



# **BANK OF FINLAND BULLETIN**

**BANK OF FINLAND ARTICLES ON THE ECONOMY**

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# The highly indebted cut spending as the economy slows

29 MAY 2019 2:30 PM • BANK OF FINLAND BULLETIN 2/2019 • FINANCIAL STABILITY



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Financial and economic crises have often been preceded by excessive debt accumulation by households. The more households accumulate debt during an economic upswing, the more they are prone to cut consumption in a downturn. Large fluctuations in lending and spending are a risk to the economy. This is why it would be necessary to curb debt accumulation relative to borrowers' repayment capacity. In Finland, a considerable amount of household debt is held by mortgage borrowers with a high level of debt relative to income.



## Excessive household debt a risk to the economy

Excessive accumulation of debt by households is likely to amplify fluctuations in the economy and its vulnerability to shocks.<sup>[1]</sup> Hence it also increases the risks to financial

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1. History has shown that credit-driven expansions and asset price bubbles tend to be followed by deeper recessions and slower recoveries. See e.g. Jordà, Ò. – Schularick, M. – Taylor, A. (2013) 'When credit bites back', *Journal of Money, Credit and Banking*, Volume 45, Issue S2, pp. 3–28; Jordà, Ò. – Schularick, M. – Taylor, A. M. (2016) 'The great mortgaging: housing finance, crises and business cycles', *Economic Policy*, Volume 31, Issue 85, pp. 107–152; Reinhart, C. M. – Rogoff, K. S. (2009) *This time is different: eight centuries of financial folly*. Princeton University Press.

stability. Household debt relative to income grew at a dangerously rapid pace in many advanced economies before the onset of the global financial crisis in 2007.

The increase in debt levels prior to the financial crisis was due to the easy access to loans, relaxation of loan terms and the decline in interest rates in the early years of the millennium. The other underlying factors were the favourable developments in the real economy as well as consumer and investor optimism, which were reflected as a rise in house and other asset prices as well as an overheating of the markets. The rise in collateral values became a self-reinforcing spiral fuelling excessive lending and risk-taking.

In countries with high levels of average household debt prior to the crisis, economic growth was weaker than elsewhere following the onset of the crisis. In the downturn, households began to cut their spending to service their debts and save for an even rainier day. Private consumption contracted or grew at a slower pace, particularly in countries with a higher household debt-to-income ratio.<sup>[2]</sup> Countries with higher average household debt before the crisis also witnessed a stronger decline in house prices and growth in unemployment, which further hampered the servicing of debt.

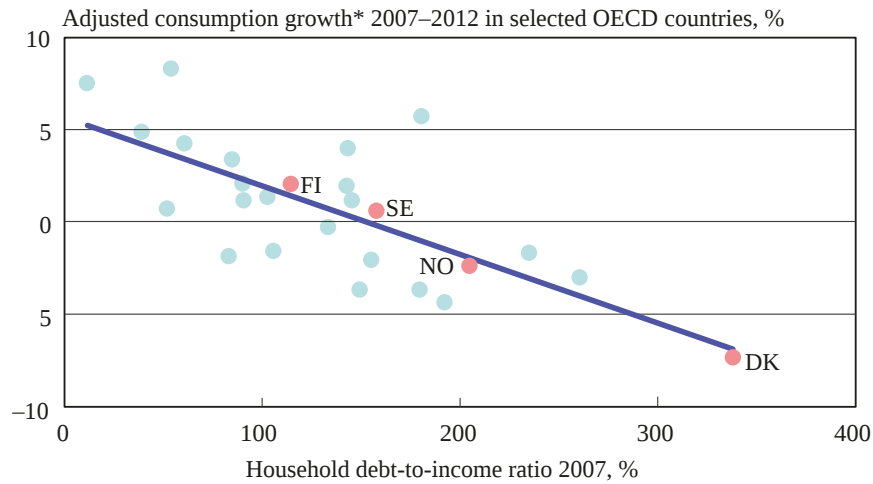
The global economic downturn triggered by the financial crisis was reflected as a recession also in the Nordic countries and there were serious problems particularly on the overheated Danish housing market. Of the Nordic countries, the largest fall in consumption was witnessed in Denmark, where house prices had risen rapidly prior to the crisis and the household debt ratio had already for a protracted period been exceptionally high by international comparison (Chart 1).

Chart 1.

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2. This correlation between debt ratios and consumption is observed particularly when other factors affecting consumption are also taken into consideration. For a more detailed discussion, see Flodén, M. (2014) Should we be concerned by high household debt? and Flodén, M. (2014) Did household debt matter in the Great Recession?

Consumption growth during the crisis was slower in countries where household debt levels were higher pre-crisis



\*Consumption growth is adjusted from regression results where changes in consumption are explained also by factors other than household indebtedness.  
Sources: Martin Flodén (2014) and Bank of Finland (layout of Chart).

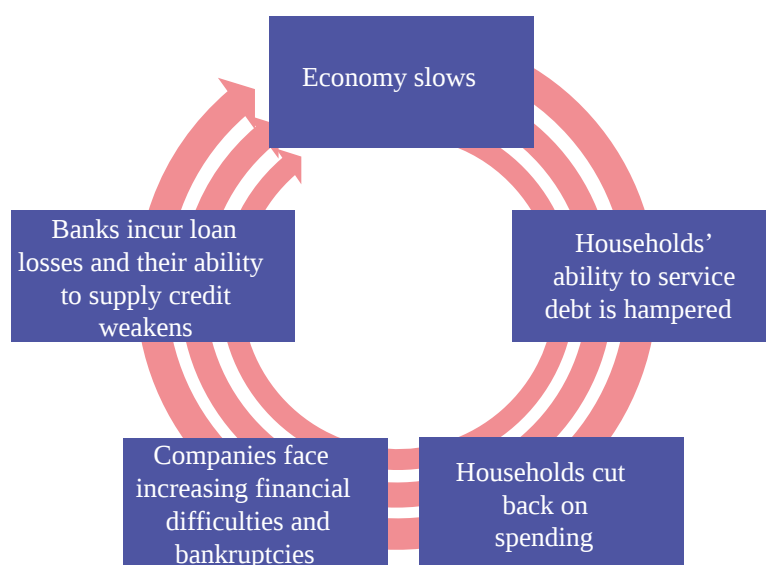
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In Denmark, households started to reduce their debt levels following the crisis, whereas in the other Nordic countries households continued to accumulate debt. Sweden and Norway recovered fairly rapidly from the 2009 recession, and their housing markets heated up at an alarming rate in the 2010s, whereas in Denmark and Finland economic growth remained sluggish for a longer period of time. In Finland, this was due particularly to problems in the export sector, whereas private consumption recovered rapidly.

In the worst case, households' payment difficulties and the shrinking of spending may cause a chain reaction that turns into a vicious circle in the economy (Chart 2). Household consumption expenditure usually accounts for a significant share of GDP – in the case of Finland, for more than half. The decline in consumption increases companies' financial difficulties, particularly in the sectors that are sensitive to cyclical fluctuations and dependent on domestic demand. Corporate payment difficulties and bankruptcies may result in large loan losses for banks. Loan losses erode banks' capital positions and thereby weaken their ability to provide new credit to facilitate sustainable economic growth.

Chart 2.

## Materialisation of risks can cause a vicious circle in the economy



Source: Bank of Finland.

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Household indebtedness thus poses a risk to not only the indebted and to the financial institutions granting them loans. In a crisis situation, the indirect risks of lending and their knock-on effects usually turn out to be larger than the direct credit risks. These knock-on effects can harm the real economy and the financial system very extensively and for a long period of time, as experienced in a number of countries during the global financial crisis.

## Differences in household debt levels reflected in consumption

Micro data on households during the financial crisis provides evidence of the correlation between indebtedness, house prices and spending in various countries. In the United States, consumption declined during the financial crisis particularly in areas with higher household indebtedness relative to the other parts of the country. High household debt and low net wealth intensified the negative effect of the decline in house prices on consumption demand.<sup>[3]</sup>

In the United Kingdom, households with higher debt-to-income ratios cut back on

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3. Mian, A. – Sufi, A. (2014) House of debt: how they (and you) caused the Great Recession, and how we can prevent it from happening again. The University of Chicago Press.

spending during the financial crisis more than less-indebted households. This has been explained mainly by the fact that the more heavily indebted households tended to consume a higher proportion of their income pre-crisis.<sup>[4]</sup> Moreover, tighter credit conditions and increased concerns during the financial crisis about ability to make future debt repayments may have resulted in cuts in spending by indebted households.<sup>[5]</sup>

Also in Denmark, highly-indebted households cut back on spending during the crisis more than the less-indebted. Highly-indebted households spent a considerably larger share of their income than their less-indebted peers prior to the crisis, and financed part of their spending by borrowing. Spending was unusually high prior to the crisis, but during the crisis it returned to normal levels.<sup>[6]</sup>

In many euro area countries, too, high household debt prior to the euro area sovereign debt crisis in 2010 made households financially more vulnerable to shocks in the economy. Households with higher indebtedness relative to their income and/or value of housing cut back on spending more in 2010–2014 than the less-indebted households.<sup>[7]</sup>

## In Finland, debt and spending levels high relative to income

Finnish household debt has doubled relative to disposable income since the turn of the millennium (Chart 3). In 2018, debt levels declined slightly and net savings grew, turning from negative to positive, as growth in income was higher than growth in debt and consumption expenditure. Historically however, the debt-to-income ratio is still high and the savings rate low.

Finnish household consumption surpassed disposable income in 2016–2017. In other words, households financed part of their consumption expenditure either by taking out credit or selling their assets, i.e. their net savings were negative. Net savings in financial assets, in particular, have been negative in recent years and have decreased relative to income, whereas net savings in other assets, mainly housing, have been positive and have increased.<sup>[8]</sup>

During the recession that followed the global financial crisis, Finnish households cut consumption in 2009 and 2013, but consumption demand continued to lend support to economic growth. On the housing market, the recession was reflected as a protracted but relatively soft downturn. Compared to developments in many other countries, changes in house prices were moderate both before and during the financial crisis.

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4. Bank of England (2014) Financial stability report.

5. Bunn, P. – Rostom, M. (2015) Household debt and spending in the United Kingdom. Bank of England Staff Working Paper No. 554.

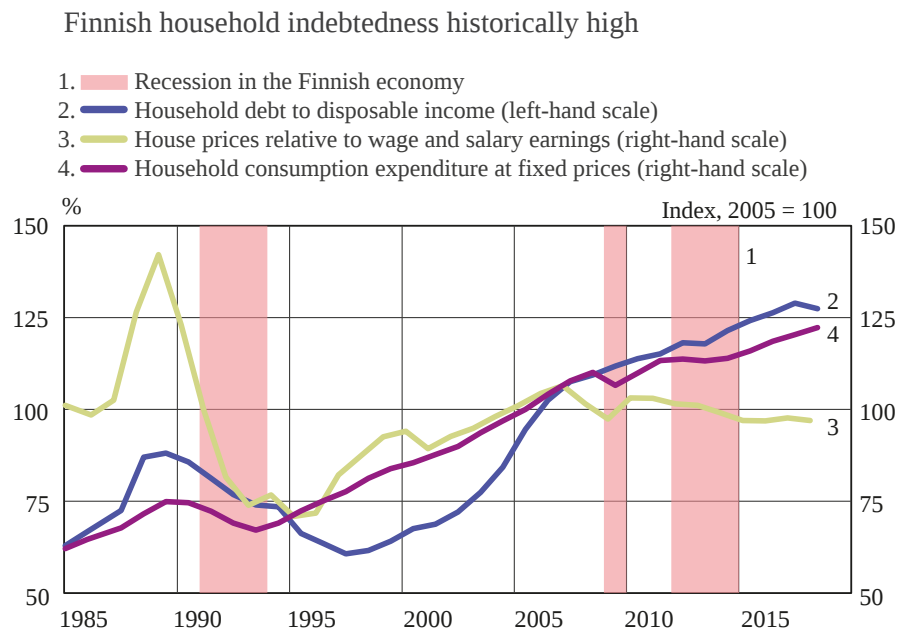
6. Andersen, A. L. – Duus, C. – Jensen, T. L. (2016) 'Household debt and spending during the financial crisis: Evidence from Danish micro data', *European Economic Review*, Volume 89, pp. 96–115.

7. Adrian, A. – Feng, A. X. – Valcix, N. (2018) Understanding the macro-financial effects of household debt: A global perspective. IMF Working Paper 18/76.

8. For a more detailed discussion, see <https://www.bofbulletin.fi/en/2018/5/are-finns-living-beyond-their-means/>.

Prior to the economic and banking crisis in the early 1990s, household debt levels were considerably lower than today. Indebtedness, however, grew rapidly and house prices rose sharply, which has often been an early warning signal of a financial crisis. During the crisis, house prices collapsed. Households cut back on spending for four consecutive years and reduced their large debt burden through to 1997 (Chart 3).

Chart 3.



Sources: Statistics Finland and calculations by the Bank of Finland.

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In Finland, the correlation between indebtedness, net wealth and spending has not been examined based on household micro data. Debt and wealth are, however, very unevenly distributed between households.<sup>[9]</sup> The bulk of household debt is housing debt, and mortgage borrowers usually also have other debt in addition to housing debt. Assessments of borrowers' ability to service their debt should therefore take into account all of a household's debts, irrespective of lender, purpose of use or other features.

Indebtedness statistics by Statistics Finland show that at the end of 2017, households' housing loans totalled some EUR 87 billion and other debt amounted to approximately EUR 19 billion.<sup>[10]</sup> Other debt includes holiday residence loans, consumer credit, student loans and loans taken out for business purposes, for example housing loans for the purchase of dwellings for investment purposes. This statistic, however, does not include housing company loans, open-end credit and some other types of consumer credit the volume of which has increased significantly in recent years.

9. See e.g. [https://www.stat.fi/til/vtutk/2016/vtutk\\_2016\\_2018-06-05\\_tie\\_001\\_en.html](https://www.stat.fi/til/vtutk/2016/vtutk_2016_2018-06-05_tie_001_en.html).

10. These loans constitute some 88% of the total household debt included in the indebtedness statistics.

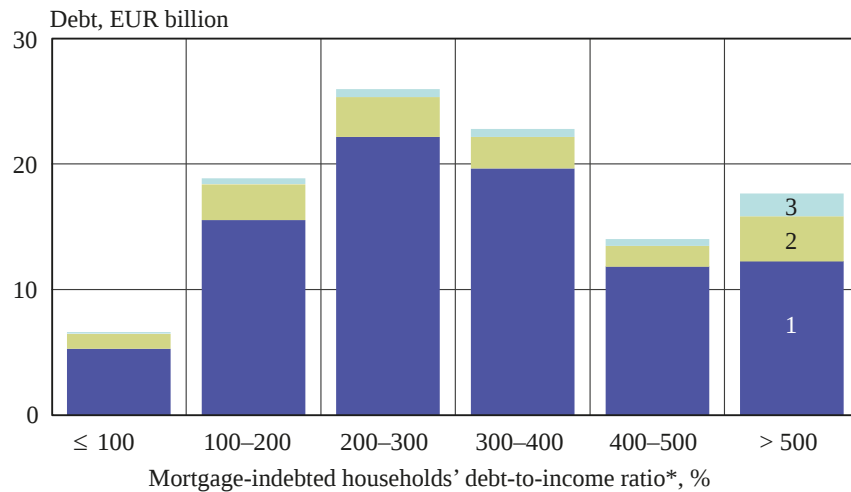


Approximately half of the total debt of mortgage-indebted households is held by those households whose total debt is more than triple the amount of their annual disposable monetary income (Chart 4). A considerable share of this debt is held by mortgage borrowers whose debt is more than five times as high as their income. Highly-indebted mortgage borrowers have a considerable amount of debt in addition to housing loans.<sup>[11]</sup> This may affect their ability to repay the debt and their possibilities of taking on more debt.

Chart 4.

### Mortgage-borrowers' debt by household debt-to-income ratio

1. Housing loans
2. Holiday residence, consumption and student loans
3. Loans for business purposes



Debt excl. housing company loans, open-end credit and certain other consumer credit in 2017.

\*Debt relative to annual disposable monetary income (net) in 2017.

Sources: Statistics Finland and calculations by the Bank of Finland.

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High indebtedness relative to income has become more common in the new millennium, particularly as a result of larger housing loans and longer maturities. The biggest change was witnessed in the first decade of the new millennium, when the typical maturities of new housing loans almost doubled, from some 10–15 years to approximately 20–25 years. In the 2010s, growth in housing debt has slowed, but large housing company loans have become increasingly common.

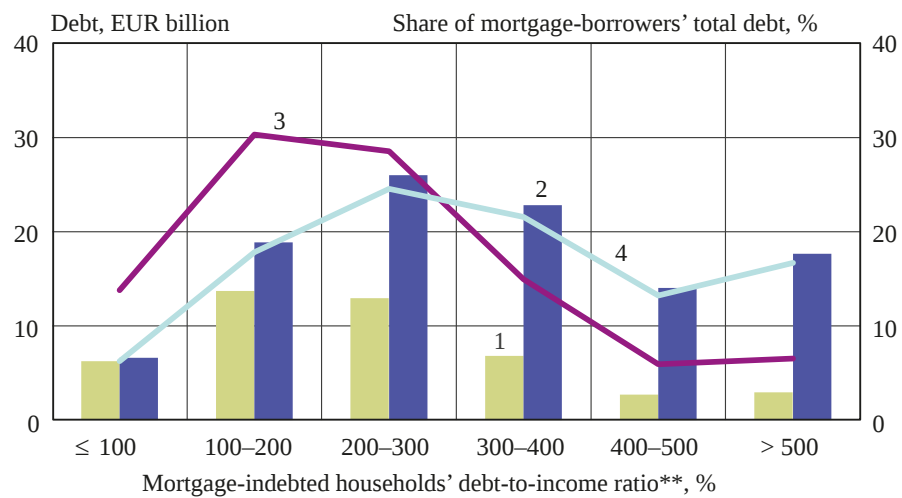
11. Mortgage borrowers whose debt is more than five times as high as their net monetary income account for some 14% of total housing debt, 24% of holiday residence loans, consumption loans and student loans taken out by mortgage borrowers, and for 43% of loans taken out by mortgage borrowers for business purposes.

A comparison of the total indebtedness of mortgage-indebted households to the situation in the early 2000s shows that the total amount of debt has increased particularly in the case of households with a high debt-to-income ratio. At the same time, the highly-indebted now account for a significantly larger share of the total debt of all mortgage borrowers (Chart 5). This increases the risks related to indebtedness.

Chart 5.

### High debt-to-income ratios increasingly common among mortgage borrowers

1. 2002: Debt volume\* (left-hand scale)
2. 2017: Debt volume\* (left-hand scale)
3. 2002: Share of total debt (right-hand scale)
4. 2017: Share of total debt (right-hand scale)



\*Debt excl. housing company loans, open-end credit and certain other consumer credit at 2017 prices.

\*\*Debt relative to annual disposable monetary income (net).

Sources: Statistics Finland and calculations by the Bank of Finland.

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Excessive household debt accumulation could be curbed in future by limiting borrowing according to the borrower's debt-servicing capacity. Following international examples, Finland should consider, for example, imposing a maximum debt-to-income ratio for households. The appropriateness and possible effects on household debt accumulation of this type of a debt-to-income cap are examined in the [Financial Stability Assessment](#) and the article '[Capping debt-to-income ratios complementary to housing loan cap](#)'.

## Tags

consumption, debt accumulation, economy, financial stability, households, mortgage borrowers

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