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Bank of Finland Financial Stability Report

One of the Bank of Finland's core tasks is to contribute to the reliable, efficient and stable functioning of the financial markets. The Bank conducts regular analyses of the vulnerabilities and risks related to the financial system that could trigger or exacerbate economic disruptions. These are not forecasts, but analyses of potential financial market developments.

The financial stability analysis published on the Bank of Finland website is intended for financial market participants, other authorities and the general public to provide information and promote discussion on financial stability. The objective is to ensure that these parties take the current condition of and future outlook for the financial system into consideration in their operations. In addition to the stability analysis, the publication features articles of topical interest.

The contents of the Bulletin may be freely quoted, but due acknowledgement is requested.

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EDITORIAL

Rising household debt levels must be addressed in time

9 MAY 2019 11:00 AM • BANK OF FINLAND BULLETIN 2/2019 • EDITORIAL

The Finnish financial system has operated smoothly and contributed to the expansion of economic activity. However, the economic outlook has deteriorated. The most significant near-term risk to the Finnish economy is if growth in the euro area slows more quickly than forecast. Cyclical risks to financial stability have so far remained slight, and the economy is expected to continue its moderate expansion.



Finland's financial system is structurally vulnerable due to the country's high levels of household debt and proportionately large banking system. Indebted households respond to declining economic conditions and increased uncertainty by reducing their levels of consumption and investment. Companies see their business conditions deteriorate, and the risks to the financial system are amplified.

The economy's ability to withstand serious economic shocks is weakened when household debt reaches excessively high levels. The experience of Ireland and Spain during the global financial crisis serves as a cautionary example. Household borrowing and overheating property markets at the height of an upswing amplified the downside risks to the economy — and these risks soon rained down on taxpayers when the economy entered a downswing.

These sobering examples should be given due weight. The competent authorities must be allowed to address the risks posed by high levels of household debt with instruments that

restrict borrowing according to borrowers' debt-servicing ability. Macroprudential instruments can be used to rein in the growth of large debt burdens, and also to avoid situations where house prices and housing loans grow significantly faster than household incomes. For example, a cap on debt-to-income ratios could help stem rising debt levels.

Such new instruments should be adopted as quickly as possible. Under current market conditions, these instruments could be calibrated so that the overall availability of loans would remain broadly unaffected. Determining the appropriate size for a loan would primarily remain a matter between the lender and the borrower.

New-build construction has continued briskly in recent years. This has in part been fuelled by professional investors showing increased interest in the market for rental housing. Investors have increased their holdings of rental housing alongside their more traditional investments in office and commercial properties. Housing company loans have grown rapidly in recent years, especially for new housing developments. Housing company loans can account for as much as 70% of the dwelling's debt-free sales price. New macroprudential instruments should cover household debt in its entirety, including liabilities incurred from housing company shares. Moreover, capping the amount of debt from housing company loans should be considered.

Foreign investors have become an increasing presence on Finland's commercial property market, especially in large transactions. The growing participation of foreign investors means that the Finnish property market is more closely tied to the cyclical fluctuations of other European real-estate markets. A decline in global markets or economic conditions may result in investors withdrawing from the Finnish market. This in turn would intensify price volatility in Finland.

In addition to the cyclical risks to the real-estate investment market, the market for commercial property in Finland is undergoing structural change. Commerce and retail trade are being pushed online because of the changes in consumer behaviour brought on by digitalisation, and flexible working arrangements have reduced the need for office space. Developments on the Finnish property market warrant a more watchful eye in future.

The effects of digitalisation are also readily apparent in payment services and in the availability of consumer credit and high-cost short-term loans. Consumer credit has expanded relatively quickly in Finland in recent years. The majority of new consumer loans are still issued by conventional banks. However, a growing share of unsecured consumer loans, while comprising only a small proportion of total household debt, is being taken out as so-called payday loans and loans issued by foreign online lenders. People who borrow from payday lenders may struggle with their personal finances. The high fees and interest rates associated with these loans are likely to only exacerbate this. Credit standards and advertisements for consumer loans issued from outside the banking sector should be brought under more stringent supervision, to tackle the problems often associated with indebtedness.

Sound lending practices and good financial housekeeping could be promoted by establishing a positive credit register in Finland. In addition, the credit register would help authorities better understand the composition of household debt. For its part, the

Bank of Finland will begin collecting information on loans issued from outside the banking sector.

Helsinki 8 May 2019

Marja Nykänen
Deputy Governor

Tags

[financial stability](#), [macroprudential instruments](#), [credit register](#)

FINANCIAL STABILITY

Debt must be measured against repayment capacity

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

Whereas recent economic and financial developments in Finland do not pose any immediate threats to financial stability, the permanent risks related to household indebtedness and the structure of the banking system have increased further.



Finnish households' debt structure is changing in response to an upsurge in housing company loans and consumer credit. The possibility to finance most of a house purchase with a housing company loan may encourage households and residential investors to take on debt and purchase dwellings that are expensive relative to their repayment capacity.

Abundant supply of – and easy access to – consumer credit has also enticed households to take out loans. This has further added to the debt burden of the entire household sector. Consumer credit is increasingly offered to customers with a poor credit record and loan repayment capacity.

The macroprudential measures to contain household debt accumulation and the consequent risks in Finland have largely focused on housing loans and credit institutions' capital buffers. The macroprudential toolkit should be replenished with instruments that restrict the level of household debt relative to household income or debt-servicing capacity. The new instruments should cover all loans and lenders.

For example, a cap on the debt-to-income (DTI) ratio would limit the amount of credit

granted to a household so that the ratio of total debt to annual income of a household would not exceed a specific upper limit. Finland should also consider limiting, in housing transactions, the maximum share of housing company loan relative to the debt-free price of the dwelling.

Regional divergence in house prices has widened further, even though new-build construction has been buoyant and has thus eased the upward pressures on house prices in the Helsinki metropolitan area and other growth centres. If the supply of housing becomes insufficient in future, this could increase the risk of local price bubbles.

Foreign investors have continued to increase their participation in commercial real estate transactions in Finland. These investors may transmit shocks from the international markets to the Finnish real estate market. The withdrawal of foreign investors from Finland in the event of deteriorating economic conditions would intensify volatility on the real estate market.

As a result of Nordea's re-domiciliation to Finland, the Finnish banking sector is now one of the largest in the EU, relative to the size of the economy. Because of the larger size, higher degree of concentration and closer Nordic interconnectedness, the capital and liquidity position of the banking system must be sufficiently strong to ensure the sector's capacity to absorb losses and ability to supply credit under all circumstances.

Determined action must be taken to further reinforce the resilience of the euro area financial system. Completing the Banking Union with a common Deposit Insurance Scheme would reduce the risk of national and Europe-wide financial crises and support the integration of the European financial markets. In the long term, the Common Deposit Insurance Scheme would most benefit economies like Finland, with a large banking sector relative to the size of the economy.

Deterioration in cyclical conditions – cyclical risks to financial stability remain moderate

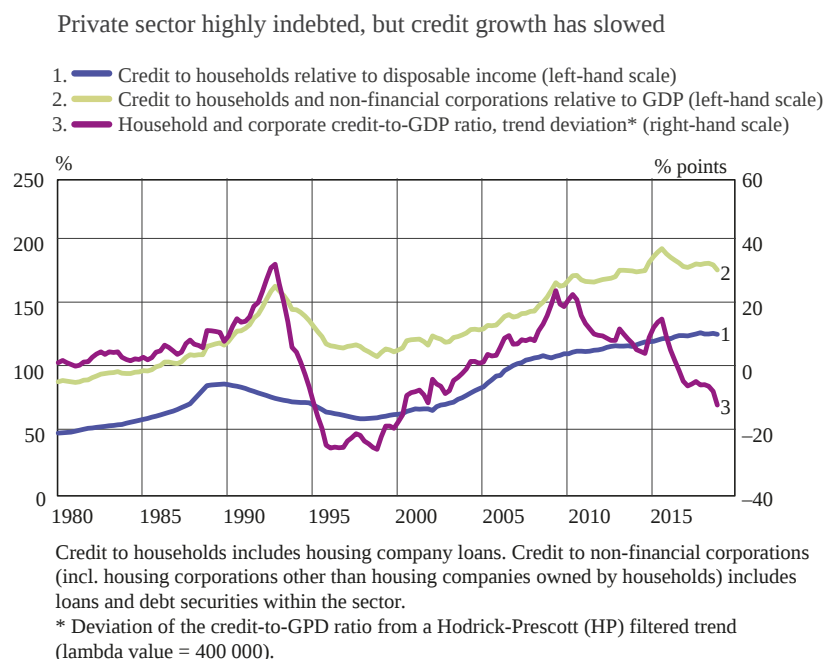
Growth in the Finnish economy slowed in 2018 and growth forecasts have recently been revised downwards. Escalation of the trade dispute between the United States and China as well as Brexit pose the biggest risks to the global economy, potentially contributing to the already weakening global growth, which would have adverse effects on a small open economy like Finland. For Finland, the biggest downside risk is faster-than-expected weakening of the euro area economic outlook.

The Finnish economy is expected to continue to grow. Slower growth in 2019–2021 will help to contain the risk of cyclical overheating on the credit and financial markets. However, slower economic growth is not projected to significantly increase the downside risks to financial stability (See '[Corporate credit risk affected by business cycles and industry factors](#)'). On the other hand, low interest rates encourage households to borrow also during economic slowdowns.

The Finnish financial system as a whole has been stable and reliable, and financial intermediation in the economy has been smooth. The cyclical vulnerabilities related to private sector credit have remained moderate. For example, the trend deviation of the

private sector's credit-to-GDP ratio, used to measure systemic risks, has continued to decline (Chart 1).

Chart 1.



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The lack of cyclical risks related to borrowing does not mean that the Finnish financial system is free from structural vulnerabilities. High household indebtedness may potentially amplify the cyclical fluctuations of the economy and aggravate crises in the economy and the financial system. At the same time, Nordea's re-domiciliation to Finland further added to the size, concentration and interconnectedness of the Finnish banking sector.

Household indebtedness an even bigger risk than before

The growth of Finnish household debt has remained moderate in recent years. At the same time, its composition has changed and the related risks to the national economy have increased. In particular, housing company loans used to fund the purchase and construction of housing have grown at an alarming rate of over 10% per annum.

Housing company loans are formally held by housing companies, but in practice the repayment liability is assumed by the company's shareholders. The possibility to fund the purchase of housing largely via a housing company loan may encourage some households and residential investors to buy housing that is expensive relative to their income. An increase in interest rates or the expiration of a lengthy interest-only period often associated with housing company loans can significantly increase shareholder debt-servicing costs. If a shareholder is unable to service his or her share of the housing

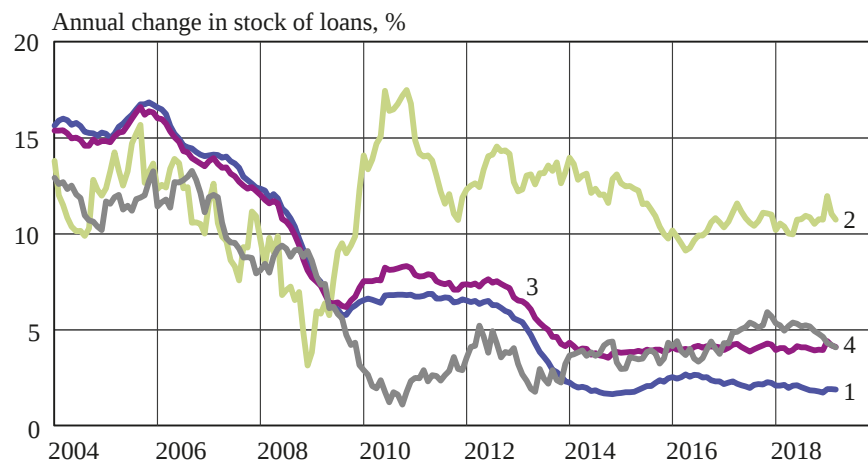
company loan, the rest of the shareholders may have to bear it.

Overall, total housing finance (housing loans and loans to housing corporations) granted by credit institutions has continued to grow at a steady annual pace of around 4% (Chart 2). The annual growth rate of the housing loan stock has slowed to around 2%. The slower growth of the housing loan stock indicates a change in the composition of housing finance and also the rapid amortisation of housing loans.

Chart 2.

Households borrow from various sources for different purposes

1. Housing loans
2. Loans to housing corporations (incl. housing company loans)
3. Total housing finance
4. Consumer credit



Euro-denominated loans granted by Finnish MFIs to households and housing corporations.

Source: Bank of Finland.

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Credit standards for new housing loans have eased. 25-year maturities on new housing loans have increased relative to loans with a maturity of 20 years. The amount of loans longer than 26 years has also increased, but they still constitute a marginal share of new housing loans, around 3–4%. Margins on new housing loans have come down to around 0.8 percentage points and the margins on housing corporation loans down to around one percentage point.

There is a wide variety of consumer credit on the market, and it is easy to get. The majority of consumer credit is granted by credit institutions operating in Finland, and the consumer credit stock has grown at a rate of about 5% in recent years (Chart 2). However, the importance of other lenders, such as vehicle financiers, peer lenders and small loan companies, has grown rapidly. Households' consumer credit from abroad is

also estimated to have increased significantly.

The rapid growth of consumer credit sustains and increases household indebtedness. Loans are also offered to customers with a low credit rating, which contributes to the increasing number of payment defaults (see article '[New methods needed to rein in consumer credit](#)').

Why does household debt have a broader significance?

Traditionally, corporate loans have been the primary source of credit loss for banks. For example, in the Finnish banking crisis in the early 1990s, the majority of credit losses were attributable to corporate loans. However, research has shown that large-scale banking crises, in most cases, seem to be the result of strong growth in housing loans rather than of increasing corporate financing.^{[1],[2]}

Households with higher indebtedness relative to their income and/or net wealth cut back on spending in economic shocks in order to service their debts and save for an even rainier day (see '[The highly-indebted cut spending as the economy slows](#)'). This decreases the demand for domestic products and services and weakens the profitability of domestic businesses.

Private consumption accounts for a big share of Finnish GDP. As a result, declining consumption dampens economic growth, which in turn influences bank credit losses.^[3] Weak domestic demand increases lay-offs, loss of jobs and bankruptcies, tightens financial conditions and thereby further aggravates economic recessions (Chart 3). In economic downturns, excessive household indebtedness may therefore indirectly weaken companies' ability to employ, invest and service their debts. This causes a risk to financial stability and to the national economy as a whole.

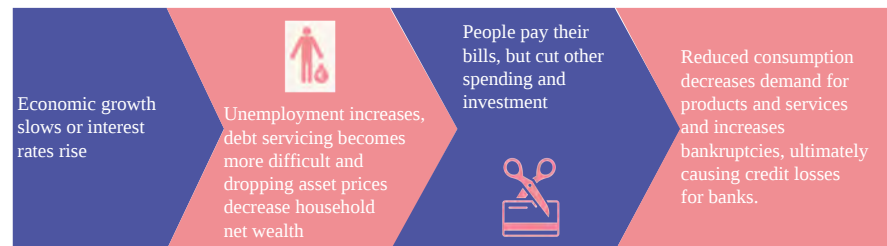
Chart 3.

1. Büyükkarabacak, B. – Valev, N.T. (2010) 'The role of household and business credit in banking crises', *Journal of Banking & Finance* 34, 1247-1256; Detken, C. – Weeken, O. – Alessi, L. – Bonfim, D. – Boucinha, M. – Castro, C. – Frontczak, S. – Giordana, G. – Giese, J. – Jahn, N. – Kakes, J. – Klaus, B. – Lang, J.H. – Puzanova, N. – Welz, P. (2014) Operationalising the countercyclical capital buffer: indicator selection, threshold identification and calibration options. ESRB Occasional Papers No. 5.

2. The results, however, to some extent depend on the credit growth indicators used. Tólo, E. – Laakkonen, H. – Kalatie, S. (2018) 'Evaluating Indicators for Use in Setting the Countercyclical Capital Buffer', *Journal of Central Banking* 14: 51–111.

3. Pesola, J. (2011) 'Joint effect of financial fragility and macroeconomic shocks on bank loan losses: Evidence from Europe', *Journal of Banking and Finance* 35: 3134–3144; Sorge, M. – Virolainen, K. (2006) 'A comparative analysis of macro stress-testing methodologies with application to Finland', *Journal of Financial Stability* 2: 113–151.

The vicious circle of debt



Source: Bank of Finland.

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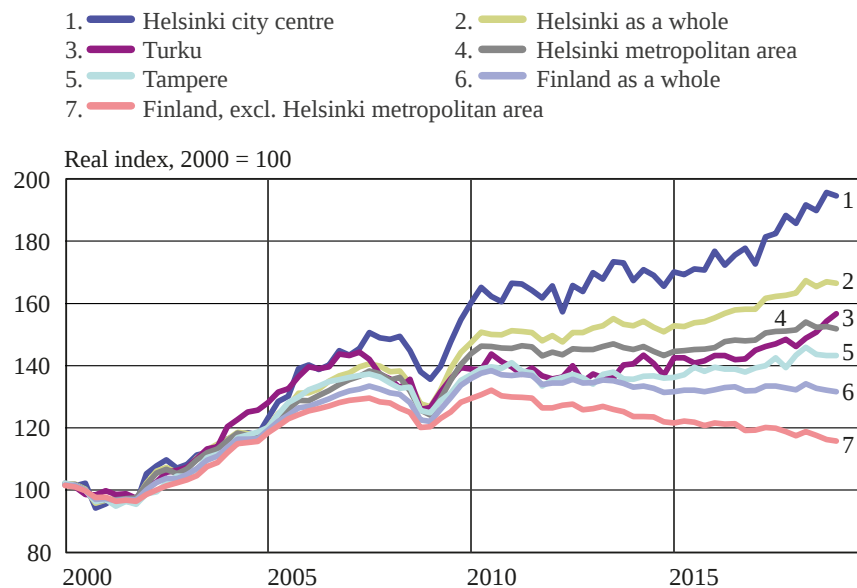
Real estate market divergence has grown depending on age, location and purpose

New housing construction has been exceptionally lively in recent years, driven by urbanisation and professional real estate investment. However, the decreasing number of new building permits shows that the cycle has reversed. The price trend is expected to continue to be largely moderate, as new apartment blocks are still being developed, especially in growth centres.

The prices of old dwellings are not showing signs of a worryingly rapid rise or widespread overvaluation. Price and demand differences on the Finnish housing market are large, and urbanisation has only further increased them. Real house prices have risen in the 2010s mainly in Helsinki and some other major cities, whereas in the rest of Finland prices have mainly fallen (Chart 4).

Chart 4.

Regional disparities in prices of old dwellings have increased in the 2010s



Source: Statistics Finland.

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The concentration of population in growth centres is also reflected in household indebtedness and the housing market. According to Statistics Finland's regional population projection released in 2015, the population aged under 65 will grow mainly in cities with more than 100 000 inhabitants. In February 2019, the Consultancy for Regional Development MDI published a population projection for ten urban areas,^[4] according to which only the Helsinki metropolitan area and the Tampere and Turku areas will experience significant population growth by 2040. Insufficient supply of housing in the growth areas would increase the risk of dangerous price bubbles.

Loans to real-estate activities account for a significant, and increasing, share of loans issued by Finnish banks (see '[Finnish commercial property market increasingly intertwined with foreign markets](#)'). Commercial property transaction volumes have increased and property valuations have risen, while foreign investors' share of the commercial property market has grown.

Falling commercial property prices abroad could also transmit to Finland through foreign investors' investment decisions. In general, the increased activity of international investors can increase fluctuations on the Finnish commercial property market. When the expectations of investment returns change, these investors may quickly either increase or decrease their investments on the commercial property markets of small

4. 'In 20 years, Finland will have only three growing urban areas', 22 February 2019.

countries.

Macroprudential policy curbs debt accumulation, not economic growth

The main objective of macroprudential policy is to reduce the probability and adverse effects on the real economy of financial crises and other severe disruptions to the financial system, and thereby to promote long-term economic growth. The competent authorities pursue this objective by mitigating macroprudential risks and vulnerabilities by means of macroprudential instruments and communication.

In accordance with its macroprudential strategy,^[5] the Board of the Financial Supervisory Authority (FIN-FSA) has taken several complementary macroprudential measures in Finland. The measures are aimed at preventing systemic risks associated with household debt and structural vulnerabilities in the financial system and improving the risk resilience of the financial system.

The maximum loan-to-collateral (LTC) ratio, i.e. the loan cap, was tightened to 85% for residential mortgage loans other than first-home loans with effect from July 2018.^[6] The purpose of the macroprudential measure is to curb household debt accumulation in a situation in which household debt has already reached a historically high level (Chart 5). The direct effects of the tighter loan cap on new lending for house purchase are assessed as moderate.

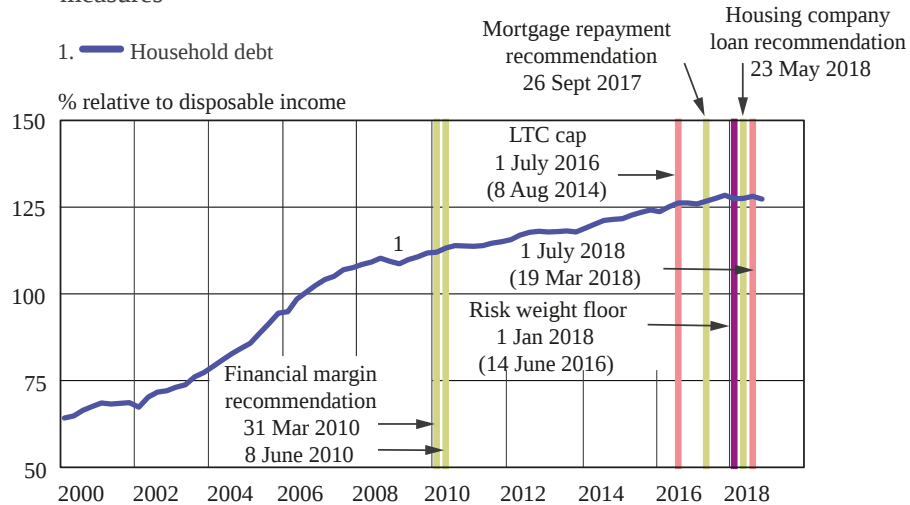
The FIN-FSA has issued a recommendation to banks according to which they should calculate loan applicants' financial margin with a maximum repayment period of 25 years and an interest rate of 6%. Moreover, the calculation should also take into account the charge for common capital expenditures linked to housing company loans. The Bank of Finland and the Board of the FIN-FSA have also urged banks to avoid very long repayment periods and granting of interest-only periods without specific reasons.

Chart 5.

5. See <https://www.finanssivalvonta.fi/globalassets/en/publications/news-releases/fivajk-makrovakaust strategia-en.pdf>.

6. See <https://www.finanssivalvonta.fi/en/publications-and-press-releases/Press-release/2018/macroprudential-decision-financial-supervisory-authority-tightens-the-loan-cap-for-loans-other-than-for-first-home-purchases2/>.

Finnish household indebtedness reined in by macroprudential measures



A vertical line shows the effective date of the measure, in brackets the announcement date.

Sources: Statistics Finland and Bank of Finland.

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The additional capital requirements imposed on Finnish credit institutions for macroprudential reasons maintain the institutions' lending capacity and loss-absorbing capacity in crisis situations. The FIN-FSA Board has set a risk weight floor for housing loans with effect from the beginning of 2018. By increasing the amount of own funds, the measure improves the risk resilience of credit institutions that have adopted the Internal Ratings Based Approach for the calculation of capital requirements.^[7]

The purpose of the systemic risk buffer requirement, which will enter into force in July 2019, is to ensure that the capital adequacy of Finnish credit institutions sector is sufficient relative to the structural risks present in the financial system.^[8] The requirement is set as follows: Nordea 3%, OP Group 2%, Municipality Finance 1.5% and other credit institutions 1%.^[9]

The values of indicators guiding the imposition of a systemic risk buffer are higher in Finland than the corresponding values of other EU countries and are also elevated compared with Finnish historical data (Chart 6).^[10] Systemic risks arise, among other

7. See <https://www.finanssivalvonta.fi/en/publications-and-press-releases/Press-release/2017/macprudential-decision-a-minimum-risk-weight-level-of-15-on-mortgage-loans-no-changes-to-the-loan-cap-no-countercyclical-capital-buffer-requirement2/>.

8. See <https://www.finanssivalvonta.fi/en/publications-and-press-releases/Press-release/2018/financial-supervisory-authoritys-macroprudential-decision-on-structural-additional-capital-requirements-systemic-risk-buffer-to-be-imposed-on-credit-institutions2/>.

9. The FIN-FSA Board has also identified the individual credit institutions significant for the Finnish financial system (other systemically important institutions, O-SIIs) and set additional capital requirements (O-SII buffers) for them. Of the O-SII and the systemic risk buffer requirement, only the higher one is binding.

things, from the large size of the credit institution sector, the degree of concentration in the sector, its interconnectedness domestically and internationally, common risk concentrations, the sector's high importance in financial intermediation and the indebtedness of the largest customer groups.

Chart 6.

The structural vulnerabilities of the Finnish banking system relative to other EU countries and the Finnish history

10. Chart 6 compares the most recent Finnish indicator values with the median of the indicator values of the other EU countries. The most recent Finnish values are also compared with the average of Finnish historical data.

Indicator	Higher or lower than the EU median	Higher or lower than the historical average in Finland
1. Housing loans granted to domestic households as a proportion of total loans granted by the credit institution sector to the private sector	Higher	Higher
2. Credit institutions' claims on construction and real estate companies as a proportion of credit institutions' total assets	Higher	Not higher
3. Credit institutions' domestic government bond assets relative to credit institutions' total assets	Not higher	Not higher
4. Domestic credit institutions' interbank deposits as a proportion of the total liabilities of the credit institution sector	Higher	Higher
5. Funding deficit of the credit institution sector in various countries	Higher	Higher
6. Combined balance sheet total of foreign banks' subsidiaries and branches relative to gross domestic product in various countries	Not higher	Not higher
7. Balance sheet of the credit institution sector relative to nominal gross domestic product	Higher	Higher
8. Combined balance sheet of the five largest credit institutions relative to the aggregate balance sheet of the entire credit institution sector	Not higher	Not higher
9. Loans granted by domestic credit institutions to households and non-financial corporations as a proportion of households' and non-financial corporations' total liabilities	Higher	Higher
10. Household sector's liabilities relative to households' disposable income	Higher	Higher
11. Non-financial corporations' indebtedness relative to gross domestic product	Higher	Higher

Based on data available on 9th April 2019.

Sources: European Central Bank and calculations by the Bank of Finland.

The macroprudential tools currently available in Finland are inadequate for mitigating long-term risks relating to household indebtedness or growth in said risks. The macroprudential toolkit should be replenished, e.g. with instruments that limit the maximum amount of household debt relative to the borrower's repayment capacity. International organisations such as the European Systemic Risk Board (ESRB) and the International Monetary Fund (IMF) have also prompted Finland to supplement the macroprudential tools designed to curb household indebtedness.

The Bank of Finland is a member in a working group established by the Ministry of Finance to examine new measures to restrain growth in household debt. The possible new measures include a cap on the debt-to-income ratio (DTI cap) or a cap on the debt-service-to-income ratio (DSTI cap) for households, a loan amortisation requirement especially at the beginning of the loan term, a maximum loan maturity and, in new-build transactions, a cap on the maximum share of housing company loan relative to the debt-free price of the dwelling.

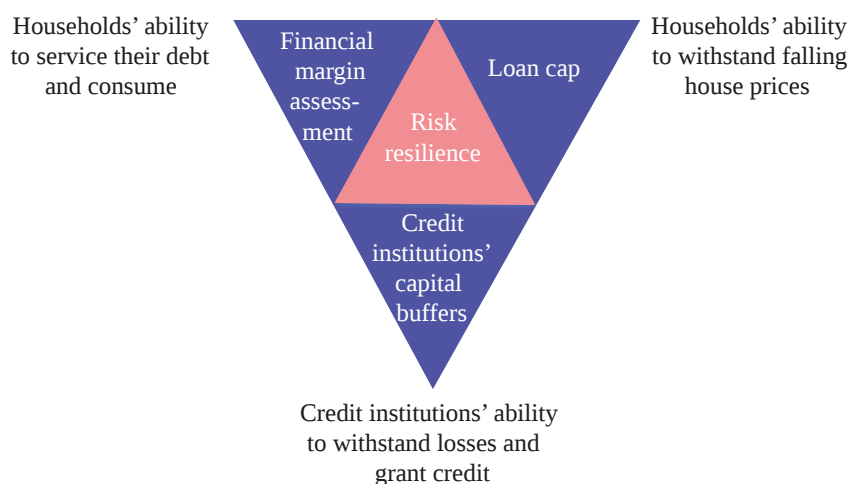
With the range of financial services becoming more versatile and increasingly digital, it is possible that non-bank funding and the share of loans other than mortgages in total household debt could increase further. To mitigate the risks associated with total indebtedness, the new macroprudential tools should cover all lenders and loans.

Debt-to-income cap would reduce the risk of financial crises

The capacity of the economy and the financial system to withstand risks posed by household debt accumulation rests on several safeguarding factors. These include the borrowers' sufficient repayment capacity, reasonable loan amounts relative to collateral and down payment and the lenders' capacity to withstand even high losses (Chart 7). The authorities should be allowed to strengthen each of these factors with macroprudential tools, as necessary.

Chart 7.

Many factors behind the financial system's ability to withstand housing market risks



Source: Bank of Finland.

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Most major financial crises have been preceded by credit booms, subsequent asset price bubbles and excessive risk-taking. A cap on the loan-to-collateral ratio (LTC cap) applicable to housing loans cannot adequately mitigate overheating on the housing market or growth in households' total debt levels when excessive credit growth and rising house prices fuel each other during economic upturns. Higher house prices also boost the value of housing collateral, which weakens the impact of the LTC cap. In addition, the LTC cap calculation does not take into account all debts of a household, nor does it restrict debt accumulation relative to the borrower's repayment capacity.

To curb excessive growth in credit and total household debt, the maximum amount of loans per household should be restricted in Finland, for example by means of a cap on the debt-to-income ratio (DTI cap). Each lender should limit the maximum amount of credit granted to a household in a way that the ratio of total debt and participations in debts (incl. housing company loans) to the annual income of a household would not exceed a specific upper limit. Hence, the DTI cap would cover all loans and lenders.

A DTI cap would strengthen and maintain the household sector's debt-servicing capacity and capacity to consume during economic downturns and thereby improve the economy's ability to recover from crises. It would also dampen the occasional adverse feedback loop between house prices and credit, as household income, which impacts the maximum size of a loan, does not grow in tandem with house prices. The imposition of a DTI cap would help to ensure that the household sector's total debt level or its rate of growth would not jeopardise the stability of the financial system.

Households diverge significantly in terms of income, wealth and debt-servicing capacity. For example, for about 16% of households with a new housing loan, the level of total debt

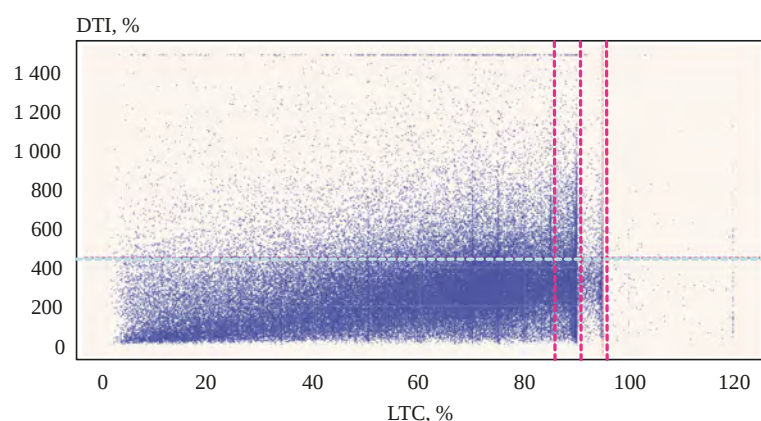
is over 4.5 times^[11] their gross income (Chart 8) (see also ‘[Capping debt-to-income ratios complementary to housing loan cap](#)’).

Single indicators do not necessarily give a full picture of a borrower’s debt-servicing capacity. For this reason, lenders should be granted a limited possibility to exceed the DTI cap for some borrowers. For example, a certain proportion of the number or euro-volume of new loans granted within a quarter could be allowed to exceed the DTI cap. The LTC cap, the DTI cap and the permitted deviations would also in future enable the supply of credit under a variety of circumstances. In some cases, these requirements would reduce the amount of loan granted.

Chart 8.

A debt-to-income cap would complement the loan-to-collateral cap

1. --- LTC cap of 85%, housing loans other than first-home loans (from 2018/III)
2. --- LTC cap of 90%, housing loans other than first-home loans (until 2018/II)
3. --- LTC cap of 95%, first-home loans
4. --- DTI cap in some countries



The blue dots present LTC and DTI ratios of households that have been granted a new housing loan between June 2017 and March 2018, at the loan approval date.

Sources: Financial Supervisory Authority and calculations by the Bank of Finland.

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EU Banking Package facilitates use of macroprudential instruments

Macroprudential instruments and the possibilities for their use differ across countries. Regulation on the macroprudential tools targeted at housing loans and other macroprudential instruments addressing the terms and conditions of credit is in the EU based on national regulation. In contrast, the use of additional capital requirements, the purpose of which is to strengthen the resilience of individual credit institutions or

11. A DTI cap of 4.5 is in use in the United Kingdom, for example.

national credit institution sectors, is based on common rules.

The current EU Capital Requirements Directive and Regulation lay down a fairly tight framework for national authorities on the use of additional capital requirements for systemically important credit institutions, systemic risk buffers and risk-weight floors for housing loans. Revisions to the Directive and Regulation are planned to enter into force in early summer 2019. These will provide more national room for manoeuvre in the use of the instruments after the transition period. For example, the reform package will make EU-level authorisation and notification procedures less burdensome and provide authorities the possibility to direct capital requirements more specifically at exposures that cause significant systemic risks.

Development of the macroprudential toolkit is part of a comprehensive set of reforms of EU financial regulation, i.e. the Banking Package. For example, the Banking Package implements the post-crisis regulatory reforms of the banking and financial sector agreed on a global level.

The Banking Package introduces a minimum leverage ratio requirement of 3% for credit institutions, i.e. the ratio between own funds and non-risk-weighted assets. The purpose of the Net Stable Funding Ratio (NSFR) requirement which regulates the minimum amount of credit institutions' long-term funding is to reduce the risks of an abrupt drying-up of credit institutions' own funding in a crisis situation. Moreover, the purpose of the amendments to resolution legislation is to ensure banks' lending capacity and the funding of resolution. The largest credit institutions in the EU must hold on their balance sheets a globally harmonised amount of own funds or eligible liabilities that can be converted into own funds in a crisis situation to absorb losses.

Euro area financial architecture must be reinforced by the Banking Union's common Deposit Insurance Scheme

The resilience of the euro area financial system has been improved significantly in recent years, but the conditions for economic growth and the financial architecture in the euro area need to be further reinforced to prevent crises and mitigate their effects.

Banks' exposures to national sovereigns should be reduced further, so that a sovereign debt crisis or a steep decline in the prices of government bonds would not weaken banks' ability to supply credit and capacity to absorb losses. More determined action in dismantling the barriers to the integration of capital markets would, in turn, promote economic growth and cross-border diversification of risks. To achieve these objectives, the EU's Capital Markets Union initiatives must be accelerated.

Completing the Banking Union with a common Deposit Insurance Scheme would reduce the risk of deposit runs and support the integration of euro area banking markets. Common deposit insurance would promote equal competition between banks and boost the entailing economic benefits.

The transfer of Nordea's domicile from Sweden to Finland in October 2018 harmonised

the supervision of the largest banking groups operating in Finland, as Nordea moved under the scope of single banking supervision in the Banking Union. As a result of the change of domicile, responsibility for Nordea's resolution planning and execution was transferred to the Banking Union's Single Resolution Board, while responsibility for Nordea's deposit guarantee was transferred to the Finnish deposit guarantee scheme.^[12] Consequently, the amount of covered deposits within the Finnish deposit guarantee scheme grew from approximately EUR 50 billion to slightly under EUR 130 billion.

Banking sector profitability good in the Nordic countries, elsewhere in Europe mixed

As a result of Nordea's re-domiciliation, the size of the Finnish credit institution sector grew and many key financial ratios changed significantly in late 2018. The credit institution sector's assets (incl. foreign subsidiaries) totalled approximately EUR 778 billion at the end of 2018, compared with some EUR 280 billion a year earlier.^[13]

The comparable operating profit of the Finnish credit institution sector was in 2018 slightly weaker than a year earlier. Net interest income improved and was the largest income item, whereas other income declined and expenses increased. Net impairment losses remained low. Return on equity was in 2018 approximately 8.5%, i.e. higher than the average for banks in the EU (Chart 9).^[14]

The capital ratios of the Finnish credit institution sector weakened considerably in late 2018, as expected.^[15] The total capital ratio declined to 20.9% and the Common Equity Tier 1 (CET1) capital ratio to 17.2%. The indicator of non-risk based capital adequacy, i.e. the leverage ratio, fell to 5.8%. The sector's resilience however remained strong, and capital and leverage ratios at the end of 2018 were higher than the average for EU banks.

Chart 9.

12. See press release by the Financial Stability Authority (https://rvv.fi/en/announcement/-/asset_publisher/nordean-kotipaikan-siirtyminen-muutti-kriisinratkaisua-ja-talletussuojaa-koskevia-viranomaisvastuita).

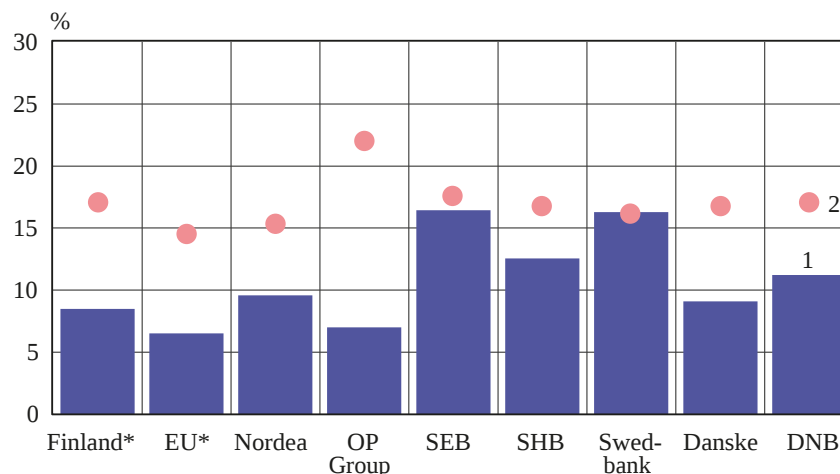
13. See <https://www.finanssivalvonta.fi/en/statistics/banks/key-financial-figures/>.

14. Based on equity at the end of 2018. For a more detailed analysis, see https://www.finanssivalvonta.fi/globalassets/fi/markkinoiden-vakaus/valтари_311218/pankkisektorin_valtari_q4_2018.pdf (in Finnish only).

15. An examination of comparable figures shows that capital adequacy remained virtually unchanged. For a more detailed analysis, see https://www.finanssivalvonta.fi/globalassets/fi/markkinoiden-vakaus/valтари_311218/pankkisektorin_valtari_q4_2018.pdf (in Finnish only).

Large Nordic credit institutions profitable and solid

1. ■ Return on equity (ROE) in 2018
2. ● CET1 capital ratio at the end of 2018



* Weighted average of financial ratios for credit institutions operating in Finland/the EU.

Sources: Financial Supervisory Authority, EBA and SNL.

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The profitability and capital adequacy of Nordic banks have remained mainly good, which has maintained the resilience of the Nordic banking system. A strong risk-bearing capacity is necessary because of the structural vulnerability of the Nordic banking sector, reflecting its large size and high degree of concentration. The largest banks operate in several countries, which increases the interconnectedness of the financial system and risks of contagion.^[16]

Large Nordic banks are dependent on market-based funding, which exposes them to changes in risk sentiment on the global financial markets. Nordic banks have long enjoyed investor confidence and obtained market-based funding at favourable rates. Covered bonds, in particular, play a major role as sources of long-term funding and liquid investment for banks.

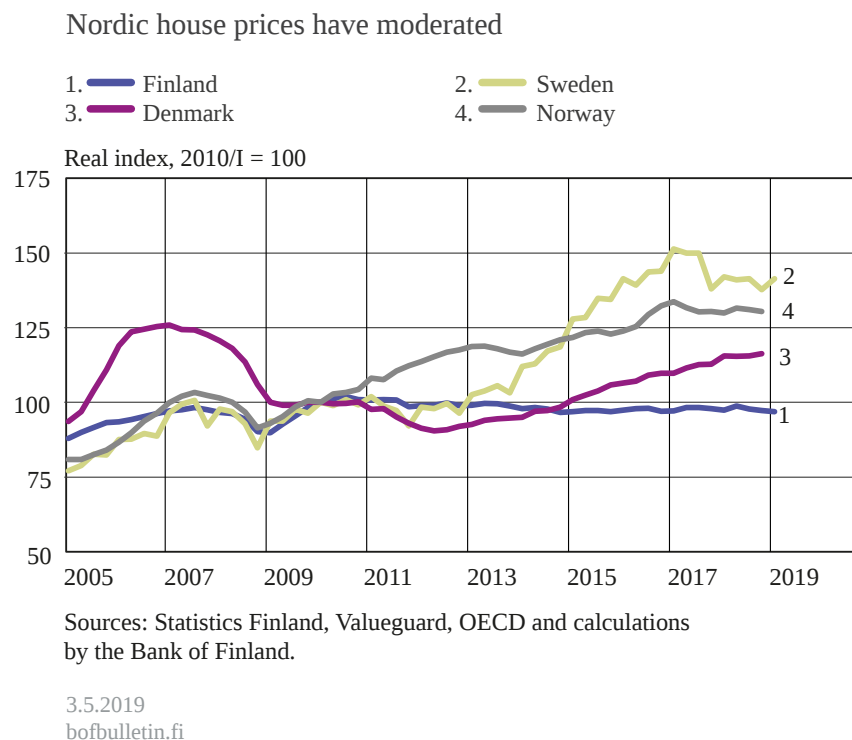
Suspected money laundering activity has recently eroded investor confidence in Nordic banks. Following the disclosure of suspected money laundering, share prices declined in the case of the banks that were subject to the most serious suspicions. In addition, hedging against credit risk became more expensive for Nordic banks during the autumn of 2018.

High household indebtedness and the major role of housing loans in the financial system

16. See also <https://www.bofbulletin.fi/en/2018/articles/risks-on-the-swedish-housing-market-also-a-cause-for-concern-in-other-nordic-countries/>.

increase the structural vulnerabilities of the financial system. Overheating of the Swedish and Norwegian housing markets following the global financial crisis also increased cyclical vulnerabilities as lending for house purchase grew rapidly and house prices rose at an alarming pace. In the past year, house prices have moderated, but prices remain historically high, particularly in Sweden and Norway (Chart 10).

Chart 10.



Due to the interconnectedness between Nordic banks, similar risks related to liquidity and funding and large exposures to real estate markets, risks in the financial system may materialise simultaneously in the Nordic countries. Disruptions may intensify and spread rapidly across countries, also via the real economy as a result of multilateral and global trade. A large-scale materialisation of potential threats would increase losses from lending and investment activities and raise the cost of funding.

Nordic and Baltic financial stability authorities conducted in January 2019 a joint banking crisis simulation exercise concerning large cross-border banking groups. The exercise involved 31 national or competent authorities from European countries. The exercise followed a hypothetical crisis scenario involving fictitious financial institutions in eight countries. The exercise tested the cooperation and crisis management capabilities of central banks, financial supervisors, ministries of finance and resolution authorities. The crisis simulation generated a valuable outcome, on the basis of which the participants will develop cooperation and crisis management preparedness.

In other European countries, banking sector profitability has improved slightly but remains weak on average, and the differences across countries are large. The low level of interest rates has eroded net interest income, and some banks still have a large volume of

legacy non-performing loans that have accumulated in a few countries. In the coming years, there will be pressure on banks to invest in a revamp of their IT systems. Digitalisation may bring about transformational changes to the competition between banks and may open the financial industry to greater competition from new actors (see [‘The impact of digitalisation on bank profitability’](#)).

In an increasingly digital society, the financial system must be able to provide critical payment services for everyone. The availability of these services must be ensured also during serious disruptions. Reliable and secure payment and settlement systems are essential for ensuring financial stability and the functioning of society. Safeguarding service continuity requires smooth cooperation between authorities and the industry as well as determined action. As the payments landscape is undergoing major changes, we must also devote attention to the availability of cash services and the possibilities to use cash. Even though citizens’ right to withdraw and deposit cash is protected by law, more detailed criteria are needed to assess the availability of services.

Tags

[banking sector](#), [banking union](#), [financial stability](#), [households](#), [housing markets](#), [indebtedness](#), [macroprudential instruments](#)

The highly indebted cut spending as the economy slows

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



Hanna Putkuri
Senior Economist

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.^[1] Hence it also increases the risks to financial

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.

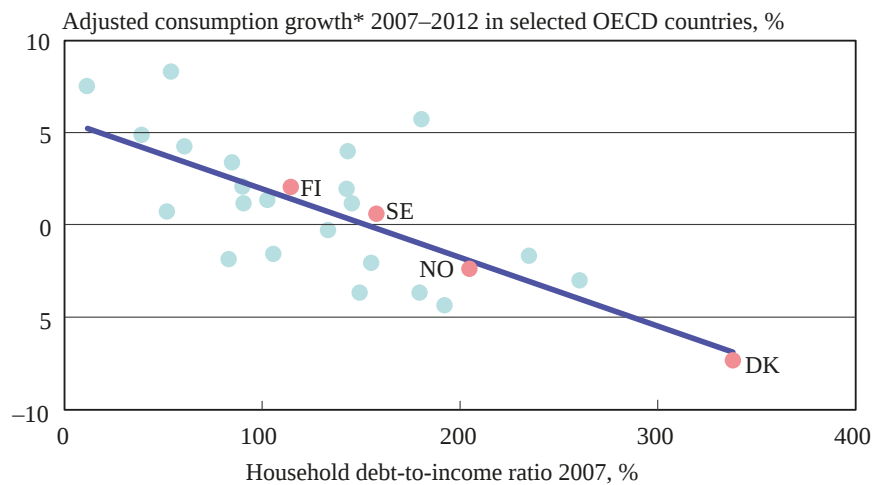
In countries with high levels of average household debt prior to the crisis, economic growth was weaker than elsewhere following the onset of the crisis. In the downturn, households began to cut their spending to service their debts and save for an even rainier day. Private consumption contracted or grew at a slower pace, particularly in countries with a higher household debt-to-income ratio.^[2] 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.

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).

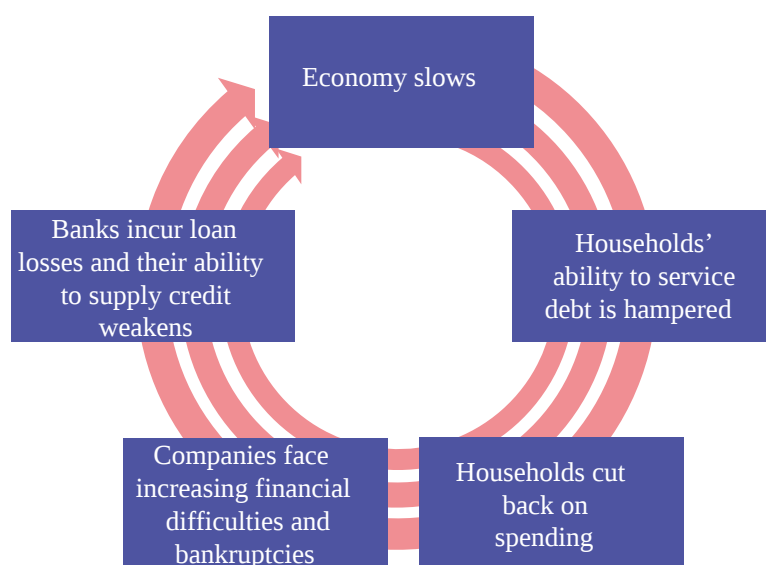
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In Denmark, households started to reduce their debt levels following the crisis, whereas in the other Nordic countries households continued to accumulate debt. Sweden and Norway recovered fairly rapidly from the 2009 recession, and their housing markets 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.^[3]

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

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.^[4] 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.^[5]

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.^[6]

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.^[7]

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.^[8]

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.

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.

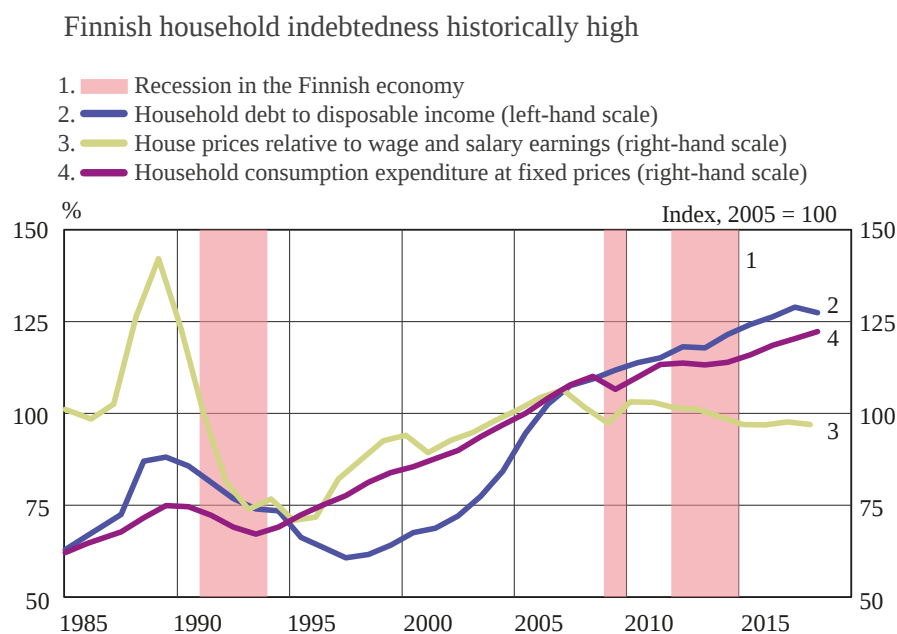
6. Andersen, A. L. – Duus, C. – Jensen, T. L. (2016) 'Household debt and spending during the financial crisis: Evidence from Danish micro data', *European Economic Review*, Volume 89, pp. 96–115.

7. Adrian, A. – Feng, A. X. – Valckx, 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.^[9] 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.^[10] 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.

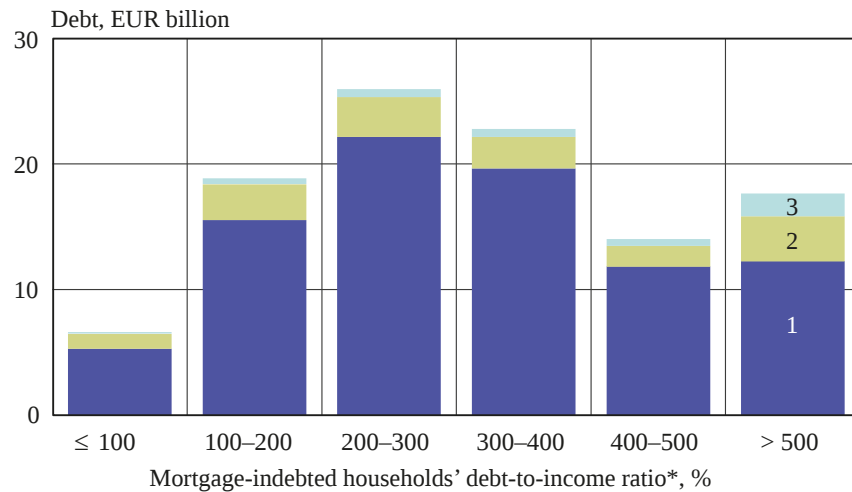
10. These loans constitute some 88% of the total household debt included in the indebtedness statistics.

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.^[11] 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.

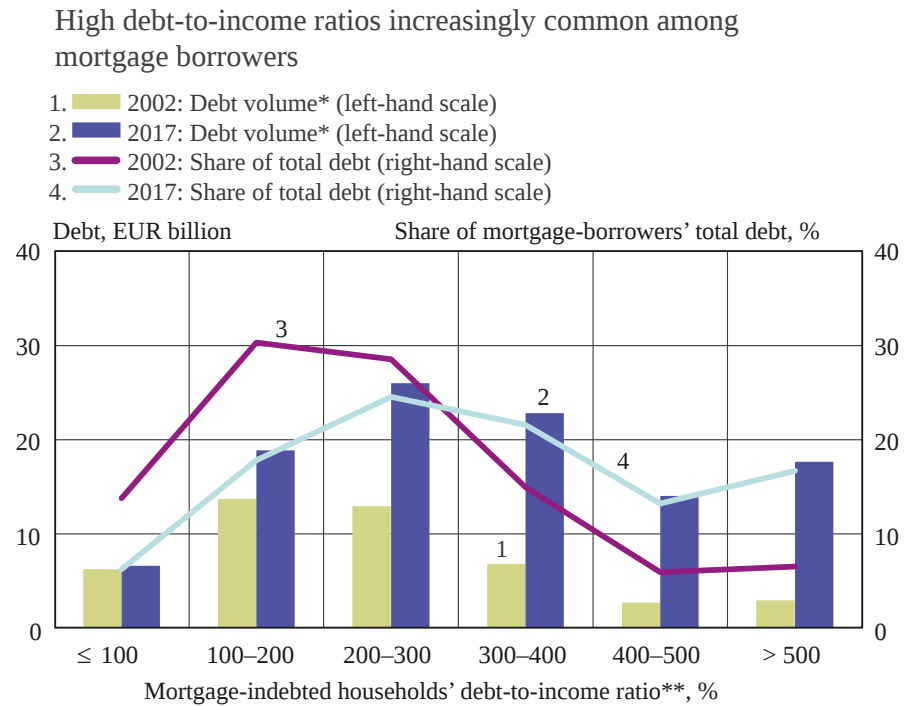
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High indebtedness relative to income has become more common in the new millennium, particularly as a result of larger housing loans and longer maturities. The biggest change was witnessed in the first decade of the new millennium, when the typical 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.



*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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Capping debt-to-income ratios complementary to housing loan cap

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Ville Voutilainen
Economist

Finnish household debt relative to income has grown significantly since the turn of the millennium. In future, excessive borrowing could be stemmed by, for example, restricting the amount of credit available to households relative to their levels of income. Capping debt-to-income ratios would rein in dangerous credit growth especially in situations where collateral assets appreciate quickly and debt burdens risk growing at a much faster pace than incomes. For this reason, the new instrument would be particularly well placed to complement the existing cap on housing loans.



Proportion of new mortgage-borrowers highly indebted relative to income

The average debt burden of a Finnish household with a recently issued housing loan^[1] has been about three times as large as their gross annual income (Chart 1).^[2] However, a

1. This article examines households with housing loans issued between April 2017 and March 2018. The calculations are based on loan-level data submitted by credit institutions to the Finnish Financial Supervisory Authority. In the charts, the housing loan distributions are weighted by the size of the loan.

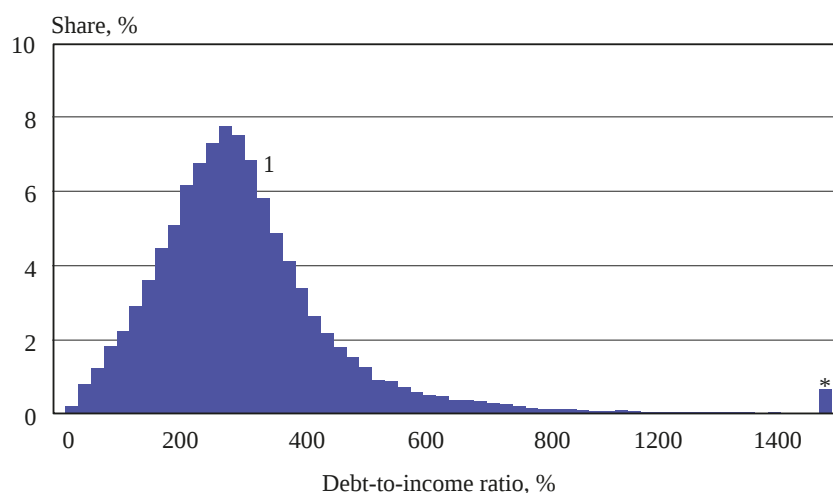
significant proportion of new mortgage-borrowers have taken out even larger loans, with about 16% having had debt worth more than four-and-a-half times their income. This group of highly indebted households possess a large share of total debt amongst new mortgage-borrowers, about 29%.

One of the aims of macroprudential policy is to prevent the excessive build-up of household debt and to mitigate its risks. In the research literature, there is robust evidence which suggests that rapid credit growth, subsequently rising asset prices and excessive risk-taking during economic upswings can exacerbate recessions and lead to financial crises (see [‘The highly-indebted cut spending as the economy slows’](#)).

Chart 1.

New mortgage-borrowers’ debt burden on average three times their income

1. ■ Current debt-to-income ratio



* Right-tail outliers are grouped to 1 500.

Sources: FIN-FSA and calculations by the Bank of Finland.

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Capping debt-to-income ratios would have a limited impact under current conditions

One type of macroprudential instrument available to authorities in some European countries is a cap on debt-to-income (DTI) ratios, which limits the amount a household can borrow relative to its income. In the following sections, alternative examples are presented where households’ debt-to-income ratios are capped at 450% relative to gross annual income. All household debt is subject to the cap, irrespective of loan type. In addition, the scenarios allow for a maximum of 15% of all new lending to exceed the debt-to-income cap each year, at the discretion of the lender.

2. The distribution of debt-to-income ratios, weighted by housing loan size, has a median of 324% (Chart 1).

The debt-to-income cap's impact on household indebtedness can be evaluated by looking at alternative growth paths for the economy and the distribution of debt. Each scenario is based on particular assumptions concerning new mortgage-borrowers' debt and income growth over a three year period, as well as assumptions concerning the actions taken by lenders and borrowers at the time of lending. The calculations assume, for example, that households will scale back the size of their desired housing loan by 10%, should they otherwise exceed the 450% debt-to-income cap. Furthermore, it is assumed that lenders will make full use of their prerogative to exceed the loan cap in the case of certain loan applicants.^[3]

The baseline scenario assumes that new mortgage-borrowers' gross annual incomes will grow at the rate projected in the Bank of Finland's December 2018 forecast, and that their debts will grow at a pace slightly faster than this.^[4] Accordingly, the baseline scenario demonstrates decidedly moderate growth in debt levels even without the debt-to-income cap, nor does the distribution of debt across debt-to-income ratios markedly differ from present levels in three years' time (red bars in Chart 2).

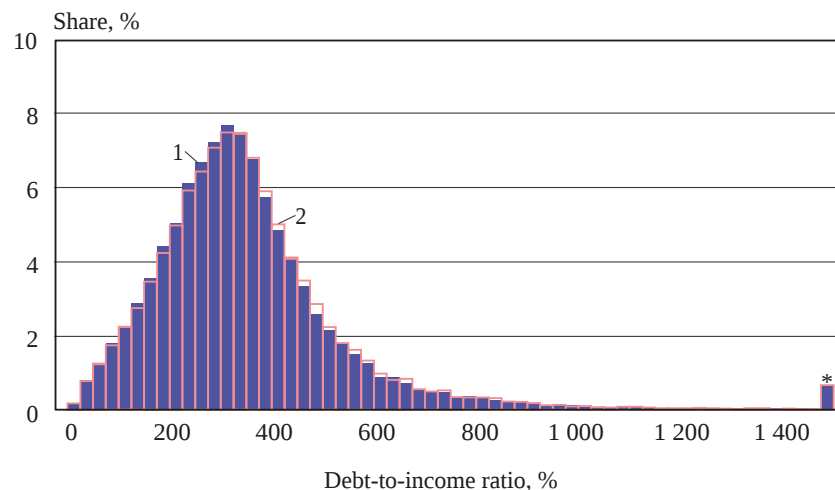
Chart 2.

3. More precisely, the impact assessment is based on the following assumptions: 1) the debt-to-income cap can be exceeded by 15% relative to the total value of housing loans (i.e. permitted overdraft). 2) If the volume of housing loans sought by households breaching the debt-to-income cap exceeds the permitted overdraft, all of the households breaching the debt-to-income cap will reduce their desired loan amounts by 10%. 3) If the 10% reduction fails to bring the total value of these desired loan amounts within the permitted overdraft, credit institutions will reject applications from this pool through random selection until the permitted overdraft is met. The uncertainty introduced by the random selection process is small.

4. In the baseline scenario, aggregate household debt grows at an average annual rate of about 3.7%, while gross household incomes grow at an average pace of about 3.2%.

Change in debt-to-income ratios only moderate in baseline scenario without restrictions

1. ■ Current debt-to-income ratio
2. □ Baseline scenario's debt-to-income ratio



* Right-tail outliers are grouped to 1500.

Sources: FIN-FSA and calculations by the Bank of Finland.

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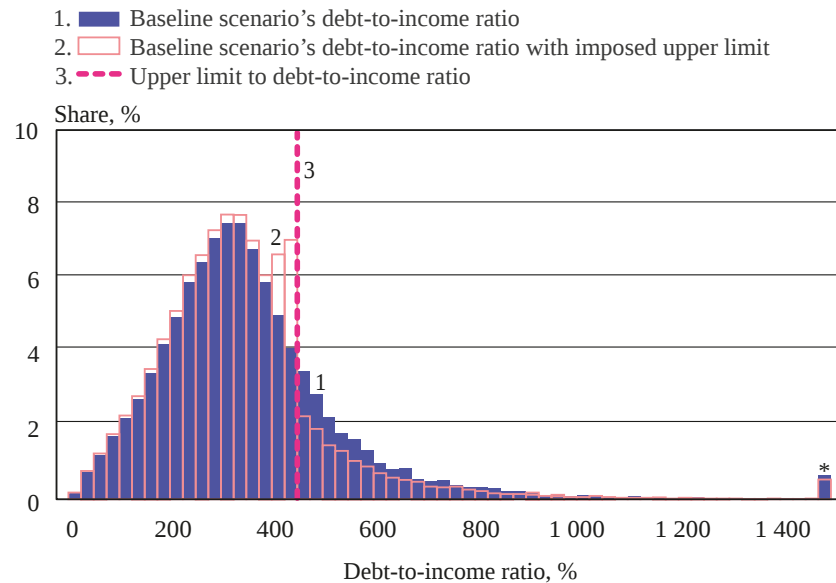
Introducing the debt-to-income cap to the baseline scenario would only have a small effect on the indebtedness of new mortgage-borrowers (Chart 3).^[5] When the debt-to-income cap is put into place and the households breaching the loan cap reduce their desired loan amounts by 10%, a proportion of them will meet the new requirements and automatically receive a loan. In addition, a share of the households breaching the debt-to-income cap will receive a loan when the lender accepts them into the 15% permitted overdraft.^[6] Overall, the debt-to-income cap would only reduce the volume of approved housing loans by 3% as compared with no new restrictions.

Chart 3.

5. The blue bars in Chart 3 are the same as the red bars in Chart 2.

6. Otherwise the household will be left without a new loan.

Debt-to-income cap of limited effect in baseline scenario



* Right-tail outliers are grouped to 1 500.

Sources: FIN-FSA and calculations by the Bank of Finland.

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The debt-to-income cap and the existing cap on housing loans can also be examined in terms of their impact on a single representative household, the Jones family. The Joneses wish to purchase their first home, worth EUR 250,000, under lending conditions similar to those currently present. The family's gross annual income is EUR 55,000. Their outstanding liabilities comprise unsecured consumer credit and amount to EUR 17,500.

If the maximum loan-to-value ratio for housing loans (i.e. housing loan cap) is set at 95% and the property in question is the only asset the Joneses have to put up as collateral, they could, at the very most, receive a housing loan worth EUR 237,500. We can assume that the Joneses will make up the difference by dipping into their personal savings.

After the house purchase, the Joneses will have EUR 255,000 in liabilities—EUR 237,500 in housing debt and EUR 17,500 in consumer credit—with a debt-to-income ratio of about 464%. If the debt-to-income cap were fixed at 450%, the Joneses would have to fund a larger share of their house purchase with personal savings and/or opt for a cheaper property. If the Joneses reduced the size of their housing loan by 5% for example, their debt-to-income ratio will come in below 450%.^[7]

7. For simplicity's sake, the loan amount is always reduced by 10% in the preceding calculations. However, the necessary adjustment will ultimately depend on the household and may be smaller, as, for example, in the case of the Joneses. Hence the calculations may overestimate the volume of housing credit that would not be issued.

Capping debt-to-income ratios would rein in dangerous credit growth

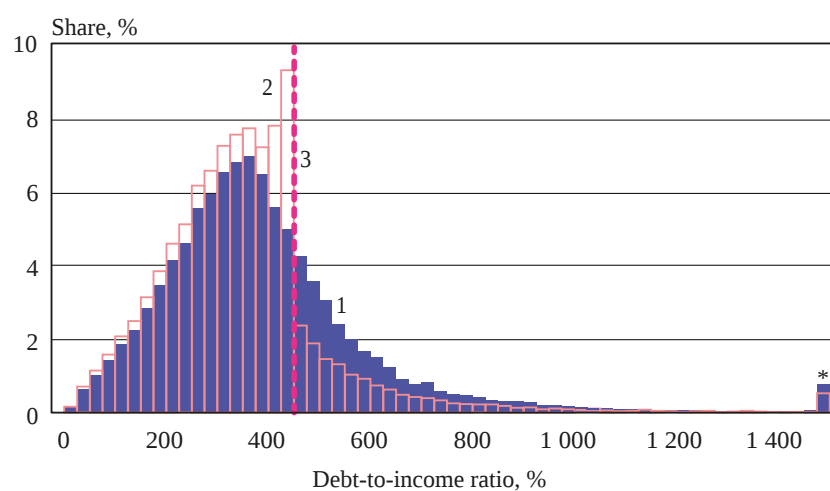
The benefits of a cap on debt-to-income ratios are highlighted when lending threatens to grow significantly faster than incomes. To illustrate this, a three-year scenario is depicted in Chart 4, where the economy follows the Bank of Finland's basic forecast but with household debt growing at a pace almost twice as fast as in the previous section's baseline scenario.^[8]

In this scenario of rapid credit growth, household debt increases sharply and the distribution of debt-to-income ratios shifts noticeably rightward compared with the baseline scenario. More households risk breaching the debt-to-income cap with their desired loan amounts, resulting in more households having to adjust their desired loans. Furthermore, even after reducing their desired amounts by 10%, a larger share of households will still be left without the full value of the loan they applied for, compared with the baseline scenario. As a result, the debt-to-income cap substantially reduces the number of loans that are approved when credit growth is high: the quantity of approved housing loans is about 10% smaller with the debt-to-income cap in place than without it.

Chart 4.

More bite in debt-to-income cap when lending growth is high

1. ■ Alternative scenario's debt-to-income ration
2. □ Alternative scenario's debt-to-income level with imposed upper limit
3. - - - Upper limit for the debt-to-income ratio



Right-tail outliers are grouped to 1 500.

Sources: FIN-FSA and calculations by the Bank of Finland.

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As for the Joneses—a sharp rise in their rate of borrowing would, in effect, be equivalent

8. 3 percentage points is added to the baseline scenario's annual growth rate for household debt, resulting in an annual growth rate of about 6.7%.

to the family seeking a significantly larger loan compared with the baseline scenario but at the same level of income. To illustrate this, let the Joneses apply for a EUR 259,000 mortgage. Their debt-to-income ratio is now about 505%. To meet the 450% cap, the Joneses would have to reduce their desired loan amount by 12%. However, the Joneses might still receive their original loan amount, without reductions, within the regulatory exemptions permitted to lenders. If the issuing bank deems the Joneses solvent and credit-worthy based on other metrics, it may issue the loan as long as it meets the standards of the bank's own risk management framework.^[9] However, if the Joneses' desired loan amount breaches the debt-to-income cap and the issuing bank does not wish to include the loan within its permitted overdraft, the loan application will be rejected at its original value.

Based on the preceding examples, a debt-to-income cap would restrain the number of households with excessive levels of debt relative to income and mitigate the risk of disruption to financial stability. Capping debt-to-income ratios is particularly effective in reining in dangerous credit growth when house prices grow faster than household incomes. For this reason, the debt-to-income cap is well placed to complement the loan-to-value cap on housing loans, which restricts the maximum loan amount relative to the collateral value of the house to be purchased as well as other eligible assets.

Tags

[financial stability](#), [households](#), [macroprudential instruments](#), [mortgage borrowers](#), [borrowing](#)

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9. There are grounds for allowing for a margin for credit approval, as a single indicator cannot realistically reflect all the factors that should motivate a credit decision.

New methods needed to rein in consumer credit

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



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Consumer credit to households keeps increasing, and roughly one in four Finns held consumer credit in 2019 (Finance Finland). At the end of 2018, households' stock of consumer credit was estimated to amount to EUR 21.7 billion, and the stock has grown by EUR 3.5 billion in the past two years. Overall, consumer credit accounts for 14% of the total loan debt of Finnish households. Debt problems caused by consumer credit are increasing, while high-interest consumer credit is being aggressively advertised.



Record growth in unsecured consumer credit granted by credit institutions

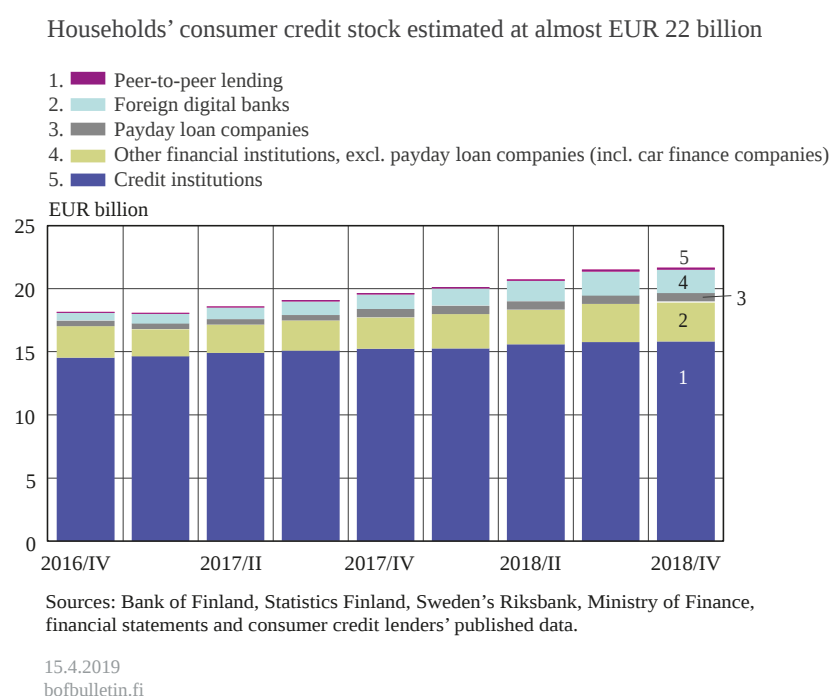
The stock of consumer credit granted by credit institutions has increased rapidly in recent years. Especially unsecured consumer credit other than overdrafts and credit card credit has grown at a record rate. The Bank of Finland estimates that one of the key factors in the growth of unsecured consumer credit by credit institutions is the good performance of car sales in recent years.^[1] A relevant benchmark could be vehicle

1. In the Bank of Finland's MFI statistics, unsecured consumer credit also includes consumer credit where, for example, a vehicle is used as collateral. Only collateral accepted in the Regulation of the European Parliament and the Council on prudential requirements for credit institutions and investment firms are accepted as collateral.

financers outside the credit institution sector,^[2] whose loan receivables increased by more than 20% in 2017.

Despite strong growth in unsecured consumer credit granted by credit institutions, the overall credit losses recorded on consumer credit have remained moderate. However, credit institutions' business models vary, and the differences are clearly reflected in the interest rates and credit losses on unsecured consumer credit. Some credit institutions provide mainly high-interest unsecured consumer credit. The annual growth rate of the stock of consumer credit^[3] granted by such credit institutions was over 50% in March 2019, with an annual interest rate above 15%. In this category of credit institutions, credit losses relative to the size of the loan stock are also several times higher than those of commercial banks. According to the Bank of Finland's MFI statistics, it appears that these credit institutions attract more customers with lower solvency than, for example, commercial bank customers.

Chart 1.



Growing share of consumer credit granted outside credit institution sector or from abroad

A growing share of consumer credit in Finland is granted by other than Finnish credit institutions. These companies^[4] have increased their share up to around 27% in just a

Such include, among other things, residential or commercial property.

2. This includes companies mainly providing car finance registered with the Southern Finland Regional State Administrative Agency.

3. Excluding overdrafts and credit card credit.

4. In addition to credit institutions, consumer credit is also provided by companies specialising in car financing,

few years. The change indicates the growing importance of new companies on the consumer credit market. Foreign digital banks^[5] and payday loan companies actively using digital distribution channels have increased their market share particularly rapidly. Peer-to-peer lending has also grown strongly, even though it still constitutes only a very small share of the total credit stock.

In recent years, especially Norwegian and Swedish digital banks have begun offering consumer credit to Finnish households. In the last two years, their loan stock to Finnish households has increased by more than 200%, totalling at EUR 2 billion at the end of 2018. These digital banks mainly provide unsecured consumer credit with high interest rates. However, in the last quarter of 2018, the stock of said consumer credits increased only slightly, as the digital banks cleaned their balance sheets by selling much of the non-performing loan stock to debt collection companies. Further inspection of the business model of some of these companies reveals an abundance of bad loans, which the companies sell to debt collection agencies, for example.

Payday loans are a profitable business

According to calculations by the Bank of Finland, at the end of 2017 households held EUR 660 million in consumer credits granted by payday loan companies. [Loan receivables held by payday loan companies](#) increased by more than 50% in 2017. Payday loan companies are also profitable, as the average profit of a payday loan company registered with the Southern Finland Regional State Administrative Agency in 2017 was EUR 3.5 million, with a profit margin of 35%. [Peer-to-peer lending through crowdfunding platforms has also increased](#). In 2018, the volume of peer-to-peer lending was EUR 150 million, with an increase of 40 % on the previous year.

Consumer credit may push households into financial difficulties

The introduction of new companies and operating models in the consumer credit market has increased the supply of loans to a wider customer base. It is also possible to grant several loans to a single person. Some consumer credit providers employ aggressive marketing strategies to promote their loans. During 2013–2018, clients with consumer credit applying for guarantee for restructuring loans from the Guarantee Foundation^[6] held an average of 17 loans. The majority of applicants for a loan guarantee from the Guarantee Foundation are in employment and live in rented accommodation. Debt problems among the retired are also reflected in the number of applications to the Guarantee Foundation.

In an interview survey conducted by Finance Finland,^[7] above average use of payday loans was found among 18–24-year-olds and 45–64-year-olds. According to the survey,

payday loan providers, peer-to-peer lenders and foreign digital banks.

5. In this connection, foreign digital banks refers to Norwegian and Swedish credit institutions providing consumer credit across the border, without maintaining branches in Finland.

6. See <https://www.takuusaatio.fi/en/guarantee-foundation/about-foundation/guarantee-operations>.

7. See http://www.finanssiala.fi/materiaalit/SLM%202019_Tutkimusraportti.pdf.

payday loan borrowers were also above average in their use of other consumer credit. According to Statistics Finland's wealth survey, more than 90% of debt among households with the least net wealth consists of other than housing debt. Other debt includes consumer credit.^{[8],[9]}

According to [Suomen Asiakastieto](#) (which provides information on customers' creditworthiness), 385,000 people had a payment default entry on their credit report at the end of March 2019, the highest number ever recorded. Payment default statistics show that consumer credit is a common cause for a payment default entry. According to a study on payment default among young adults,^[10] unemployment contributes to payment default entries. Half of the unemployed young adults who responded to the survey had a payment default entry. The study also analysed the causality between level of education and payment default entries. Among survey respondents, those with only basic level education had the most payment default entries. According to the study, persons with payment default entries had a low income consisting of income support, housing allowance or student financial aid. Academic studies also show a correlation between the negative impacts of poverty on rational decision-making and prolonged poverty.^[11]

In 2018, 519,000 people were subjected to debt collection procedures, 3.5% more than in 2017.^[12] According to a study on debt-related court rulings,^[13] a court ruling is often rooted in consumer credit. The sums involved in consumer credit-related court rulings increased significantly during 2013–2016. In 2014–2016, banks were the original creditors in 3.4% of all debt-related court rulings, while other credit companies, such as payday loan companies, were the original creditors in 35.8% of all rulings.

More tools required for prevention of debt problems

Debtors with serious debt problems may be granted debt adjustment by a district court. The number of applicants for debt adjustment is relatively small compared to the number of payment default entries,^[14] but increasing nonetheless. In 2018, debt adjustment applications by private persons increased by 7.6% on the previous year.

8. Other debt also includes, for example, student loans.

9. See https://www.stat.fi/til/vtutk/2016/vtutk_2016_2018-06-05_kat_005_fi.html.

10. Minna Alhonen: Nuorten aikuisten maksuhäiriömerkintä: syyt ja seuraukset. ('Payment default among young adults: causes and consequences') Available at: <https://www.theseus.fi/handle/10024/146192>.

11. See e.g. Haushofer – Fehr (2014): On the psychology of poverty, *Science*, 344, 6186, 862–867 and Adamkovic – Martoncik (2017): A review of Consequences of Poverty on Economic Decision-Making: A Hypothesized Model of a Cognitive Mechanism, *Frontiers in Psychology*, 8, 1784.

12. See <https://findikaattori.fi/en/35>.

13. Karoliina Majamaa – Laura Sarasoja – Kati Rantala: Viime vuosien muutokset vakavissa velkaongelmissa. Analyysi velkomustuomioista ('Recent changes in serious debt problems. An analysis of debt-related court sentences'), available at: http://www.julkari.fi/bitstream/handle/10024/135270/YP1706_Majamaaym.pdf?sequence=3&isAllowed=y.

14. Debt adjustment is not granted lightly, as the [Act on the Adjustment of the Debts of Private Individuals](#) lists several impediments to debt adjustment. Statistics by [Statistics Finland](#) show that during 2018, Finnish district courts received a total of 4,533 applications for debt adjustment by private individuals.

The Guarantee Foundation may guarantee debtors a restructuring loan, provided that the total debt does not exceed EUR 34,000. Due to the increasing size of debts, the Guarantee Foundation is able to assist a decreasing number of debtors.^[15] Some municipalities also grant social loans. The purpose of social lending is to help prevent economic exclusion and over-indebtedness. According to 2016 statistics by the National Institute for Health and Welfare (THL), social loans were most commonly granted to cover consumer credit and debt enforcement debt.^[16]

In 2013, Finland sought to curb payday lending by introducing an interest rate cap for loans under EUR 2,000. However, companies started circumventing the interest cap by offering larger loans and limits. In order to curb the growth of consumer credit lending, the Ministry of Justice began in April 2018 to prepare a reform of the legislation relating to consumer credit. The main goal of the reform is to reduce debt problems caused by high-interest consumer credit. The interest cap (20%) that will come into force in September 2019 will apply to most consumer credit. The reform will also limit the right to collect other loan-related costs from consumers.

The Ministry of Justice finished an assessment report on a positive credit register in autumn 2018. The report suggested that Finland should establish a centralised database for positive credit information. Authorities should be able to more accurately assess the influence of consumer credit granted outside the credit institution sector on total indebtedness. A credit register that covers all household loans would provide a better picture of overall indebtedness, improve market pricing of risk, and allow better management of personal finances.

In the future, the Bank of Finland's collection of statistics will include data on intermediation of financing outside credit institutions. Credit institutions' finance companies and companies providing consumer credit will come within the scope of the expanded collection of statistical data.

Consideration should be given to how the monitoring and regulation of consumer credit can be developed. Development is also being assessed by a working group appointed by the Ministry of Finance in autumn 2018, with the task to propose new methods for containing household indebtedness.

Tags

consumer credit, credit institutions, households, indebtedness, payment defaults

15. See <https://www.takuusaatio.fi/takuusaatio-neuvonta-ennatysruuhkainen-velallisten-ahdinko-syvenee>.

16. Available at http://www.julkari.fi/bitstream/handle/10024/135278/Tr31_17.pdf?sequence=1&isAllowed=y.

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Corporate credit risk affected by business cycles and industry factors

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



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The Finnish corporate loan stock has grown in recent years. Corporate loans are riskier than household loans, yet the default rates on corporate lending have almost returned to the levels prevailing before the financial crisis. Even the protracted recessionary period did not significantly increase banks' loan losses on corporate lending. The low level of interest rates have supported companies' debt servicing capacity and kept losses in check. Credit losses may pick up again if global cyclical conditions deteriorate, interest rates are raised, or if household indebtedness results in a sharp contraction in private consumption.



In most banking crises, the majority of banks' credit losses are incurred on corporate loans, which was also the case during the Finnish banking crisis of the 1990s. Household credit only accounted for a small proportion of all loan losses during the crisis. When credit losses topped out in 1992, less than 7% of Finnish banks' loan and guarantee losses were from household loans, even though they represented about one-third of banks' loan portfolios. During the same year, 72% of banks' loan losses were incurred on domestic corporate loans, which comprised less than half of all banks' receivables.^[1]

Most household lending is secured with collateral, which significantly reduces the credit risk. Private persons cannot declare bankruptcy and have little recourse for having their debts absolved.^[2] By contrast, companies facing insolvency problems often cease operations, e.g. by declaring bankruptcy. While banks retain the collateral received against secured loans they have issued to bankrupt companies, realising these assets is typically a drawn-out process. Moreover, collateral assets can lose a significant portion of their market value during economic downswings, further fuelling banks' credit losses.

In recent years, banks have only incurred minor losses from corporate lending. The prevailing macroeconomic conditions, and the low levels of interest rates in particular, have helped companies meet their repayment commitments. The future of this positive state of affairs rests entirely on the performance of the economy. Corporate loan losses may begin to swell if the economic environment deteriorates.

This article examines the distribution of the Finnish corporate loan stock across different industries and, in light of experience gained from previous crises, evaluates the risks associated with the structure of the loan stock as well as the magnitude of credit risk faced by its bank creditors.

How much, and to which companies, have banks lent?

The corporate loan stock has grown at a moderate pace in recent years, but still slightly faster than nominal GDP^[3] (Chart 1).

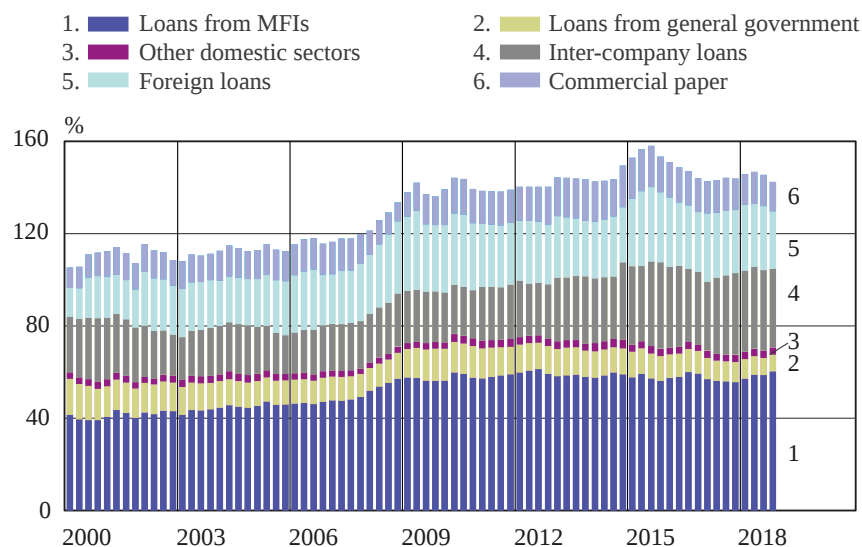
Chart 1.

1. See Pensala and Solttila 1993, 14.

2. The courts can order debt restructuring for private persons, or they can be declared bankrupt in distraint proceedings.

3. According to financial accounts data published by Statistics Finland, companies (excluding housing corporations) had EUR 26 billion in bonds payable and EUR 5 billion in commercial paper payable as of September 2018. Other loans amounted to substantially more, almost EUR 220 billion. Companies' liabilities to domestic credit institutions and other MFIs alone stood at EUR 54 billion. In addition, companies had tens of billions worth of loans issued from abroad as well as by other companies.

The ratio of corporate-sector loan-based liabilities relative to GDP has remained fairly steady for a decade already



Source: Statistics Finland.

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Credit institutions operating in Finland quickly increased their lending to Finnish companies in the early 2000s. At the end of 2008, the stock of these loans reached almost EUR 50 billion, or 26% relative to GDP. The corporate loan stock expanded at a brisk pace after the global financial crisis and stood at EUR 53.4 billion at the end of 2018, or 23% relative to GDP.^[4]

In 2011–2018, companies operating in electricity, gas and heating and in real-estate activities (excluding housing corporations) accounted for most of the growth in the loan stock, incurring liabilities of EUR 3.6 billion and EUR 3.4, respectively (Chart 2).^[5] These two industries accounted for over half of the growth in the corporate loan stock during this period.

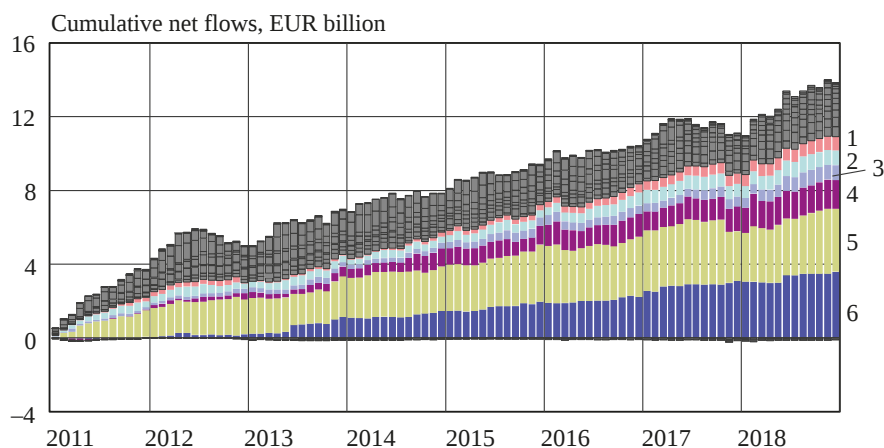
Chart 2.

4. In terms of financial stability, corporate loans issued by domestic banks are likely to be higher risk than, say, lending between companies or foreign debts, which are often intra-group balance sheet items.

5. The chart depicts net flows while taking into account classification changes and loan impairments, so that it depicts the loan stock's 'real growth'.

Energy and real-estate sectors accounted for almost half of all corporate lending growth since 2011

1. Agriculture, forestry and fisheries
2. Construction
3. Professional, scientific and technical activities
4. Financial and insurance activities
5. Real estate activities
6. Electricity, gas, heating and air conditioning activities



The 16 industries with the least change in their loan stocks are depicted in grey. Certain industries have seen their loan stock shrink, which means that their cumulative net flow is negative.

Source: Bank of Finland.

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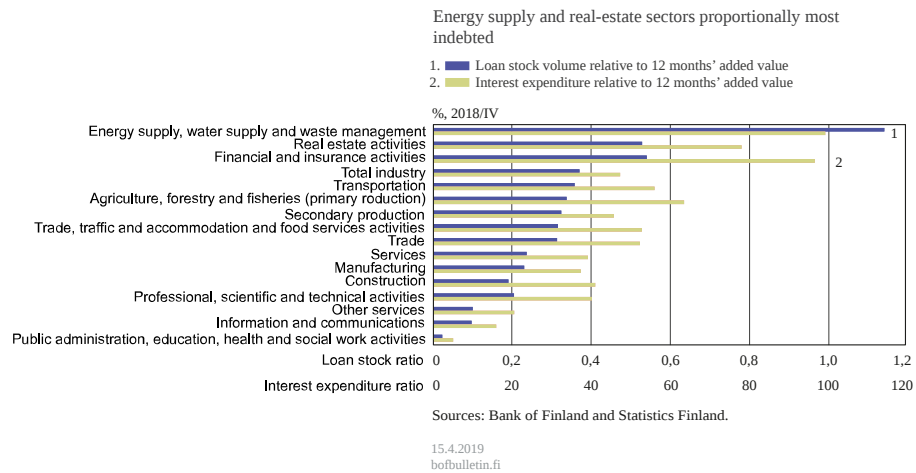
The energy and real-estate sectors also stand out when their loans are examined relative to the value added created in these industries. The ratio of the loan stock relative to value added created by the energy industry in 2018 is 115%. However, the industry's annual interest rate expenditure is still only 1% relative to the annual value added. Accordingly, energy-industry companies seem to be well positioned to meet their debt-servicing commitments—as do most other companies in other industries too, as a rule (Chart 3).

The growth of loans to real-estate companies^[6] has been rapid. More than this, however, credit institutions operating in Finland have seen their exposure to real estate grow because of their lending to housing corporations (excluded from Chart 2). In the past five years, lending to housing corporations has increased by almost 70%.

The use of property as collateral against corporate loans has not significantly changed in recent years. In February 2019, corporate loans secured on housing and other real estate accounted for 22% of the total stock of corporate loans, and it has remained at similar levels in recent years.

Chart 3.

6. Real-estate activities include e.g. property management and rental companies.



Corporate credit risk across sectors

Based on their levels of non-performing assets, companies have recently been able to service their loans as successfully as households, on average.^[7] According to the FIN-FSA, non-performing loans comprised 2.0% of credit institutions' stock of corporate lending as of September 2018, compared with 1.9% of their loans to households. These figures are small by recent historical standards in Finland. When the banking crisis reached its worst at the end of 1992, non-performing assets accounted for about 12% of deposit banks' receivables from companies (Vihriälä 1993, 583).

Loan losses have remained fairly small amid the favourable conditions of recent years (Chart 4), but this does not necessarily imply a permanent reduction in risk. Corporate loan losses are often particularly sensitive to the business cycle. Credit losses remain low during upswings but become widespread in recessions, especially if interest rate levels are high. In the Finnish banking crisis of the 1990s, loan losses and impairments on corporate loans increased rapidly, and the sum of these losses over a 12-month period reached up to 1.1% of the corporate loan stock.

Chart 4.

7. A loan is classified as non-performing if its interest or principal payments are at least 90 days overdue, or if the debtor is unlikely to be able to service the debt due to insolvency.

Credit and impairment losses incurred on corporate loans moderate



Source: Bank of Finland.

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Household borrowing and especially mortgages and housing company loans can heighten the credit risk on corporate loans. In crisis situations, indebted households may reduce their consumption levels, which makes it more difficult for companies producing for the domestic market to meet their loan obligations. Severe banking crises seem to be linked to rapid expansions of housing credit rather than growth in corporate finance (Büyükkarabacak and Valev 2010; Detken et al. 2014).

The credit risk associated with corporate lending varies according to the respective industry of the debtor. Industries that are the most sensitive to the economic cycle are also the likeliest to default on their loans. For example, if a company sells capital goods, its income flow and debt-servicing capability are strongly dependent on the macroeconomic environment. Also, a high degree of fixed costs and dependency on domestic demand are linked with credit risk being more sensitive to cyclical fluctuations.

The construction industry is highly sensitive to the business cycle and, as evidenced by past crises, high-risk. During the Finnish recession of the 1990s, a large number of receivables from the real-estate sector were written down as losses, especially in property investment (Pensala and Solttila 1993, 14). The same industries inflicted even larger losses in Spain, for example, during the 2008–2014 crisis (Banco de España 2017, e.g. pages 88, 91, 158). In Ireland, the construction industry proved to be one of the most problematic debtors during the banking crisis (Lawless and McCann 2012, 6). In recent years, with a veritable building boom ongoing, only a relatively small share of all lending to the construction industry has become non-performing (Chart 5).

In addition to the construction industry, companies in the hotel and restaurant business have also been prone to bankruptcies (Chart 6). Taken together with trade, they comprise half of all bankruptcies. Related sub-industries that are particularly prone to bankruptcy

include house construction, building completion and finishing as well as electrical work and plumbing. In addition to these, restaurants and other hospitality companies as well as road haulage and removal companies are prone to bankruptcy. Bankruptcies in these industries potentially have the strongest impact on employment.

In recent times, the largest loan losses have occurred in manufacturing, even though the industry's bankruptcy level is only as high as the corporate-sector average. The sawmill industry in particular has been in dire straits. Companies in the metal industry and mechanical engineering have also caused loan losses, even though these industries are not particularly highly indebted (Chart 7).

The stock of lending to the real-estate sector is notably large, but non-performing loans have remained few and far between recently. The supply of collateral has been able to cover realised losses, but the value of collateral also depends on the development of property prices. The sector has largely managed to avoid payment issues in recent years. This is in part due to the steady expansion of the rental market, both in terms of size and in terms of market rents. However, historical trends may not hold in the future if radical changes are observed in the development of prices and rents.

Sectoral risk analyses (see e.g. Jokivuolle & Viren 2013 or Takala & Viren 1999) indicate that the dependence of bankruptcies and loan losses on the business cycle and on interest rates and indebtedness is fundamentally similar across industries, albeit with different magnitudes.^[8]

When assessing banks' credit risk on corporate loans, one must assess how exposed various banks are to different industries, how prone companies in any given industry are to bankruptcy, and what proportion of a bank's receivables might be recovered through bankruptcy proceedings or realisation of collateral. Finnish banks have issued relatively few loans to industries with a higher propensity towards bankruptcy, which, for its part, reduces banks' exposure to credit risk on corporate lending.

Chart 5.

8. In Finland, only the agriculture and forestry industry (and transport, to an extent) behaves markedly differently from other industries.

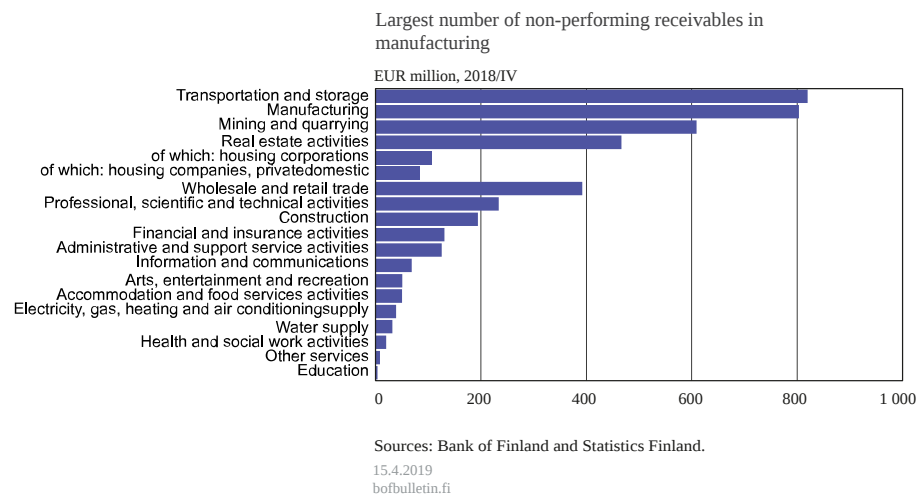


Chart 6.

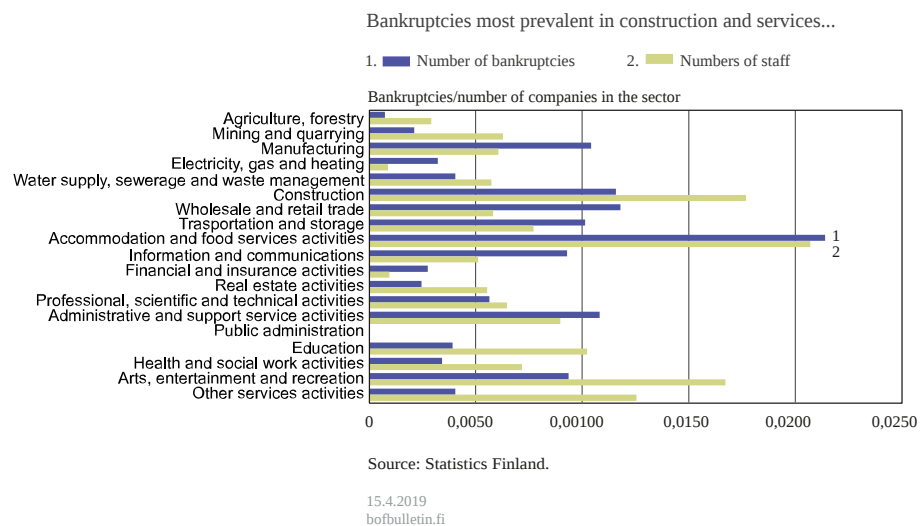
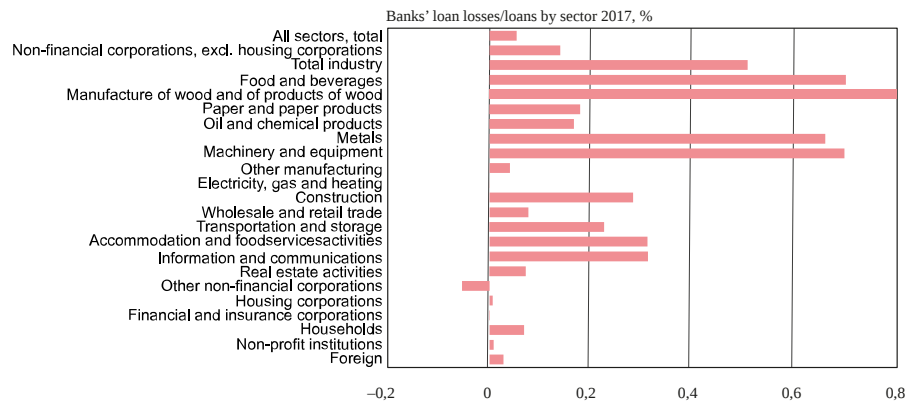


Chart 7.

...but majority of loan losses in manufacturing



Source: Financial Supervisory Authority.

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Tags

corporate loans, credit losses, impairment losses

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Finnish commercial property market increasingly intertwined with foreign markets

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The property market in both Finland and in the other Nordics has attracted increasing interest from foreign investors. Global risks may carry over onto the Finnish property market through foreign investors. An adverse economic shock may cause property values to fall and prompt a share of foreign investors to withdraw from the Finnish market. Consumer behaviour is being reshaped by urbanisation and digitalisation, with important ramifications for office and retail property investments.



Brisk trading on Finnish property market continues

When interest rates are low, investors seek returns from markets that are less liquid than those for equities and bonds. Property investments have offered steadier and higher returns than many other asset classes in recent years. However, with property valuations having now persisted at high levels on many important markets in both Europe and the United States, investor interest has shifted towards countries that lie on the geographical periphery of Europe, such as Finland.^[1]

1. Investors also value Finland's robust infrastructure, well-functioning rental market and low levels of political

Investment continued to flow briskly into the Finnish property market in 2018, despite moderating slightly on 2017.^[2] According to KTI^[3], the volume of major real-estate transactions in Finland totalled some EUR 9.3 billion in 2018. As in 2017, this figure was bolstered by large, individual transactions carried out by foreign investors.

In 2018, foreign investors accounted for 66% of all new investment flows into the Finnish property market. Foreign investors also increased their share of the stock of investment properties owned by professional investors, reaching 30% at the end of 2018.^[4] A significant portion of international investors who partake in the Finnish property market come from other Nordic countries, most notably from Sweden.

Institutional investors' keen interest in the Finnish investment property market, and especially in the Helsinki metropolitan area, has increased the market's size while pushing down property yields.^[5] In addition, foreign investor activity has further strengthened the property market's growth, both in terms of size and in terms of valuations. In particular, the yield requirements on prime investment properties^[6] located in Helsinki's central business district have declined much more quickly than in other regions, underscoring the strong rise of property prices in Helsinki compared with the rest of Finland. Yet in spite of strong investor demand, Finland as an investment locale still remains less bid and more affordable than many other European countries.

Chart 1.

risk.

2. While the volume of transactions declined by 9% from the historically high figures reached in 2017, 2018 was the second strongest year on record.

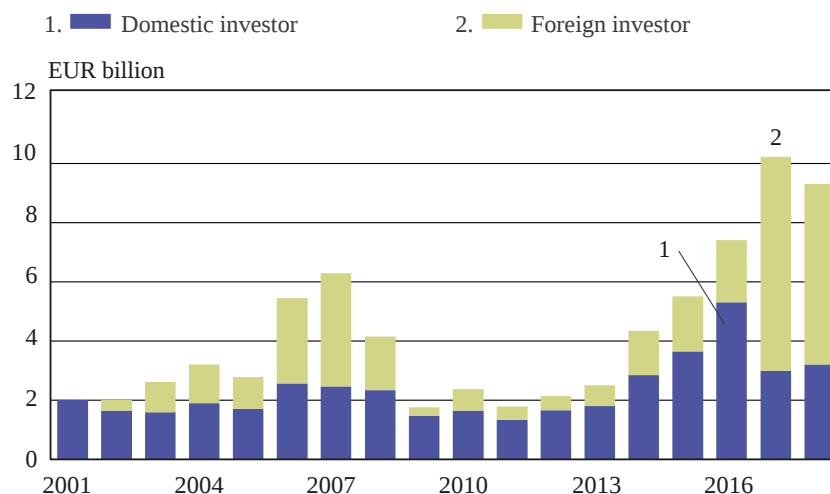
3. KTI Property Information Ltd.

4. The large corporate acquisitions of recent years, in particular, have contributed to this growth.

5. Typically the so-called capitalisation rate, which the investor sets as a condition for investment. Yield is defined as the net operating income of a property (i.e. market rent after expenses) divided by the property's market value at the time of review. The lower the yield, the higher the property's valuation (relative to market rents at the moment of review), and vice versa. The yield can be viewed as the sum of the risk-free rate and risk premium, minus the presumed annual net rent growth percentage, plus the percentage of replacement costs of the capital invested.

6. Prime real-estate generally refers to properties located in the most sought-after downtown areas.

Volume of major real estate transactions in Finland



Source: KTI Property Information Ltd.

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The Finnish property market is strongly tied to the performance and price developments of other property markets in Europe. There is a risk that a significant deterioration of market conditions in Europe or in the Nordics could prove disruptive to the property market in Finland. Foreign investors have historically responded to changes in general market conditions more forcefully than domestic investors.^[7]

A negative economic shock would lower property prices and especially influence the behaviour of speculative and highly leveraged investors. Lacklustre market performance would make it more difficult to refinance property investments on bond markets, which have become an increasingly important source of finance for property investment companies. The retreat of a significant number of foreign investors from the Finnish property market could drive down property prices even further.

Property market split by urbanisation

Statistics Finland's regional population projection shows that the proportion of people of working age in the population is growing especially in cities with over 100,000 inhabitants. This development highlights the importance of location.

Urbanisation and the favourable momentum in the economy have fuelled new-build construction. In the greater Helsinki area in particular, a large amount of office and retail space is due for completion, which will increase competition between shopping centres and office premises. Yet in spite of the economy's vigour, underutilisation of office space

7. Foreign investor interest in peripheral countries not only depends on the outlook for growth and the balance of risks of these countries but also on the development of investment opportunities and expected returns in core countries.

has remained relatively high, also in the Helsinki metropolitan area. Businesses' rapidly changing needs are no longer satisfied by old and difficult-to-reach premises.

One challenge for investors lies in converting existing properties ill-suited for office use into, say, residential dwellings. The returns on investment on properties in less desirable locations may not live up to the expectations set by high valuation levels.

Demand for retail space transformed by digitalisation and e-commerce

Digitalisation and e-commerce are transforming the how and where of trade. Market data reveal that the growth of e-commerce in Finland clearly accelerated in 2018.^[8] Meanwhile, shopping centres have seen diminishing sales growth and declining visitor counts.^[9] Consumers have especially increased their online purchases of clothing and related accessories. The ramifications for many shopping centres located outside the Helsinki metropolitan area are considerable.

The changing demand for office and retail properties has in part already resulted in investors increasing their investments in alternative property types, such as residential housing, care properties, and hotels.

The property market, which is in any case highly sensitive to the business cycle, is undergoing significant structural change, and this has increased the risks associated with investors and real-estate finance. Urbanisation, changing consumer habits, and the growing prevalence of working from home all promise weaker returns-on-investment for office and commercial properties located in remote areas. Overly optimistic expected returns and less-than-desirable locations may prove problematic for investors and financiers alike.

Banks bear the risks of property investment finance

A significant proportion of property transactions are funded by owners' equity. At the same time, however, leverage remains a ubiquitous part of real-estate investing. The lion's share of credit used to finance property investment in Finland is still being issued by domestic banks as well as banks in the rest of the Nordics. The total volume of credit issued by domestic banks to the real-estate and construction sectors stood at EUR 48.5 billion at the end of 2018, which comprised 54.6% of banks' receivables from firms and housing corporations.

The number of loans issued by domestic banks that are exposed to real-estate risks has grown rapidly over the past two decades. Property company loans spurred this growth up until 2012. Since then, the momentum has been propped up by the number of loans issued to housing corporations. The stock of housing corporation loans has continued to grow by over 10% per annum for practically the entire past decade.

8. Euro-denominated sales increased by 41% year-on-year, see Vilkas Group: verkkokauppaaindeksi. (Finnish only).

9. Finnish Council of Shopping Centers.

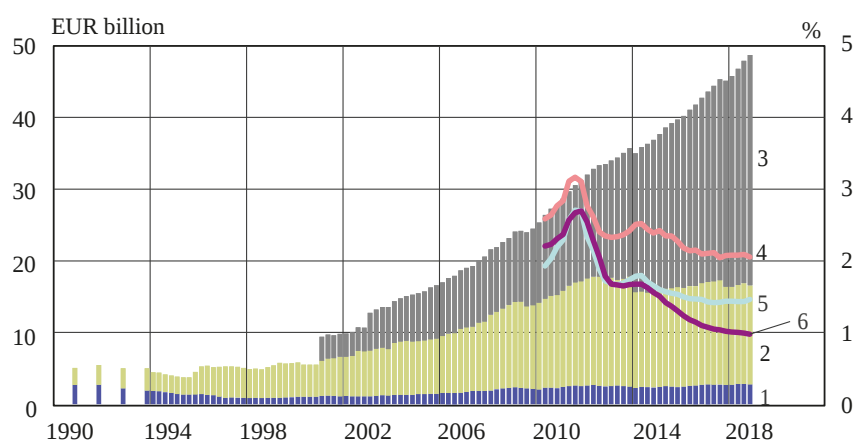
In recent years, Finnish entities have increased their uptake of market-based real-estate finance. At the end of 2018, large domestic construction companies as well as property rental and management firms accounted for 36% of all corporate bonds issued by domestic firms.

Banks' credit losses have largely been incurred from corporate lending. The annual credit loss incurred from corporate lending stood at over 5% relative to the loan stock during 1992–1994. Meanwhile, household loans defaulted at an annual rate of 0.9% relative to the loan stock during the same period. The relative volume of credit losses was much smaller in the aftermath of the financial crisis, i.e. 2008–2015. During this period, the corporate sector defaulted on credit worth EUR 250 million a year, on average. This represented less than 0.5% of the loan stock. Meanwhile, the household sector induced credit losses worth half this amount, or about EUR 125 million a year. Housing corporations scarcely defaulted on their loans at all.

Chart 2.

Domestic banks' real estate-related loan stock grown rapidly in past 20 years

1. Construction, loans (left-hand scale)
2. Real estate sector, loans (left-hand scale)
3. Housing corporation loans (left-hand scale)
4. Construction, interest rates (right-hand scale)
5. Real-estate sector, interest rates (right-hand scale)
6. Housing corporations, interest rates (right-hand scale)



Sources: Bank of Finland and Statistics Finland.

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Non-performing loans in the corporate sector stood at EUR 875 million, or about 1% of the loan stock, at the end of 2018. Businesses operating in real estate accounted for 27% of these loans. The largest share of non-performing loans can be found in the construction sector, at 2.9% of the loan stock. The real-estate sector has fewer non-performing loans than the average for all companies, at 0.8%. The risks of the real-estate sector and the industries it comprises are similarly reflected in loan rates, and the highest average interest rate on loans can be found within the construction sector.

The Nordics' large commercial property markets

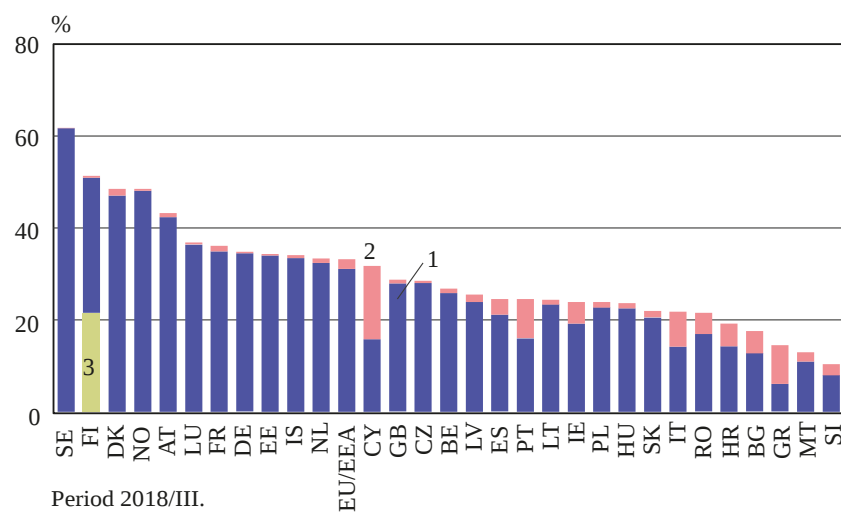
In Finland, as in the other Nordic countries, a great number of loans are related to real-estate activities. In fact, these loans represent a large proportion of the entire corporate loan stock (including loans to housing corporations). In Finland, this share is about half.^[10]

Some of the debt taken out by housing corporations is attributed^[11] to households. According to an estimate by Statistics Finland, the share of these loans issued to households stood at EUR 20 billion in September 2018. This accounts for some 42% of all debt owed by companies (including housing corporations) operating in the real-estate sector. In Sweden, the country's financial supervisory authority Finansinspektion estimates that housing company loans account for about 15% of all corporate borrowing and about 28% of all corporate and housing corporation debt within the real-estate sector.^[12]

Chart 3.

In the Nordics, loans relating to real-estate activities are plentiful and the share of non-performing loans is small

1. Property sector and construction
2. Proportion of non-performing loans
3. Estimate of share attributable to households



Period 2018/III.
Source: EBA.

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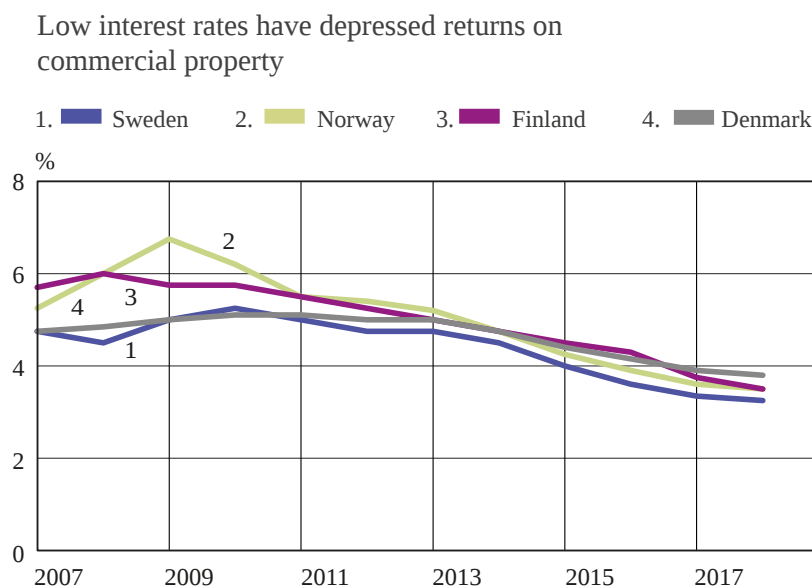
10. The real-estate sector's share is this large partly because of housing company loans.

11. In addition to housing companies, housing corporations include all corporation forms of housing units. Repayment of housing company debt is effectively the responsibility of the households who own shares (i.e. dwellings) in the company.

12. See <https://www.fi.se/contentassets/86382ed610304769b77c5a35aa54891f/stability-financial-system-2018-2nn.pdf>.

Investors have seen lower realised returns on commercial property investments across the Nordics, as investor demand has raised the prices of commercial properties throughout the region. Office buildings brought in returns of 3–4% in 2018. Commercial property investors' search for yield is evidenced in Denmark, for example, by growing foreign investor interest in properties located outside Copenhagen.

Chart 4.



Source: Pangea/Mrec.

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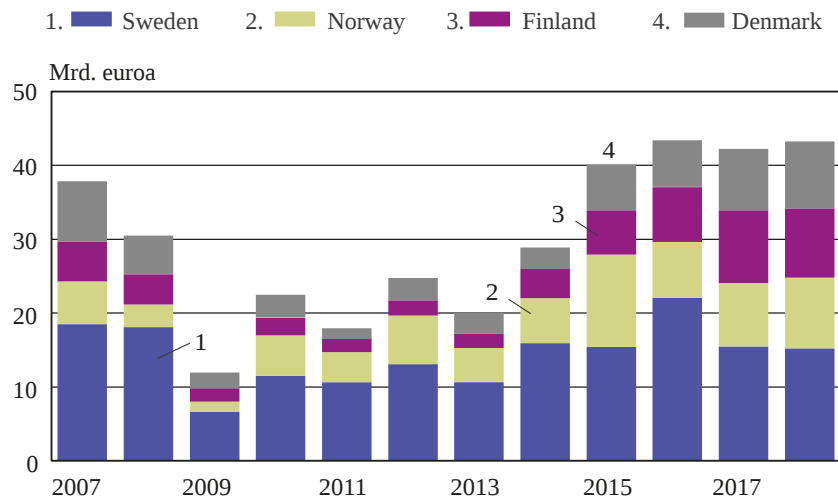
Rent levels have also increased in all the Nordic capitals, although with clear differences. Over the past decade office building rents have increased by about 9% in Copenhagen, about 10% in Oslo and some 47% in Helsinki, while even reaching about 107% in Stockholm. Among other factors, the supply and demand of new office buildings has contributed to the rise in rents. However, regional divergences in rent growth can also be found within the countries themselves.^[13]

In the Nordics, commercial property transaction volumes have persisted at a high level for four years now, and the total value of transactions has already surpassed its level before the financial crisis. Foreign investors are estimated to have accounted for some 40% of commercial property transactions in the Nordics in 2018. The share of foreign market participants was clearly lowest in Norway, at about 18%, and greatest in Finland, at about 66% of investors.

Chart 5.

13. In Norway's Stavanger, Bergen and Trondheim, for example, rents have remained at or even declined from 2013 levels. The rent levels in the capital cities are not directly comparable with each other, as rents may include various costs depending on the country and, for instance, property taxes. Nevertheless, Stockholm has the highest prices per square meter of all the Nordic capitals.

Value of commercial property transactions high for past four years



Source: Pangea/Mrec.

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The funding of commercial property accounts for a considerable share of banks' corporate lending in each of the Nordics: about 50% in Sweden, 45% in Norway and 65% in Denmark. The entire Nordic banking sector is vulnerable to commercial real estate companies running into insolvency issues, triggered by, for example, rising interest rates or weakening economic conditions.^[14] However, non-performing loans remain few and far between in the Nordic real estate sector, compared with other countries in the EU. In all the Nordics, such non-performing loans accounted for less than 0.8% of the loan stock in September 2018. The average for the EU countries was 6.4% during the same period.

In European comparison, the Swedish commercial property market is very large, at around 40% relative to GDP, compared with the EU-wide average of about 16%. The Swedish commercial property market has experienced a rapid rise in corporate debt in recent years. The loan stock contains, for example, bank loans and bonds issued by commercial property companies. Looking at the commercial property market as a whole – including both listed and privately owned companies – the stock of outstanding loans owed by Swedish commercial property companies has grown by up to 58% between year-end 2014 and the end of September 2018. The equivalent figures for Finland, Denmark and Norway are 39%, 22%, and 6%, respectively.^[15] Sweden's commercial property

14. Of the large Nordic banking groups, Danske Bank, DNB, SEB and Swedbank have commercial property lending listed as its own item in their loan portfolios. For these banks, commercial property finance accounted for between 16–31% of their total corporate loan portfolios at the end of 2018. At the end of 2018, Nordea's loans to the real-estate sector accounted for some 34% of its total corporate loan portfolio. However, this figure may include e.g. loans to residential property management companies, and is hence not fully comparable.

15. The comparison only includes companies with balance sheet data covering the entire review period, i.e. from 2014 onwards.

companies are in fairly good financial health, however, as their share of non-performing loans, for example, is extremely small.

Commercial property companies are increasingly turning towards market-based funding. In Sweden, for example, companies operating in the real-estate sector, including commercial property companies, have accounted for slightly over 40% of all corporate bonds issued in recent years. In 2018, 25% of the stock of loans owed by listed commercial property companies in Sweden was market-based.

Tags

[Nordic countries](#), [property investments](#), [property markets](#)

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The impact of digitalisation on bank profitability

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The profitability of the European banking sector is weaker than 10 years ago or compared with banks outside the EU. However, the average figures conceal market differences among EU banks. Responding to digitalisation in the financial sector necessitates substantial efforts from banks. A major problem for banks is that IT investments that will boost productivity over the long term will often weaken it in the short term.



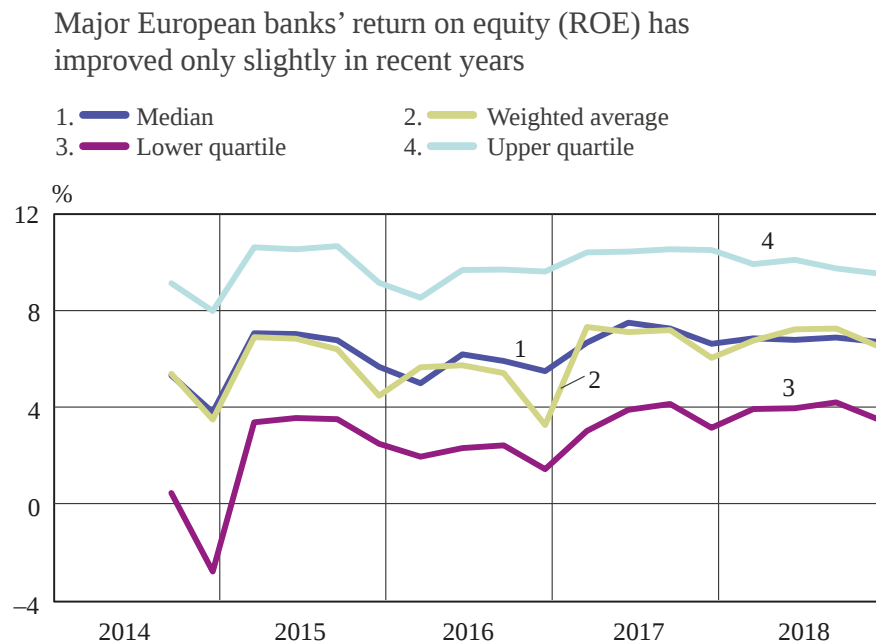
Subdued profitability outlook for European banking sector

Despite a slight improvement in recent years, the profitability of European banks has remained rather challenging, on average. Higher market volatility, escalation of political risks and a weaker outlook for the global economy dragged down banks' profitability expectations in the latter half of 2018.

Low interest rates and a weaker operating environment have eroded the net interest income of European banks, in particular, even though bank lending has begun to grow again slightly in the past few years. Net interest income continues to constitute a key source of income for banks, and many banks have not succeeded in finding sufficient alternative revenue streams to replace it. Income performance has been widely reflected

in the prices of European banks' shares, as investors have lowered their inflation and interest rate expectations and hence also return expectations related to banks' net interest income. The markets and banks themselves assume that banks' return on equity will not improve notably in the immediate years ahead.^[1]

Chart 1.



Source: European Banking Authority (EBA).

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Banks continue to suffer from many long-term structural issues. In many major European countries, banks' cost structure is heavy and the banking sector is large relative to the size of the economy. In the years to come, banks must respond to the challenges brought by major trends such as digitalisation. Investment in IT systems, R&D and new operating models necessitate significant efforts from banks, while at the same time exposing them to risks associated with changes.

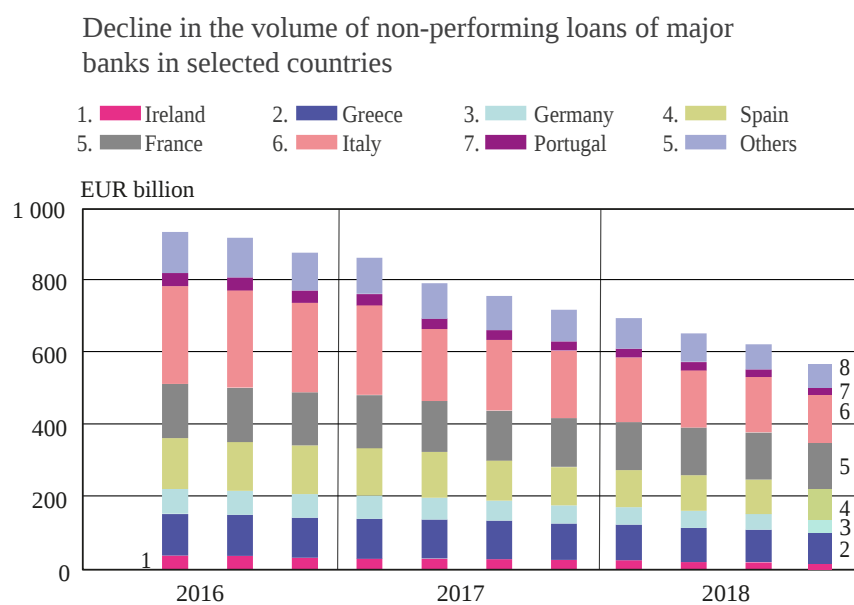
As a legacy of the financial and sovereign debt crises, EU banks have significant volumes of non-performing loans (NPLs) on their balance sheets.^[2] According to the European Banking Authority (EBA), the total volume of NPLs in Europe as a whole amounts to EUR 637 billion, which is 3.2% of all loans (Q4/2018). However, NPLs are not evenly distributed among banks.

1. Banks' return on equity (ROE) is expected to improve by no more than slightly over 1 percentage point, to 8%, by 2020. In the third quarter of 2018, EU banks' average ROE was 6.9%.

2. Non-performing loans (NPLs) refer to loans where the borrower has had difficulties in repaying the loan as planned. NPLs have been strictly defined, and a short delay in payment or an interest-only period agreed with the bank does not make a loan into an NPL. NPLs are also referred to as problem loans or bad debt.

Despite recent years' positive developments, bad loans and credit losses continue to weigh on bank profitability. Banks have set aside capital to cover losses arising from NPLs, which makes new lending more difficult. One solution to the problem would be to sell the bad loans. However, this would require more write-downs from banks, which in turn would necessitate more capital banks do not necessarily have. This is why the sale of bad loans has proven to be a slow process.

Chart 2.



Source: SSM.

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Why is banking sector profitability important?

A profitable banking sector can supply loans to the real economy – i.e. finance business investment – and thus underpin economic growth. Small and medium-sized enterprises, which are highly important for economic growth and employment, are particularly dependent on bank loans. Measures to strengthen bank balance sheets focus especially on the riskiest loan segments, such as loans to SMEs.

If the profitability of the banking sector is low, banks are also more prone to run into difficulties during downswings in the economy. Low profitability can scarcely provide a robust buffer when loan losses increase. Higher loan losses reduce bank capital, and banks are forced to cut lending. Hence, bank profitability has a direct impact on financial intermediation and financial stability.

Digitalisation of operations is an investment in the future

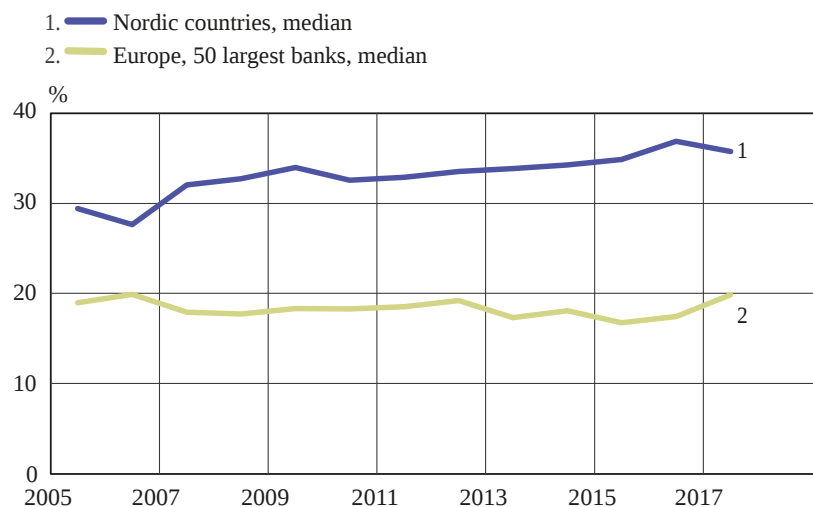
Many measures to improve banking sector profitability over the long term weaken profitability in the short term. The transition from an institution with a heavy branch network into an agile bank of the digital age and reducing NPLs necessitates substantial efforts. Investment in IT systems, R&D and new operating models require considerable resources and capital and expose banks to the risks associated with changes. On the other hand, without the transformational changes, banks may fall behind in the very developments that will contribute to creating future success stories.

In the years to come, banks must respond to the challenges brought by major trends such as digitalisation. Digitalisation is progressing in the financial sector, as other parts of society are going digital and consumers are increasingly shifting to using mobile services.

Many banks have constructed their IT systems in the course of several decades. These legacy systems are expensive to maintain and do not enable banks to reap the full benefits of digitalisation. The full exploitation of digitalisation requires that bank systems be compatible and processes can be digitalised.

Chart 3.

Nordic banks allocate more funds to IT investment than European banks on average



Source: S&P Global Market Intelligence.

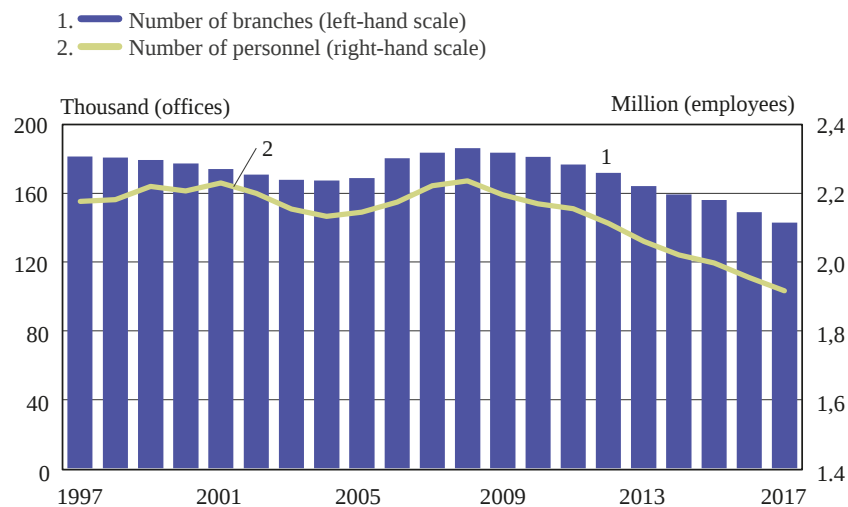
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Modernisation of IT systems involves risks. Many banks have launched substantial IT projects but have found that the project costs and timetable have changed considerably from what was initially envisaged. Together with weak profitability, this poses a challenge as to whether all banks can make the investments needed to modernise themselves.

However, IT investments alone will not strengthen bank profitability. In many European countries, banking is still highly branch-oriented and the branch network is relatively extensive.^[3] Cutting branch networks and personnel improves profitability in principle, but it can be extremely costly in the short term. In addition, the pace of change depends on the progress made by competitors and the time needed by customers to adopt new banking technology.

Chart 4.

A decade of decline in the number of bank branches and personnel in European banks



Source: European Central Bank.

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Digitalisation of banks is expected to improve bank profitability in the long term, as it should enable operations with a lighter cost structure. Digital activities require fewer branches and less personnel because the majority of service production is automated. In their visions, banks particularly rely on new technologies, such as artificial intelligence (AI) and blockchain. These should ensure that the benefits of digitalisation will also be reflected in bank profitability.

Digitalisation opens doors for new competitors

Digitalisation blurs the boundaries between digital and other services and opens the banking industry to greater competition. It enables new actors, such as cross-border digital banks or fintech start-ups. It also enables the provision of certain services (e.g. payment services) by major technology companies (e.g. Apple, PayPal and Google).

3. Excluding the Nordic countries. For more information on the situation in the Nordic countries, see the article 'Nordic banks go digital' at: <https://www.bofbulletin.fi/en/2018/2/nordic-banks-go-digital/>.

There are significant differences in the universal banking model of traditional banks and the operating concepts of new actors. Universal banks provide all financial services in one or a few markets, while new actors focus on a few services and provide them in all markets.

New actors also strive to provide services that are less strictly regulated and can be produced without capital deployed on the balance sheet. They operate with as light an organisation as possible and utilise external service providers. By supplying their customers with the products of other service providers, new actors can offer a broader range of services with a lower cost structure. New actors also create new competition in the area of pricing and the usability of services. Furthermore, as a rule, new actors do not have physical customer service points.

The impact of new competitors on banks' business models

Services provided by new competitors are often in the business areas where banks earn the largest service fees. Even when competitors cannot capture significant market shares from banks, they force banks to lower their prices in business segments which have traditionally been the most profitable for the banks. On the other hand, higher competition is advantageous to customers, as it increases service provision and lowers prices. However, new services create new risks (e.g. those related to cyber security and data).

Banks are preparing for the new form of competition and demand for mobile services by reforming their business models – i.e. their range of services and the way these services are provided. As part of this process, banks are exploring new technologies, such as AI and blockchain (Table 1). Banks are now increasingly collaborating with various new actors and have, for example, launched accelerator programmes and invested in fintech companies.

Banks are moving at very different speeds in digitalisation. The most advanced banks readily present their digital strategies and IT system reforms and experiment with new methods to produce services. However, the new activities and experiments are still reflected only to a limited extent in banks' financial results and balance sheet figures. In the Nordic countries, many banks have already started investing in the necessary transformation, but for banks elsewhere in Europe this work is still in its infancy.

Table 1.

Examples of banks leading in digitalisation^[4]

4. A comparison of banks based on information reported by the banks themselves. The letter 'x' denotes that the bank has at least advanced plans in the area in question. In cases where the service is not yet provided to customers, the assessment is based on an expert assessment. The data has been slightly modified to prevent the identification of individual banks. The table is only a simplified example of a follow-up framework and does not reflect the actual state of banks.

Operating model	Accounts and account transfers	Card payments	Consumer credit	Housing loans	Investment	Branch network	Internet	Mobile	Online negotiations	Digital onboarding	Digital consumer credit	Digital housing loan	API	Robo-advisory	Blockchain
International universal bank	X	X	X	X	X	X	X	X	X		X		X	X	X
Domestic universal bank	X	X	X	X	X	X	X	X	X		X		X		X
International universal bank	X	X	X	X	X	X	X	X	X		X	X	X		X
Domestic universal bank	X	X	X	X	X	X	X	X	X			X	X	X	
International universal bank	X	X	X	X	X	X	X	X		X			X		
International universal bank	X	X	X	X	X	X	X	X	X	X			X	X	X
Domestic universal bank	X	X	X	X	X	X	X	X			X	X	X	X	X
Consumer credit provider			X				X	X	X	X	X		X		
Challenger bank	X	X						X	X	X			X		
Consumer credit provider		X	X					X	X	X	X				
Payment transfer	X							X		X			X		

Tags

banks, digitalisation, profitability

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