Analysis

Risks in long-term and large home loans – Sweden's worry is also ours

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AUTHOR



Hanna Putkuri
Adviser

Household debt relative to income is currently at a record high in Finland and Sweden. High household indebtedness exposes both the financial system and the economy to risks. In Finland, home loans are typically paid off faster than in Sweden, which makes an average Finnish household with a mortgage less indebted. The comparison does not, however, dissipate national concerns. Rather, it shows that, if Finland follows the path that Sweden has taken, it would further increase both debt levels and risks.



Household debt levels higher than ever before

The debt level of an average Finnish household has long been record high by national standards. One of the indicators of indebtedness – the ratio of households' total debt to annual disposable income (debt-to-income ratio, DTI) – climbed to a record high again in 2016, at 127%. In other words, debt has long increased faster than the income available for repayment plus normal consumption and savings. The majority of debt accumulation is due to mortgages, and in Finland the ratio of mortgage debt to annual income is about 83%.

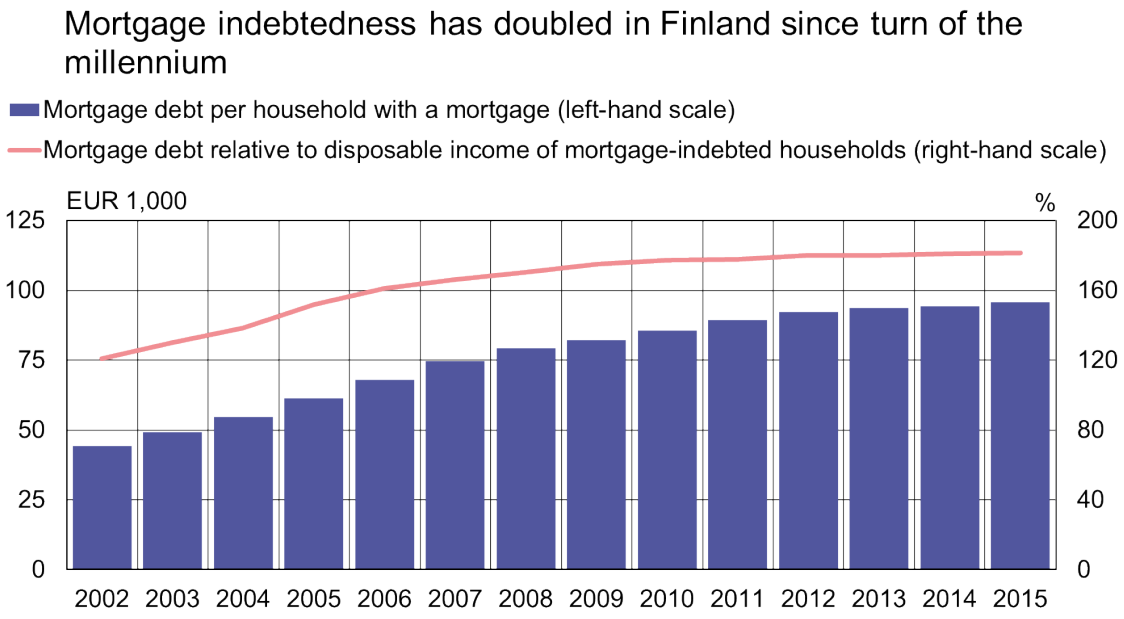
At the level of the economy as a whole, it is difficult to say how much debt is too much. In the latter part of the 1980s – just before the economic and banking crisis of the early 1990s – the household DTI ratio rose rapidly but was, even at its highest, significantly lower than at present, i.e. below 90%. Rapid debt accumulation partly contributed to the onset and severity of the crisis.

The economic upturn and overheating of the 1980s was followed by the recession of the early 1990s. At that time, interest rates were markedly higher than at present, credit losses grew, lending partly dried up and households gradually deleveraged by paying off their loans. By 1997, the DTI ratio declined to around 60%, equalling the level before the exuberance of the late 1980s.

Since the turn of the millennium, households have continued to accumulate debt almost

uninterruptedly. At the same time, the DTI ratio has doubled compared with the situation two decades ago (Chart 1). Debt accumulation continued also during the prolonged downturn of the 2010s, albeit at a slower rate. Debt developments in Sweden have shown a pattern similar to the trend in Finland, but the DTI ratio has been higher, about 180% at the end of 2016. How have we come to the current situation and should we be concerned about it?

Chart 1.



Sources: Statistics Finland and calculations by the Bank of Finland.
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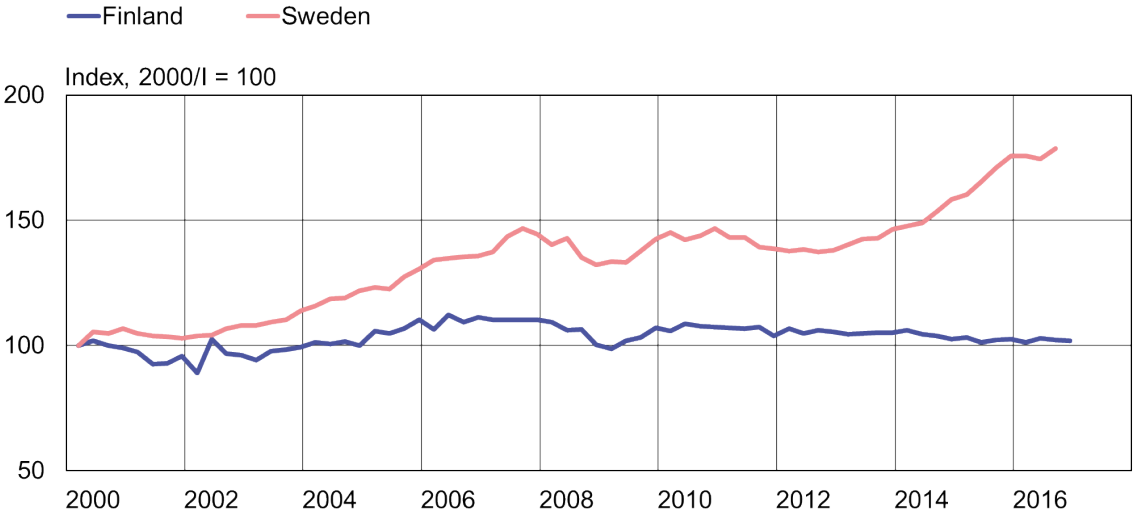
Mortgage debt levels and loan maturities have doubled

Household debt accumulated rapidly during the first ten years of the new millennium, particularly when mortgage debt became more commonplace and households began to take out home loans in larger amounts and with longer maturities. At the same time, mortgage debt began to accumulate both in terms of amount per household with a mortgage and in relation to the income of these households.

At present, about every third household has a mortgage, in the amount of about EUR 96,000 per mortgage-indebted household (Chart 2). Looking at households with a mortgage, the mortgage loan-to-income (LTI) ratio averages 181%, i.e. it is significantly higher than the LTI ratio for the household sector as a whole (83%). In 2002, mortgage debt averaged EUR 44,000 per mortgage-indebted household, and the LTI ratio for these households was 121% (Chart 2).

Chart 2.

House prices have risen faster in Sweden than income



House prices relative to annual disposable income of households.
Sources: Macrobond and calculations by the Bank of Finland.
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At the end of the 1990s, new home loans in Finland typically had a maturity of 10–15 years.[1] In the 2010s, the typical maturity has been about 20 or 25 years, and in rare cases 30 years or longer. While loan maturities have almost doubled in less than two decades, the mortgage debt of an average household with a mortgage has almost doubled, too (Chart 3).

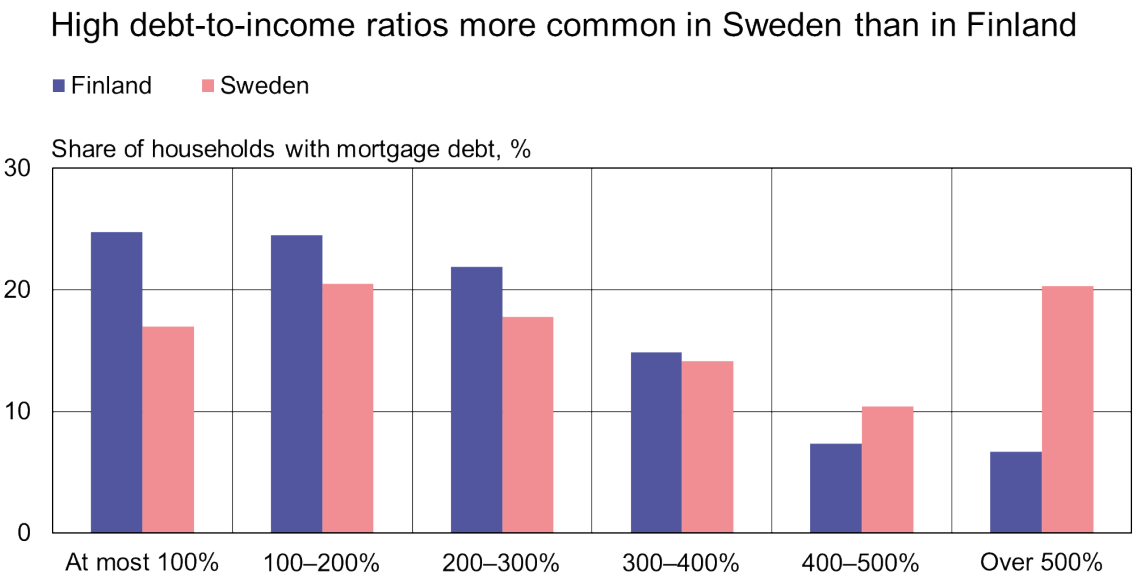
The current situation in Sweden also points to a connection between long loan maturities and high mortgage debt levels. The initial maturity of a new mortgage specified in the mortgage contract in Sweden is often about 30–50 years. In practice, however, only about half of households with a mortgage regularly pay down their debt.[2] An average mortgage holder has mortgage debt worth three times their annual disposable income (Chart 3).

Finland should not follow the Swedish path of indebtedness, as Sweden itself is already pressing the brake and searching for a new path. In summer 2016, Sweden introduced a new macroprudential tool, the loan-specific amortisation requirement, which pertains to new mortgages that are large relative to the purchase price of the house. A mortgage must be regularly amortised at least until the remaining amount is at most half of the value of the housing purchased and secured by the loan.

According to the Swedish financial supervisor responsible for macroprudential policy (Finansinspektionen), the amortisation requirement has already contributed to the fact that some

of the households with new mortgages have taken out smaller loans.[3] Big ships turn slowly, however, and the high mortgage debt levels already accumulated by households are a long-term structural concern.

Chart 3.



Horizontal axis: household's mortgage and other debt relative to annual disposable income.
Sources: Bank of Finland and Riksbank.
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The longer the loan maturity, the more expensive the loan

Longer mortgage maturities and lower interest rates have enabled debt accumulation without so far significantly increasing the monthly debt service burden of mortgage-indebted households. A longer maturity distributes the debt service burden over a longer period of time. In the whole, however, a loan is always more expensive, the longer the maturity or the higher the interest rate. Interest-only periods also prolong loan repayment, thereby increasing interest expenses for the loan period as a whole.

Interest expenses and loan losses from home loans have been minor in recent years both in Finland and Sweden, even though mortgage debt levels are record high. Even so, the risks from high indebtedness can materialise in a crisis situation in the form of both higher loan losses and lower consumption compared with a normal situation. Highly indebted households are more prone to reduce consumption expenditure in a downturn due e.g. to unemployment or falling house prices.

Because home loans are tied to variable interest rates, the ability of mortgage-indebted households to service the debt and maintain their previous consumption level may also be put to the test in an upturn, when interest rates rise. The average interest rate on outstanding home loans in Finland was record low in 2016, at only around 1.1%, and interest expenses took an exceptionally small proportion of household income. Depending on the loan amortisation method, higher interest rates would either increase a household's monthly debt service costs or lengthen loan repayment. In any case, aggregate interest expenses for the loan period as a whole would increase.

In the example in the article 'How can the build-up of housing price bubbles be dampened?' the Korhonen household takes out a mortgage of EUR 180,000 to purchase a house worth EUR 200,000. The loan maturity is 25 years and the interest rate on the loan is about 1.1%, as is currently the case, and hence the family's monthly debt service costs are EUR 687 (see the Table). Since the family's annual disposable income is EUR 40,000, debt repayment takes more than one fifth of the household's income each month.

Table.

The larger the loan, the longer the maturity or the higher the interest rate, the more expensive the loan

Home loan, EUR	Interest rate, %	Monthly instalment, EUR	Maturity, years	LTI, %
Fixed-instalment loan (fixed monthly instalment)				
180 000	1.1	687	25	450
180 000	3.0	687	36	450
180 000	6.0	687	Perpetual	450
200 000	1.1	763	25	500
200 000	3.0	763	36	500
200 000	6.0	763	Perpetual	500
Annuity loan (fixed loan maturity)				

180 000	1.1	687	25	450
180 000	3.0	854	25	450
180 000	6.0	1,160	25	450
200 000	1.1	763	25	500
200 000	3.0	948	25	500
200 000	6.0	1,289	25	500
Loan-to-income, LTI = home loan relative to annual disposable income (EUR 40,000).				
Debt service-to-income, DSTI = monthly instalment relative to monthly disposable income (EUR 3,333).				
Source: Bank of Finland calculations.				

In the case of a fixed-instalment loan, the repayment period of the Korhonens' loan of EUR 180,000 would lengthen by 11 years, to 36 years, if the interest rate were to rise to 3%.[4] At the same time, the interest expenses for the overall loan period would more than quadruple if the interest rate were to remain at 3% for the entire 36 years. If the interest rate were to rise to over 4.5%, the principal of the loan would not decrease at all, because the fixed monthly instalment would need to exceed the original amount to cover even interest expenses.

In the case of an annuity loan, the loan maturity remains unchanged regardless of the interest rate level. If the interest rate rises, however, the monthly debt service burden and therefore the debt service burden for the overall loan maturity could substantially increase. If the interest rate were e.g. 3%, the monthly instalment would be almost a quarter higher than if the interest rate were 1.1%, and servicing the debt would take some 5 percentage points more from the Korhonens' monthly income.

The larger the loan relative to income, the more vulnerable the Korhonens will be to rising interest rates. For example, in the case of an annuity loan of EUR 200,000 (i.e. when the loan-to-income ratio is 500%), debt service costs would already take almost 40% of the household's monthly income if the interest rate were 6% and the loan maturity 25 years. The Financial Supervisory Authority (FIN-FSA) has urged banks to test the debt-servicing capacity of each new mortgage applicant at least against this interest rate and debt service scenario and to take it into consideration in their loan decision.

On the other hand, the Korhonens' financial margin would be larger if the initial loan were smaller

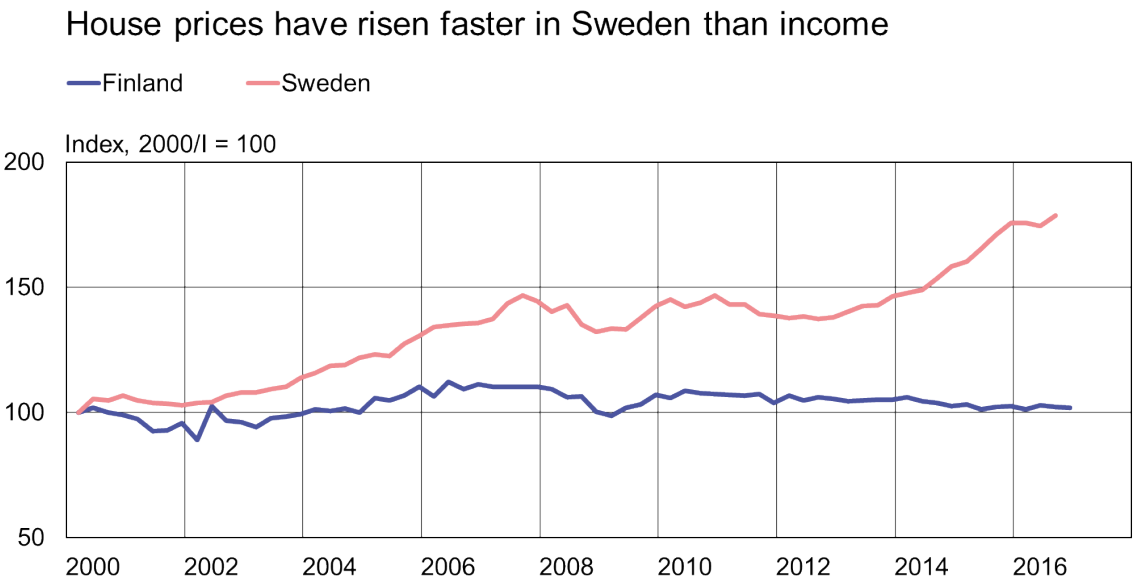
relative to the household's income and part of the loan were repaid before the interest rate rises. This is why it is particularly important to amortise the loan at the beginning of the loan period when the remaining principal amount is at its highest.

Housing market cooler in Finland than in Sweden

The moderation of household debt accumulation in Finland in the 2010s has served to contain the increase in risks and vulnerabilities. According to warning signals on the housing market, such as developments in house prices relative to household income, the Finnish housing market is not at present subject to a risk of overheating (Chart 4). The Finnish financial system is, however, permanently exposed to risks from lending for house purchase (see the Bank of Finland's financial stability assessment).

In Sweden, meanwhile, housing market vulnerabilities have also increased because house prices have long risen faster than household income. The rapid rise in house prices has given cause for concern over the long-term sustainability of the price level, especially in the event of rising interest rates. The chronic shortage of housing in growth centres, in particular, has contributed to rising house prices, especially when the availability of home loans has been good and mortgage interest rates have been exceptionally low. It is hazardous if rising house prices encourage a self-fuelling spiral of overly optimistic expectations.

Chart 4.



House prices relative to annual disposable income of households.
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Mortgage debt concentrated on just some households

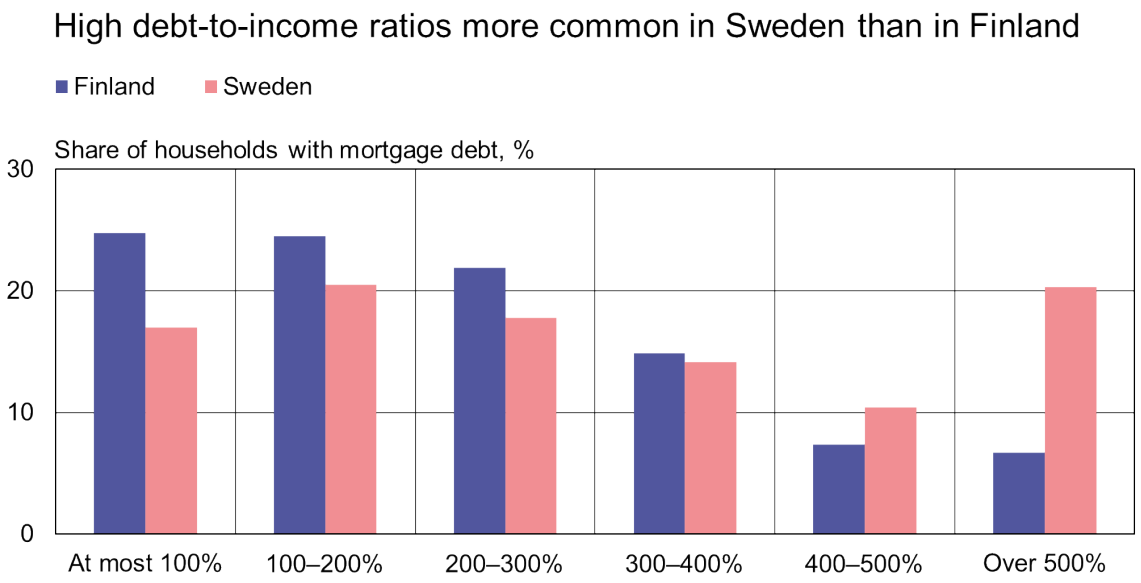
The authorities responsible for financial stability in Finland and Sweden alike agreed with the warning issued by the European Systemic Risk Board (ESRB) in the latter part of 2016, according to which high household debt concentrated on some households constitutes a significant risk over the medium term for both financial stability and the economy. The ESRB regarded it a shortcoming that national authorities lack powers to contain lending on the basis of debt-servicing capacity measured in terms of household income.

Household debt is predominantly mortgage debt, a considerable part of which is concentrated in households that are most indebted relative to their income. Half of all mortgage debt in Finland is with households whose total housing and other debts are over three times their annual disposable income. These households that are quite heavily indebted account for almost one third (29%) of all mortgage-indebted households and one fifth of all indebted households. Of all households, about one in ten is in this group.

Almost 7% of mortgage-indebted households have a debt-to-income ratio of over 500%, and these households' share of total mortgage debt is about 14%. The share in mortgage debt of these heavily indebted households grew considerably during the first ten years of the 2000s (Chart 5). Since 2010, in turn, this worrying trend has halted, which is positive from the perspective of

financial stability.

Chart 5.

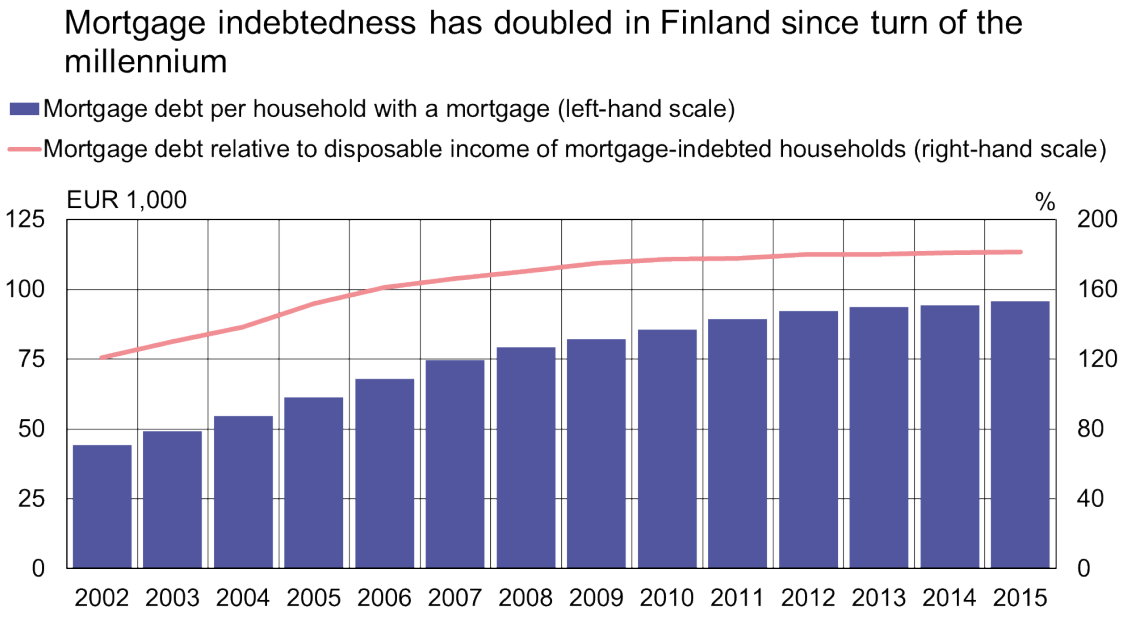


Horizontal axis: household's mortgage and other debt relative to annual disposable income.
Sources: Bank of Finland and Riksbank.
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In Sweden, high DTI ratios for mortgage-indebted households are more common than in Finland. About every fifth Swedish household with mortgage debt has mortgage and other debts totalling over five times their annual disposable income (Chart 6). These households are particularly vulnerable to income losses and interest rate increases, and are therefore prone to reduce consumption in a tight financial situation.

Swedish authorities consider high household indebtedness a significant macroeconomic risk.[5] If materialised, the effects of the risks could spread to other Nordic countries through the economy and the banking system (see also 'Finland, the land of branches – the landscape of the Nordic banking sector').

Chart 6.



Sources: Statistics Finland and calculations by the Bank of Finland.
2.5.2017
eurojatalous.fi

Notes

1. The average initial maturity of a new home loan has lengthened in Finland, from about 11 years in 1998 to the current 19 years. The data on repayment periods in the late 1990s are from the Federation of Finnish Financial Services Report 'Säästäminen, luotonkäyttö ja maksutavat' ('Savings, credit and payments'; in Finnish only) 2015. ↑
2. Ölcer, D. – van Santen, P. (2016) The indebtedness of Swedish households: Update for 2016. Riksbank, Economic Commentaries No. 5, 2016. ↑
3. Finansinspektionen (2017) The Swedish mortgage market. ↑
4. According to a Bank of Finland survey among Finnish credit institutions, fixed-instalment loans account in euro terms for some 40% of outstanding home loans. See also Asuntovelalliset ovat hyötyneet matalasta korkotasosta ('Households with housing debt have benefited from low interest rates'; in Finnish only). ↑
5. Riksbank (2016) Financial stability report 2016:2; Finansinspektionen (2016) Stability in the financial system 2016:2. ↑

Keywords

financial stability, households, housing loans, indebtedness, repayment period