



Staff memo

Credit assessment for mortgages

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June 2024

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Staff memos

A staff memo provides members of the Riksbank's staff with the opportunity to publish advanced analyses of relevant issues. It is a publication for civil servants that is free of policy conclusions and individual standpoints on current policy issues. Publication is approved by the appropriate Head of Department. The opinions expressed in staff memos are those of the authors and should not be regarded as the Riksbank's standpoint.

Summary

In this staff memo, we describe how banks conduct credit assessments for mortgages. First, we provide an overview of how the credit assessment is designed in practice, and then we delve into the two main components of the credit assessment: the stressed mortgage rate and the standardised cost of living. Finally, we examine how these affect households' borrowing capacity.

The stressed mortgage rate is a tool used to ensure that a borrower can handle higher interest rates. Changes in the stressed mortgage rate have a big impact on households' borrowing capacity, and thus potentially also on housing prices. If it varies widely over time, it can amplify ups and downs in the economy. Compared with an average variable mortgage rate, the stressed mortgage rate has varied relatively little over time, probably reflecting the fact that banks regard a mortgage as a long-term commitment where the borrower is expected to have a good repayment capacity throughout the duration of the mortgage.

Standardised costs of living are used to calculate a reasonable standard of living based on the Swedish Consumer Agency's guidelines. However, they appear to be lower than actual household expenditure. Households may therefore need to make relatively large adjustments to their finances to be able to meet their credit agreements. It is important that they are aware of this. For a long time, households' disposable incomes grew faster than the standardised costs, increasing households' borrowing capacity. One reason for this is that the standardised costs have at times failed to be increased in line with general prices. However, in 2021-2023 they increased more than both inflation and incomes, which has instead reduced households' room to borrow.

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¹ The authors would like to thank Isabelle Holmberg, Björn Lagerwall, Jakob Winstrand, Robert Emanuelsson, Annika Svensson, Olof Sandstedt, Caroline Jungner and Tommy Persson for their valuable comments as well as translators Elizabeth Nilsson and Gary Watson for excellent translation services.

1 Credit assessments play a role in financial stability

When a lender conducts a credit assessment, it involves evaluating a borrower's ability to service a loan. If credit assessments are not sufficiently rigorous, borrowers may take on too much debt. As a result, borrowers may need to make significant adjustments to their consumption or savings to fulfil their credit agreement if economic conditions deteriorate. Empirical research shows that rapidly growing debt risks building up imbalances, which ultimately can lead to a financial crisis.² An important factor in this process is whether debt has increased because demand has also increased or because the supply of credit has increased. Financial crises have often been preceded by a period in which lenders have relaxed their credit assessments, increased the supply of credit and contributed to the creation of a self-reinforcing spiral between asset prices and debt. For example, one of the causes of the global financial crisis of 2008-2009 was shortcomings in credit assessment components in the US mortgage market. There is thus a clear link between lenders' credit assessments and the stability of the financial system. In addition, there is a link to the transmission of monetary policy, as changes in lenders' credit assessments affect households' access to credit and, by extension, economic activity. For these reasons, it is important to follow the banks' credit assessments.

In this staff memo we focus on the two main components of credit assessments for household mortgages: **the stressed mortgage rate**, i.e. the interest rate that banks use to ensure that a borrower is able to pay higher interest rates, and the **standardised cost of living**, i.e. the amount that the borrower is assumed to spend on basic consumption. By describing them, we aim to highlight the different elements of the credit assessment and how they change over time, as well as to illustrate how they affect the borrower's borrowing capacity.

2 Design of the credit assessment

Loans to consumers are regulated by the Consumer Credit Act. One of the basic requirements there is that the lender (henceforth referred to as **the bank**) must comply with good lending practice.³ It also states the following: "The person carrying out business activities shall evaluate whether the consumer has the economic conditions to fulfil his or her commitments under the credit agreement. Such credit assessment shall be based on adequate information on the consumer's economic circumstances. Credit may only be granted if the consumer has the economic conditions to fulfil his or her commitments".⁴ In practice, the credit assessment for mortgages therefore mainly consists of a cost calculation in which the borrower's income is compared with

² See, for instance, Mian and Sufi (2018, 2017), Jordá et al. (2015), Schularick and Taylor (2012), Kelly et al. (2019) and Keys et al. (2010).

³ "Good lending practice" means that the lender must keep the consumer's interests at heart, for example by ensuring that the consumer understands the agreement and the costs involved.

⁴ See section 12 of the Consumer Credit Act (2010:1846).

potential expenses in a so-called "discretionary income" calculation. For a mortgage to be granted, the borrower's income usually needs to be high enough to cover various expenses – the amount 'left to live on' must be equal to or greater than zero.⁵ It is the borrower's expected repayment capacity that determines whether or not a loan should be granted.

The size of the cost components of the discretionary income calculation varies for different types of borrowers, depending, for example, on the number of people in the household and where in the country they live, and it can be divided into three categories:

- **Loan-related expenses** such as interest costs (calculated using a stressed mortgage rate that is higher than the actual interest rate) and amortisation.⁶
- **Standardised living costs and expenses related to the running of the home**, such as electricity, food costs, utilities, transport and charges related to the home.
- **Taxes and fees**, such as tax on earned income and tax on capital income, municipal property tax and ground rent.

Table 1 shows an example of a discretionary income calculation for a fictitious single person household borrowing SEK 1.8 million to buy a tenant-owned apartment costing SEK 2.4 million. The household has a disposable income of SEK 24,500 per month.⁷ The household borrows more than 70 per cent of the value of the home and the amortisation payment is therefore 2 per cent per year.⁸ However, the household is not affected by the stricter amortisation requirement because the size of the loan does not exceed 4.5 times the household's gross income.⁹ The fact that the household is entitled to use the interest deduction is included in the calculation.

⁵ Banks may make exceptions if the borrower has substantial other assets or income that has not been taken into account. In addition, there may be internal debt-to-income limit that the bank does not want to exceed in most cases, even if discretionary income is greater than or equal to zero. A debt-to-income limit means that the ratio of debt to income should not exceed a certain predetermined ratio – the 'ceiling'.

⁶ In certain circumstances, other aspects related to the finances of tenant-owner associations are also taken into account. If the loan of the association exceeds a certain level, the banks often analyse how much an increase in interest rates of 1 or 2 percentage points would affect the monthly fee. If there is a high risk of a fee increase, this should be taken into account in the discretionary income calculation.

⁷ Gross income is 35,000 with a simplified assumption that income tax is 30 per cent.

⁸ The loan-to-value ratio is 75 per cent ($1.8/2.4 = 0.75$).

⁹ The disposable income used here in the notional discretionary income calculation is 24,500. Gross income, which is used to determine the amortisation requirements to which the household is subject, is 35,000 (= $24,500/(1-0.3)$). In this case, the size of the loan (1.8 million) is less than 4.5 times the annual gross income ($35,000 * 12 * 4.5 = 1,890,000$) and therefore the household is not affected by the stricter amortisation requirement.

Table 1. Simplified hypothetical discretionary income calculation for a mortgage of SEK 1.8 million

SEK per month

Income	
<i>Disposable income</i>	24,500
Expenditure	
<i>Fee to the association</i>	2,350
<i>Standardised operating cost, tenant-owned housing</i>	750
<i>Interest expenditure with stressed mortgage rate of 7% (after interest deduction, 30%)</i>	7,350
<i>Amortisation, 2%</i>	3,000
<i>Standardised cost of living allowance, single person household</i>	10,000
<i>Standardised cost for public transport</i>	850
Discretionary income calculation	+ 200

Note. The calculations are based on a hypothetical case of a single person household.

Source: The Riksbank

In the calculation, discretionary income corresponds to SEK 200, which means that the borrower is assessed to be able to fulfil his or her commitments under the credit agreement for the mortgage even if economic conditions deteriorate. The calculation in the table is only an example of what a credit assessment with a discretionary income calculation might look like. In many cases, other items of income or expenditure may be added, such as various forms of benefits or whether or not the household owns a car. The bank will also assess the overall credit score.

3 Components of the credit assessment vary over time and between banks

In this section, we take a more in-depth look at the main components of the calculation: the stressed mortgage rate and the standardised cost of living. As the economy develops and financial conditions change, the bank needs to review the various components of the credit assessment. This in turn affects borrowers' ability to borrow. The way the credit assessment is designed can also vary from one bank to another, depending on how much risk the bank wants to take.

3.1 Stressed mortgage rate

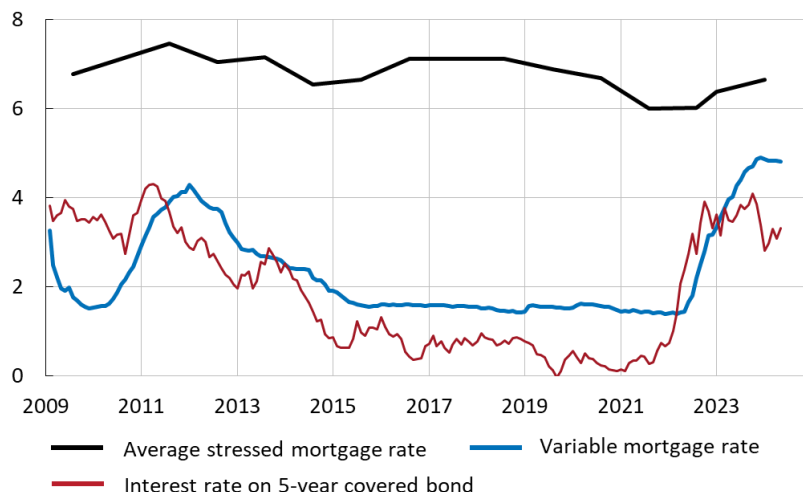
The stressed mortgage rate is the interest rate used by banks to ensure that the borrower can cope with lastingly higher interest rates. The banks themselves decide how

high it should be. Some banks state that they use the interest rate of a five-year covered bond – with a certain mark-up – to determine the level of the stressed mortgage rate (see Chart 1). This is sometimes combined with a floor as to how low the stressed mortgage rate can be allowed to fall. The final level of the stressed mortgage rate also depends on banks' internal credit risk policies, which differ between banks.

Chart 1 shows an average of the stressed mortgage rate and how it has developed over time in the banks surveyed by Finansinspektionen.¹⁰ We can see that it has not fluctuated as much as the average variable mortgage rate has. Several of the banks are currently using a stressed mortgage rate of just over 6 per cent, which is on average almost one percentage point lower than in previous years. One reason why banks started to lower their stressed mortgage rates in 2020 was probably to adjust to the fact that interest rates had been low for a long time and were expected to remain so. However, as price levels and interest rates rose in 2022-2023, banks have raised their stressed mortgage rates again.

Chart 1. Average stressed mortgage rate, variable mortgage rate and covered bond rate

Per cent



Note. The black solid line represents an average of eight banks' stressed mortgage rates. The blue line refers to the variable mortgage rate on new and renegotiated contracts from MFIs, mortgage institutions and alternative investment funds (AIFs). The red line shows the yield on a five-year Swedish covered bond, also known as a "housing bond" (zero-coupon bond calculated using the Nelson-Siegel method).

Sources: Finansinspektionen, Statistics Sweden and the Riksbank

3.2 Standardised cost of living

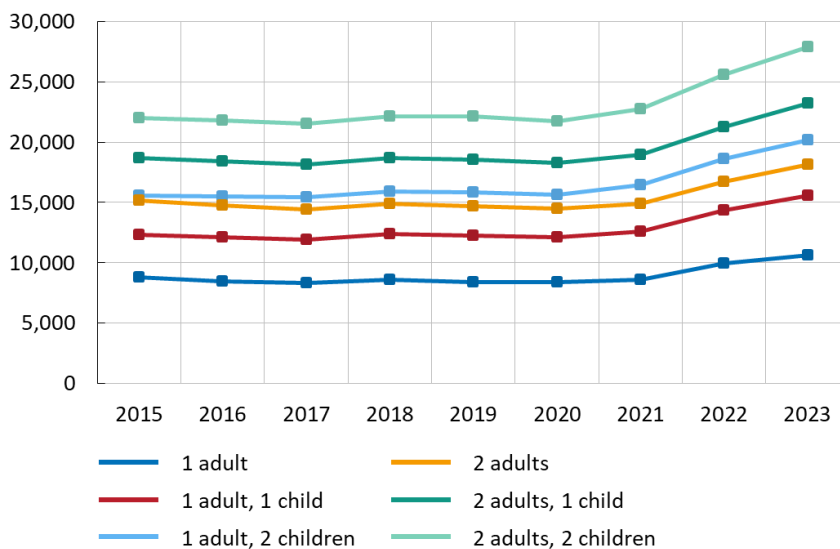
As stated in Finansinspektionen's general guidelines, banks need to consider relevant household expenses in their credit assessments. As a starting point, banks typically

¹⁰ Finansinspektionen collects an annual sample of new mortgage borrowers. The survey includes data from the eight largest mortgage institutions: Danske Bank, Handelsbanken, Länsförsäkringar Bank, Nordea, SBAB Bank, SEB, Skandiabanken and Swedbank.

use standardised living and running costs. These standardised costs may vary depending on how many individuals that are part of the household, their age and where in Sweden the household resides. Chart 2 shows the average standardised cost of living for different types of households.¹¹

Chart 2. Average standardised cost of living for different households

SEK per month



Note. Refers to an average of eight banks' standardised amounts for different households. Additional costs such as car or public transport are not included in these amounts.

Sources: FI and the Swedish Consumer Agency

After remaining at roughly the same levels for several years, the standardised costs have increased significantly as a result of the rising cost of living over the past two years. According to Finansinspektionen's mortgage survey, all banks surveyed increased their standardised costs more than normal in 2022 and 2023.¹² From being relatively unchanged between 2015 and 2021, standardised costs increased by almost 14 per cent on average between 2021 and 2022. The level of the standardised costs continued to rise in 2023, by around 8 per cent on average.

Chart 3 shows how the standardised cost has developed in relation to other variables. For a long time, both the price level and disposable household income increased faster than the standardised costs. CPIF inflation was 10 per cent in December 2022. By way of comparison, standardised costs increased by an average of 14 per cent for all household types between 2021 and 2022, while the increase in disposable income

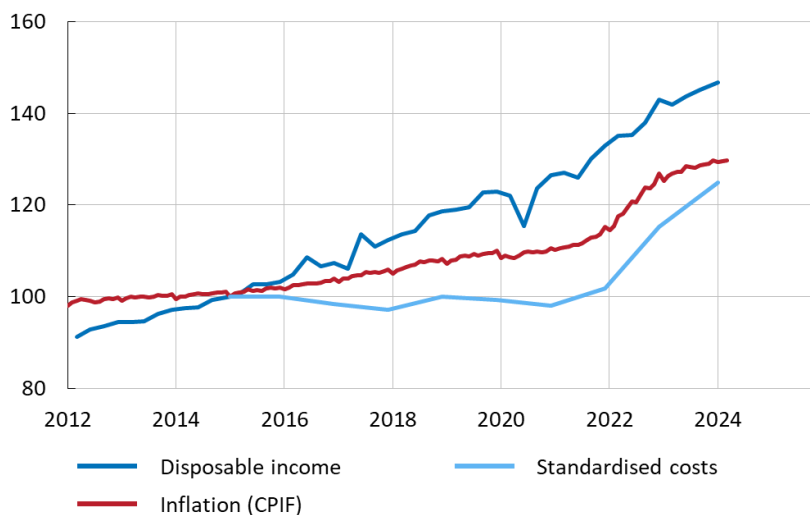
¹¹Differences in standard costs between banks may be due to the fact that the banks handle household costs in different ways within the framework of their credit assessment. With some banks, certain expenses can be covered in their standardised costs, while other banks can manage the same type of cost by making a separate surcharge in addition to the existing standardised cost. The standard cost would then appear to be lower at the latter bank, but is solely due to the bank taking the cost into account in a different way. In the end, it is the balanced assessment of a borrower's ability to repay in accordance with good credit practice that is most important. Ultimately, it is the overall assessment of a borrower's repayment capacity in accordance with good lending practice that is most important.

¹² See *The Swedish mortgage market, 2024 2023*, Finansinspektionen.

amounted to just over 7 per cent (see Chart 3). In the past year, however, the adjustment of standardised costs has been more in line with developments in both inflation and disposable income.

Chart 3. Development of disposable income, price level and standardised costs in Sweden

Index, 1 January 2015 = 100



Note. Disposable income is seasonally adjusted and expressed per quarter. The light blue line refers to an indexation of the level of the standardised costs from Chart 2. Inflation refers to monthly data.

Sources: Statistics Sweden and the Riksbank

The standardised costs are lower than actual household expenses

Many banks use the Swedish Consumer Agency's calculations when assessing what is a reasonable basic level for some household costs.¹³ Statistics Sweden collects statistics on actual household expenses. It may be interesting to compare these with the Swedish Consumer Agency's calculations and the standardised costs used by banks in their credit assessments.

Household costs estimated by the Swedish Consumer Agency

Every year, the Swedish Consumer Agency calculates how much money households may need to spend on food and other necessities. These costs are called household costs and include common household costs, such as for consumables, home equipment, insurance and household electricity, individual costs, such as for hygiene, clothing and leisure, and food costs. The estimated costs vary depending on how many people are in the household, how old they are and whether they are male or female. According to the Swedish Consumer Agency, the starting point is what is usually

¹³ The purpose of the Swedish Consumer Agency's calculations of household costs is to enable the costs to be used as reference values when planning household budgets, for example for households, consumer advisers, budget and debt counsellors, social welfare offices, banks and schools.

needed to live a "good" everyday life, i.e. neither overconsumption nor minimum subsistence level. The calculations should therefore reflect a reasonable standard of consumption. The Swedish Consumer Agency also states that the calculations for household costs should be seen as approximate, and they therefore tend not to change much from year to year. However, following the cost increases of recent years, the Consumer Agency has made a larger adjustment in household costs compared to previous years.¹⁴ The table below summarises the costs for a one-adult household, a two-adult household and a household with two adults and two children.

Table 2. Household costs per month, National Consumer Agency reference values 2023

SEK per month

	Food costs	Individual costs	Common household costs	Total
1 adult	3,420	2,250	3,650	9,320
2 adults	6,840	4,500	4,420	15,760
2 adults, 2 children	11,780	6,450	6,660	24,890

Note. Adult refers to the category 31-60 years (food costs) and 26-49 years (individual costs) in the Swedish Consumer Agency's table of reference values. Food costs assume that all food is prepared at home. Children refer to 10-13 years and 6-9 years (food costs) and 11-14 years and 7-10 (individual costs). The common household costs have been calculated on the basis that the household lives in a "medium-sized city".

Source: Swedish Consumer Agency

Although banks can use the Swedish Consumer Agency's guidelines as a basis, the agency also makes it clear that the calculations do not cover all costs for households, but only around one third.¹⁵ If banks follow the principles that are the basis for the Swedish Consumer Agency's calculations - that the standardised cost of living should reflect a reasonable standard of living - they may therefore need to take additional costs into account in connection with the credit assessment. For example, it is common for banks to take into account the running costs associated with the home and the costs of transport, such as public transport and car costs.

If costs rise sharply in a short period of time - as they did in 2022-2023 - the estimated costs previously produced by the Swedish Consumer Agency may be misleading. Banks therefore need to continuously review their standardised costs and ensure that they reflect a reasonable standard of living.

¹⁴ See the Swedish Consumer Agency's website and "Estimated household costs" for a summary of the last year's household costs.

¹⁵ For example, the Swedish Consumer Agency's calculations do not include housing expenses or running costs associated with the home, transport, dental and medical care or social services such as child and elderly care.

Household expenses according to Statistics Sweden

Statistics Sweden's statistical product *Household expenses* is a sample survey that shows the expenses of different household groups and how they are distributed between different goods and services for one year.¹⁶ Households are asked to state how much they spend on, for example, food and clothing each month. Unlike the Swedish Consumer Agency's calculations, Statistics Sweden's collection covers statistics on total household expenses over a year. The statistics should therefore reflect actual household consumption. Since Statistics Sweden's statistics cover all costs, it is inappropriate to compare them directly with the Swedish Consumer Agency's reference values, but since the expenses are reported by product group, an approximation can be made of the corresponding cost items (see Table 3).

Table 3. Actual household costs, Statistics Sweden's *Household expenses 2021*

SEK per month

	Food and non-alcoholic beverages	Other expenses	Total
1 adult	3,500	11,700	15,200 (17,000)
2 adults	5,500	22,000	27,500 (30,600)
2 adults, 2 children	7,800	28,500	36,300 (40,500)

Note. Here, single persons without children, cohabiting persons without children and cohabiting persons with children (at least one child aged 0-19) are used. Other expenses refer to the Statistics Sweden item "total expenses" minus the following expenses in order to make the figure more comparable with other standardised costs: "housing, water, electricity, gas and other fuel", "transport", "vehicle tax" and "gifts". The amount in brackets refers to an estimate of the actual costs in 2023 projected using the CPIF from the end of 2021 until 30 June 2023.

Source: Statistics Sweden

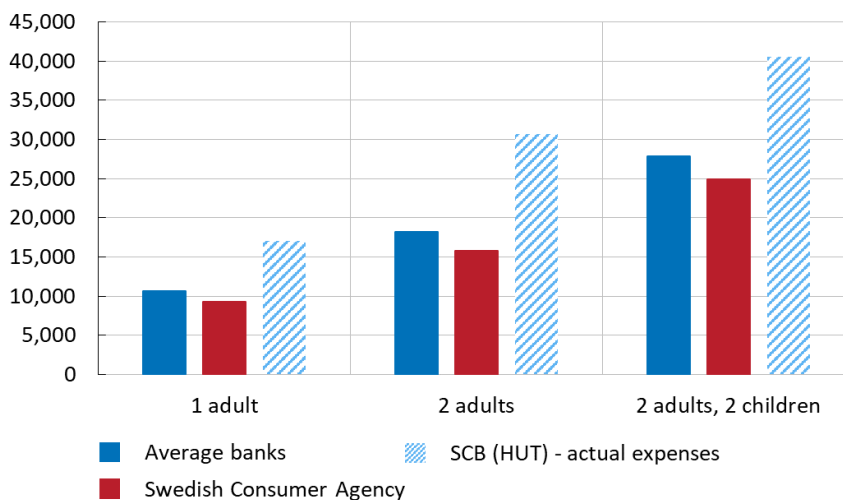
Chart 4 shows an average of the banks' standardised costs, the Swedish Consumer Agency's reference values and actual household expenses according to Statistics Sweden's statistics. We can see that, in most cases, the average of the banks' standardised costs is close to the Swedish Consumer Agency's calculations, but they are lower than actual household expenses. This implies that banks assume that households can adjust their expenses to meet their loan payments.¹⁷

¹⁶ Statistics Sweden collects data on household expenses every five years. The latest collection was in 2021, i.e. before the cost of living rose across the board in Sweden. To estimate the actual costs in today's prices, we project them using the CPIF.

¹⁷ It is also conceivable that banks expect there to be margins in household finances, as historically the stressed mortgage rate has ultimately been higher than the actual mortgage rate.

Chart 4. Differences in cost of living estimates for 2023

SEK per month



Note. The Consumer Agency's standardised costs are from their estimated costs for 2023 (see also Table 2). Statistics Sweden's household expenses statistics (HUT) refer to the 2021 collection adjusted for inflation to mid-2023 (see also Table 3). The banks' average refers to amounts from 2023 (see also Chart 2).

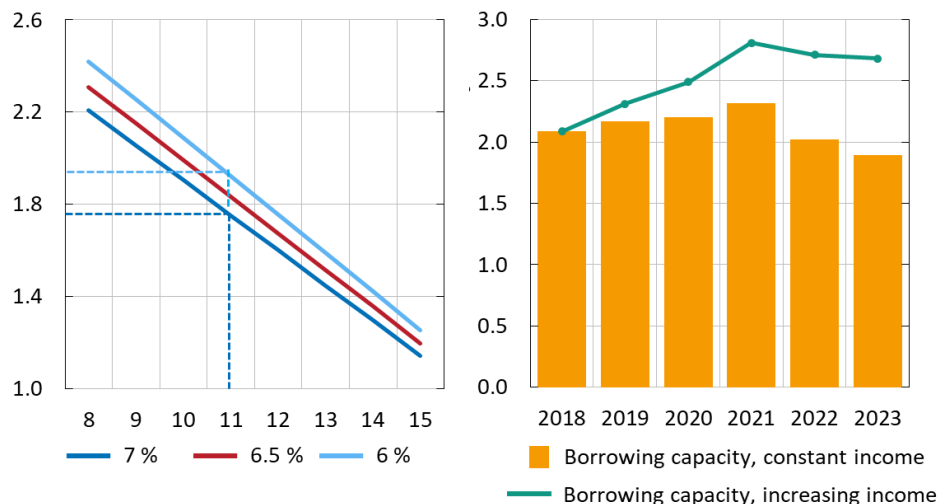
Sources: FI, Swedish Consumer Agency and Statistics Sweden

4 The stressed mortgage rate and standardised costs affect households' borrowing capacity

The stressed mortgage rate level and size of the standardised cost of living determine how much of the household's disposable income can be used to pay interest and amortisations. For example, a higher stressed mortgage rate reduces the borrowing capacity, and vice versa. In the left-hand figure in Chart 5, we illustrate how large a loan a single household with a gross income of SEK 35,000 per month can be expected to be granted (y-axis) based on three different levels of the stressed mortgage rate and different sizes of the standardised cost of living (x-axis). The blue dashed lines show how much the household could have borrowed. If we assume that the stressed mortgage rate is 7 per cent and the standardised costs are SEK 11,000, this fictitious household could have borrowed just over SEK 1.7 million. If the stressed mortgage rate had instead been 6 per cent and the standardised costs had remained unchanged, the loan amount would have increased by just over SEK 170,000. This corresponds to an increase in borrowing capacity of about 10 per cent.

Chart 5. Borrowing capacity with different levels of stressed mortgage rate and standardised cost of living

SEK million (y-axis), SEK thousand (x-axis)



Note. Left: The borrowing capacity (y-axis) at different levels of the standardised cost of living (x-axis) and the stressed mortgage rate is determined by calculating the maximum size of the loan with the constraint that the discretionary income calculation is equal to zero. Gross income amounts to SEK 35,000 per month. The calculations assume 30 per cent income tax, 3 per cent amortisation and interest costs after interest deductions of 30 per cent. The lines therefore represent the maximum borrowing capacity, assuming that the household is allowed to borrow up to 85 per cent of the value of the home. Right: Here we make the same calculation with the difference that we use the actual average levels of the stressed mortgage rate and the standardised costs. In one case, income is kept constant and in the other, income is allowed to increase at the same rate as general household income. See appendix for calculations.

Source: The Riksbank

Another simplified calculation example with a constant stressed mortgage rate of 7 per cent shows that if the standardised cost-of-living allowance increases by SEK 1,000, the borrowing capacity decreases by just over SEK 150,000.

In the right-hand image in Chart 5 we illustrate instead how the borrowing capacity of the same single person household has changed over time in terms of how both the stressed mortgage rate and the standardised costs have changed (see Chart 1 and Chart 2). This illustration is made in two different ways: we assume that the household's economic conditions are constant, i.e. that the household has a constant gross income of 35,000, and then calculate the borrowing capacity (orange bars). Then we do the same, but let gross income rise each year in line with income growth in Sweden (green line).

Between 2018 and 2021, banks' average stressed mortgage rate decreased, while their standardised costs remained relatively unchanged. As a result, households' capacity to borrow also increased. If we had allowed income to rise as well, the borrowing capacity would have increased even more, as illustrated by the green line in the chart. In simple terms, assuming that the household buying a home uses the entire increase in its borrowing capacity in a bidding process, the price of the home may in-

crease by the same amount. However, in 2022 and 2023, households' borrowing capacity decreased as a result of higher stressed mortgage rates and higher standardised costs.¹⁸ Compared to 2021, it decreased by just over SEK 600 000. Similar to an increase in borrowing capacity, a decrease in borrowing capacity can lead to a decrease in housing prices.

Changes in the borrowing capacity do not only affect how expensive a home a borrower can buy. It also affects the possibility for existing home owners to extend their existing mortgage with a so-called home equity withdrawal. With these withdrawals, home owners can convert capital tied up in the home into liquid funds that can be used for investments, to pay off other loans or for consumption. There is limited information on what the households actually use home equity withdrawal for.¹⁹ If the withdrawals are used for housing investment and consumption, changes in the credit assessment can also affect economic activity.

5 The credit assessment requires adaptable households

In this staff memo, we have examined the main components of banks' mortgage credit assessments – the stressed mortgage rate and the standardised costs for living – to show how they affect households' borrowing capacity. The standardised costs appear to be lower than actual household expenditure. Banks conduct credit assessments to test and ensure the borrower's ability to fulfil the credit agreement, and it may be reasonable to assume that households can make various adjustments to cope. However, it is important that borrowers are aware that their actual costs are likely to be higher than those used by the bank for the credit assessment. If their financial circumstances deteriorate, households may need to make relatively large adjustments to fulfil a credit agreement.

Over time, both the banks' stressed mortgage rates and the standardised costs have been adjusted. In recent years, we have seen bigger changes in the standardised costs as a result of higher inflation and interest rates. For a long time, households' disposable incomes grew faster than the standardised costs, increasing households' borrowing capacity. This was partly due to the fact that the standardised costs did not follow the general price trend, but remained relatively constant over time. However, in 2021-2023, the standardised costs increased more than both inflation and disposable income over the same period, while the stressed mortgage rate also increased slightly. This helped to reduce the borrowing capacity.

Adapting the credit assessment to new cost situations will improve the ability of new borrowers to repay their mortgages. On the other hand, large adjustments can amplify ups and downs in the economy. Simple calculations show, for example, that

¹⁸ The average stressed mortgage rate increased by 10 per cent (from 6 to 6.6 per cent) during these years, while average standardised costs increased by about 22 per cent. During this period, the increase in the standardised costs accounted for the largest share of the change in the borrowing capacity.

¹⁹ For example, Li, J. et al. (2020) points to the fact that the majority of households' home equity withdrawals may have been used for housing reconstructions or for consumption.

changes in the stressed mortgage rate can have a major impact on households' borrowing capacity, and thus on housing prices. Historically, the stressed mortgage rate has fluctuated much less than the average variable mortgage rate, probably reflecting the fact that banks consider a mortgage to be a long-term commitment, where the borrower is expected to have a good repayment capacity throughout the life of the loan.

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APPENDIX – Calculation of maximum borrowing capacity

Find the size of the **LOAN** so that discretionary income = 0 given different predetermined values of standardised costs (**S**) and stressed mortgage rate (**K**)

$$\begin{aligned} \text{Discr. income} &= \text{Disp. Inc} - (\text{LOAN} * K * 0,7) - (\text{LOAN} * 0,03) - \text{Cost}_{\text{Assoc.}} - S * 12 \\ &= 0 \end{aligned}$$

To solve for **LOAN** and discretionary income = 0 we need $(\text{LOAN} * K * 0,7) + (\text{LOAN} * 0,03) = \text{Disp. Inc} - \text{Cost}_{\text{Assoc.}} - S * 12$ which gives that $\text{LOAN} = \frac{\text{Disp. Inc} - \text{Cost}_{\text{Assoc.}} - S * 12}{K * 0,7 + 0,03}$

- The fee for the tenant-owned housing association ($\text{Cost}_{\text{Assoc.}}$) amounts to SEK 677 per year per square metre. Size of accommodation is assumed to be 35 square metres. $\text{Cost}_{\text{Assoc.}} = 23,695$.
- The amortisation cost amounts to 3% of the loan cost per year. $\text{LOAN} * 0,03$.
- The interest cost is calculated using the stressed mortgage rate. Tax deduction for interest of 30 per cent is applied. $\text{LOAN} * K * 0,7$.
- Gross income is constant at SEK 35,000 per month (Table A1) or rises in line with the development of disposable income in Sweden (Table A2). Income tax amounts to 30 per cent. Annual disposable income is used. $\text{Disp. Inc} = 294,000$.
- The standardised costs (**S**) and the stressed mortgage rate (**K**) vary for each year according to the table below.

Table A.1 Calculation of borrowing capacity with constant income

	2018	2019	2020	2021	2022	2023
Stressed mortgage rate	0.0713	0.0686	0.0669	0.0600	0.0637	0.066
Standardised costs	8,638	8,401	8,411	8,606	9,966	11,640
Disposable annual income	294,000	294,000	294,000	294,000	294,000	294,000
Borrowing capacity	2,085,459	2,172,430	2,204,516	2,319,903	2,020,552	1,714,388

Table A.2 Calculation of borrowing capacity with rising income

	2018	2019	2020	2021	2022	2023
Stressed mortgage rate	0.0713	0.0686	0.0669	0.0600	0.0637	0.066
Standardised costs	8,638	8,401	8,411	8,606	9,966	11,640
Disposable annual income	294,000	304,769	315,567	328,007	342,740	342,740
Borrowing capacity	2,085,459	2,172,430	2,204,516	2,319,903	2,020,552	1,714,388



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