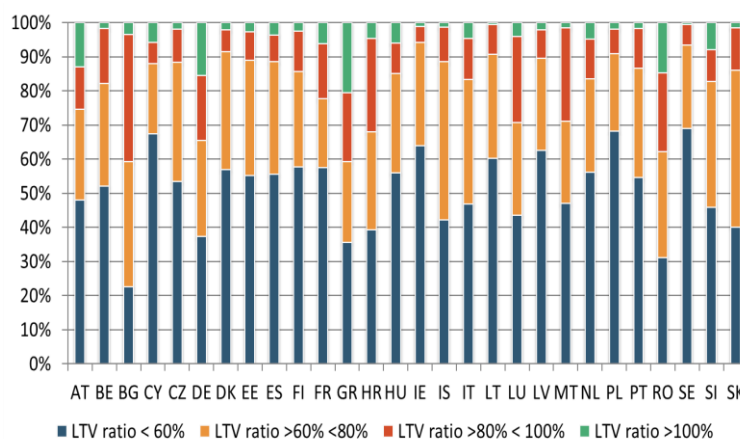
during the pandemic. However, rising house prices have also resulted in higher debt ratios for households (size of mortgages outpaced the growth of household income) and therefore new loans may have a higher LTV. 17% of the outstanding mortgage loans has an LTV of at least 80%<sup>22</sup>. A few countries reported a heightened share of their loans in the high LTV cohorts (more than 80%), revealing pockets of vulnerabilities that are sensitive to interest rates increases or correction in real estate valuations. Nevertheless, in order to better comprehend the underlying risks for each country, one should examine the ground causes of the developments in the LTVs (Figure 20 and Figure 21).

Figure 20: Trend in distribution of mortgage loans by Loan-to-value ratio



Source: EBA Supervisory Data

Figure 21: Distribution of mortgage loans distribution by loan-to-value ratio by country - Q1 2022



Source: EBA Supervisory Data

**Forbearance measures may mitigate against asset quality deterioration.** In the event of rising costs that would be detrimental to borrowers’ ability to sustainably repay the loan, banks could potentially offer forbearance measures such as extension of maturities, payment holidays or deferrals. As laid out on the EBA’s guidelines on management of non-performing and forborne exposures, forbearance measures should be granted with the aim to restore sustainable repayment by the borrower and are thus in the borrower’s interests. The efficiency and effectiveness of these

<sup>22</sup> Countries which predominantly use the ‘mortgage lending value’ as this affects the LTV ratios i.e. Spain and Germany.

measures should be monitored closely and assessed promptly. So far data shows that banks have not been required to extensively use forbearance measures, at least for their mortgage loan portfolio.

**Fiscal and government support measures could also act as help maintain borrower repayment capacity.** For example, compensation schemes to tackle higher energy costs have been widely introduced in Europe, which could protect borrowers, at least temporarily, from inflationary pressures. In addition, some countries have laws forbidding the abrupt increase in new mortgage loans rates (France), or authorities have imposed a cap on mortgage rates for outstanding loans with a variable interest rate period of 1 or less than 1 year (Hungary). Such measures could impair banks' margins and create an uncertain operating environment for banks which could inherently raise their funding cost and cost of equity.

**Box: Risks and risk mitigants in the Belgian RRE market in light of recent developments<sup>23</sup>**

**As in many EU countries, the Belgian RRE market has been characterised by dynamic developments in recent years, including during the COVID pandemic.** Vulnerabilities in this market continued to persist and some of them even further amplified in the recent period. In Belgium, the main vulnerabilities relate to the level of household indebtedness, the potential for downside risks in house prices, and banks' significant mortgage loan exposures secured by relatively low capital buffers calculated in IRB models. Considering the recent developments in terms of interest rates, inflation and rising energy costs, increased vigilance is required for a potential materialisation of some of these risks. Nevertheless, some risk mitigants exist.

**In Belgium, the impact of higher interest rates on borrowers' debt servicing capacity is quite limited in general.** This is because more than 70% of outstanding mortgage loans carry an interest rate that is fixed for the whole maturity of the loan. In addition, the Belgian mortgage credit law stipulates that, for variable rate loans, the rate charged to borrowers may never exceed a level that is twice the initial rate. Considering new loans, a sudden surge in interest rates could have an impact on the borrowing capacity of new debtors. However, the significant tightening by Belgian banks in the past with respect to the share of loans with long maturities (above 25 years) also provides some flexibility in this regard. While a lengthening of maturities was not desired in a very low interest rate environment, it could be justified now in view of the recent rapid increase in interest rates, to avoid sudden market shocks.

**The increase in inflation and especially in energy costs will also have consequences for households' budget and energy inefficient houses.** Nevertheless, inflation pressures are compensated to some extent by the automatic wage indexation mechanism and by several recent measures implemented by the Belgian federal government (e.g., social energy tariffs, temporary tax reductions, ...). Considering the risks for financial institutions, data<sup>24</sup> from the largest Belgian mortgage lenders show that quite a large proportion of the mortgage debt – for which the data is available – is collateralised by properties with a low energy inefficiency. These exposures risk being

<sup>23</sup> The box has been drafted in collaboration with the National Bank of Belgium. For more information, please refer to the Financial Stability Report 2022 of the National Bank of Belgium (Thematic article "Overview of developments in the Belgian residential real estate market", p.65-85) , available at: [https://www.nbb.be/doc/ts/publications/fsr/fsr\\_2022.pdf](https://www.nbb.be/doc/ts/publications/fsr/fsr_2022.pdf)

<sup>24</sup> The data collection is based on a requirement of the National Bank of Belgium (NBB) of 2020 which stipulates that financial institutions for their measurement, assessment and mitigation of climate-related risks, should collect information on the energy performance of their real estate exposures.

impacted more by the increase in energy prices, because the debtors face a larger increase in energy expenses (although this also depends on the terms of their energy contract). Moreover, increased awareness about energy-efficiency could also affect the value of these properties and (further) widen the price differential between energy-efficient and -inefficient houses.

**With a view on enhancing the resilience of both financial institutions and borrowers to a potential shock hitting the market, several macroprudential measures have been implemented in the Belgian residential real estate market in the past.** In 2020, the National Bank of Belgium (NBB), in its capacity of macroprudential authority, has introduced so-called “prudential expectations” for mortgage loans. These prudential expectations consist of specific thresholds for LTV and for some pockets of risk, together with tolerance margins that determine the share of new mortgage loans that is allowed to surpass these thresholds. They have been implemented with the aim of improving the average credit quality of new mortgage loans and will gradually reduce the vulnerabilities in the mortgage stock. These expectations led to a significant improvement in the LTV profile of new mortgage lending since 2020.

**The Belgian banking sector also has to maintain a specific macroprudential capital buffer for real estate risks.** This buffer has been imposed by the NBB since 2013. It applies to banks which calculate their minimum capital requirements according to the IRB approach because these models – calibrated on historical data for credit losses with no real crisis in the Belgian housing market – resulted in low micro prudential risk weights for RRE. The additional macroprudential buffer was previously applied via an increase in risk weights under Article 458 of the CRR, but it was replaced in May 2022 by a sectoral systemic risk buffer of 9%. The buffer could be released at the first sign of a materialisation of vulnerabilities, for example in case of a significant increase in payment difficulties for mortgage borrowers. At that moment, the release would provide banks with additional room to absorb credit losses, allow to continue to grant mortgage loans and provide solutions for borrowers with payment difficulties (e.g., forbearance). This would help to avoid that a downturn in the residential real estate market would be amplified by a large wave of mortgage loan defaults and forced home sales which would eventually lead to a real estate crisis.

## 7. Conclusions and policy recommendations

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**Developments in residential real estate markets are important for the European banking sector.** While there are clearly differences across banking sectors and between individual banks, mortgage loans often account for an important share of banks' assets and loan portfolios. Moreover, these exposures continued to grow in recent years against the background of further strong increases in house prices. Double-digit growth rates have been observed in many EU countries in 2021, fuelled by both demand side factors (such as the low interest rates and search for yield behaviour) and supply side factors (e.g., supply-chain disruptions and increases in construction costs).

**The recent developments and the uncertain macroeconomic environment since the Russian unprovoked war of aggression against Ukraine may however negatively affect residential real estate markets going forward.** Borrowers' debt servicing capacity could be squeezed by the increase in energy costs and inflation and by the rise in interest rates in variable rate loans, while lower borrowing capacity in new loans could impact house price developments. A potential decline in house prices would impair banks' collateral position in existing mortgage loans. Reduced consumer confidence would affect banks more indirectly through a slowdown in economic growth.

**Several mitigating factors are currently present in EU residential real estate markets.** Enhancements to the regulatory framework have helped ensure that banks apply prudent standards for the origination, risk management and monitoring of mortgage loans. In addition, many countries have introduced borrower- or capital-based macroprudential measures in the RRE market. Lower loan-to-value ratios were generally reported in recent years. A broad-based lengthening of mortgage interest rate fixing periods should protect borrowers from a sudden surge in interest rates, yet this increases the interest rate risk that needs to be managed by banks.

**Banks' NPL ratios for mortgage loans have so far continued to show a steady downward trend, also in the more recent period.** Nevertheless, a slight deterioration in forward-looking asset quality indicators signals that the developments should continue to be closely monitored.

**Given the current level of downside risks stemming from residential real estate exposures, supervisors and banks should continue to closely monitor developments in the market and in mortgage portfolios.** Early detection of debtors and exposures in distress, adequate provisioning policies and timely recognition of loan losses remain important. Banks should continue to adhere to good underwriting standards. While experience from the covid pandemic indicate that temporary repayment suspensions and other proactive forbearance measures may help preventing increases in credit losses, banks' decisions related to forbearance should remain in line with existing EBA's guidelines on management of non-performing and forborne exposures. It is therefore, paramount banks to be accurate in their risk classification and to undertake timely impairment charges for loans that are impaired.

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