BANK OF FINLAND BULLETIN

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ANALYSIS

Repricing of securities markets' risk premia still most significant threat to global financial stability

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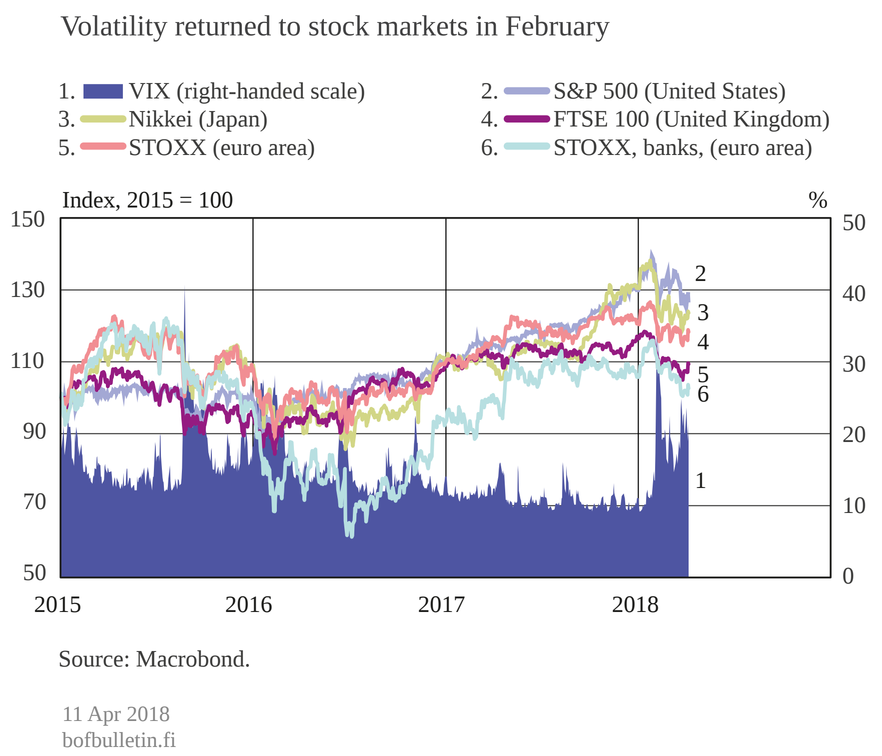
Financial markets saw volatility rise as stock markets underwent a correction in February 2018. Low risk premia and high valuations have increased global securities markets' exposure to price corrections and abrupt shifts in risk premia. Other risks to global stability that are of particular concern to Finland include vulnerabilities related to the euro area's banking sector and the sustainability of the region's public finances, as well as risks associated with Sweden's housing market.

The period of sustained low volatility that characterised global financial markets throughout 2017 came to an abrupt end in February. A market correction, which began in the US stock market before weighing down on share prices globally, raised volatility in equities back to 2015's level of turbulence (Chart 1). The United States' fiscal stimulus is likely to have contributed to the onset of the correction by spurring inflation expectations as well as expectations of further interest rate hikes, and its effects have also been evident in the continuous rise of long-term interest rates throughout early 2018. In addition, investment funds whose underlying assets include the VIX volatility index are thought to have contributed to the speed and magnitude of the correction.[1] Yet while these funds are undoubtedly highly sensitive to market movements,[2] their overall prevalence, whether measured by quantity or valuation, remains relatively small.[3]

Chart 1.



1. See, for example, "International banking and financial market developments", BIS Quarterly Review. March 2018.
2. ETNs (Exchange Traded Notes) typically track the performance of their underlying assets synthetically, i.e. they do not physically own any assets belonging to their target indices but instead hold derivatives thereof. Some of these instruments have been designed to track the daily performance of the VIX inversely, a strategy meant to capitalise on periods of sustained low volatility. Inversed and potentially leveraged positions contain considerable risk, as they are extremely sensitive to market movements and do not necessarily do well in tracking the performance of their underlying assets over the long term. Furthermore, the daily rebalancing of positions held on leveraged and inversed ETN securities is performed in a manner which can further entrench market movements and increase volatility towards the end of trading.
3. As of January 2018, a total of 31 listed securities used volatility indices (VIX and VSTOXX) as underlying assets, and 71% of these were located in the United States. In total, these funds managed just under EUR 5 billion of worth of assets; securities that inversely replicated their underlying assets accounted for approximately EUR 2 billion.

Volatility in equity markets has remained persistently higher since February's market correction. Uncertainty has been fuelled by the growing risk of trade war and rising geopolitical tensions. In the United States, financing conditions have tightened in the unsecured interbank money market, but there has been little overall sign of risk premium growth in global securities markets. While the market turbulence did raise yields on more high-risk securities in the markets for corporate bonds, it had little effect on sovereign bond yields. Similarly, the correction did not result in widespread runs from investment funds beyond those comprising of high-risk US corporate bonds. In the second week of February 2018, high-risk corporate bond fund redemptions (approx. USD 4.5 billion) reached their highest level since 2015, a period during which especially high-risk US energy companies faced considerable difficulties.

In addition to accommodative financing conditions, the strong performance of the real economy has further boosted investors' willingness to bear risk. In 2017, the global economy expanded on the back of cyclical growth shared by several major economies. While the real economy's growth outlook remains strong, its growth risks remain tilted to the downside.[4] Furthermore, recent market uncertainty has cast a shadow over consumer and industrial confidence and tempered investors' expectations regarding the global economy's longer-term outlook. Signs of inflation have remained slight in spite of the real economy's good performance, and thus monetary policy remains unusually accommodative globally. Looking ahead, inflation expectations are expected to increase, particularly in the United States, driven by the country's fiscal stimulus.

Chance for risk premia to surge in securities markets

The general interest rate level has remained low due to the prolonged period of exceptionally accommodative monetary policy within the major economies. Consequently, investors in bond markets have had to bear greater amounts of risk in their search for yield. The increased demand for higher-risk debt instruments has lowered the yield spread between high- and low-risk bonds and narrowed their risk premia (Chart 2). In addition to bond markets, equity valuations have also reached historical highs in many countries, including the United States. An indicator that warns of excessive real price growth in equities suggests evidence of a price bubble within the US stock market (Chart 3).

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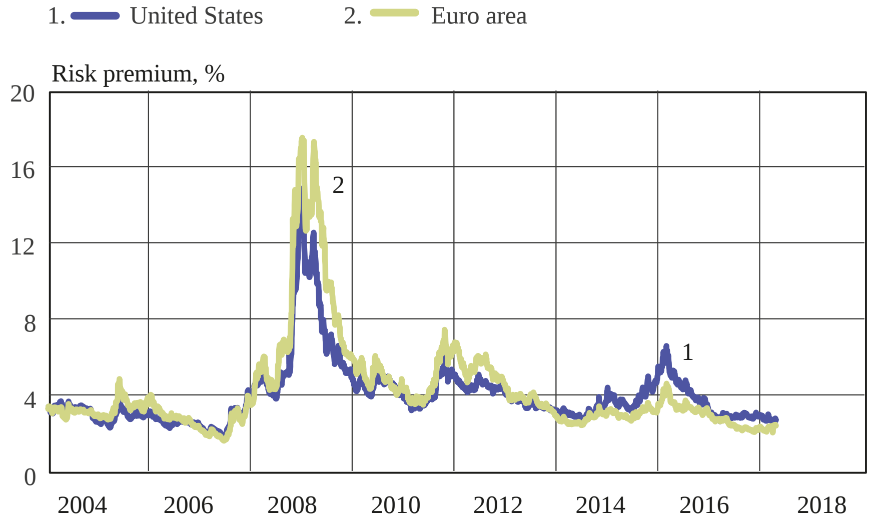
4. For more on the global economic outlook, see "Expansionary economic policy boosts growth", Bank of Finland Bulletin 1/2018.

Chart 2.

Narrow yield spread between high-risk and investment-grade corporate bonds



Sources: Barclays, calculations by the Bank of Finland.

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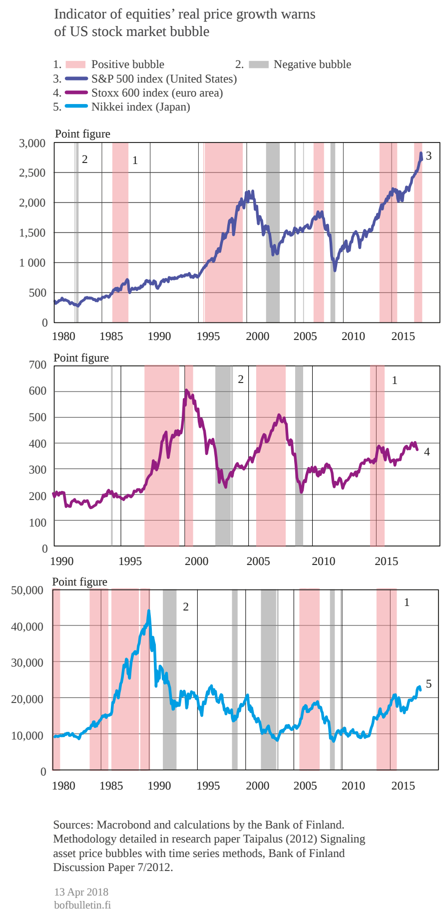
Chart 3.



Investors' greater appetite for risk is also illustrated by rising investment activity beyond the conventional markets for bonds and equities. Investment growth is observable, for example, in real estated[5], private equity and private-debt funds, structured loans, and in a number of exotic instruments such as mutual funds that track the performance of crypto-assets. However, many of these instruments risk offering poor liquidity in stress situations. One particular worry is the growing participation of open-ended[6] funds in non-liquid markets, such as real estate. Moreover, terms on bonds have deteriorated in recent years, particularly on high-risk securities, leaving investors in a weaker position in the event of credit default.

February's market correction served as a reminder that shifts in investors' inflation expectations may prompt widespread portfolio adjustments, raising volatility in securities markets. Higher interest rates may incur impairment losses for investors, especially in portfolios with large holdings in long-term sovereign bonds, such as those typically held by banks or pension and insurance companies.[7] Expectations of higher

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5. See, for example, Koskinen K. (2017) Euroopan liikekiinteistöinvestoinnit voimakkaassa kasvussa – sijoittajakunta entistä monipuolisempi. Analysis, Euro&talous. Finnish only.
6. In open-ended funds, investors may generally redeem shares at a moment's notice; however, there is a considerable risk that non-liquid assets may not be redeemed quickly or may have to be done so at an undervalued price, especially during crises.

interest rates may also have other effects on asset valuations. Higher yields on sovereign bonds may raise yields on high-risk corporate bonds, as the latter are usually priced at a premium over the former. Furthermore, the popularity of riskier securities, such as equities, may decline, causing their prices to fall and possibly changing the regional allocation of such investments.

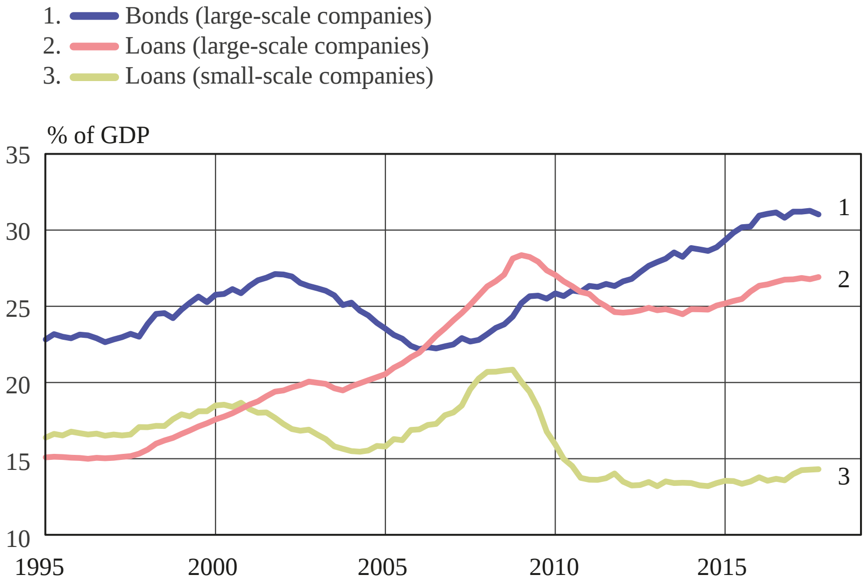
Normalising monetary policy may become a topical concern even beyond the United States as economic growth continues to accelerate globally. Returning to conventional policy will involve gradually raising interest rates at a controlled pace while tapering asset purchases. Together, these measures will tighten financing conditions. At the same time, central banks will gain additional manoeuvrability in the implementation of monetary policy, especially if confronted by negative economic shocks. Negative shocks might originate, for example, from an unexpectedly rapid decline in China's growth rate caused by weaknesses in its financial system, heightened political uncertainty or rising geopolitical tensions. These negative forces could easily transfer into the real economy by increasing market uncertainty, and may trigger a surge in credit and liquidity risk premia on securities and especially raise yields in the markets for corporate bonds.

The realisation of market risk could have an unprecedentedly severe impact on corporate financing, as the structural composition of corporate debt has undergone significant change since the financial crisis. Banks have been under pressure to adjust their balance sheets and comply with stricter regulation, leading to a reduction in the provision of bank-based corporate loans. Instead, affordable financing has been available on international bond markets; large business enterprises worldwide have significantly increased their share of bond-based finance. The trend has been strongest in the United States, where capital markets are particularly robust and well-established (Chart 4).

7. For more on rising interest rates' effects on long-term sovereign bonds, see Koskinen, K. and Laakkonen H., Most significant international threats to stability relate to securities markets. Bank of Finland Bulletin 2/2017.

Chart 4.

Large-scale US businesses increasingly turning to market-based financing in preference to bank-based



Sources: FED, OECD, Macrobond and calculations by the Bank of Finland.

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For small and medium-sized enterprises (SMEs), tightening lending conditions on bank loans and the thinness of capital markets have often acted as bottlenecks for financing. In recent years, however, the search for yield has driven many institutional investors to create novel financing solutions aimed at SMEs and funding corporate acquisitions. An assortment of loan funds and structured products account for an increasingly large share of, for example, high-risk corporate finance. Moreover, insurance companies and other large institutional investors have also deepened their role as lenders in the real estate market, typically through various real estate funds. Although the rise of market-based finance is favourable from the perspective of financial intermediation, as it has helped offset the contraction in the provision of bank loans, businesses are now more vulnerable to disruptions in market funding than they were during the time of the last financial crisis. The risk is that as the provision of finance becomes increasingly complex,[8] evaluating market participants' level of credit risk will become increasingly difficult.

8. Financial intermediation that takes place outside of the banking sector is often characterised by the chaining of financing arrangements and is provided by a wide variety of market entities and operating models.

Public finances and banking sector raise concerns in the euro area

The improved condition of the euro area's real economy has been reflected favourably in the credit risks of its member states and its banks. The easing of sovereign credit risk has resulted in, for example, upgraded credit ratings for several countries in the past year, particularly in countries where credit risk was higher to begin with.[9] Better ratings have led to lower rates of interest on their sovereign bonds, most notably for Portugal.

The economy's favourable outlook and expectations of higher interest rates also promise respite for banks struggling with long-standing profitability challenges[10]. An overall reduction in credit defaults in 2017 has especially helped banks in the countries most severely impacted by the sovereign debt crisis. Moreover, the economy's good performance has allowed euro area banks to tackle the issue of non-performing loans. According to the Single Supervisory Mechanism (SSM), banks held EUR 759 billion worth of non-performing loans in their balance sheets by the end of Q3 2017, representing an approximately 18% reduction over the previous year. Currently, non-performing loans only account for an average of approx. 5.2% of all credit claims (Chart 5).

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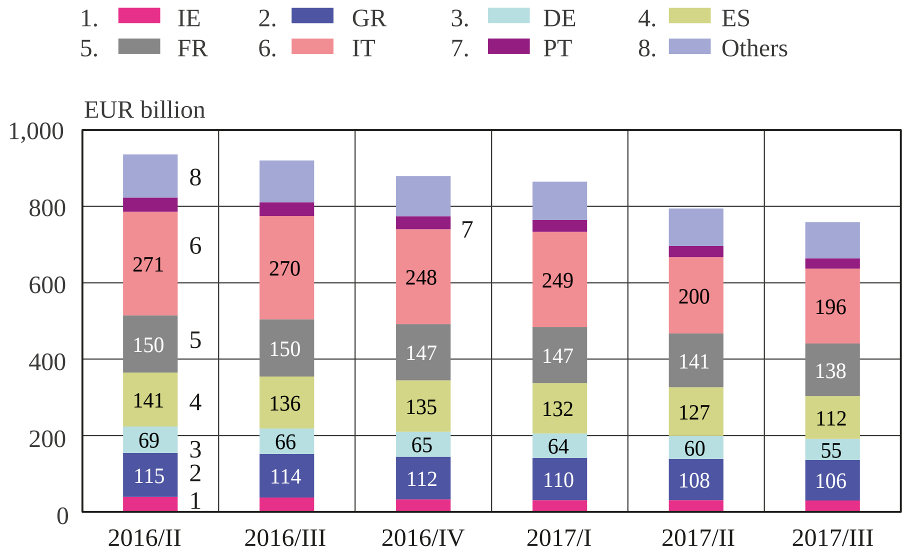
9. Fitch revised Cyprus' credit rating to BB on 20 October 2017 and Ireland's and Portugal's to grade A+ and BBB, respectively, on 15 December 2017. Additionally, Fitch rated Spain at A- on 19 January 2018 and Greece at grade B on 16 February 2018. Moody's raised Cyprus to grade Ba3 on 28 July 2017, Slovenia to grade Baa1 on 8 September 2017, and Ireland to grade A2 on 15 September 2017. This year, Moody's has upgraded Greece's credit rating to B3 on 21 February 2018 and Spain to Baa1 on 13 April 2018. S&P, in turn, have assigned the following ratings: Cyprus BB+ 17 March 2017, Slovenia A+ 16 June 2017, Portugal BBB- 15 September 2017, Italy BBB 27 October 2017, Lithuania A 2 March 2018 and Spain A- 24 March 2018.
10. For more information on the overall condition of euro area banks, see Expansionary economic policy boosts growth, Bank of Finland Bulletin 1/2018.

Chart 5.

Decomposition of non-performing loans held by banks in different countries



Source: SSM.

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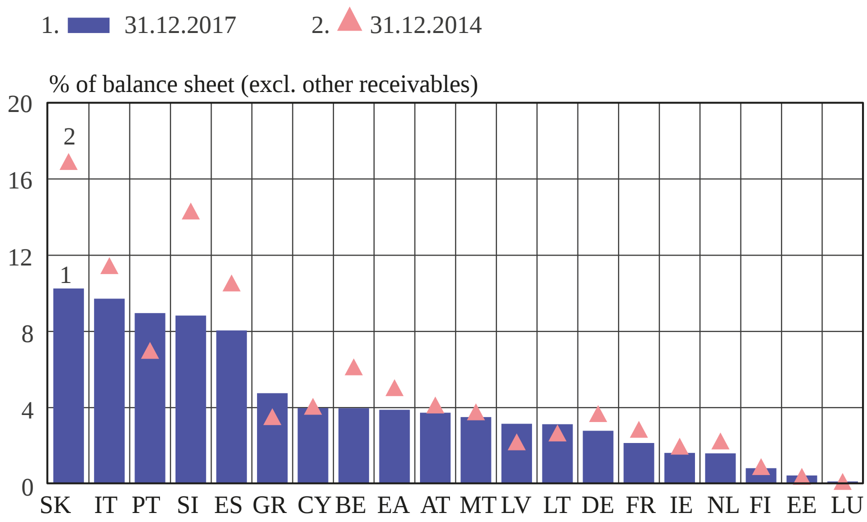
The euro area's banking sector is not short of challenges, despite much-welcomed improvement in the condition of its banks. Expectations of higher interest rates have improved the long-term profitability outlooks of banks, as the steepening yield curve (the difference between short- and long-term interest rates) will strengthen net interest income; however, in the short term, rising interest rates may impose a variety of different effects on banks. The significance of net interest income to profitability greatly depends on a bank’s domicile and business model. In countries where loans are typically fixed-rate, the effects of low interest rates will continue to weigh down on banks’ earnings even after interest rates are raised. Higher interest rates may even negatively impact profitability by raising costs of financing, especially for banks with weak pre-existing balance sheets.

In addition, competition in the financial sector is poised to intensify on the back of new service providers and technical innovations, e.g. in payment services, wealth management and certain loan segments. Looking ahead, this could put pressure on banks’ traditional sources of revenue, such as fees and commissions. It is as-of-yet difficult to assess what impact digitalisation might have on banks, as the operating environment's transformation is still in its infancy. Many banks are investing heavily into digitalisation and new operating models; however, the value of such investments will only be seen in the future and obviously at the expense of increased short-term costs.

The banking sector is also exposed to overall market risk growth, as several banks still hold significant quantities of sovereign bonds in their balance sheets (Chart 6). While sovereign credit risk has alleviated, the sustainability of public debt still remains a major systemic vulnerability within the euro area. Public-sector indebtedness has surpassed the threshold of 60% in twelve euro area countries, and yet there have been few meaningful improvements in debt-to-GDP, despite favourable economic conditions. Some countries not only hold a significant amount of public debt but are also home to banks facing considerable balance sheet risks and weak profitability. The danger is that if financing conditions were to suddenly tighten on the back of, for example, a correction in global risk premia or rising political uncertainty, financing costs would proportionately increase more in countries with weaker economic fundamentals and banking sectors to begin with.

Chart 6.

Euro area banks have reduced holdings of domestic public-sector bonds



Source: ECB.

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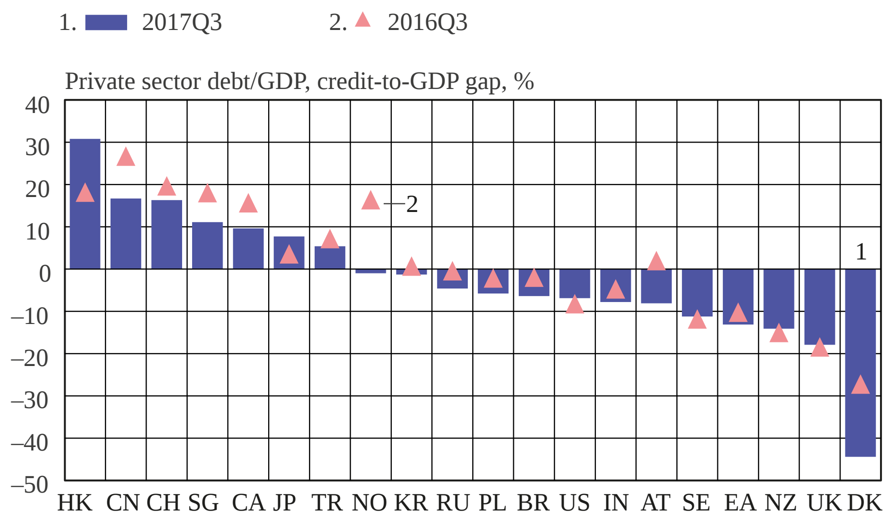
Heightened cyclical risk, particularly in China

So-called cyclical risks that are associated with overheating property markets and the rapid accumulation of debt by the non-financial private sector are familiar factors underlying financial crises. In the years following the financial crisis, the pace of debt accumulation has, by global comparison, been most rapid in the emerging economies and especially in China. In the advanced economies, the growth of private sector debt has remained modest over the same time period, although there are exceptions. An indicator warning of excessive private sector debt growth has reached high figures in recent years, particularly in Canada, Switzerland, some countries in Asia and a few other countries that were largely spared the impact of the global financial crisis (Chart 7). In these countries, household indebtedness in particular has continued to grow since the crisis.

Chart 7.

Growing private-sector indebtedness a long-standing concern, especially in China



Source: BIS.

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The accumulation of debt by China's private sector has been a long-standing concern. China's volume of corporate debt is particularly high compared to that of the advanced economies. So far, the non-financial private sector's mounting debt burden has not resulted in significant disruptions in the financial system, although the debt cycle has clearly begun to decline. Spill over of China's potential debt issues is arrested by the fact that the most heavily indebted enterprises, as well as the banks who have provided funding to them, are largely state-owned. In addition, China's debt has, by and large, not been funded by foreign investment, which as a form of financing is more sensitive to disruptions.[11] Nevertheless, it remains feasible that disturbances in China's financial system caused by excessive indebtedness could have significant detrimental effects on the entire global financial system. Risks might be realised through weaker-than-

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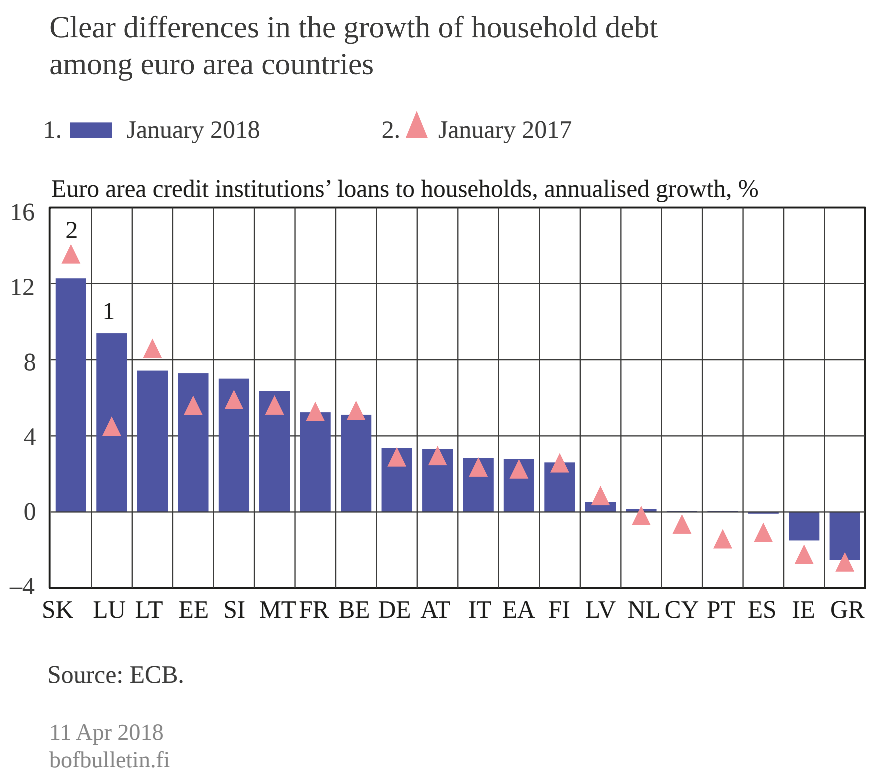
11. For more information, see Anni Norring's blog Kuinka paljon Kiina vaikuttaa kansainvälisiin rahoitusmarkkinoihin? Euro & Talous 14.7.2017. Finnish only.

predicted growth of China's real economy, rising market uncertainty or through other negative shocks.

In the euro area, there are clear regional disparities in the growth of private sector debt. In some of the countries worst-hit by the financial crisis, banks' holdings of household and corporate debt are still in an annualised decline, whereas the same loan stocks are seeing relatively brisk growth in many of the euro area's smaller nations (Chart 8). Conducting macroprudential policy to mitigate the cyclical risks associated with debt growth is particularly crucial for the euro area with its single monetary policy. Although the stock of housing loans to households has continued to shrink in some countries, growth in consumer credit has accelerated in almost the entire euro area in recent years. By historical comparison, growth rates in the stock of consumer credit have reached their pre-crisis levels in the euro area.

Chart 8.

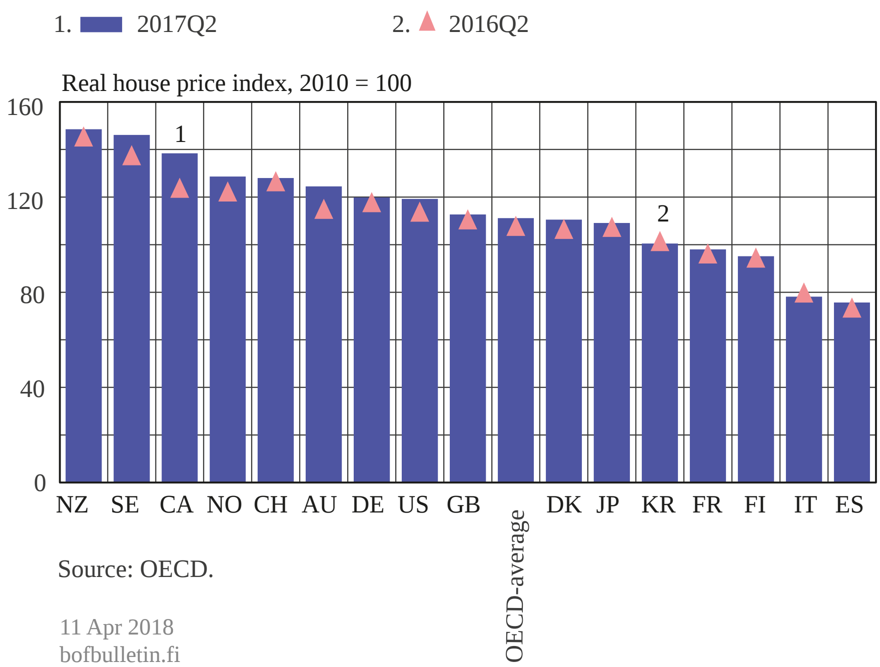


The growth of consumer credit in the euro area is part of a larger global phenomenon. Changing consumer behaviour and the digitalisation of financial markets have provided consumers with broader and less restricted access to credit. A variety of entities have entered the market and operate alongside traditional banks, including bank-owned finance companies, special credit institutions, auto finance and leasing companies, quick loan providers and a growing amount of small entities who specialise in peer-to-peer lending. The rapid growth of consumer credit has also piqued the interest of institutional investors, most notably in the United States, where the securitisation of consumer credit (e.g. car loans, card loans and unsecured consumer loans) has increased in recent years. The risk is that the rapid expansion of consumer credit and proliferation of aggressive advertising made possible by the digital operating models will not only increase household indebtedness but also the undesirable secondary effects of credit growth, such as payment defaults. Most vulnerable are households whose loan servicing abilities are weak to begin with. These issues risk intensifying especially if the economy suffers a crisis stemming from the housing market. High housing-related indebtedness and diminished debt-servicing capacity may quickly erode households' levels of consumption, arresting economic activity even further.

Housing market risk is heightened in largely the same countries where private sector debt is also high. In the advanced economies, house prices have increased most since the financial crisis in New Zealand, Australia, Canada, Switzerland, Sweden and Norway (Chart 9). Within the European Union, there are broad regional disparities in the growth pace of house prices. In addition to Sweden, house prices have increased rapidly in the Baltics and in several small EU-countries, such as Austria and Luxemburg, but also for example in Germany.

Chart 9.

Significant growth in Swedish house prices since crisis, even by global comparison



Source: OECD.

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In Sweden, house prices began to decline in late autumn 2017, which has increased concerns of potential disturbances in the Swedish financial system. The realisation of risk in Sweden's housing market could have a broader negative impact on financial stability within the Nordics, due to the strong interlinkage between the real economy and financial markets.[12] For now, the decline of home prices in Sweden has not caused international investors to worry. The decline in Sweden's house prices levelled out in the beginning of the year, but market uncertainty has nevertheless remained at a higher level. For now, Sweden's housing market is being supported by accommodative financing conditions and strong economic growth. While these factors do mitigate the likelihood of a deep market correction, the housing market's vulnerabilities remain significant.

Tags

banks, financial markets, financial stability, housing markets, indebtedness

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12. For more information, see Koskinen, K., Laakkonen, H., Putkuri, H. and Tölö, E., Risks on the Swedish housing market also a cause for concern in other Nordic countries, Bank of Finland Bulletin 2/2018.