

## ARTICLE – Macroprudential measures safeguard the resilience of the household sector

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Historically, economic crises have often been preceded by strong credit expansion. In Sweden, household indebtedness has increased significantly in recent decades. This has made the household sector, and by extension the Swedish economy, more vulnerable. This is why Finansinspektionen has introduced the mortgage cap and amortisation requirements, which are borrower-based macroprudential measures. These measures safeguard the resilience of the household sector while countering a future trend of rapid growth in the share of highly indebted households. However, these measures may also entail costs. For example, they can affect households' consumption choices over the life cycle or make it more difficult for financially vulnerable groups to buy a home. It therefore makes sense to evaluate the measures periodically to see if there are more cost-effective alternatives that achieve the same objectives. However, changing macroprudential policy in such a way as to increase household indebtedness is not a long-term sustainable solution.

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### Supply problems and taxes affect housing prices

In a well-functioning housing market, housing and construction follow the needs of households and there are different types of housing for all income levels. This makes it easier for households to move to places where there are jobs or educational possibilities and for companies to locate where they want. It also means that labour and capital can be allocated efficiently in the economy.<sup>65</sup>

Unfortunately, the Swedish housing market is far from this ideal. In many parts of the country, construction has been too low in relation to the rate of population growth. What has been built has not necessarily matched the demand.<sup>66</sup> At the same time, the existing housing stock is inefficiently utilised and there are long waiting lists for rental

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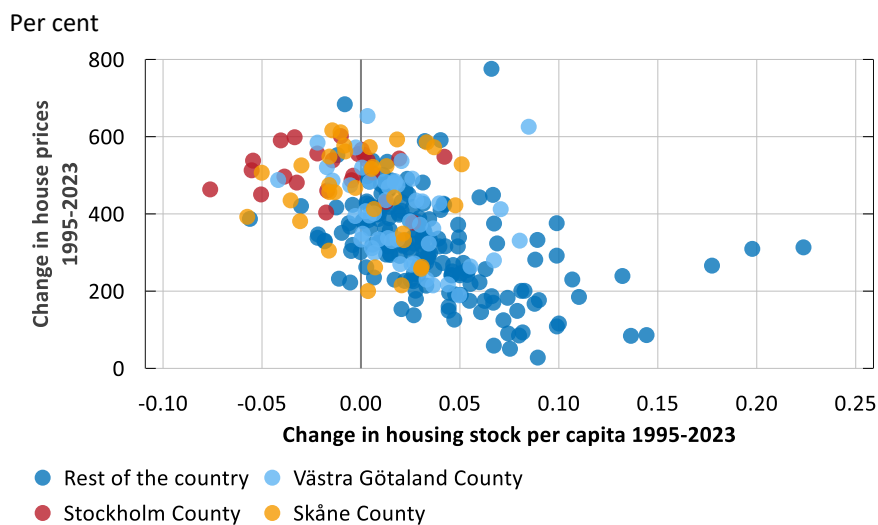
<sup>65</sup> Studies show that cities are favoured by migration from other parts of the country; see, for example, A. Bergh and M. Nordin (2022), "Inkomstutveckling för människor från glesbygd och storstad" [Income development for people from sparsely populated areas and large cities], *Ekonomisk Debatt* 50 (2).

<sup>66</sup> The reasons why construction has not kept pace with demand include high material costs, not enough land for new construction where demand is high and extensive and complex planning processes. The fact that construction costs are high compared to other countries is partly due to a lack of competition and the high demands that legislation places on new housing, for example in terms of noise levels, lifts and disabled toilets; see R. Emanuelsson (2015), "Supply of housing in Sweden", *Economic Review*, 2015:2, Sveriges Riksbank.

apartments in the regulated stock.<sup>67</sup> Households that quickly need to find a home risk being referred to expensive sublets or newly built rental apartments where rents are high, or encouraged to buy a home.

The supply problem has also contributed to the significant rise in house prices, particularly in large cities and growth centres. In the municipality of Stockholm, for example, house prices have increased by almost 600 per cent between 1995 and 2023.<sup>68</sup> At the same time, the total number of homes per capita has decreased in the municipality over the same period (see chart 28).

**Chart 28. Changes in house prices and housing stock in Swedish municipalities**



Note. Each point refers to one of Sweden's 290 municipalities. Knivsta and Nykvarn are excluded due to reclassifications.

Sources: Statistics Sweden and the Riksbank.

In addition to frictions hampering the supply of housing, the rise in prices can be explained by an increase in household demand for housing. This is due, among other things, to lower interest rates, higher wages and underlying trends in urbanisation and demographics.<sup>69</sup> The tax system also allows mortgagors to deduct 30 per cent of interest expenses. In addition, the property tax was replaced by a lower municipal property charge at the beginning of 2008.

<sup>67</sup> According to each regional housing agent, the average waiting time to be offered a rental contract is 9 years in Stockholm, almost 7 years in Gothenburg, 3.5 years in Malmö and 5 years in Uppsala.

<sup>68</sup> The price rise can be compared with the increase in consumer prices according to the CPIF, which has been 69 per cent, and the increase in disposable household income, which has been 223 per cent, over the same period.

<sup>69</sup> For example, the population has grown rapidly at the same time as many households have been of family-forming age; see "Drivers of household indebtedness", annex to the July 2015 meeting of the Financial Stability Board.

## Higher indebtedness and low amortisation rates

As housing purchases are financed by a large share of mortgages, rising prices have gone hand in hand with increasing household debt. Overall, bank lending collateralised by housing has increased more than fivefold between 2002 and 2024, from SEK 800 billion to over SEK 4,000 billion. As a consequence, household debt as a share of GDP is now high from both a historical and an international perspective (see chart 29, left).

Microdata on the stock of mortgages show that households have become more indebted in relation to their income. During the period 2010–2017, this was true for all age and income groups across Sweden but young people’s indebtedness had increased the most.<sup>70</sup>

Among new mortgagors, similar patterns are observed as for the mortgage stock. The share of households with high debt-to-income ratios has increased since 2011. Since the stricter amortisation requirement was introduced in 2018, there have been signs that the proportion of new mortgagors with a debt-to-income ratio of over 450 per cent has decreased and that a larger share of new mortgagors are borrowing up to exactly 450 per cent of their gross income to avoid being subject to the requirement (see chart 29, right).<sup>71</sup> FI’s latest mortgage survey shows that there are now even fewer households with a debt-to-income ratio of over 450 per cent. It also shows that around 83 per cent of new mortgagors amortise.<sup>72</sup> The corresponding share in 2011 was 42 per cent.

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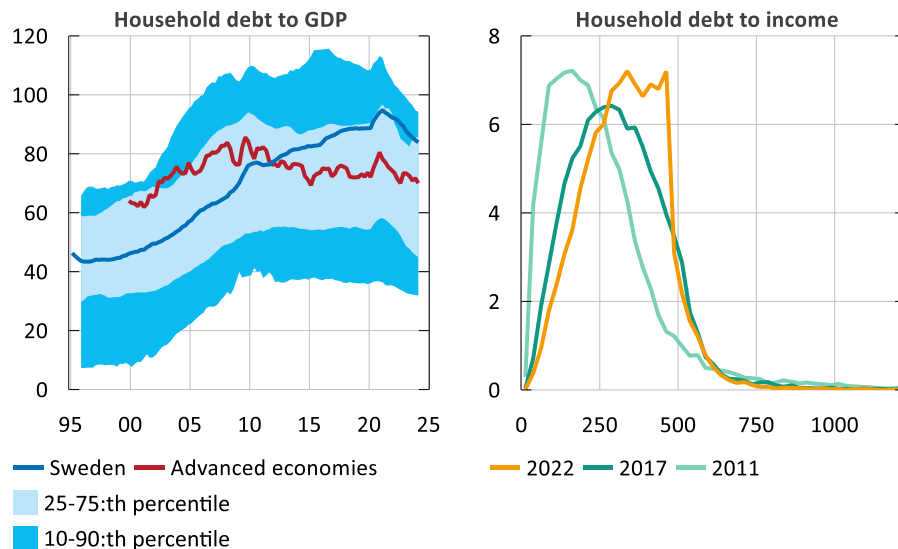
<sup>70</sup> See J. Eng Larsson, K. Hallsten and M. Kilström (2018), “Indebtedness in various age groups in Sweden”, *Staff memo*, March, Sveriges Riksbank. The survey covered approximately 3 million individuals. Since 2018, the Riksbank no longer has access to this type of microdata.

<sup>71</sup> Under the first amortisation requirement, households taking out a mortgage with a loan-to-value ratio (loans in relation to the value of the home) of more than 50 per cent must amortise 1 per cent of the loan per year. Households with a loan-to-value ratio of more than 70 per cent must amortise 2 per cent of the loan per year. Under the stricter amortisation requirement, borrowers with a debt-to-income ratio (total mortgages in relation to annual income before tax) of more than 450 per cent need to amortise an additional 1 per cent of the loan per year. Under the mortgage cap, new mortgages with the home as collateral should not exceed 85 per cent of the market value of the home.

<sup>72</sup> See *The Swedish mortgage market 2023*, April 2024, Finansinspektionen.

**Chart 29. Household debt and distribution of debt-to-income ratios among new mortgagors**

Per cent



Note. In the left-hand chart, the intervals include 23 different countries. Developed economies in this context are defined by the BIS as including Australia, Canada, Denmark, the euro area, Japan, New Zealand, Norway, Sweden, Switzerland, the United Kingdom and the United States. The right-hand chart shows new mortgagors' total loans in relation to gross income.

Sources: BIS, Finansinspektionen and the Riksbank.

## Risks to the real economy and financial stability

Financial imbalances can occur when risk-taking increases among economic agents and also coincides with rapidly rising debt and asset prices. These can amplify fluctuations in the economy and thus pose risks to both macroeconomic and financial stability. For example, they may lead many households to choose or be forced to make major adjustments to cope with higher interest payments or lower wealth. Households may then reduce their consumption or adjust their savings, amplifying the economic downturn.

The propagation channels to the financial system can be both *direct* and *indirect*. If households have large debts, short mortgage fixation periods and limited liquid assets, a shock such as higher interest rates could lead to difficulties in servicing their loans.<sup>73</sup> This has *direct* consequences for banks by increasing their loan loss provisions. But it can also have *indirect* consequences for banks. If consumption falls sharply, companies may have to adjust their demand for labour as a result of lower profitability or, in the worst case, go bankrupt. In addition to potentially increasing banks' loan loss provisions, households' debt-servicing ability also deteriorates. This can affect the value of homes and other assets.

<sup>73</sup> In Sweden, mortgage fixation periods are generally short. This is also true in an international perspective. In recent years, 60–70 per cent of all mortgages are taken out at a variable rate that changes every three months.

In Sweden, house prices are closely linked to bank funding. This is because banks finance some of their mortgages by issuing covered bonds backed by mortgages. A major fall in housing prices affects the value of the cover pool backing the covered bonds. This may affect confidence in banks, which may then be forced to renew their funding at a higher price. This could lead to both higher interest rates and lower credit supply in a period when the financial situation of borrowers is already strained, which could further amplify the downturn. The fact that the Swedish banking system is also concentrated and closely interconnected may cause problems to spread rapidly in the financial system. It is interconnected, among other things, by the fact that banks own each other's covered bonds.

These systemic risks are also affected by agents' expectations about the future. Historically, economic crises have been preceded by periods with a spiral of loans, asset prices and expectations among households and banks that this trend will continue. This can lead to assets becoming highly valued and households borrowing against them to increase their consumption.<sup>74</sup> This was characteristic of countries such as Denmark in the years before the global financial crisis. When the trend turns, the spiral can have a major negative impact on overall demand. Thus, if households have overly optimistic expectations, the effects of a shock may be amplified through their balance sheets and cash flows. However, the shock may also be amplified by homes being overvalued and housing prices falling more than they would otherwise have done.

From a Swedish perspective, it is above all the risks to macroeconomic stability and the more indirect effects on the financial system that are most significant. This is partly due to institutional factors, such as unemployment insurance and the personal liability of households for their loans.<sup>75</sup> During the Swedish financial crisis in the early 1990s, loan losses on mortgages were relatively small.<sup>76</sup> By contrast, consumption fell sharply, amplifying the impact on the real economy.

In a crisis, when household incomes decrease rapidly or housing prices fall, the problems can be mitigated by expansionary economic policy. There is currently considerable scope for fiscal policy, as Swedish public sector consolidated gross debt is low, at just over 30 per cent of GDP. In addition, the Riksbank can lower the policy rate and, via mortgage rates, affect households' interest expenses. This happened, for example, during the global financial crisis. But there are risks in placing too much faith in what monetary policy can achieve. In addition, the Riksbank's ability to conduct an expan-

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<sup>74</sup> Several studies find that high indebtedness is correlated with high sensitivity to economic shocks. Studies also show that the rate of increase of debt, rather than its level, is a better risk indicator, especially if increased debt is used to finance increased consumption; see, for example, the literature review in P. Englund (2023), "Makrotillsynsregleringar och finansiell stabilitet" [Macroprudential regulation and financial stability], Annex 4 to the *Long-Term Survey 2023*.

<sup>75</sup> The recession following the global financial crisis was longer and deeper in US states where banks have greater access to borrowers' income than in other states; see P. Gete and F. Zecchetto (2024), "Mortgage design and slow recoveries: The role of recourse and default," *Review of Economic Studies*, 91 (2).

<sup>76</sup> The household sector accounted for 13 per cent of the banks' reported loan losses in 1990 and 7 per cent in 1991; see K. Eklund, A. Lindbeck, M. Persson, H. Tson Söderström and S. Viotti (1993), "Fast kurs med flytande krona" [Fixed exchange rate with a floating krona], *Swedish Economic Research Council report*, 1993, SNS.

sionary monetary policy may be limited by various factors. These may include, for example, rising risk premiums, a lack of scope to cut the policy rate when it is close to its lower bound or rising inflation. The monetary policy trade-off can also be complicated by the fact that the krona exchange rate and ultimately inflation are affected if the interest rate level deviates significantly from that of other countries.

## Risk assessment hampered by lack of data

It is difficult to quantify how big the risks are or how they could develop in the future. The likelihood of a disruption occurring is also unknown. It can certainly be noted that the risks on the housing market are not constant but vary over time depending on the development of various underlying explanatory factors. However, it will never be possible to determine, with certainty, the right time to adopt measures to dampen a development that is not necessarily sustainable in the long term. One factor that further complicates the risk assessment from a Swedish perspective is the poor availability of microdata on household assets, consumption and savings.

Studies highlight the importance of households having liquid assets in the event of a shock.<sup>77</sup> Aggregate data show that the savings ratio and liquid assets are high in Sweden (see chart 30, left). However, estimates from 2012 show that assets were unevenly distributed and that highly indebted households had relatively small liquid assets. Whether this is the case today is uncertain, although some information suggests it.<sup>78</sup>

Experience from the global financial crisis indicates that a high level of debt-financed consumption can contribute to the depth of the crisis. One indicator that can be used to estimate this is household consumption of durable goods, such as cars and boats, as such purchases sometimes need to be financed by loans. This indicator does not suggest that such consumption is more common in Sweden than in other countries (see chart 30, right). At the same time, microdata show that almost one-third of the increase in household mortgages in Sweden during the period 2011–2017 could be explained by households mortgaging their homes by making equity withdrawals.<sup>79</sup> Equity withdrawals also typically account for a large share of new mortgages taken out. However, it is not possible to obtain a comprehensive picture of the impact of the equity withdrawals on household resilience. This is because the purpose of the equity withdrawals is not shown in the data, for example whether it is used to renovate the home, to transfer wealth or to finance consumption.<sup>80</sup>

<sup>77</sup> See J. Almenberg, M. Kilström, V. Thell and R. Vestman, “Household debt and resilience in crises”, *FI Analysis* No. 33, June 2021, Finansinspektionen.

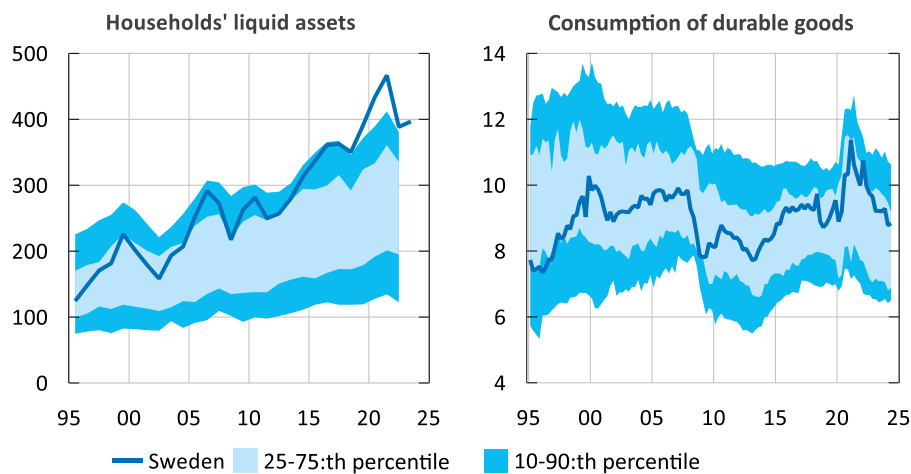
<sup>78</sup> See M. Andersson and R. Vestman (2021), “Liquid assets of Swedish households”, *FI Analysis* No. 28, Finansinspektionen.

<sup>79</sup> See R. Emanuelsson, G. Katinic and E. Spector (2018), “Developments in the housing market and their contribution to household debt”, *Economic Commentaries* No. 14, Sveriges Riksbank.

<sup>80</sup> Households appear to be using some of the increased borrowing to start companies and repay more expensive unsecured loans; see J. Li and X. Zhang (2017), “House prices, home equity and personal debt composition”, *Working Paper* 343, Sveriges Riksbank. Some of the borrowing also appears to have been for home renovation; see *The Swedish mortgage market 2021*, April 2022, Finansinspektionen. Surveys also show that the proportion of surveyed households that have mortgaged their homes for consumption other than housing consumption has decreased in recent years; see R. Boije and S. Hansen (2024), “Hushållens bolån, Makroriskerna med dem är inte så stora som ofta hävdas” [Household mortgages: the macro risks associated with them are not as great as is often claimed], *Insiktsrapport [Insight Report] 6*, May, SBAB.

**Chart 30. Household liquid assets and consumption of durable goods**

Per cent, share of disposable household income and total household consumption



Note. The ranges are based on 26 countries. Household liquid assets refer to bank deposits, foreign exchange, mutual funds and equities.

Sources: OECD, national sources and the Riksbank.

## Macroprudential measures to reduce systemic risks

The supply problems in the Swedish housing market and the design of the tax system create negative externalities in the form of increasing household demand for mortgages. These externalities can be mitigated by structural reforms in housing and tax policies. But even if such reforms are implemented, household indebtedness could still be higher than is justified from a broader economic perspective. This is because neither households nor banks take into account the risks that their borrowing and lending decisions may entail for the whole economy.<sup>81</sup> Such a market failure may need to be addressed by some form of regulation. According to the IMF, BIS and European Systemic Risk Board (ESRB), macroprudential measures are appropriate to mitigate systemic risks arising from market failures in the housing and mortgage markets.<sup>82</sup>

In simple terms, macroprudential measures can be said to have two main tasks. First, they should strengthen the resilience of the financial system as a whole. Second, they should discourage excessive increases in credit and indebtedness that, when sentiment changes, can lead to a credit crunch and a sharp and prolonged fall in demand.<sup>83</sup>

<sup>81</sup> For example, banks can relax credit conditions to avoid losing market share. When making mortgage decisions, households probably do not take into account that reduced consumption may lead to profitability problems for companies. Neither are they likely to take into account that selling homes during an economic downturn can contribute to a fall in prices if many households sell at the same time. Unemployment insurance safeguards households and also indirectly protects banks. But it can lead to neither households nor banks making as careful risk assessments as they would if there were no safety nets.

<sup>82</sup> See G. De Nicolò, G. Favara and L. Ratnovski (2012), "Externalities and macroprudential policy", *IMF Staff Discussion Note*, June.

<sup>83</sup> See B. Lagerwall, B and G. Guibourg (2015), "How is the economy affected by macroprudential measures?", *Economic Commentaries* No. 9, Sveriges Riksbank.

Both the Riksbank and Finansinspektionen (FI) have assessed that the substantial credit expansion in Sweden over recent decades has led to financial imbalances and that it has given rise to systemic risks. To increase resilience, FI introduced increased capital requirements for banks, such as higher risk weights on mortgages. To also reduce indebtedness, FI also introduced three borrower-based measures, i.e. measures that more directly affect households' ability to borrow: the mortgage cap (2010), the amortisation requirement (2016) and the stricter amortisation requirement (2018).<sup>84</sup> The measures have been characterised by a structural approach and are thus measures that are not intended to vary over time. They have been presented primarily as preventive measures to create buffers against future shocks.<sup>85</sup>

Overall, FI's evaluations show that the measures have had the intended effect.<sup>86</sup> The Riksbank shares this assessment. The measures have contributed to a lending environment where high loan-to-value ratios and interest-only mortgages are no longer a competitive tool among banks, as was the case in the early 2000s. In addition, both the amortisation requirements and the mortgage cap have contributed to households borrowing less, buying cheaper homes and amortising more than they would otherwise have done. Microdata also show that the share of households with a debt-to-income ratio above 450 per cent has decreased and that the measures have had a normalising effect (see chart 29, right). Those who nevertheless choose to take out large loans in relation to their income are paying them off at a rapid pace. The measures are thus slowing down a future development in which the share of highly indebted households grows rapidly. In addition, the amortisation culture has improved, which will strengthen household resilience over time. Overall, this is judged to have reduced the systemic risks associated with household mortgages. However, the lack of microdata makes it difficult to analyse how the measures have affected the rest of households' balance sheets, such as the level of their liquid assets, and thus their resilience in the short term.<sup>87</sup>

## Increased flexibility has both advantages and disadvantages

As with any regulation, borrower-based measures can also incur costs. Here, the state of knowledge has advanced in recent years. However, the number of crisis episodes is

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<sup>84</sup> When the mortgage cap was introduced in 2010, FI justified it by counteracting unsound lending on the mortgage market and strengthening consumer protection.

<sup>85</sup> According to the IMF, 71 countries have introduced loan restrictions in the form of mortgage caps, 16 countries have introduced debt-to-income ratio limits, 60 countries have introduced debt servicing limits (interest and amortisation) and 45 countries have introduced amortisation requirements in the form of a amortisation rate requirement, limits on the proportion of interest-only loans or limits on the maturity of the loan. Overall, the measures are justified on the grounds that they improve the resilience of creditors and borrowers. A few countries have complemented their resilience objectives with targets to dampen the credit or house price cycle.

<sup>86</sup> See *Overall assessment of macroprudential policy measures*, 2021, Finansinspektionen.

<sup>87</sup> Studies indicate that a stricter mortgage cap may contribute to a temporary and longer-term reduction in households' liquid assets and lead to greater fluctuations in consumption; see K.A. Aastveit, R.E. Juelsrud and E. Getz Wold (2022), "The leverage-liquidity trade-off of mortgage regulation", *Working paper*, Norges Bank.



low, while access to microdata in several countries is poor. Moreover, there are structural as well as institutional differences between countries that should make one cautious about drawing too far-reaching conclusions from individual studies.

Some studies suggest that mortgage contracts that provide flexibility in debt payments can contribute to greater stability by temporarily reducing debt payments for households in certain situations.<sup>88</sup> This is especially true for households that change their consumption a lot when their disposable income changes, i.e. those with a high marginal propensity to consume. Such contracts provide better conditions for households to maintain their consumption in the event of a shock to the economy, thereby reducing the risk of reduced consumption amplifying the shock.

In Sweden, the amortisation requirements apply to households with high loan-to-value ratios or loan-to-income ratios. This reduces the incentives for households to take out large loans, thereby helping to make them less vulnerable to various shocks. However, life situations and supply problems in the housing market mean that households may still need to take out large loans. The fact that these households have their cash flows tied up in larger amortisation payments may make it more difficult for them to smooth their consumption in the short term and, for example, to cope with loss of income or cost shocks.<sup>89</sup> It is therefore positive that the amortisation requirements are designed with a degree of flexibility whereby mortgagors can be exempted for special reasons, such as unemployment. There may also be grounds for analysing whether a broader exemption that also covers various types of cost shocks that are not included in banks' current credit assessments could reduce the risk of the amortisation requirements in certain situations reinforcing an economic downturn.<sup>90</sup>

Overall, borrower-based measures are blunt measures that do not take into account borrowers' individual circumstances. For example, they may delay the entry of households into the owner-occupied housing market.<sup>91</sup> To try to avoid this, several countries have chosen to exempt certain groups of borrowers, for example first-time buyers or young people, or introduced flexibility quotas for banks in new lending.<sup>92</sup> A lesson learnt from these countries is that it is then important to design the exemptions in a way that creates incentives for banks to lend to the targeted groups. In the United Kingdom, for example, it is mainly borrowers with the largest loan amounts that

<sup>88</sup> See J. Almenberg, M. Kilström, V. Thell and R. Vestman, "Household debt and resilience in crises", *FI Analysis* No. 33, June 2021, Finansinspektionen.

<sup>89</sup> The impact of amortisation requirements on households' ability to cope with shocks also depends on whether households finance the increased amortisation payments by saving or consuming less. In the Netherlands, households financed increased mortgage repayments by reducing their consumption; see A. Bernstein and P. Koudijs (2021), "The mortgage piggy bank: Building wealth through amortization", *Working Paper* 28574, NBER.

<sup>90</sup> General amortisation relief in times of crisis, which FI introduced during the pandemic, can improve households' ability to cope with shocks; see J. Campbell, N. Clara and J. Cocco (2021), "Structuring mortgages for macroeconomic stability", *Journal of Finance* 76 (5).

<sup>91</sup> See the discussion in P. Englund (2023), "Macroprudential regulation and financial stability", Annex 4 to the *Long-Term Survey* 2023.

<sup>92</sup> For example, Ireland, Finland, Luxembourg, the Czech Republic and Iceland have slightly less strict loan restrictions for first-time buyers or young people. Norway, New Zealand, Ireland and the United Kingdom have introduced flexibility quotas linked to their debt-to-income limits – these allow banks to issue a certain proportion of mortgages above the requirement.

banks have chosen to exempt from the rules. These borrowers are often wealthy households rather than young households with potentially favourable income growth.<sup>93</sup> Since the price of a home is set by the marginal buyer, increased flexibility can lead to higher house prices and debt. Studies have shown that relatively small parts of the population can drive price developments in the housing market.<sup>94</sup> One disadvantage of higher prices is that they may reduce the ability of financially weaker households to buy a home. In Sweden, it seems to be the high housing prices and not the amortisation requirements that are the main reason why, for example, young people find it difficult to buy a home.<sup>95</sup>

Borrower-based measures can have a dampening effect on housing prices and thus also on the construction of new homes.<sup>96</sup> In Sweden, the amortisation rules allow banks to exempt borrowers from amortisation if they have a mortgage secured by a newly built home. It is up to the bank to assess how exemptions should be used – according to FI’s evaluations, seven out of eight banks currently grant exemptions even though not all applications are granted.<sup>97</sup> The exemption is designed to provide cash flow relief to the borrower. However, amortisation remains part of the banks’ credit assessment and thus limits the scope for borrowing in a similar way to other borrowers subject to the requirements. The actual impact of the exemption on construction is yet to be determined, although it may contribute to slightly higher prices for newly built homes and thereby to more construction. However, studies show that the economy is better served by a policy mix that stimulates additional housing supply through changes in building regulations and improved allocation of existing stock rather than through increased price levels resulting from greater risk-taking in the household sector.<sup>98</sup>

## The resilience of the household sector needs to be safeguarded

Recent years have shown how quickly and unexpectedly the economic situation can change and how important it is for economic agents and the financial system to be highly resilient to shocks. The rapid rise in inflation and interest rates led Swedish households to reduce their consumption quite considerably, both from a historical

<sup>93</sup> See J-L Peydró, F. Rodriguez-Tous, J. Pripathy and A. Uluc, (2024), “Macprudential policy, mortgage cycles, and distributional effects: evidence from the United Kingdom”, *The Review of Financial Studies*, 37 (3).

<sup>94</sup> See A. Mian and A. Sufi (2019), “Credit supply and housing speculation”, *Working paper 24823*, NBER.

<sup>95</sup> In larger cities, where housing prices are higher, the requirements are more binding; see N. Olsén Ingefeldt and V. Thell (2019), “Young adults and the housing market”, *FI Analysis* No 19, Finansinspektionen.

<sup>96</sup> See M. Bjellerup and L. Majtorp, L. (2019), “The development of housing prices”, *Focus Report*, Swedish National Debt Office.

<sup>97</sup> Six out of eight banks grant exemptions in some cases, following an individual assessment of the need, see “*Bankernas hantering av undantag från amorteringskrav vid nyproduktion*” [*Banks’ handling of exemptions from amortisation requirements for newly constructed homes*], February 2024, Finansinspektionen.

<sup>98</sup> See D. Aikman, R. Kelly, F. McCann and F. Yao (2021), “The macroeconomic channels of macroprudential mortgage policies”, October, Central Bank of Ireland. Studies show that the abolition of the ban on interest-only loans in Denmark did not have a major effect on construction and did not improve opportunities for young people to own their own home; see C. Bäckman and C. Lutz (2020), “The impact of interest-only loans on affordability”, *Regional Science and Urban Economics* 80.

perspective and compared with other countries. However, the resilience of mortgage holders has been relatively good. One contributing factor to this is that the labour market has weathered the economic downturn relatively well. In addition, many households were able to use the savings buffers they built up during, for example, the pandemic. Furthermore, the combination of amortisation requirements, mortgage caps and banks' credit assessments safeguarded resilience in the household sector. Without these measures, households would not have been as well equipped and the systemic risks associated with household mortgages would have been greater. Economic developments could have been much worse if the Riksbank had needed to raise the policy rate even more to combat inflation. This would have been particularly true if more households had had large loans relative to their income.

The borrower-based measures seek to address market failures in the housing and mortgage markets. They involve a trade-off between limiting the room for manoeuvre of households and banks and preventing the build-up of risks in the economy. They are based on a general precautionary principle and on an overall assessment of complex risks. The risk assessment is also hampered by lack of data. However, knowledge about the revenue and costs of different measures is constantly evolving and it is useful to evaluate them at regular intervals. This makes it possible to see if they have the desired effect or if there are more cost-effective alternatives that achieve the same objectives.

Increased flexibility for banks in new lending can bring benefits. If properly designed, greater flexibility could, for example, make it easier for young, creditworthy households with little liquid assets to buy a home. At the same time, there may be drawbacks to making macroprudential policy less stringent. For example, they risk causing both housing prices and debt to rise again in a way that is undesirable for society. This is particularly true if the changes take place in a period when monetary policy becomes less contractionary. Directing more debt-financed purchasing power towards a housing market characterised by several supply problems is not a long-term sustainable solution. Instead the fundamental problems need to be solved and the necessary structural measures taken to create a better functioning housing market. Moving forward, such policy measures would also favour those who want to enter the housing market.