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In a prolonged environment of exceptionally low interest rates, the authorities are responsible for ensuring the adequate monitoring of potential vulnerabilities due to low interest rates. Before measures to manage risks can be implemented, the risks must first be identified. Owing to continuous market developments, there is a strong need to update the analysis conducted by the authorities.

Low interest rates may pose a challenge to stability

Macroprudential supervision is conducted by the authorities for the purpose of preventing threats to the financial system as a whole. Macroprudential supervision seeks to safeguard the smooth functioning of financial intermediation.

Economic activity in the euro area has been subdued, despite a long period of accommodative monetary policy. The European Central Bank (ECB) has signalled its commitment to accommodative monetary policy over an extended period of time, until achievement of the inflation target (inflation rates below, but close to, 2% over the medium term). The ECB’s exceptionally accommodative monetary policy and non-standard monetary policy measures, such as asset purchases, are indispensable for the euro area economy.

Improved access to finance, via both bank and market lending, supports economic recovery. A rebound in economic growth will also promote the stability of the financial
system. Consequently, monetary policy measures are not in conflict with the objectives of macroprudential policy. However, a policy of maintaining a long period of low interest rates – particularly in combination with ample global liquidity – may also have negative side-effects for the financial markets. The build-up of systemic risks related to such factors needs to be monitored closely.

The way the ECB support measures are allocated is vital for euro area economic recovery. In order for the measures to foster economic growth, they should be focused on underpinning healthy risk-taking and the financing of investments. The vulnerability of the economy will grow if the support measures mainly boost risk-taking on financial markets rather than investments in the real economy, postpone the implementation of necessary reforms and increase moral hazard.

In a protracted period of low interest rates, there is an obvious cause for increased risk-taking on the financial markets: a search for yield. In an environment of ample liquidity, investors look for better returns on their investment assets. Generally, this means investment in riskier investment products offering higher yields than offered by products with lower risk.

There is a danger that, in their investment assessments, investors fail to pay adequate attention to economic fundamentals, while mainly concentrating on yield expectations based on continued price increases, which contributes to an ineffective allocation of capital in the economy. The situation may result in strong increases in asset prices across several different sectors. Clear signs of the search for yield are already visible, as just such demand pressures have e.g. affected yields on lower-quality corporate bonds, causing them to fall to record lows on the market.

Lower bond yields improve e.g. the debt sustainability of non-financial corporations and governments, as funding costs decrease. However, incentives to carry through the necessary structural reforms may diminish in response to lower debt-servicing costs and significantly easier access to finance.

The consequences of such a scenario are negative for a country’s long-term growth prospects: if old problems remain unresolved, the foundations of the economy will not strengthen to support sustainable growth. Despite institutional reforms during the crisis, it has not yet been possible to sever the negative feedback loop between banks and governments. The stability of the financial system is not only tied to economic growth, but also to sovereign debt sustainability.

During a period of low interest rates, many financially weak firms and households are able to service their loans. As soon as interest rates begin to rise, these borrowers may rapidly exceed the limit where they are no longer capable of meeting their obligations. In such a situation, banks’ poor-quality balance sheet items increase, acting as a constraint on their operating capacity amid lower profitability and weaker capital adequacy.

Therefore, in a low interest rate environment, it would be advisable to wind down debt levels, which are still considerable in many places, as a legacy from the financial crisis. Unfortunately, however, we have seen only marginal adjustment of leverage ratios, with a partial resumption of growth in leverage. This type of development may strengthen
further still: sharp increases in asset prices and particularly potential excess growth in valuations have a strong negative impact on stability, as the elevation of asset prices enables an increase in leverage via higher collateral values.[1]

Growth in leveraged investment activity boosts demand and puts pressure on asset valuations to climb even more strongly.

Similar trends were seen in the global financial crisis. In fact, collateral values play an important role in amplifying credit cycles. There is a higher risk of disturbance if the correlations between the price developments of different assets increases, as observed recently. If leverage grows very fast in a low interest rate environment or maintains its already inflated level, an increase in interest rates will very quickly affect debtors via higher debt-servicing costs. Economic recovery could then remain more subdued or more quickly reach its limits.

In the economy, moral hazard refers to risk-taking at the expense of others in such a way that the risk-taking party gets the benefit from successful risk-taking while the others pay most of the costs for unsuccessful risk-taking. In the banking sector, moral hazard may mean greater risk-taking than is beneficial for society. It may be a consequence of expectations regarding public sector bail-outs.

Debt developments need to be monitored closely for the identification of systemic risks, as the worst economic recessions have typically occurred in the wake of strong debt accumulation.[2]

Smooth functioning of financial intermediation as a goal

Well-functioning market funding and low costs support banks’ own funding activity, thereby strengthening their lending capacity. Particularly in Europe, the banking sector’s good capital adequacy and frictionless credit supply are important, as the area’s banks are still key players in the channelling of finance.

Even so, a protracted period of low interest rates also poses challenges to banks. Banks’ net interest income has remained low, and bank profitability is weak in many countries. However, low interest rates and, on the other hand, small differentials between short- and long-term interest rates (a flat yield curve) affect very differently banks with different approaches to interest rate linkage in their lending.

Given that average profitability in banking is still weak in Europe,[3] banks are seeking new sources of income or changing their business activities. Changes in business also reflect increased regulation. In addition, the traditional banking business is challenged by increasing market funding: advantageous funding on the debt market offers some

3. The profitability of the Finnish banking sector is good
non-financial corporations seeking finance a highly important alternative to bank funding.\(^4\) Market funding is not accessible to all non-financial corporations, however.

Along with the traditional banking sector, we are witnessing a very rapid emergence of a number of totally new market participants as providers of finance. Their ability and readiness to deal with risks may, however, be weaker than those of traditional providers.

With a widespread search for yield on the markets and an increasing share of new market participants (such as the shadow banking sector) as lenders, the capacity to assess risks related to loan applicants may deteriorate compared with traditional banking, where customers are often known over a long period of time. Nevertheless, the activity of alternative providers of finance has grown very fast, as the new market participants are able to make use of the benefits of digitalisation, among other things. Admittedly, alternative channels of financing diversify, and bring greater efficiency to, the supply of finance, while also increasing competition. On top of the entry of totally new market participants, the traditional operating environment of banks has been subject to sectoral shifts, with representatives from other sectors, such as insurance companies, offering services traditionally perceived as belonging to the banking sector.

The smooth functioning of financial intermediation is a precondition for the transmission of monetary policy. This is conditional on financial intermediaries maintaining their operational capacity and financial health over the business cycle. In respect of the banking sector, both microprudential supervision (banking supervision) and macroprudential supervision, covering the financial system as a whole, are aimed at achieving this goal.

The financial system is, however, undergoing a major transition, with financing channels offering alternatives to the banking sector growing strongly. This makes it necessary to ensure that the means are in place to strengthen the resilience of alternative providers of finance. Similarly, we must secure the availability of tools that enable containment of credit cycles deriving from the alternative system, whenever necessary.

**Risks must be identified in advance**

A protracted period of low interest rates may create threats to the stability of the financial system via many channels of influence. Given the abundance of potential channels of influence, the first priority for the authorities is to ensure an adequate monitoring of vulnerabilities caused by low interest rates.

Macroprudential policy, examining the operation of the financial system as a whole, needs to be supported by constantly evolving analysis. Conducting the analysis is not unproblematic, as the monitoring of developments in risk-enhancing vulnerabilities is based on information on previous crises and their causes. Even so, the analysis is of great importance for the planning of policy measures: there must be an ability to foresee new vulnerabilities and related risks, which continue to build up and change in response to

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4. Alternative providers of finance and banking sector competition are discussed in greater detail in, among others, the Bank of Finland Bulletin (2/2015) articles *Structural changes in banking have paved the way for shadow banks* and *Major changes underway in European banking sector*. 
the evolution of the financial markets. Policy measures can only be directed at already identified systemic risks.

With a protracted period of low interest rates and an accommodative monetary policy, the possibility of undesirable side effects on financial stability increases. Authorities should be prepared to forestall the related systemic risks. The starting point is to set realistic objectives. Current tools make it most realistic to aim primarily at improvement of the banking sector’s risk resilience. Another important aim is to seek to soften the steepness and depth of credit cycles. Prevention of systemic risks and banking and other financial crises caused by such risks is the primary objective of macroprudential policy, aimed at safeguarding the stability of the financial system as a whole.

Macroprudential supervision should be extended to cover non-banks. However, the EU legislation providing for macroprudential policy is primarily banking regulation, meaning that the development work seen so far has mainly focused on actions concerning the banking sector. The current toolkit is only able to impact on credit cycles emerging within the banking sector. The authorities have no established methods in place for containing credit cycles outside the banking sector. This enables regulatory arbitrage, benefiting non-bank financing. Another factor is the strongly procyclical nature of market funding: funding is available considerably more abundantly and on easier terms and conditions in an economic upswing than in a downswing. Excessive reliance on frictionless access to market funding may thus expose the system to a liquidity crunch, i.e. a tightening in the availability of finance.

For this reason, efforts are under way to broaden the scope of macroprudential supervision and its toolkit so as to include the non-bank financial system. At EU level, the European Systemic Risk Board is currently working on the development of legislation supporting this aim. With regard to the extension of regulation and the policy toolkit, however, we must accept the fact that not everything can, or should, be controlled by more regulation. The broadening should be prioritised with care. Rather than increasing regulation, more attention should be devoted to creating incentives conducive to stability.

Macroprudential stability requires a national, but also a euro area perspective. Macroprudential policy mainly consists of activity by national authorities, which is warranted considering the structure of the banking system, in particular. However, potential threats that the authorities want to address may also be of a cross-border nature, and especially so when actualised. This is particularly striking in the shadow banking sector.

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5. According to Thakor (2014), a healthier bank pre-crisis can better provide credit during a crisis than a capital-constrained bank. This is also the premise on which the objective of countercyclical macroprudential policy is based. The banking sector’s capital adequacy is strengthened during an economic upswing in order to ensure less restrictive lending in a recession. This smooths out the booms and busts of the financial cycle. See Thakor, Anjan V. (2014) Bank capital and financial stability: An economic tradeoff or Faustian bargain. Annual Review of Financial Economics, vol. 6.

6. Regulatory arbitrage is reflected in the banking system particularly as circumvention of capital adequacy regulation by making use of artificial arrangements and gaps in the regulatory framework. Regulatory arbitrage is here understood to mean the transfer of a regulated institution’s operations beyond the reach of regulation.
Along with single banking supervision within the banking union, the European Central Bank was also given a mandate in macroprudential policy. The ECB can impose more – but not less – stringent requirements than the actions taken at national level on the basis of EU legislation. The purpose of these asymmetric powers is to prevent passiveness (inaction bias) in the pursuit of macroprudential policy by national policy-makers, as the deployment of macroprudential instruments is unpopular and tends to meet with opposition. In the euro area, the ultimate responsibility for macroprudential policy is thus conferred on the Governing Council of the ECB. This has the advantage of national analysis being complemented with independent ECB analysis and the euro area as a whole being reflected in policy actions.

However, legislators in various countries have adopted partially different tools for implementing their respective macroprudential policies. Common EU legislation has been interpreted and implemented in part differently across Member States. Additional EU legislation would be required to ensure consistency in the implementation of macroprudential policy across the euro area.

The primary macroprudential tools available to the authorities are either those enshrined in EU\textsuperscript{[8]} legislation or separately defined in national laws for macroprudential policy. Instruments strengthening banks’ risk resilience mainly comprise capital buffers, which have a broad-based impact but include delays in implementation.\textsuperscript{[9]} Sectoral capital requirements (for example higher risk weights), which also improve banks’ resilience, are more precise tools, especially if targeted at housing loans or other mortgage-backed lending.\textsuperscript{[10]} Instruments impacting directly on loan demand can be effective quickly if included in national legislation, but are typically targeted at new loans rather than the loan stock. In addition, authorities have the option of setting liquidity requirements for banks.

As a secondary option, softer actions may be taken, such as issuance of recommendations, influencing via communication or using institution-specific supervisory tools, especially Pillar 2 measures.\textsuperscript{[11]} These actions enable the strengthening of banks’ risk resilience, thus supporting macroprudential policy, but they are institution-specific and not generally made public. (For these reasons, such measures should not be applied as a first option.) Stress tests – in this connection particularly

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7. The frequently cited term ‘shadow banking sector’ is not particularly well-chosen. It means financial intermediation outside the banking sector. Shadow banks are not necessarily shadier than banks.
8. See EU Capital Requirements Regulation and Directive.
9. These additional capital requirements include the capital conservation buffer requirement, the countercyclical capital buffer requirement, the requirements set on the basis of global and national systemic importance (G-SII and O-SII) and the systemic risk buffer requirement. Each additional capital requirement strengthens banks’ risk resilience, but the justifications for their activation differ.
10. Risk weights help to establish each bank’s minimum own funds relative to lending, ensuring a bank’s ability to cover the related credit risk. For example, some Nordic countries have set higher risk weights on mortgage-backed lending (see the article ‘Housing loan risk weights affect banks’ capital adequacy’, Bank of Finland Bulletin 2/2015).
11. Pillar 2 is an annual supervisory review process in which the supervisor may impose discretionary bank-specific additional capital requirements. It is incorporated into the global regulatory framework (Basel 3) established by the Basel Committee on Banking Supervision. Pillar 1 of the framework includes minimum capital requirements and Pillar 3 disclosure requirements.
regarding interest rate risk (vis-à-vis either borrowers or lenders) – are macroprudential tools if they include requirements to remedy the shortcomings detected in the tests.

**Macroprudential policy does not operate in a vacuum**

Macroprudential policy is a complement to monetary policy and operates together with other economic policy segments. The operating environment of macroprudential policy is better when the actions run parallel with those of the other economic policy segments. For example, in the case of a systemic crisis, an easing of both monetary policy and macroprudential policy – or similarly, in the case of an accelerating credit cycle, a tightening of both policies – is mutually supportive.

An easing of monetary policy and a tightening of macroprudential policy at the same time is not unproblematic. Financial regulation is exposed to regulatory circumvention. Financial markets are dynamic and their institutions are innovative in developing new products and making use of regulatory arbitrage. It may well be that the stronger the macroprudential measures, the greater the incentives to circumvent them. The costs may rise so high that they lead to new problems difficult to foresee in advance. For example, the financial sector can move operations to the shadow banking sector, outside the regulatory perimeter.

It is harder to circumvent and bypass monetary policy measures. Monetary policy is a blunt tool, it hits all, but is thus also omnipresent. In contrast, macroprudential measures can have a more specific focus. As the relevant analysis becomes more sophisticated, macroprudential measures can be targeted at those segments of the financial system where the analysis finds a build-up of systemic risks. With an accumulation of experience and research literature, macroprudential policy is expected to reduce the need for monetary policy to concentrate on financial stability during normal times. If banks are required to proactively hold additional levels of capital and prepare for liquidity problems, the need to use monetary policy for dealing with post-crisis management will diminish. In the case of systemic crises, however, it is likely for monetary policy to be required to take account of financial stability for the purpose of maintaining the monetary policy transmission mechanism and mitigating liquidity problems. Monetary policy and macroprudential policy will then run parallel with each other.\[^{12}\]

If monetary policy is unable to temper national credit cycles, for example, in a monetary union where monetary policy designed for the area as a whole may be non-optimal – too relaxed or too tight – for an individual country, macroprudential policy needs to take this limitation of monetary policy into account. For this reason, the development of macroprudential policy is seen as being of particular importance for the euro area.\[^{13}\]

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Tags

- financial stability
- macroprudential stability
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- systemic risks
- shadow banks
- stability threats
- leverage

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