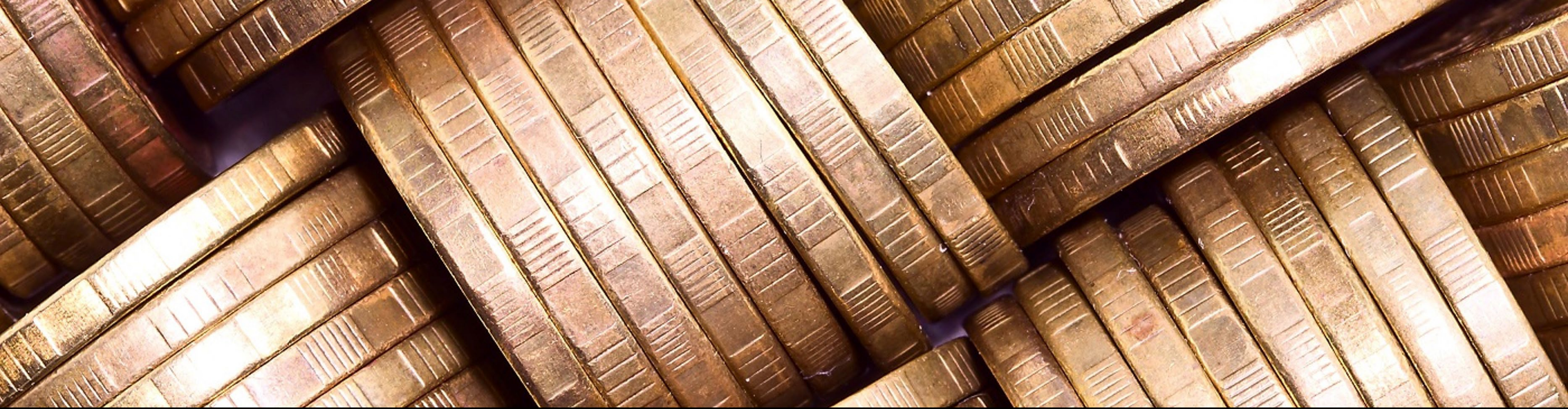


Payment Shock In Swedish Covered Bond Pools

Cost Of Living Crisis

S&P Global Ratings

Andrew South

Casper Andersen

April 18, 2023

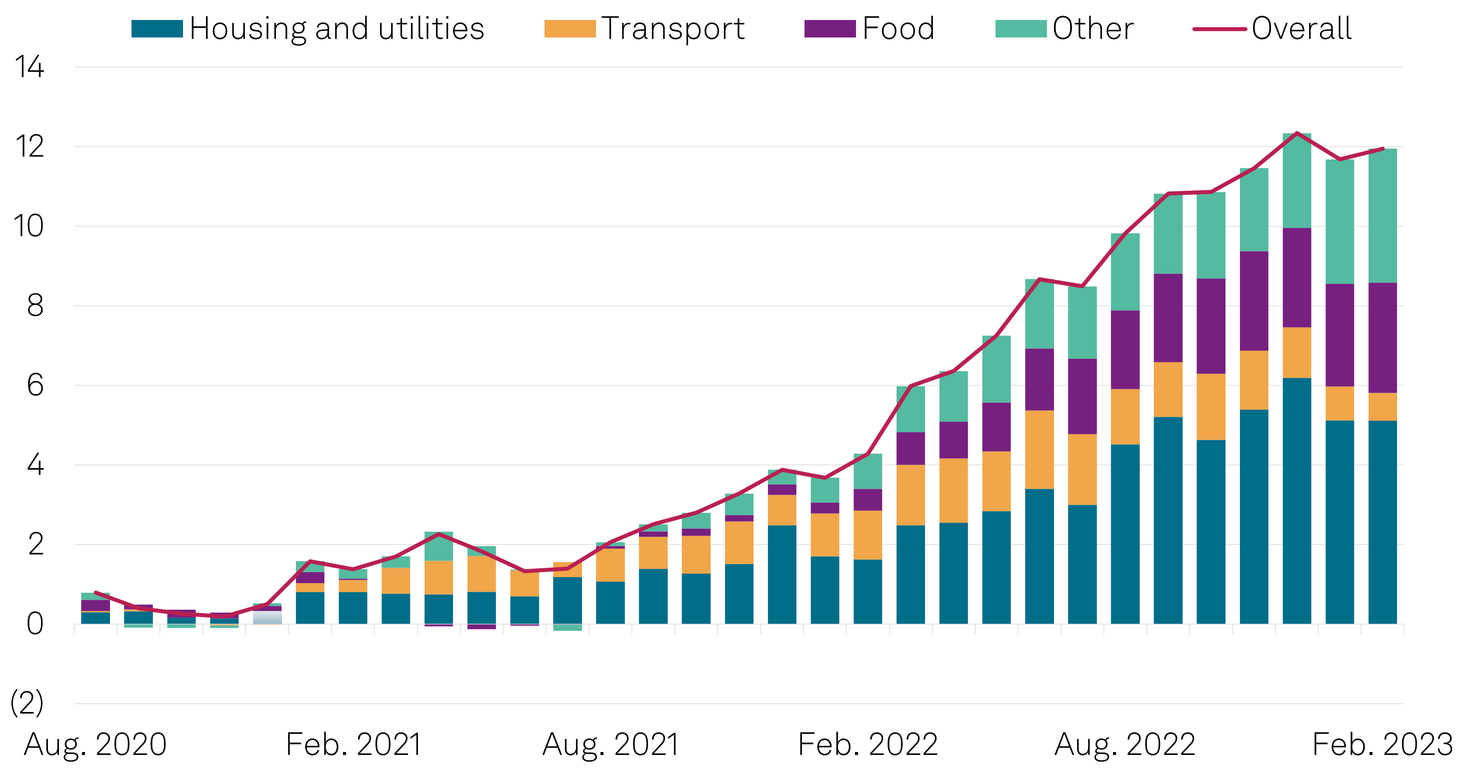
This report does not constitute a rating action

Key Takeaways

- Swedish consumer prices are rising rapidly, pushing policy and mortgage rates to multi-year highs.
- For a sample of over a million mortgage loans backing Swedish covered bond programs, the average monthly payment has risen to Swedish krona (SEK) 2,256 from SEK1,503 (+50%) at the start of 2022, assuming rates have risen by 300 basis points (bps). If rates were to rise a further 200 bps, the average payment would rise to SEK2,792 (+86%).
- Two-thirds of the loans in our sample are either on a floating rate or will have reset to a new fixed rate by the end of 2023, and will therefore have experienced a payment shock by then.
- Many loans backing Swedish covered bonds--45% in our sample--pay interest only. These loans are more sensitive to rate rises and see almost twice the monthly payment increase compared with amortizing loans in our sample under the same rate rise scenarios.
- Mortgage collateral originated before 2015 tends to have lower absolute monthly installments than more recent loans but comprises 60%-70% interest-only loans, increasing its relative sensitivity to rate rises.
- Swedish house prices are under pressure, but we anticipate only a 2%-3% further decline in 2023. Although rising loan-to-value ratios could exacerbate payment shock for mortgage borrowers when their loan rates reset, leverage is generally modest for the pool we analyzed.
- We expect Swedish covered bond ratings to remain stable, given high overcollateralization buffers and unused notches of uplift from the issuer credit rating.

Consumer Prices Are Rising At A Rate Not Seen In Decades

Swedish Consumer Price Inflation Components (%)



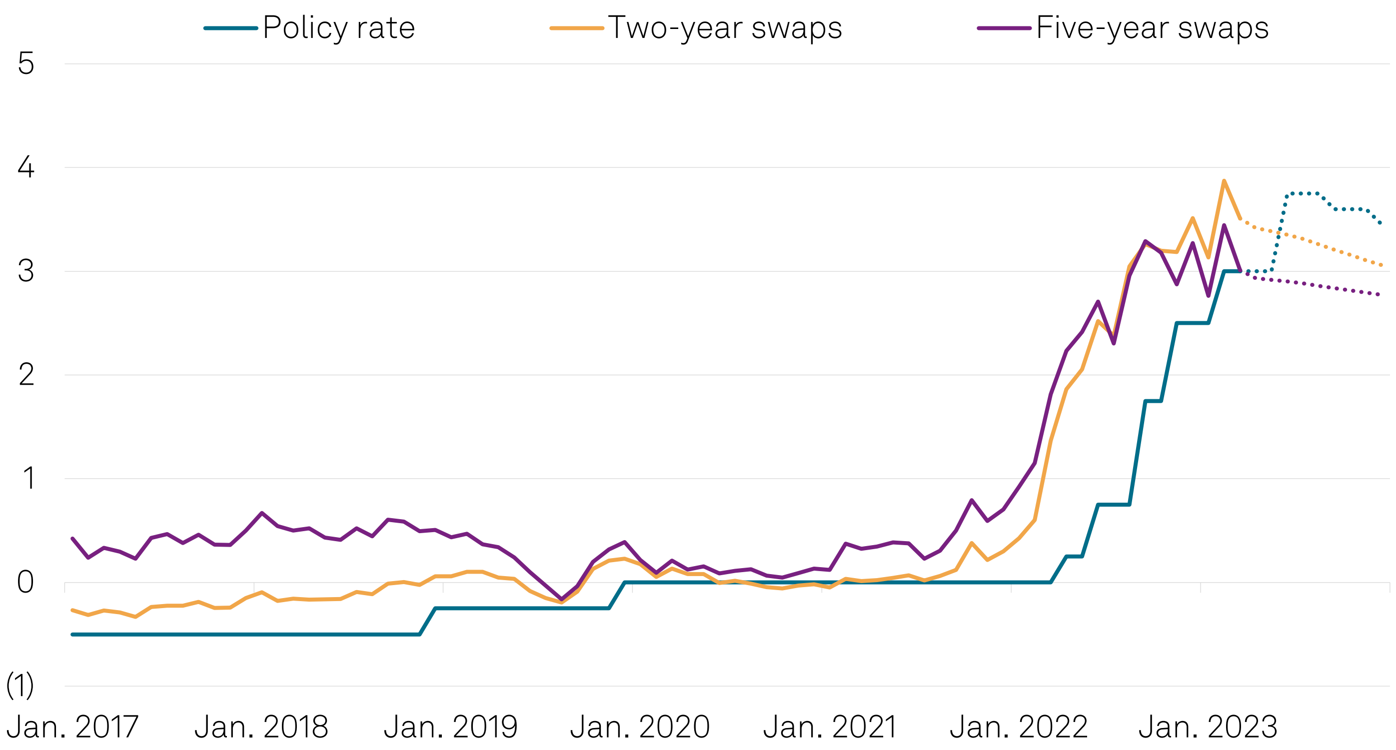
Sources: Statistics Sweden, S&P Global Ratings.

- Swedish consumers are suffering from a substantial cost of living shock.
- Prices began rising through 2021 as demand recovered from the effects of the COVID-19 pandemic but supply chains remained disrupted.
- Throughout 2022, the Russia-Ukraine conflict fueled a rise in energy costs, with utility bills and transportation contributing most to the overall inflation trend.
- Now, pressure on food prices is also having a marked impact, given the importance of Ukraine in food supply and the lagged effect on food production from the disruption in that country.

The Policy Response To Inflation Has Caused Market Rates To Spike

- After years of low interest rates, the return of inflationary pressures caused market benchmarks--such as swap rates--to start rising from late 2021.
- The Swedish central bank, the Riksbank, has moved to normalize monetary policy, with five consecutive hikes leading the base rate to reach 3% in February, for the first time since late 2008.
- Market consensus is for the Swedish base rate to continue rising, potentially peaking at 3.75% in the second half of 2023, before gradually easing in 2024.
- Swap rates have steadied since September 2022 but look set to remain elevated, with a knock-on effect for mortgage rates.

Swedish Interest Rate Benchmarks (%)

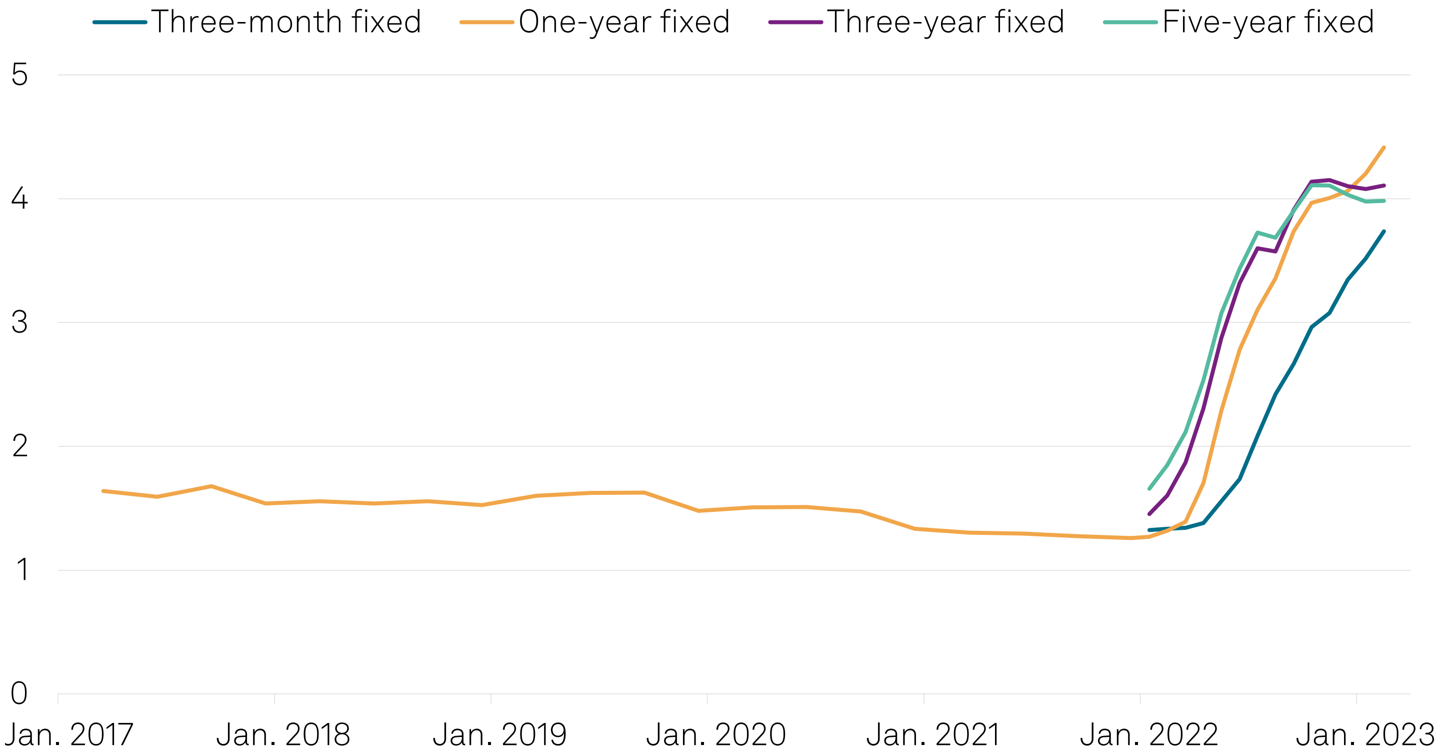


Dotted lines indicate market-implied forward rates for swaps and market consensus forecast for the policy rate.
Sources: Bloomberg, S&P Global Ratings.

S&P Global
Ratings

Mortgage Costs Have Followed Benchmark Rates Upward

Swedish Mortgage Rates On New Lending (%)

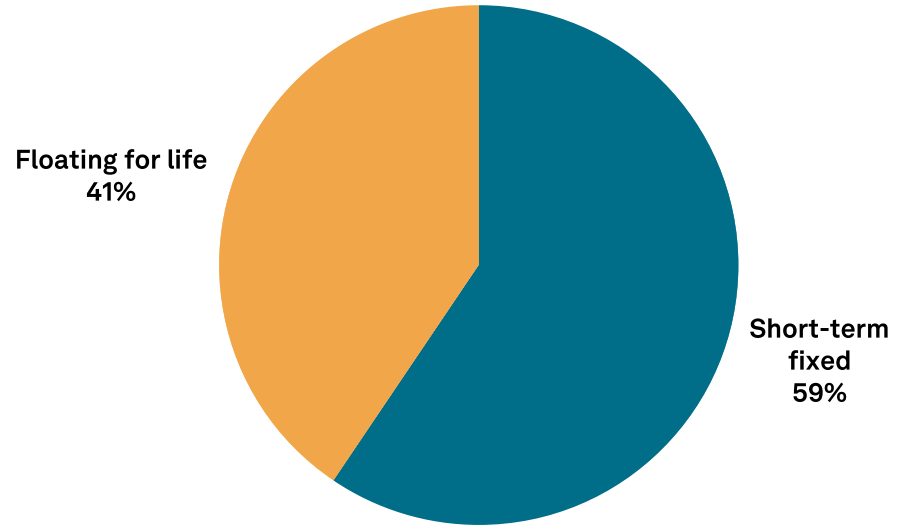


Sources: www.comprice.se, S&P Global Ratings.

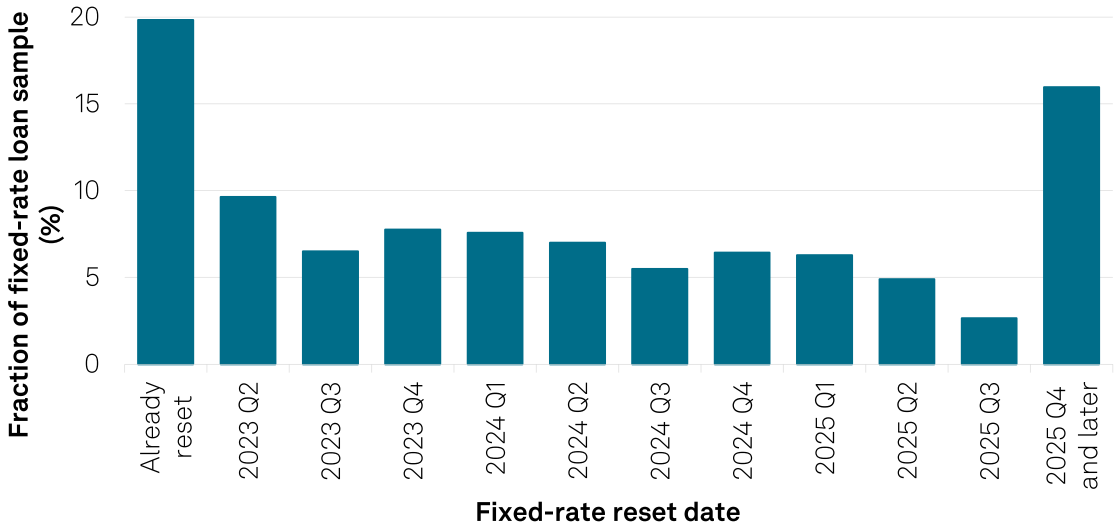
- Mortgage lenders are likely seeing some margin pressures as they avoid fully passing on higher funding costs to borrowers.
- However, mortgage rates offered on new short-term fixed lending have broadly mirrored the gradual rise in swap rates since early 2022.
- For example, at the end of February 2023, typical rates for one-year fixed loans were three percentage points higher than at any time for several years before the start of 2022.
- This will cause a payment shock for borrowers looking to refinance at the end of their fixed-rate period.
- For all mortgage products, rates have typically risen by 2-3 percentage points over the same period.

Many Loans Are Floating, While Fixed Rates Reset Relatively Frequently

Collateral Breakdown, By Interest Rate Type



Reset Date Distribution For Fixed Rate Loans

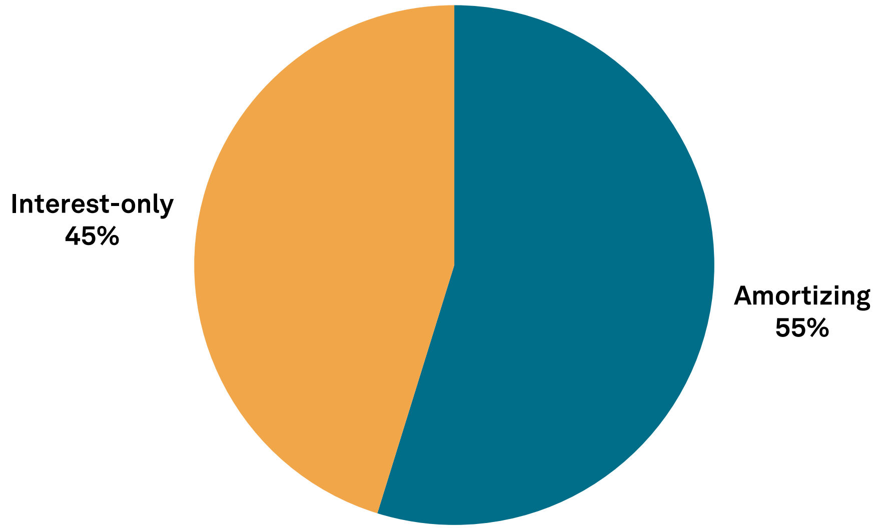


- A significant portion (41%) of loans backing Swedish covered bonds that we rate pay a floating rate of interest, and borrowers have therefore already been exposed to significant rate rises since the beginning of 2022.
- For the 59% of loans that were fixed at the beginning of 2022, more than 40% will have reset by the end of 2023--likely to a higher rate.

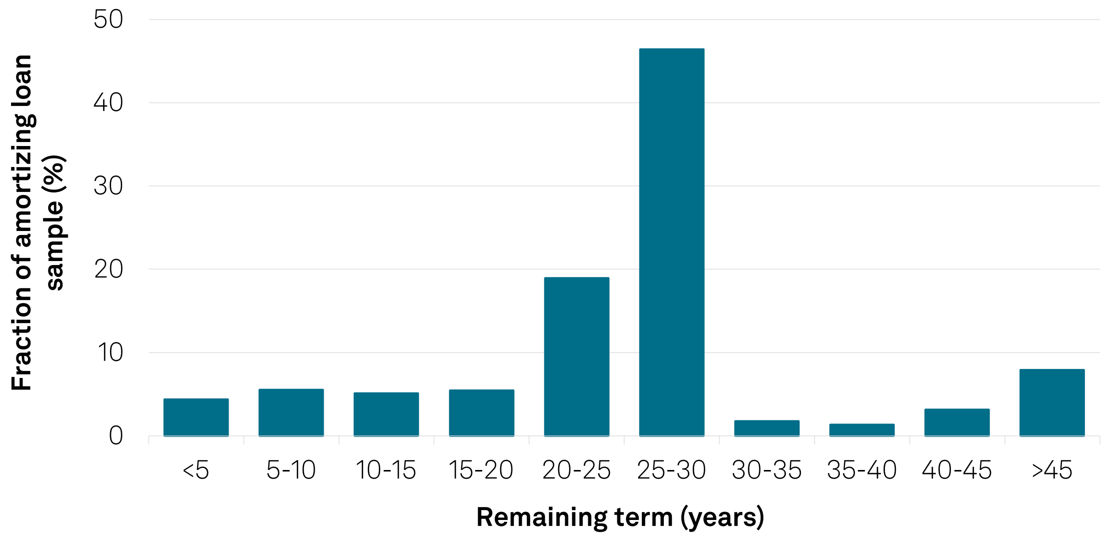
Source: S&P Global Ratings.

About 45% Of Loans Are Interest-Only, Increasing Sensitivity

Collateral Breakdown, By Repayment Type



Reset Date Distribution For Amortizing Loans

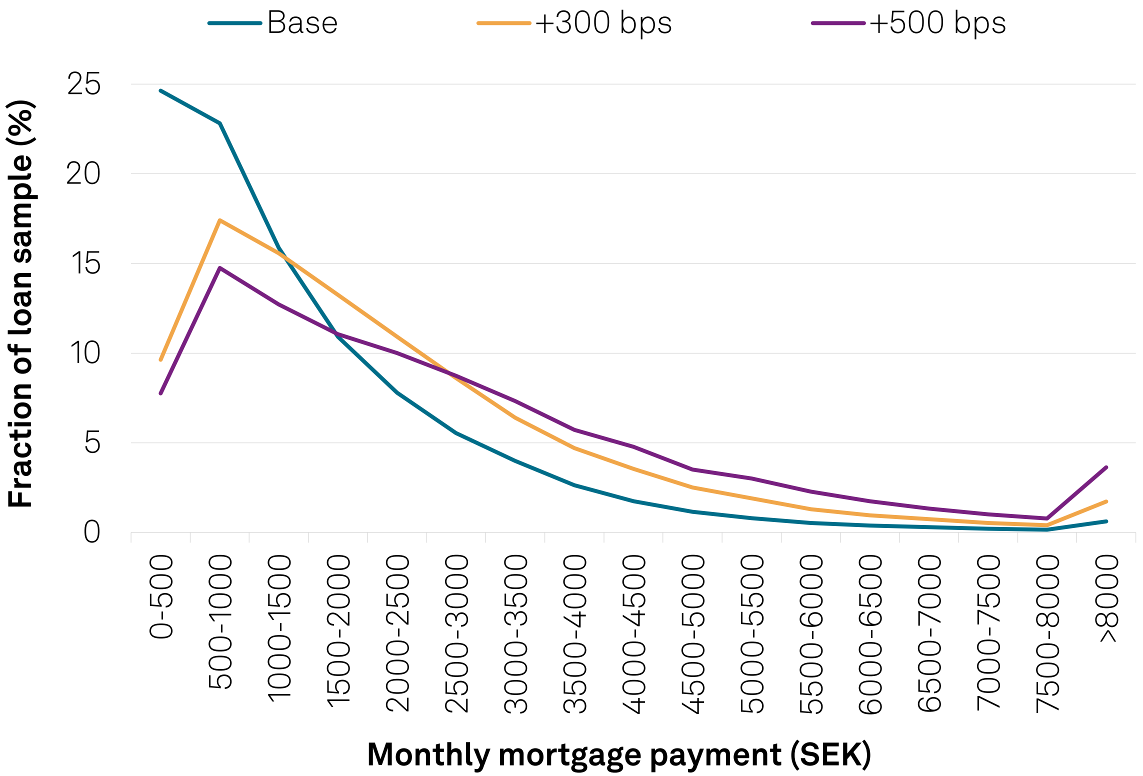


- About 45% of loans are interest-only. While absolute monthly payments are generally lower for these loans, they are more sensitive to interest rate rises in relative terms.
- Even for the amortizing loans, almost 15% have a remaining term of more than 30 years. Loans with a longer maturity are also more sensitive to rising interest rates, given that the interest component is a more significant portion of their monthly installments.

Source: S&P Global Ratings.

Typical Monthly Mortgage Payment Up 50% Since Early 2022

Monthly Payment Distribution, By Rate Scenario



bps--Basis points. Base scenario is as of Jan. 1, 2022. Source: S&P Global Ratings.

- We calculated the increase in loan payments resulting from rate rises of 300 bps or 500 bps from Jan. 1, 2022, to Dec. 31, 2023.
- Our +300 bps scenario broadly quantifies the effect of rate rises that already occurred since the beginning of 2022, while the +500 bps scenario simulates the effect of further hypothetical increases by the end of 2023.
- For our loan sample, the average monthly mortgage payment as of January 2022 was about SEK1,500.
- With rates 300 bps higher, the average borrower has already seen a 50% payment shock of more than SEK750 per month, which would rise to almost SEK1,290 (86%) in the +500 bps scenario.

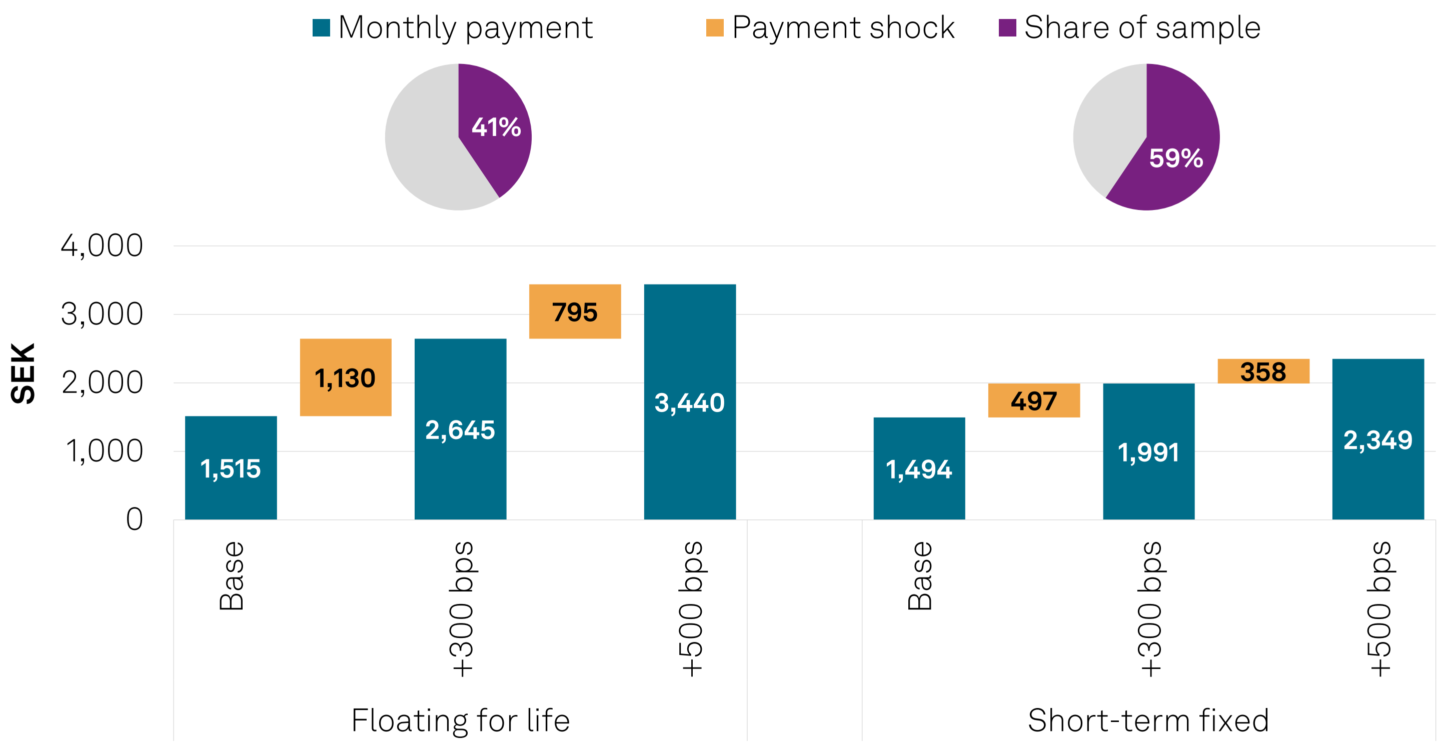
Scenario	Rate (%)	Avg. payment (SEK)	Avg. increase (SEK)	Avg. increase (%)
Base	1.6	1,503	--	--
+300 bps	3.6	2,256	753	50
+500 bps	4.9	2,792	1,289	86

S&P Global
Ratings

Two-Thirds Of Loans Are Floating Or Revert From Fixed By Year-End

- Of the loans in our sample, 59% began 2022 on fixed-rate terms that frequently last for three or five years but can be longer. Some of these borrowers may not yet have experienced a payment shock due to market rate rises.
- However, more than 40% of these loans will have reached the end of their fixed-rate periods by the end of 2023 and will refinance at a higher rate.
- The remaining 41% of our sample comprises loans that are already on long-term floating rates, where rate rises pass through more quickly.
- Overall, almost 65% of the loans in our sample will have seen some impact from rate rises by the end of 2023.

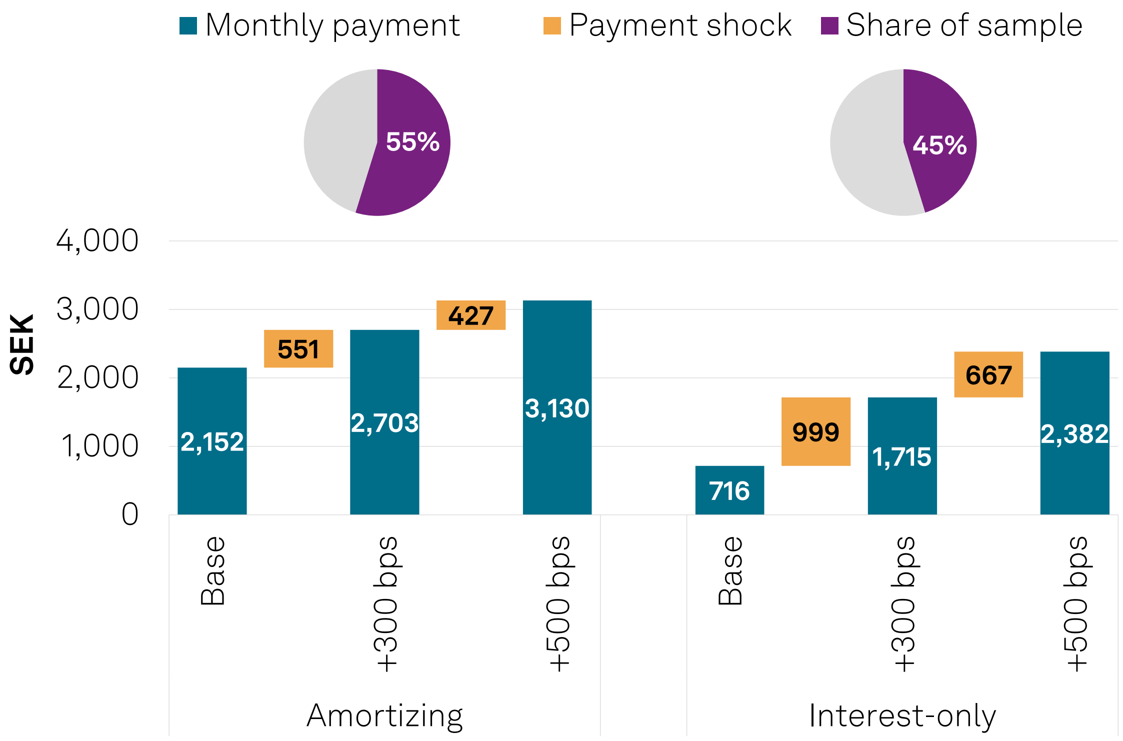
Monthly Payments And Shocks, By Loan Product Type



Pie charts show prevalence of each loan product type in the sample. bps--Basis points. Base scenario is as of Jan. 1, 2022. Source: S&P Global Ratings.

Payment Shock Is Far More Severe For Borrowers On Interest-Only Payments

Monthly Payments And Shocks, By Repayment Type

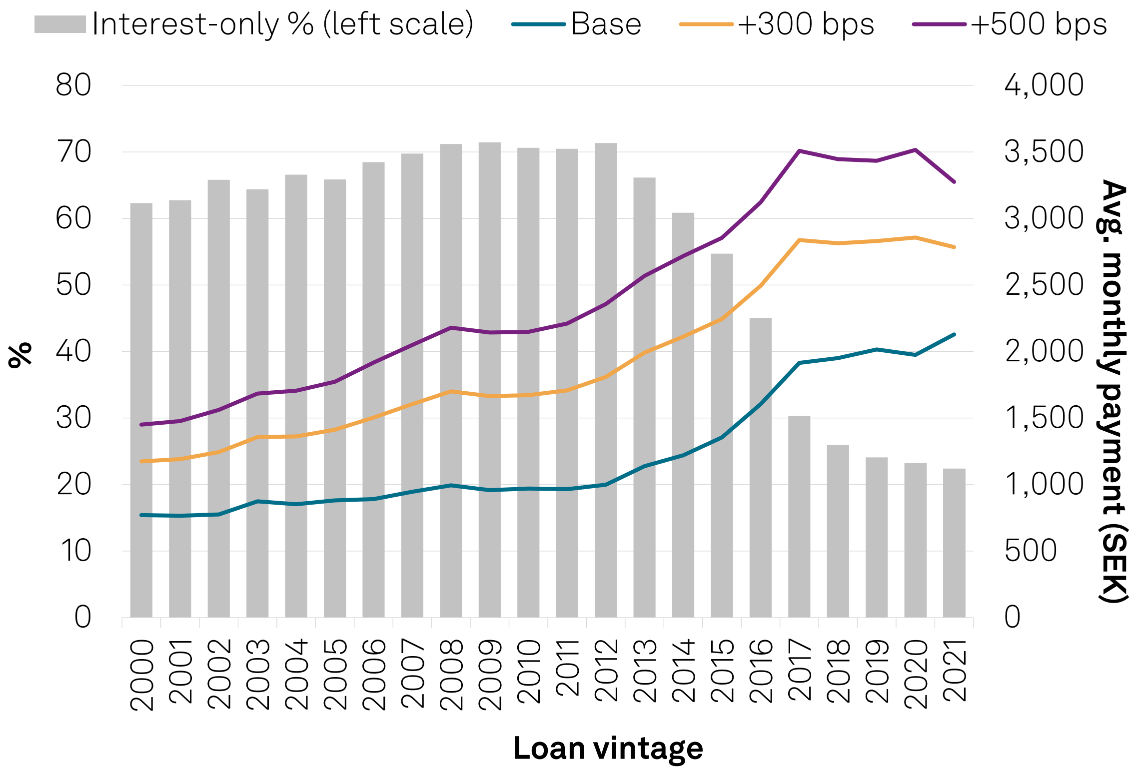


Pie charts show prevalence of each loan product type in the sample. bps--Basis points. Base scenario is as of Jan. 1, 2022.
Source: S&P Global Ratings.

- Of the loans in our sample, 45% make monthly payments on an interest-only basis.
- As of Jan. 1, 2022, these loans' monthly payments were typically much lower as a result of not having to regularly pay down principal, averaging just SEK716, compared with SEK2,152 for repayment loans.
- However, interest rate rises of about 300 bps through 2022 have typically more than doubled the monthly payment on these interest-only loans, with the average payment rising by almost SEK1,000 in our sample, to more than SEK1,700 per month.
- By contrast, repayment loans have only seen an average payment shock of SEK551, or 26% of the previous payment.
- If rates were to rise a further 200 bps, interest-only borrowers would typically see a further payment increase of more than SEK660, compared with about SEK430 for borrowers with repayment loans.

Earlier Vintage Loans Have Higher Relative Payment Shock

Payment Shock And Interest-Only Share, By Loan Vintage

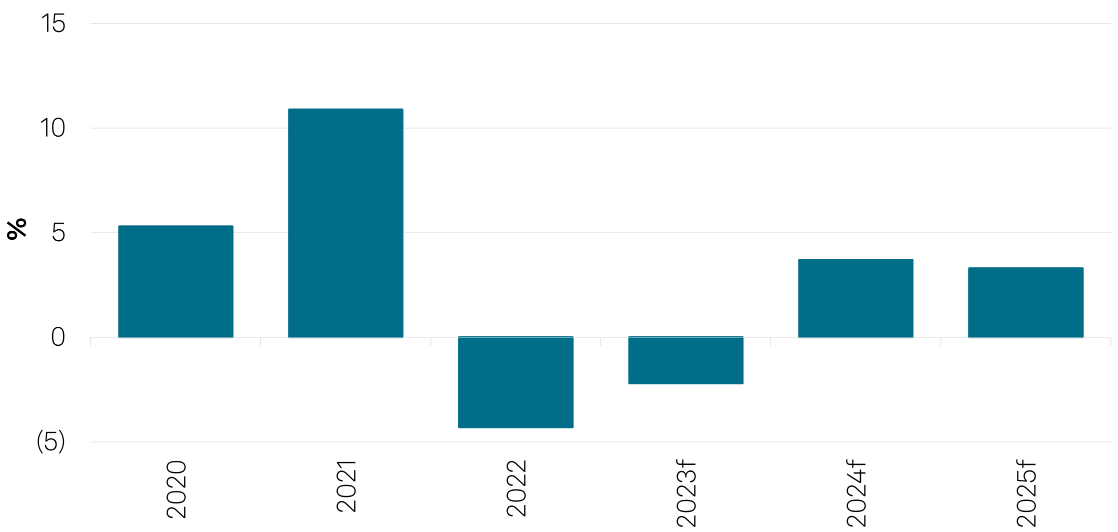


Base scenario is as of Jan. 1, 2022. Source: S&P Global Ratings.

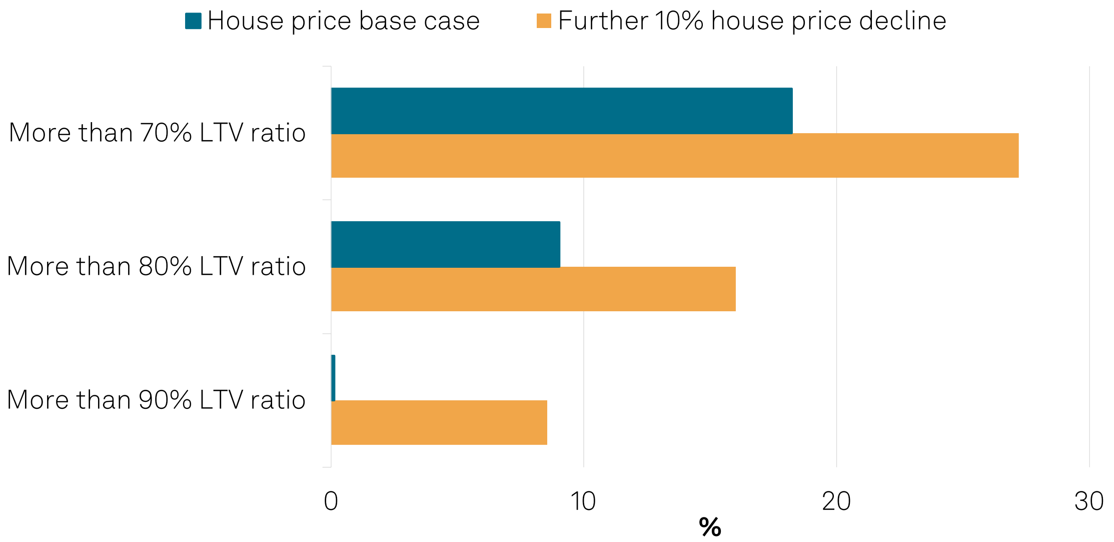
- Given the correlation between interest-only repayments and the severity of payment shock related to rate rises, we have mapped the prevalence of interest-only loans across the sample when segmenting by other characteristics.
- For example, segmenting by vintage reveals that loans originated before 2015 have the highest share of interest-only, at 60%-70%.
- Despite generally having lower balances and therefore lower monthly payments, earlier vintage loans have a greater relative sensitivity to interest rate rises, on average.
- For example, the average payment for 2011 vintage loans was SEK963 at the beginning of 2022, compared with SEK2,128 for the 2021 vintage.
- However, for 2011 vintage loans, the average monthly payment has likely already increased by 77% (as per our +300 bps scenario), compared with only 31% for the 2021 vintage.

Swedish House Prices Are Adjusting, But Loan-To-Value Ratios Are Modest

Swedish House Price Growth



Proportion Of Sample Properties, By LTV Ratio



- Among the European housing markets that we cover, we believe that Sweden is among the more exposed to a price correction, although we anticipate only a 2%-3% further decline in 2023 in our base case.
- Rising indexed loan-to-value (LTV) ratios could exacerbate payment shock for mortgage borrowers when their loan rate resets at the end of a fixed-rate period or they refinance, although leverage is generally modest in the sample of properties we have analyzed.

f--Forecast. Source: S&P Global Ratings.

S&P Global Ratings

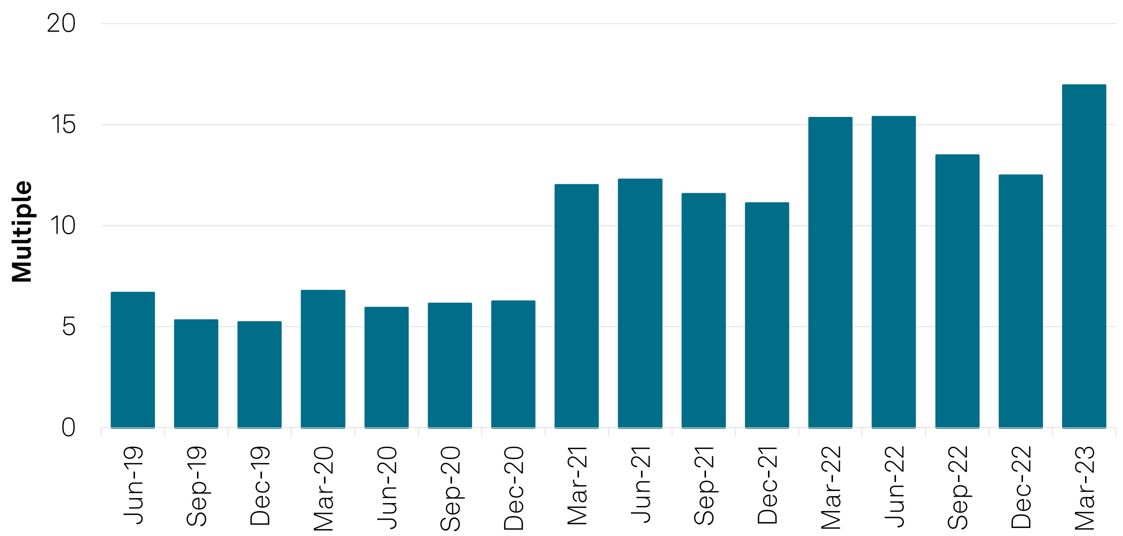
Lenders Potentially Have Some Scope For Forbearance

- During previous times of stress, such as the COVID-19 pandemic, Sweden's Finansinspektionen (financial services authority) allowed lenders to **waive amortization requirements** on certain mortgage loans. Swedish homeowners' mortgage borrowings also tend to be split into loan parts, which may make a partial move to interest-only more likely.
- For our loan sample, borrowers currently on amortizing loan contracts would **completely reverse** the rise in monthly installments **of even the +500 bps scenario**, on average, **if they all switched to interest-only**. Modifying loans in the same way in our **+300 bps scenario**--where rates stay approximately where they currently are—would lead to borrowers with amortizing loans actually **paying SEK600 per month less** on average than in January 2022.
- Lenders could also mitigate rate rise effects by extending the maturity of amortization loans. However, given the typically lengthy remaining loan terms, significant term extensions would be required to have a material effect on monthly installments. For example, to remove the payment shock from rate rises **in our +300 bps scenario**, lenders would have to **extend all amortizing loan terms by ten years**, on average. That said, the required extension varies significantly and is shorter for loans nearer to maturity.
- Any application of forbearance techniques will likely mean that **arrears rise more slowly and peak at a lower level** than might otherwise be the case. Of course, they cannot be used to mitigate payment shock for borrowers who already make interest-only payments. Here, forbearance may involve negotiated temporary payment reductions.

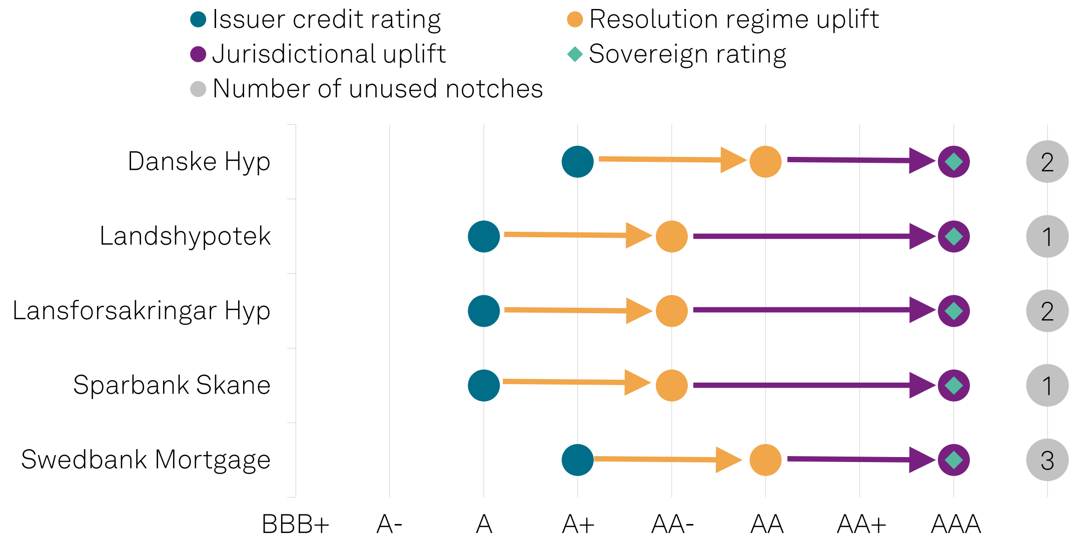
Source: S&P Global Ratings.

Swedish Covered Bond Ratings Should Withstand Weaker Loan Performance

Ratio Of Available To Required Credit Enhancement



Covered Bond Program Uplift From Issuer Credit Rating



- Swedish banks' asset credit quality is likely to deteriorate in 2023 as a result of rising rates and the higher cost of living.
- However, Swedish covered bond programs have significantly more available credit enhancement than the level required to maintain current ratings, acting as a buffer against increasing credit losses.
- They also benefit from unused notches of rating uplift, insulating program ratings should the issuer rating come under pressure.

Source: S&P Global Ratings.

Links To Related Research

- Global Covered Bond Insights Q2 2023: The Implications Of Rising Interest Rates, April 12, 2023
- EMEA Structured Finance Chart Book: April 2023, April 11, 2023
- Economic Outlook U.K. Q2 2023: Growth Eludes This Year Even As Inflation Eases, March 27, 2023
- Economic Outlook Eurozone Q2 2023: Rate Rises Weight On Return To Growth, March 27, 2023
- Nordic Banks In 2023: Robust Fundamentals And Strong Performance Despite Economic Slowdown, March 6, 2023
- European RMBS Index Report Q4 2022, Feb. 9, 2023
- Cost Of Living Crisis: Southern European RMBS Grapples With Rising Rates, Jan. 25, 2023
- European Structured Finance Outlook 2023: Close To The Edge, Jan. 12, 2023
- European Housing Prices: A Sticky, Gradual Decline, Jan. 11, 2023
- Cost Of Living Crisis: Payment Shock Greatest In Legacy U.K. Nonconforming RMBS, Dec. 15, 2022
- Covered Bonds Outlook 2023: Sailing Through Choppy Waters, Dec. 6, 2022
- Swedish Covered Bond Market Insights 2022, Sept. 22, 2022
- Cost Of Living Crisis: Mapping Exposures In European RMBS And Covered Bond Markets, June 27, 2022

Analytical Contacts

Andrew South

Head of Structured Finance Research - EMEA

+44-20-7176-3712

andrew.south@spglobal.com

Casper Rahbek Andersen

Senior Director, Covered bonds

+49-69-309-9208

casper.andersen@spglobal.com

spglobal.com/ratings

S&P Global
Ratings