Memorandum

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Mortgagor margins and amortisation exemptions in early 2023

The report entitled *Den svenska bolånemarknaden* (The Swedish Mortgage Market) is based on data collected in the autumn of 2022. Since then, prices and interest rates have risen sharply and electricity prices have fluctuated, affecting borrowers' finances. Moreover, the number of borrowers receiving temporary exemptions from amortisation requirements has increased during the winter. That is why we are publishing this memorandum as a complement to the mortgage report. The additional data was collected in early 2023.

The weakness of the economy is reflected in the mortgage market. Banks' total new lending for mortgages is at historically low levels, and the number of borrowers with new mortgages has not been so low while data has been available. At the same time, rising interest rates mean that interest payments account for an increasing proportion of household disposable income and may continue to increase for the rest of 2023. The analysis shows that despite high inflation and higher interest rates, most of the mortgagors who took out new mortgages in 2022 have significant margins in their finances. The majority of new mortgagors currently have incomes that allow them to cover essential living expenses as well as interest and amortisation payments. That said, all mortgagors are affected by higher inflation and rising interest rates, thereby reducing their margins. Many people will have to reduce their consumption or savings going forward. Our calculations also show that a significantly larger share of the borrowers will get a deficit in a stressed scenario with higher than expected interest rates and inflation.

As more and more mortgagors are under financial pressure, the demand for a temporary repayment break among borrowers has increased. Based on follow-ups with the banks, FI sees that exemptions from amortisation requirements if special grounds emerge are being used more frequently. We will continue to monitor and analyse developments and return with our report in June 2023.

Economic development

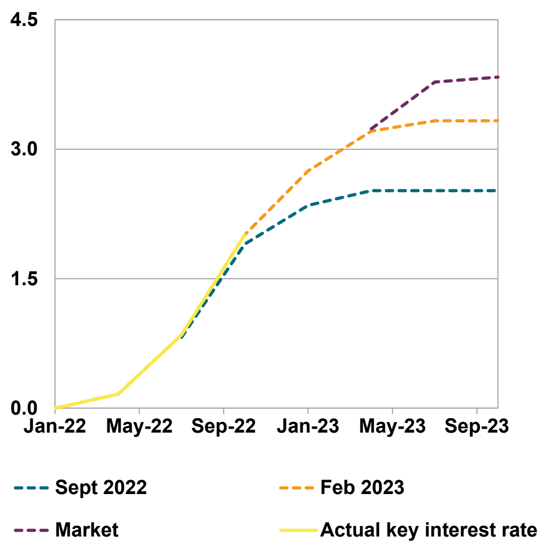
The economic outlook for households has changed during the autumn and winter. Inflation has been high and is expected to remain at high levels for longer than projected in early autumn 2022. As a result, the key interest rate is expected to be raised more than predicted in September (see Diagram 1). Market expectations for future key interest rates have also increased, and the key interest rate is expected to approach 4 per cent in autumn 2023.[1] This has meant that mortgage rates have also risen more than expected in the autumn. Variable mortgage rates may rise to almost 5 per cent in the winter of 2023/2024.

Higher inflation and a tightening monetary policy are helping dampen the real economy. GDP growth projections were gradually revised downwards in 2022, and the recession in 2023 is expected to be deeper than predicted in September (see Diagram 2). The deeper recession in 2023 will impact the labour market, and unemployment is expected to increase. Households' expectations of their own finances and the Swedish economy are at historically low levels.[2] Compared with September 2022, households' views on their own finances are more pessimistic.

[1] We use RIBA futures for market expectations of the key interest rate. RIBAs are forward contracts based on future average key interest rates. There has been considerable variation in expectations in recent weeks, linked to developments in the banking sector and other factors. During the first three weeks of March, market expectations have on average been that the key interest rate will peak at just over 3.8 per cent towards the end of 2023.
[2] See *Hushållens konfidensindikator* (Household Confidence Indicator), Economic Tendency Survey, National Institute of Economic Research, February 2023.

1. Higher expected key interest rate than in autumn

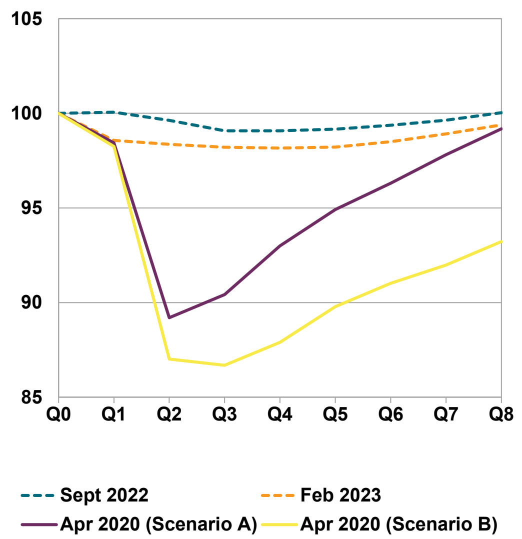
Per cent



Source: Sveriges Riksbank and Refinitiv Eikon.
Note: Refers to key interest rate projections from 20 September 2022 and 9 February 2023. Market expectations refer to average prices for the period 1 – 20 March. The actual key interest rate refers to monthly averages.

2. Expected GDP growth weaker than in autumn

Index = 100, quarter before forecast, seasonally adjusted values



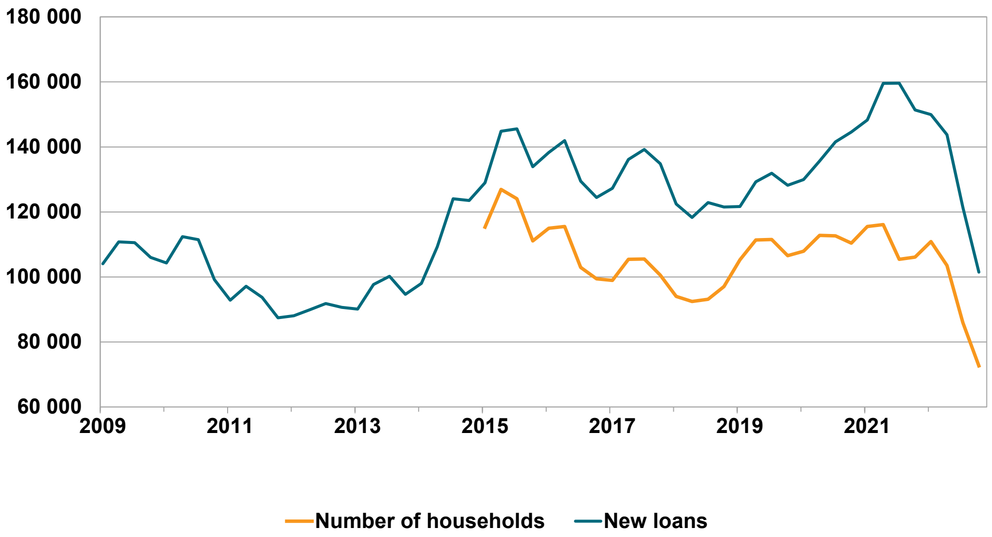
Source: Sveriges Riksbank.
Note: Solid lines refer to scenarios from 28 April 2020. Dashed lines refer to projections from 20 September 2022 and 9 February 2023, respectively. Q0 refers to 2019 Q4 4 for the solid lines, and 2022 Q2 and 2022 Q3 for the dashed lines.

The weak economic performance is also reflected in the mortgage market. Lending to households has been historically low in recent months, and the growth rate of housing loans has slowed since spring 2022.[3] New lending in the first months of 2023 is at its lowest since 2014 (see Diagram 3).[4]

In the second half of 2022 and the first two months of 2023, new lending has decreased for all age ranges and to a similar extent for mortgagors with different loan-to-value ratios. The number of households taking out loans also fell significantly in early 2023. A similar trend applies to equity withdrawal. The average loan-to-value ratios remained largely unchanged for both single-family homes and tenant-owned housing at the beginning of 2023 compared with autumn 2022.

[3] Refers to data from financial market statistics, Statistics Sweden (SCB).
[4] FI collects information on banks' total lending to households for housing purposes, known as aggregate data. This information includes the total volume of new lending, the number of households, existing loans, amortisation payments and loan-to-value ratios.

3. Historically low levels of new lending and number of borrowers with new mortgages
SEK million, respective number



Source: FI.
Note: Refers to moving average of 4 quarters. Data is extrapolated for March 2023. The number of households in the 2015–2018 period refers to data from 7 out of 8 banks in the survey.

New mortgagors have margins but are vulnerable to higher interest rates

The change in interest rates is reflected in our sample. The chapter *Nya låntagares lån* (New borrowers' loans) in the report entitled *Den svenska bolånemarknaden* (The Swedish mortgage market) shows that the average mortgage rate more than doubled between 2021 and 2022, from 1.4 to 3.1 per cent. The chapter also reports that more borrowers are choosing variable rates than before. This means that the borrowers in our sample who chose a variable rate have already had encountered one or more interest rate increases.

The Riksbank has raised the key interest rate on several occasions since we collected the sample data. To illustrate the effect of the changes since the sample was taken and the expected future interest rate development on new mortgagors, we calculate what the average interest rate for the new mortgagors in our autumn 2022 sample would be today (March 2023) and at the end of the year (December 2023). These calculations are based on the assumption that interest rates will develop in line with market expectations for the key interest rate.[5] The calculations take into account the duration of the fixed interest period that borrowers had when the new loan was taken.[6] Under these assumptions, the average interest rate for new borrowers goes from 3.1 per cent in the sample to 3.8 per cent today, and 4.7 per cent at the end of the year (see Diagram 4).[7]

Diagram 4 also shows an estimate of what the interest-to-income ratio and debt service ratio for homebuyers in our sample would look like, given how interest rates have evolved since the sample was taken and how interest rates are expected to evolve over the rest of 2023.[8] Under these assumptions, the average interest-to-income ratio goes from 10 per cent in the sample to just over 12 per cent today. The interest-to-income ratio is expected to increase further, reaching just over 15 per cent by the end of the year. Thus the estimated interest-to-income ratio at the end of the year is more than three times that for new mortgagors in 2021.

Including mortgage repayments and other loans, loan payments represent on average just over 20 per cent of disposable income today, up from just over 18 per cent in the sample. By December 2023, these borrowers can use more than 23 per cent of their income for loan payments. This is almost double the debt service ratio for new borrowers at the time of the 2021 sample.

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[5] The calculation is based on market expectations of the key interest rate in March and December 2023 plus 100 points, which has been the average difference between the average variable mortgage rate and the key interest rate in recent months. The latest statistics for mortgage rates relate to February (see Statistics Sweden's publication of financial market statistics dated 27 March 2023).

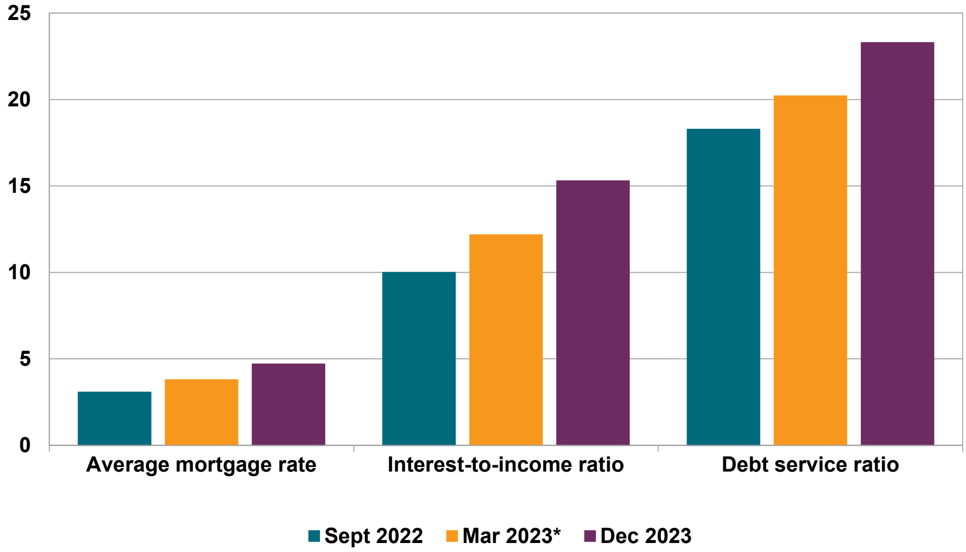
[6] The interest rate remains unchanged in March 2023 for loan components with a fixed interest period longer than 6 months. The interest rate remains unchanged in December 2023 for loan components with a fixed interest period longer than 15 months. The interest rate is increased as described above for loan components with a fixed interest period of more than 6 and 15 months, respectively. The estimated mortgage rate for March and December 2023 is then volume-weighted according to the method used in the regular sample.

[7] The figures refer to new loans for house purchases, but the trend also includes equity withdrawal and switching banks.

[8] The calculation assumes that income in March 2023 is 3 per cent higher than at the time of the sample, and a further 3.5 per cent higher in December 2023. Everything else being equal, higher incomes mean lower interest and debt service ratios. The figures are presented after interest deductions.

4. Much higher proportion of income goes on interest payments when interest rates rise

Per cent



Source: FI.

Note: Refers to housing purchases. Interest-to-income ratio and debt service ratio refer to the percentage of disposable income.

Sound credit checks important

The change in the situation reinforces the importance of sound credit checks. As part of the survey, the banks have answered in-depth questions about credit checks on mortgagors. During the spring follow-up, the questions have focused on whether there have been changes since the sample was taken in autumn 2022. Banks' credit checks consist of several different elements, such as the stressed mortgage rate, housing and subsistence costs, and the overall picture is what shows how credit checks are performed.

Several banks stated in the autumn survey that they had increased their stressed mortgage rate compared to 2021. The average stressed mortgage rate at that time was 6.4 per cent (6.0 per cent in 2021). The banks report that stressed mortgage rates are still 6.4 per cent on average in March 2023. That said, a majority of banks have adjusted the standardised figures for the subsistence costs since then. Since of December 2022, banks have increased the standardised figures for subsistence costs for mortgagors that are single-person households by about 10 per cent on average. The corresponding increase for standardised running costs is 12 per cent for single-family homes and 17 per cent for tenant-owned housing.[9] The banks also reported increases in this autumn's survey, which means that mortgagors today probably face considerably higher standardised subsistence costs and running costs in credit checks than was previously the case.

The chapter *Låntagarnas kassaflöden* (Borrowers' cash flows) in the report entitled *Den svenska bolånemarknaden* (The Swedish Mortgage Market) presents new mortgagors' cash flows in the event of different interest rate levels, loss of income and fall in housing prices. These calculations aim to analyse the vulnerability of new mortgagors over time. In the past year, FI has published scenario-based cash flow calculations that are more closely tied to the current economic situation, with high inflation, rising interest rates and high electricity prices.

Table 1. Scenario-based cash flow calculations

Scenario	**Period**	**Average variable mortgage rate**	**CPIF excluding energy**	**Electricity prices, SEK/kWh (SE3 & SE4)**
Autumn 2022	September/October 2022	2.9	7.9	1.79 & 2.23
Today	Q1 2023	4.0	8.2	1.48 & 1.60
Baseline scenario	December 2023	4.8	3.5	1.02 & 1.16
Stressed scenario	December 2023	6.0	6.0	1.02 & 1.16

Source: FI
Note: The table summarises the main parameters used in the various scenarios.

In the report entitled *Låntagarbaserade åtgärder vid hög inflation och stigande räntor* (Borrower-based measures amid high inflation and rising interest rates), which was published in mid-October 2022, the scenario was based on market pricing of future key interest rates and the price of electricity.[10] In the report entitled *Stabiliteten i det finansiella systemet* (Stability in the Financial System), which was published at the end of November, we used a scenario from the International Monetary Fund (IMF) involving a mortgage rate of 5.25 per cent and relatively high inflation. We

[9] The change in standardised costs is an estimate based on banks' responses to in-depth questions about their credit checks. The composition of the standardised figures differs between banks, which means that the figure may differ from the actual changes.
[10] In particular, electricity price expectations were very high in early autumn 2022. Although electricity prices have been high this winter, at their peak they were less than half the prices expected in September last year.

also assumed high electricity prices. Here, we present new scenario-based cash flow calculations based on borrowers' situation in autumn 2022 (when the sample was taken). We then project the developments until March 2023 and provide a scenario for the end of 2023, based on the latest projections. In addition, we use a scenario with developments that are worse than current expectations (see Tabell 1 for a comparison of the various scenarios).

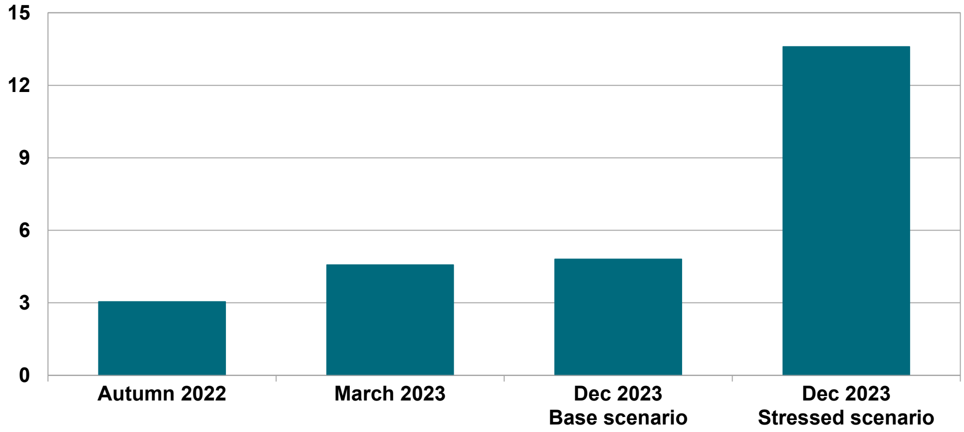
Since the autumn, inflation – apart from electricity prices – has surprised on the upside, which means that interest rate expectations are slightly higher today than they were before. That said, expectations for electricity prices have fallen back. We use the Riksbank's forecasts for core inflation, 3.5 per cent, in the baseline scenario (see Tabell 1). For mortgage rates, we use the market's expectation of the key interest rate for the fourth quarter, and maintain the same difference between average variable mortgage rates and the key interest rate as at today. We assume that electricity prices will be like the market pricing of the system price for the fourth quarter. In the stressed scenarios, we assume that core inflation will fall back more slowly than projected and stand at 6 per cent at the end of 2023. We therefore assume a tighter monetary policy, which means that mortgage rates will be 1.2 percentage points higher.

The majority of new mortgagors have good margins. In our calculations, 3 per cent have a cash flow deficit right from the outset (see Diagram 5). Just under 10 per cent have a cash flow surplus of between SEK 0 and 2,500 per month per adult borrower in the household. If we adjust the standardised figures for subsistence costs and mortgage interest rates for the developments since October, the proportion with a deficit increases to 4.5 per cent, and the proportion with a small surplus increases to around 13 per cent. If mortgage rates, inflation and electricity prices develop as expected, the deficit ratio will increase by a further 0.2 percentage point in 2023. The relatively small increase is a sign that most new mortgagors have the margins to cope with the expected future developments. Moreover, borrowers with cash flow deficits at the outset may have income or assets for which we have no data, but which banks took into account before granting credit.[11]

[11] This is likely because a deficit using a simplified cash flow calculation with actual interest rates would mean large deficits in banks' discretionary income calculations.

5. Proportion of new mortgagors with deficits

Percentage of new homebuyers



Source: FI.

Note: Refers to buyers of tenant-owned housing and single-family homes from the 2022 sample.

In the stressed scenario, almost 14 per cent are projected to have deficits, which is significantly more than in the baseline scenario. The large increase in the proportion between the baseline scenario and the stressed scenario is largely due to the fact that there are relatively many borrowers who have utilised a large part of the available lending space in the credit check when taking out a mortgage. Even though the mortgage rate in the stressed scenario is roughly in line with the banks' *stressed mortgage rates*, the combination of higher interest rates and the other cost increases means that a small surplus in the calculation becomes a deficit.

The calculations are based on the standardised figures described in *Appendix 1. Cash flow calculations* There are many mortgagors who start out with a higher subsistence costs than this. Such borrowers will need to adjust their consumption even in a baseline scenario to avoid having a negative actual cash flow on a monthly basis. This group will also be even larger if mortgagors are exposed to additional financial strains under the stressed scenario.

The chart shows the outcome for new mortgagors. These people typically have the lowest margins of all mortgagors. There are about 2.4 million households with mortgages in Sweden. An estimated 150,000 households took out a mortgage to buy a home in 2022. In the baseline scenario, it is estimated that around 7,000 of these could be in deficit by the end of 2023. In the stressed scenario, the corresponding figure would be around 20,000.

It is difficult to estimate how many of these people will face major financial problems because they do not have a cash buffer or are unable to reduce their cost of living. Although households' liquid financial assets are large in aggregate, they are distributed unevenly; and households with small buffers are particularly vulnerable.

People who have bought homes in recent years, when housing prices and loan-to-income ratios have been particularly high, are generally the most sensitive to the kind of developments we are currently seeing. If we consider the same scenario as in Diagram 5, but use the sample for 2021 and 2020, there is a lower proportion of deficits. The proportion decreases by about 10 per cent for people who took out mortgages in 2021, and the proportion decreases by about one third for people who took out mortgages in 2020. This is because we assume that their income has increased and that they have been able to make amortisation payments on parts of their mortgage, which means that their interest expenditure is increased to a lesser extent.[12] A total of around 20,000 mortgagors may experience a deficit in the baseline scenario over the three years.

More borrowers exempted from amortisation requirements

According to Finansinspektionen's regulations (FFFS 2016:16) regarding amortisation of loans collateralised by residential property (the amortisation regulations), lenders are able to grant temporary exemptions from the amortisation requirements if there are special grounds for doing so. A description of what may constitute special grounds can be found in the decision memorandum to the regulations.[13] This states that a borrower may be exempted if their financial circumstances have significantly deteriorated since the loan was taken. It is up to the lender to make an individual assessment in each case.

In the decision memorandum, FI provides examples of circumstances that *may* cause the borrower's financial circumstances to deteriorate significantly. This includes unemployment, extended periods of sick leave and deaths of relatives. The decision memorandum makes it clear that the

[12] We assume that households' disposable income has increased in line with the average for Sweden as a whole, and that they have made amortisation payments on their mortgages in accordance with the mortgage contract.
[13] See *Föreskrifter om krav på amortering av bolån* (Regulations on requirements for amortisation payments on mortgages), FI Ref. 14-16628.

list of examples is not exhaustive. Last autumn, we clarified the fact that other circumstances may also create significantly worse financial conditions, such as a sharp increase in the borrower's expenses, and thus constitute special grounds.[14]

Since December 2022, FI has been holding meetings with the largest mortgage companies to identify how the exemptions in the regulations are applied in practice in the current economic situation. Many mortgagors are seeking advice from their lenders in the current economic climate of high inflation, rising interest rates and falling housing prices. Bank customers' questions concern several areas that affect their personal finances, including amortisation payments and the possibility of mortgage companies granting exemptions from the amortisation requirements.

The general impression from these meetings is that the opportunities for mortgage companies to grant exemptions work relatively well.

Mortgage companies have set up or improved internal processes to:

- inform their customers about which situations may constitute special grounds
- advise customers on how they should view amortisation payments versus other savings, depending on their financial circumstances
- manage applications by requesting information and assessing their customers' financial situation.

During the discussions with the mortgage companies, FI has collected data on the number of exemptions from the amortisation requirements and set up an additional collection with a higher frequency and further information in respect of exemptions granted than was previously collected.[15] In late 2021 and early 2022, the number of exceptions was between 600 and 800 per month (see Diagram 6). Both the number of applications and the number of exemptions granted gradually increased from September onwards. In the fourth quarter, the number of exceptions per month averaged around 2,500. The number of exceptions continued to increase in January, while it declined slightly in February. In total, around 15,000 exemptions were

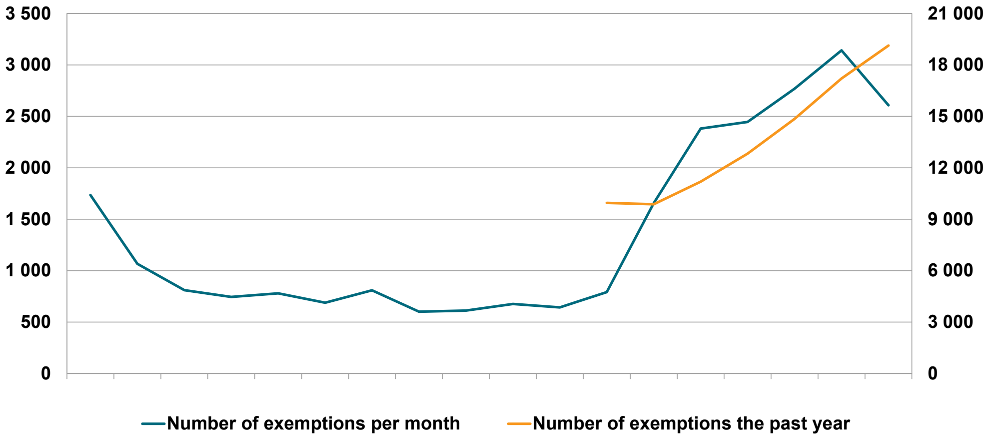
[14] See *Låntagarbaserade åtgärder vid hög inflation och stigande räntor* (Borrower-based measures amid high inflation and rising interest rates).

[15] The first reporting by lenders took place in mid-March. There is a certain amount of variation in the information available to lenders and the definitions they use. Data may therefore be revised before FI submits its final report to the Government on the survey of lenders' handling of exemptions from the amortisation requirements.

granted between September and February. In addition to the exemptions from the amortisation requirements due to special grounds, borrowers can also reduce their amortisation payments on the basis of how their loan-to-value ratios and loan-to-income ratios relate to the regulatory limits. In addition, borrowers who took out loans before the amortisation requirements were introduced may be granted amortisation relief. Modified amortisation conditions of this kind are more common than temporary exemptions from amortisation requirements.

6. Exemptions authorised on special grounds

Number



Source: FI.

Note: The chart shows the number of temporary exemptions from the amortisation requirements granted on special grounds per month and over the last year.

Mortgage lenders state that the most common reasons why mortgagors are deemed to have significantly impaired financial circumstances, and are therefore granted exemptions, are loss of income or a combination of loss of income and significantly increased expenses.[16] There are also cases where mortgagors have been granted exemptions where a sharp increase in expenses has been the decisive factor in the assessment of significant deterioration of the mortgagor’s financial circumstances.

The most common reason why lenders are of the opinion that they cannot grant exemptions from the amortisation requirements is that the mortgagor still has significant financial margins in their personal finances, despite the general economic changes that have taken place recently. This is mainly

[16] Except the effect on interest expenses for which mortgage lenders have taken into account in their credit check and where borrowers have chosen fixed interest periods in consultation with mortgage lenders.

because their income still exceeds their expenditure, but in some cases because they have significant buffers in the form of liquid financial assets. In this case, the borrower's financial circumstances have not deteriorated to such an extent that lenders are of the opinion that there are special grounds. There are also cases where lenders are of the opinion that it is beneficial for the customer to continue making amortisation payments as required. This may be because the loan-to-value ratio has risen due to the fall in housing prices, for example, or because the reduction in interest expenditure resulting from amortisation payments is advantageous compared to other types of savings.[17]

Mortgage lenders have organised their management in different ways and, to some extent, they have made different assessments of what falls under the concept of a *significant deterioration in financial conditions*. There may also be differences in the extent to which different mortgage lenders are *willing to* grant exemptions even when the possibility exists. The fact that different mortgage lenders set different limits is partly due to their different business models. This affects outcomes in a similar way as the decisions of mortgage lenders on how much they are willing to lend to different borrowers, and on what terms.

Too much variation in the assessment of whether there have been material changes in the borrower's financial circumstances may lead to uncertainty for both borrowers and lenders. To prevent this variation from becoming too great, FI would like to further develop the reasoning from the decision memorandum on when exceptions are intended to be authorised. As we have emphasised in previous contexts, an exemption on special grounds requires the lender to make an individual assessment of the borrower's circumstances. For the individual assessment to fulfil its purpose, it is important for it to be based on sufficient information, such as up to date information on the borrower's income, expenditure and liquid financial assets. An assessment of how *one* of these factors has changed is not enough to determine whether the borrower's financial circumstances have deteriorated substantially. An increase in expenditure of a given size has very different effects on borrowers with different incomes. Similarly, a temporary reduction in income has different effects on the borrower's

[17] The loan-to-value ratio here refers to the mortgage in relation to the estimated market value of the home. This is not the same as the loan-to-value ratio subject to amortisation, which refers to the mortgage relative to the value of the home when the original loan was taken out.

conditions depending on whether the borrower has significant liquid financial wealth or just a small savings buffer.

The need to make an individual judgement based on sufficient information also means that it is not possible to determine in advance exactly the kind of decisions to which different types of future events will lead. Mortgage companies have extensive experience of dealing with borrowers in financial difficulties. Therefore, they should be in a good position to determine whether the problems are such that a borrower should be temporarily exempted from the amortisation requirements. The lender is always the party that ultimately decides whether to grant an exemption on special grounds. Therefore, there may be situations in which an exemption from amortisation payments is possible under the amortisation regulations, but where the lender refuses to allow the borrower to temporarily change the amortisation conditions for other reasons, such as commercial considerations.

As with all other credit management, when assessing the conditions for an amortisation exemption, lenders are also responsible for identifying, managing, internally reporting and controlling their credit risk, taking into account consumer protection and making the assessments required by the applicable regulations.

Given that the economic situation puts pressure on borrowers, leading to more of them facing significantly worse conditions, the fact that the possibility of a temporary exemption from the amortisation requirements is being deployed more frequently is positive. FI will continue to analyse the banks' management during the spring and submit a report to the Government in June.