

# Most significant international threats to stability relate to securities markets

29 May 2017 – Bank of Finland Bulletin 2/2017 – Financial stability



Helinä Laakkonen  
Head of Division



Kimmo Koskinen  
Senior Economist

Investors' optimism on the financial markets can rapidly turn to risk aversion if global economic or political uncertainty increases. Longer-term risks related to indebtedness and the housing markets are considerable, especially in emerging economies, although the Nordic countries, for example, are also vulnerable. The condition of the banking sector and public finances gives cause for concern particularly in some euro area countries. In addition, uncertainties regarding financial regulation have increased in the United States.



The international financial markets functioned without major disruptions in the first quarter of 2017. Improvement in the growth outlook for the global economy and expectations of an expansionary economic policy in the United States maintained investors' risk appetite. Investors' optimism was visible especially on the stock markets, where the level of volatility (indicating uncertainty) decreased to an exceptionally low level and prices increased, especially in the United States. The increased risk-taking also manifested itself on the corporate bond markets, where the already low risk premia between low-risk and high-risk bonds declined further.

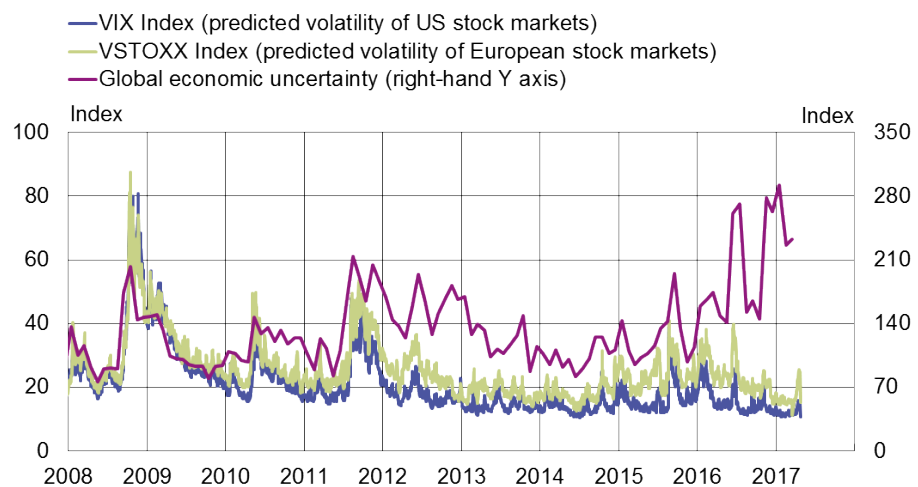
At the start of the second quarter of the year, investors' appetite for risk has been affected

by an increase in geopolitical uncertainty due, for instance, to the situation regarding Syria and North Korea. On the stock markets, expected volatility has increased both in the United States and in Europe. At the same time, demand for safer investment products, such as long-term government bonds, has increased. In the euro area, adding to the uncertainty has also been the French presidential election in April and May, which has increased volatility on the government bond markets as well as the equity and foreign exchange markets.

The Bank of Finland's [recent international forecast](#) suggests the economic growth prospects of the United States, Europe and Japan have improved slightly, but the slowdown in Chinese growth is restraining global growth. The global economy is predicted to continue growing over the next three years at a rate of more than 3%, but the forecast contains downside risks. These risks relate to increased restrictions on international trade, a quicker-than-predicted slowdown in China's debt-led growth and, in certain countries in Europe, the weak condition of the banking sector and the outlook for the public finances. From the point of view of financial stability, there is a risk<sup>[1]</sup> that investors' risk appetite could be considerably weakened if the expectations around US economic policy are not met, the likelihood of downside risks in the real economy actualising increases or geopolitical tensions continue to mount.

Chart 1

### Uncertainty on the equity markets has increased after a calm start to 2017



Sources: CBOE, Bloomberg and Baker, Bloom and Davis (2016).  
25 April 2017  
bofbulletin.fi

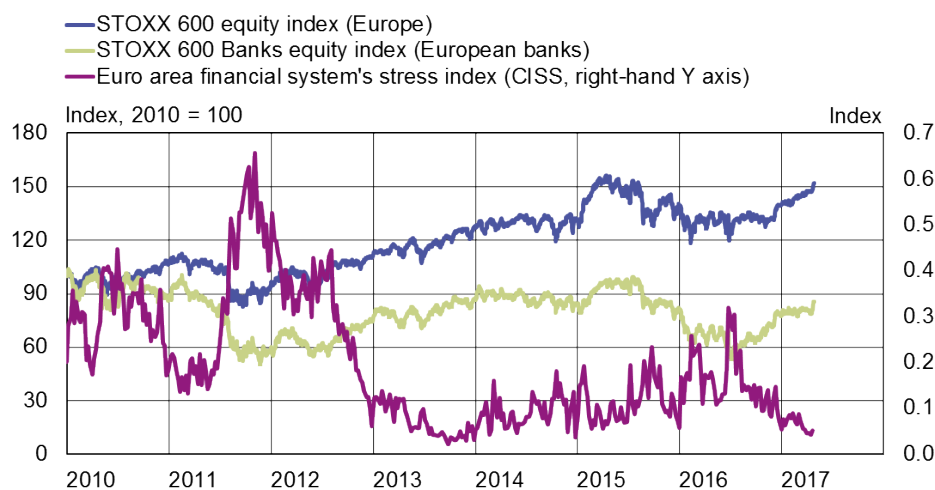
1. Systemic risk means a risk of disruption in the financial system that may have a considerable negative effect on the real economy and prosperity. A financial crisis often emerges as a combination or chain of several vulnerabilities and many triggering factors. Vulnerabilities typically cumulate over a long period of time without the risk materialising. The shock caused by the materialisation of risks and, therefore, the timing of the materialisation of risks is usually very difficult to anticipate. If the vulnerabilities are large enough, even a small shock can trigger a crisis. This article reviews the vulnerabilities in the international financial system and the risks engendered by them. The risks presented are not forecasts; they represent unlikely but possible courses of events that might endanger the stability of the international, and therefore the Finnish, financial system.

## European banks' profitability challenges unchanged

Investors' confidence in European banks has increased in the last six months. A steeper yield curve and an improved economic outlook have raised profitability prospects which, in turn, has increased equity prices in the financial sector globally. There has also been a similar effect from the plans to deregulate the financial sector, especially in the United States. In addition to the increase in equity prices, the CDS (Credit Default Swap) spreads reflecting European banks' credit risk have decreased. Also, the price of market-based funding has stayed low and its availability is good for the majority of banks. In the last year, the various periods of heightened uncertainty on the financial markets have been reflected only in the yields on European banks' riskiest (subordinated) bonds.

Chart 2

### Recovery of European banking shares has decreased stress level in euro area financial system



Sources: Bloomberg and ECB.  
25 April 2017  
bofbulletin.fi

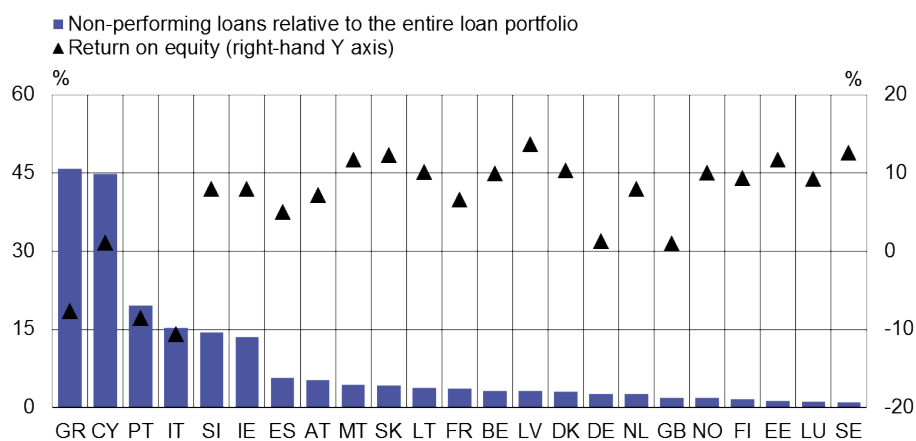
Although investors' confidence has increased, the long-term profitability of banks still entails substantial challenges. According to the European Banking Authority, the return on investment (ROE) for large banks' equity was in the fourth quarter of 2016 on average 3.3%, as opposed to 4.5% in the corresponding period the previous year. Approximately 15% of Europe's large banks in the fourth quarter of 2016 made a negative (or zero) result. Banks' prospects still involve uncertainties, as, according to the EBA's most recent risk survey, fewer than 20% of responding banks expect their profitability to improve in the next 6–12 months (EBA, 2017). Underlying the weak profitability developments have been particularly weak growth in net interest income and fee and commission income as well as various structural problems.

In several euro area countries affected by the debt crisis, banks' profitability is still weakened by large amounts of non-performing loans on their balance sheets as a legacy of the crisis, which hinders their ability to act as financial intermediaries. According to the Single Supervisory Mechanism for European banking (SSM), the large banks in the

euro area have on their balance sheets non-performing loans to a value of EUR 880 billion, which is approximately 8.2% less than a year ago. The amounts of problem loans show large variations between banks and countries. The most significant problems are concentrated in Italian, Portuguese, Greek and Cypriot banks. In Germany, shipping-related non-performing loans afflict particularly banks specialising in corporate finance.

Chart 3

### High levels of non-performing loans burden profitability particularly in the euro area's stressed economies



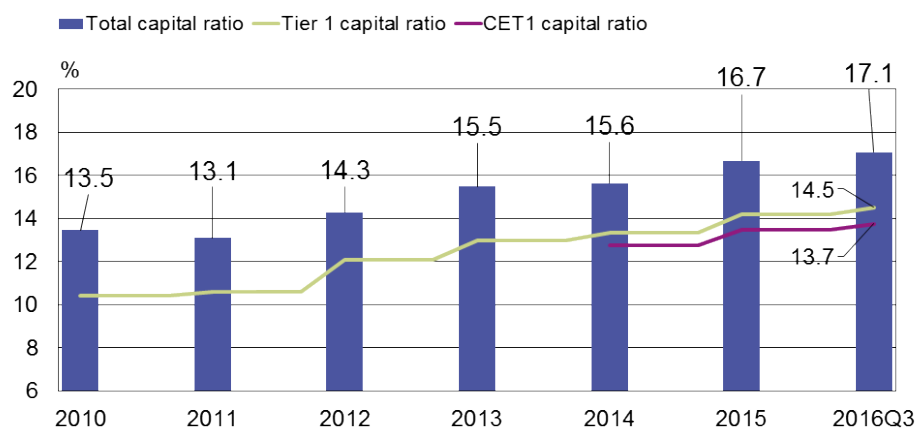
Source: EBA.  
25 April 2017  
bofbulletin.fi

The European banking sector is large compared with the size of the economy, and some of the big countries have many bank branches. In the banking sector, there still exists overcapacity and inefficiency. Also, increased competition for declining revenue weakens banks' profitability. According to the EBA's latest risk survey, approximately 40% of responding banks have sought to alleviate their profitability problem by initiating various cost-cutting and efficiency programmes. Nevertheless, banks' cost/income ratio, which measures inefficiency, remains high in several countries.

Regardless of the profitability challenges, banks' capital adequacy has steadily improved. According to the EBA, European banks' average Tier 1 capital ratio was 15.5% in the fourth quarter of 2016, and it has almost doubled since the financial crisis. Banks' capital adequacy has improved both through increased capital and decreased risk-weighted assets. In addition to improving capital adequacy, banks' financial structure is now more solid than before the financial crisis. Deposits represent a larger share of banks' funding, and market-based funding has a longer maturity. Banks relying heavily on market-based funding – such as various specialised credit banks, investment banks and several Nordic banks – can, however, be susceptible to strong disruptions in market-based funding. A rapid and large increase in risk premia might have a negative effect on banks' ability to raise capital on the international finance markets and increase the price of capital at the same time as it would weaken the valuations of bonds held by banks and bring down income from fees and commissions. For instance, in the Nordic countries attempts have been made to lower banks' refinancing risks by, among other things, increasing the size of the liquidity buffer requirement.

Chart 4

### Improving capital base enhances banks' risk-bearing ability in the euro area



Source: ECB.  
25 April 2017  
bofbulletin.fi

## Rising interest rates may cause losses for investors who emphasise safety

The sustained period of slow economic growth and low inflation in the major economic regions has depressed the general rates of interest.<sup>[2]</sup> In order to gain any interest income, investors have had to accept a higher risk on the bond markets, and increased demand has decreased the credit and interest rate risk premia between low-risk and high-risk bonds. This has, in turn, encouraged companies and governments to issue bonds with longer maturities. For example, in 2016 in the euro area there were bonds exceeding EUR 1 billion issued with considerably longer than normal maturities, such as Austria's 70-year and Italy's, Spain's, Belgium's and France's 50-year government bonds.

Bonds with longer maturities are a good thing for the stability of the financial system, as they decrease the risk that comes with refinancing loans while interest rates are rising. At the same time, however, they increase investors' interest rate risk. Due to the non-linear dependency between the price and the interest rate of a bond, the bond's value is more susceptible to interest rate changes when interest rates are low. As a result, even relatively minor changes in the rate of interest may cause large changes in values, particularly in long-maturity bonds. Rising interest rates can, therefore, cause valuation losses, particularly in portfolios weighted towards long-term government bonds, such as are typical of banks, insurance companies and pension insurers.<sup>[3]</sup>

2. Domanski et al. (2017) note that the very compressed interest rates on safe long-term government bonds might also be the result of long-term investors' (such as pension funds and life insurance companies) short-term risk management measures. As long-term interest rates decline, the maturity of liabilities on insurance companies' balance sheets increases faster than the maturity of assets. In order to compensate for the consequent maturity gap, insurance companies must add longer-term bonds to their portfolios. When interest rates come down, demand for long-term government bonds increases and the insurer's demand curve slopes upward: higher price increases demand. This can lead to a negative spiral and a further decline in interest rates.

Valuation losses are not, however, determined directly by the amount of bonds held; their scale is affected by when the bonds were acquired, how they are valued on the balance sheet and how interest rate risk has been hedged against, for example by using derivatives. In addition, rising interest rates also have positive effects, for instance on banks' and insurers' profit-making ability and on return from future investments, a factor that compensates for the possible valuation losses on fixed-income investments.

Expectations of a rise in interest rates may also affect stock market valuation levels more broadly. An increase in the interest rates on government bonds can increase the yield on the riskiest corporate bonds as they are generally priced at a premium on top of the government bond yield. The relative popularity of equities and other riskier securities, or market areas, as investments can also suffer when returns on lower risk investments rise. The danger is that changing expectations of forthcoming interest rates can lead to widespread changes in investors' portfolio allocations and, through this, increased uncertainty on the financial markets. To date, the rapid rise of the interest rates on long-term government bonds, for example in the United States, has not, however, led to this. This might be explained, among other things, by the fact that the use of government bonds as collateral for various market operations, and restrictions imposed by regulation on some finance operators' investments, sustain their demand even in changing market conditions. As interest rates rise, the demand for the riskier end of securities, such as equities and corporate bonds, is bolstered by the lowering credit risks that come with improving economic growth.

## **Vulnerabilities related to debt and property markets are in some places considerable**

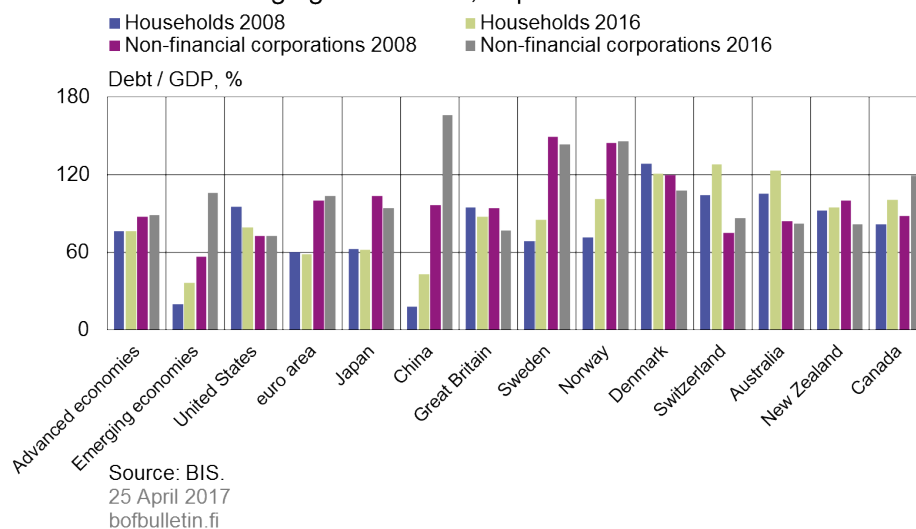
Private sector indebtedness and property market overheating are, from the point of view of financial stability, the most dangerous long-term vulnerabilities (Tölö et al., 2017). The considerable tightening of financial sector regulation following the financial crisis and the high level of debt in both private and public sectors inherited from the financial crises have restrained debt levels in several developed economies. At the same time, however, vulnerabilities have grown in countries that avoided the financial crisis. The increase in private sector indebtedness after the financial crisis has been rapid particularly in emerging economies, in which corporate debt relative to GDP on an aggregate level has risen above the level of the developed economies. The rate of increase in indebtedness has been particularly fast in China, where the level of debt is also exceptionally high, especially in the corporate sector.

Chart 5

---

3. Banks', insurers' and pension funds' ability to bear risk is regularly tested with stress tests.

## Private sector indebtedness has increased since the financial crisis in emerging economies, in particular



Tightening of monetary policy in the United States can tighten financial conditions also outside the United States, as debtors outside the United States hold dollar-denominated debt totalling USD 10.5 billion. Approximately a third of this is held by debtors in emerging economies. The proportion of dollar-denominated debt is high especially in emerging economies' bond debt. According to BIS's estimate, on average 33% of government bonds and 57% of corporate bonds are dollar-denominated, but of all corporate debt the dollar share is high in only a few countries.

It is challenging to analyse the risks caused by dollar debt due, among other factors, to the incompleteness of the statistics.<sup>[4]</sup> Furthermore, the amount of dollar-denominated debt does not in itself show the level of risk, as it is affected by the level of overall debt and other vulnerabilities as well as hedges taken against the risks of dollar-denominated debt on which there is no statistical information. The danger is, however, that as the dollar strengthens and dollar interest rates rise, the costs of servicing USD debt increase and its availability weakens, in which case the risks related to refinancing debt will grow.

The strengthening of the dollar and the rise of dollar interest rates also escalates the costs of banks' own dollar funding and can weaken banks' ability to offer dollar-denominated financing and currency hedging products to investors, debtors and each other (Avdjiev et al., 2016). Since the maturity of currency hedging products is for cost reasons generally shorter than the maturity of the underlying object, a rise of currency hedging costs will have an immediate effect on debtors' debt servicing costs even though the debts in themselves are long-term. The increase in the cost of currency hedging can also weaken dollar-denominated investments' attractiveness from the investors' point of view and thereby reduce the supply of dollar-denominated finance.

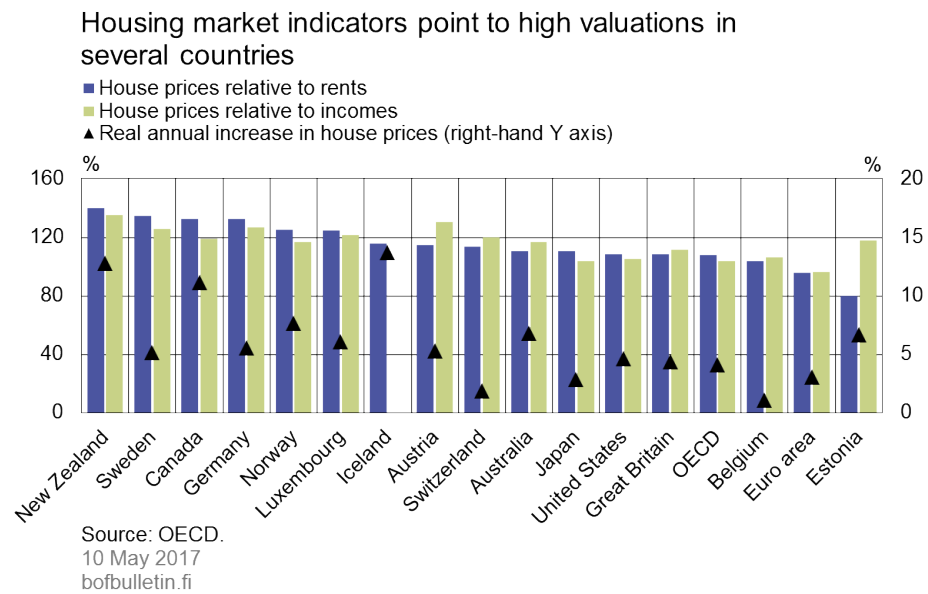
The high level of indebtedness in the private sector creates a vulnerability in financial

4. The BIS has long endeavoured to consistently analyse the significance of the US dollar and the vulnerabilities it creates in the international financial system. See, for example, Chui et al., (2014); McCauley et al., (2015); Borio et al., (2016); Shin (2016).



stability also in many developed economies, such as the Nordic countries. The Nordic banking system is very centralised, interlinked and highly dependent on international funding. The Nordic countries' highly solvent banks and states are among the safest investments, but the notion of a stable system may change if vulnerabilities continue to grow. In several countries with a high level of debt, there are also signs of overvaluation on the property markets, which is measured, for example, by comparing house prices to rents or household incomes. The European Systemic Risk Board (ESRB) issued a warning last autumn<sup>[5]</sup> on vulnerabilities related to property markets and household debt to eight EU countries (Austria, Belgium, the Netherlands, Luxembourg, Denmark, Finland, Sweden and the United Kingdom).

Chart 6



A high level of vulnerabilities does not necessarily always lead to a financial crisis, this being influenced also by the magnitude of the shock, i.e. the rate at which vulnerabilities unravel, and the financial system's risk-bearing capacity. In most advanced economies, in which debt-related and property market-related vulnerabilities are elevated, the banking sector is highly solvent and government finances are in good order. Additionally, the vulnerabilities related to debt have been identified and steps have been taken to restrain them via macroprudential policy.

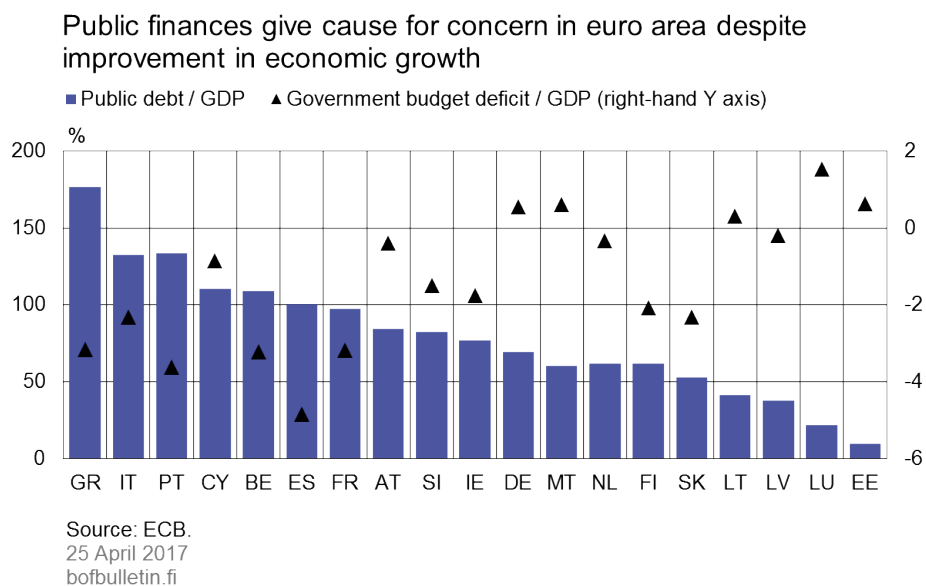
In the euro area, the condition of the public finances causes concern regardless of the improvement in the real economy. Public debt is declining only slowly in the euro area. Of the big countries in the area, only Germany's public sector debt is expected to come down substantially, whereas in France, Italy and Spain public debt in proportion to GDP will stay roughly unaltered. The situation is the most challenging in those countries that suffered during the debt crisis and in which economic growth remains weak and vulnerabilities in the banking sector are large. European bond markets are also

5. 'Warnings on medium-term vulnerabilities in the residential real estate sector', ESRB, September 2016. The cause of the warning given to Finland was high household debt rather than overheating of property prices.



overshadowed by the political uncertainty caused by Britain's exit from the European Union and a busy election year.<sup>[6]</sup>

Chart 7



## Deregulating financial sector would increase long-term risks

In the United States, some representatives of the administration and the Republican Party have stated, amongst other things, that the ability of United States' banks to offer loans is hampered by over-regulation and have criticised the Dodd-Frank legislation that governs the United States' banking system. February's Presidential Executive Order<sup>[7]</sup> emphasises, among other things, the need to avoid bailing out financial institutions with taxpayers' money and the need to look after US interests in negotiations on regulation of the international financial system.

It is still too early to estimate how regulation in the United States will change and what effects any changes may have in the long term. Easing of regulation or de-regulation will not in itself lead to a financial crisis but can lead to a weakening of banks' and other financial institutions' capacity to bear risk and an increase in vulnerabilities through increased risk-taking. The regulatory uncertainty in the United States could also have an effect on, for example, the Basel Committee on Banking Supervision negotiations to finalise the international Basel III recommendations on banks' solvency regulations.

6. Laakkonen et al. (2014) note that in addition to the economic situation in a country, its credit rating is also affected by the functionality of the administration and its decision-making ability. The study measured decision-making ability by an index measuring the rate of concentration of ministerial posts in the government and found that the wider the party base of a government, the more negative the effect on the credit rating.

7. 'Presidential Executive Order on Core Principles for Regulating the United States Financial System', White House, 3 February 2017.

## Sources

Avdjiev, S., Du, W., Koch, C., ja Shin, H., (2016) ‘The dollar, bank leverage and the deviation from covered interest parity’. BIS Working Papers, no 592.

Baker, S, Bloom, N., Davis, S, (2016) ‘Measuring Economic Policy Uncertainty’ The Quarterly Journal of Economics 131, 1593–1636.

Borio, McCauley, McGuire and Sushko (2016) ‘Covered interest parity lost: understanding the cross-currency basis’. BIS Quarterly Review, September 2016.

Chui, Fender and Sushko (2014) “Risks related to EME corporate balance sheets: the role of leverage and currency mismatch”, BIS Quarterly Review, September 2014.

Domanski, Shin and Sushko (2017) ‘The hunt for duration: not waving but drowning?’ IMF Economic Review, March 2017, 1–41.

EBA (2017) ‘Risk Assessment Questionnaire – Summary of Results’. December 2016.

Laakkonen, Lahtinen and Härmälä (2014) ‘Mistä on valtioiden luottoluokitukset tehty?’ (*What are sovereign credit ratings derived from?*) BoF Online 3/2014, Bank of Finland.

Lombardi, Mohanty and Shim (2017) ‘The real effects of household debt in the short and long run’. BIS Working Papers No 607.

McCauley, McGuire and Sushko, (2015) ‘Dollar credit to emerging market economies’. BIS Quarterly Review, December 2015.

Shin (2016) ‘The bank/capital markets nexus goes global’. Talk given at the LSE.

Tölö, Laakkonen and Kalatie ‘Indicators used in setting the countercyclical capital buffer’. International Journal of Central Banking (forthcoming).

## Tags

financial markets, systemic risks, financial system stability, macroprudential policy, banks