

Øystein Olsen: Macroprudential policy and financial stability

Speech by Mr Øystein Olsen, Governor of Norges Bank (Central Bank of Norway), at the meeting of the Norwegian Savings Banks Association, Oslo, 31 October 2013.

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Accompanying charts can be found at the end of the speech: [Charts in pdf-format](#).

Thank you for inviting me to this meeting of the Norwegian Savings Banks Association. It is a pleasure to meet representatives of Norway's many savings banks. As a key element of the financial system, savings banks play an important role in the Norwegian economy.

The financial crisis showed the importance of promoting financial stability. In the wake of the crisis, a number of reforms were introduced in many countries. These efforts have achieved results. Regulations have been tightened and have incorporated a clearer macroprudential perspective. Banks' capital ratios have been raised. There are also initiatives aimed at bolstering the resilience of the financial infrastructure.

I will devote most of my time today to the introduction of the new capital framework in Norway, including a countercyclical buffer requirement, and I will also touch upon the interaction of the buffer with monetary policy. I will conclude by saying a few words about Norges Bank's settlement system, which plays an important role in promoting financial stability.

Chart: Banks play a key role

Why capital regulation?

A well functioning financial market is essential for virtually all other economic activity in a market-based economy. Banks play a key role. Banks channel funds from savers to investors. Banks determine who should be given credit and closely monitor borrowers and their projects. This is a task that would be difficult for small savers to undertake.

By offering customers various kinds of financial products, banks also help to diversify and redistribute risk. This function is essential in a modern market economy. At the same time, experience shows that complex financial structures are a source of increased vulnerability.

Chart: Securitisation resulted in complex and vulnerable structures

Ahead of the financial crisis, there was a proliferation of complex financial products, including residential mortgage-backed securities in the US. In theory, these new products were intended to improve the distribution of risk. Banks' exposure to risk that had been shifted off their balance sheets would be limited. In reality, it turned out differently. Risk was not very well distributed, merely hidden. With so many links in the chain between borrower and saver, the responsibility for monitoring borrowers became highly fragmented.

Good banking is important for a sound and stable economy. Despite thorough credit assessments and close monitoring of borrowers, banks will face unexpected losses. If banks end up with insufficient equity capital following substantial losses in bad times, they will have to tighten lending. This may amplify a downturn, as is currently the case in a number of European countries.

Compared with other enterprises, many banks have limited equity capital. It is often more costly for banks to fund lending with equity capital than with deposits and borrowing from the market. As deposits are readily available to depositors and many deposits are covered by a deposit guarantee, depositors accept a relatively low interest rate. The insurance premium banks pay for the deposit guarantee bears little relation to the risk the bank takes. In addition, since investors can expect that the authorities will come to the aid of banks in distress, they

may be satisfied with a lower return. The result is an underpricing of risk, potentially leading to excessive risk-taking.

Low equity ratios reduce loss-absorbing capacity and, at the same time, strengthen the incentive to take risks. While owners cannot lose more than their equity stake, there is a potential for high returns on the equity they have invested.

To avoid a situation where banks hold inadequate equity capital, banks are subject to capital requirements. Each bank should hold capital in proportion to its risk exposure. This is the basis of microprudential bank regulation.

But even if banks appear to be solid individually, the banking system as a whole may be vulnerable. Banks are exposed to one another and can inflict losses on one another directly. Banks can also suffer substantial losses indirectly if they have shared exposures outside of the banking system. This was clearly evident during the financial crisis. When a bank is forced to sell off assets, they fall in value. This weakens the balance sheets of other banks holding the same type of assets.

Chart: Total credit-to-GDP ratio

Systemic risk also arises from the interaction between the financial system and the real economy. Financial crises tend to occur following a period of mutually reinforcing increases in credit, property prices and demand for goods and services, culminating in a bubble that reaches bursting point. Each individual loan makes a scant contribution to overall risk, but gradually, as debt burdens increase, the economy becomes more vulnerable to shocks. This chart shows that Norway has also experienced periods of especially strong credit growth that have been interrupted by financial crises. The subsequent losses in the real economy have been substantial.

Banking regulation must therefore include a macroprudential perspective. The purpose is to dampen the build-up of systemic risk and ensure that the banking system as a whole is resilient to shocks. In a number of countries, frameworks are now being established for macroprudential regulation, along with efforts to put policy instruments in place.

Preferably, such instruments should focus directly on the sources of systemic risk. This is the principle that is applied when taxes are imposed directly on environmentally hazardous products. In the financial system, however, this is difficult to accomplish in practice. Systemic risk has numerous sources. The financial system and its interaction with the real economy are complex, and problems spread across borders. The financial crisis was a clear reminder of this. New sources and forms of systemic risk may also arise. It is difficult to imagine instruments that can fully prevent financial crises from developing. Yet it is still appropriate to increase banks' resilience to losses when systemic risk increases. This is the primary purpose of the countercyclical capital buffer, which is now being introduced in Norway.

The countercyclical capital buffer

The amendments to the Financial Institutions Act that were approved in summer include a number of new capital adequacy standards. There are new buffer requirements in addition to the minimum Common Equity Tier 1 (CET1) capital ratio requirement. Banks that do not meet the buffer requirements will face restrictions on distributing dividend and paying out bonuses.

Chart: New CET1 capital requirements for Norwegian banks

The capital conservation buffer is permanent and independent of systemic risk. The systemic risk buffer is designed to act as a buffer against more persistent systemic risk and will apply to all Norwegian banks. In addition, the largest banks will be subject to a separate capital buffer requirement. The Norwegian authorities are currently formulating criteria for designating systemically important financial institutions. The countercyclical capital buffer is designed to act as a buffer against systemic risk that varies over time. The buffer rate is to be

assessed each quarter, and will normally be between 0 and 2.5 percent of banks' risk-weighted assets. The requirement will apply to all banks operating in Norway, eventually also branches of foreign banks.

On 4 October, a new regulation relating to the countercyclical capital buffer was approved by the Government. The Ministry of Finance has been tasked with setting the level of the countercyclical capital buffer. Norges Bank has been tasked with preparing a basis for the buffer decision and providing advice to the Ministry of Finance regarding the level of the buffer. In preparing the basis for the buffer decision, Norges Bank will exchange information and assessments with Finanstilsynet.

Since March of this year, Norges Bank has published an assessment of the need for a countercyclical capital buffer in the *Monetary Policy Report* in addition to its monetary policy assessment. Norges Bank will give its first advice on the level of the buffer to the Ministry of Finance in connection with the next *Monetary Policy Report*, to be published at the beginning of December.

Text slide: Criteria for an appropriate countercyclical capital buffer

In line with the purpose of the countercyclical capital buffer, Norges Bank has formulated three criteria for setting an appropriate buffer rate. The buffer should ensure that the resilience of banks is strengthened during an upturn. The buffer requirement should be viewed in the light of other requirements applying to banks, particularly when new requirements are introduced. One of the most important purposes of the capital buffer is to alleviate stress in the financial system.

History shows that the foundation for banking crises is laid during upturns. When financial imbalances build up, this increases the likelihood of substantial losses in the entire banking system. In an environment characterised by large losses, insufficient equity capital may force banks to curtail lending to households and enterprises, amplifying a downturn. Banks should therefore hold larger capital buffers when financial imbalances are building up or have built up.

Financial imbalances, or systemic risk, are difficult to measure. However, there is both empirical and theoretical support for using the credit-to-GDP ratio as one indicator of risk in the financial system. In the first chart I showed today, we saw that financial crises have followed periods of strong credit growth.

Chart: Key indicators

Also indicators other than the credit-to-GDP ratio provide signals regarding systemic risk. We have emphasised in particular developments in house and commercial property prices and the share of banks' wholesale funding.

The chart shows the indicators along with both an estimated trend and a mean.¹ The greater the positive gap above trend and historical mean, the stronger is the signal of vulnerability and imbalances.

Text slide: Section 3 of the Regulation relating to a countercyclical capital buffer

The countercyclical capital buffer is a part of the EU's Capital Requirements Directive (CRD IV). Under CRD IV, national authorities shall take account of other variables in addition to the credit-to-GDP ratio.² The four key indicators are also in line with the new Norwegian regulation, which states that the basis for the buffer decision from Norges Bank "shall contain an overview of the credit-to-GDP ratio and the extent to which it deviates from the long-term

¹ The trend is estimated using a one-sided Hodrick-Prescott filter ($\lambda = 400000$) extended by a forecast. The mean is for the entire period in the chart.

² Articles 135(1)(c) and 136(3)(c) of Directive 2013/36/EU (CRD IV).

trend, as well as other indicators, and Norges Bank's assessment of systemic risk that is building up or has built up over time".

Under the regulation, Norges Bank shall take account of guidance from the European Systemic Risk Board (ESRB). The ESRB is currently working to formulate guidelines for setting the buffer rate. Norges Bank and Finanstilsynet are actively participating in this effort. Once the guidelines are in place, recommendations from the ESRB on methodologies and benchmarks for setting the buffer rate will be included in the basis for the buffer decision.

In line with the recommendations from the Basel Committee on Banking Supervision and the regulatory framework, there should not be a mechanical relationship between developments in the indicators and Norges Bank's advice on the buffer as relationships in the economy are too complex. The advice will always be based on qualified judgement. As we gain experience and insight, indicators and methods can be developed further.

Uncertainty and the need for resilience suggest that the buffer should not be reduced automatically even if there are signs that financial imbalances are receding. In long periods of low bank losses and rising asset prices and credit, banks will normally hold a countercyclical capital buffer.

Banks will be allowed to draw on the buffer in the event of an economic downturn and large bank losses. If the buffer functions as intended, banks will tighten lending to a lesser extent in a downturn. This may mitigate the procyclical effects of tighter bank lending. The four key indicators are not well suited to signalling when the buffer should be reduced. Other information, such as market turbulence and loss prospects for the banking sector, will be more relevant.

The benefits of higher capital requirements for banks must be weighed against any costs the countercyclical capital buffer imposes on the economy. Several analyses, such as those conducted by the Basel Committee on Banking Supervision, suggest that higher capital requirements will not give rise to considerable, permanent economic costs in the longer term.³ In the short term, higher capital requirements may result in somewhat lower growth in credit and overall GDP. Analyses conducted by Norges Bank using Norwegian data find similar patterns.⁴

When credit growth is strong, a higher buffer requirement may restrain the build-up of financial imbalances. But if capital requirements are raised too quickly, the result may be excessive credit tightening. The level of the buffer must therefore be considered in the light of other capital requirements.

Norway could be among the first countries to apply the countercyclical buffer. Growth in credit and in house prices in Norway has been high for a long period, and credit has reached a historical level relative to GDP. In view of this situation, banks must make extra allowance for the risk of an economic setback.

Banks have taken due note of the requirements and are in the process of adjusting to them. Discussions with market participants suggest that an expected countercyclical buffer has been included in banks' long-term adjustments.

³ Basel Committee on Banking Supervision, "An assessment of the long-term economic impact of stronger capital and liquidity requirements", August 2010. <http://www.bis.org/publ/bcbs173.pdf>. For an updated collection of references to studies of the costs and benefits of macroprudential regulation, see Annex 1 in IMF Working Paper WP/13/167, by Arregui et al. "Evaluating the Net Benefits of Macroprudential Policy: A cookbook", July 2013. <http://www.imf.org/external/pubs/cat/longres.aspx?sk=40790.0>.

⁴ For further detail and references, see *Norges Bank Papers 1/2013*.

Capital requirements and monetary policy

The countercyclical capital buffer and the key policy rate are two instruments serving different objectives. The objective of the countercyclical capital buffer is to increase banks' resilience to losses in a downturn. The primary objective of monetary policy is low and stable inflation. The key policy rate is set with a view to keeping inflation close to 2.5 percent over time without triggering excessive fluctuations in output and employment. Monetary policy also seeks to be robust and take into account the risk that financial imbalances in the economy build up.

Even though the objectives differ, both of these instruments work through banks' responses. The level of the countercyclical buffer may therefore affect the conduct of monetary policy. Increased buffer requirements may induce banks to increase their lending margins or restrict access to credit in other ways. Tighter lending growth curbs economic activity and inflation. This suggests, in isolation, a lower key policy rate. Other developments in the economy may amplify or dampen this effect.

Although increasing lending margins in isolation point towards a lower key policy rate, a period of strong economic expansion, with prospects for high inflation and a risk of a build-up of financial imbalances, might indicate that the key policy rate should be raised while at the same time tightening capital requirements for banks. Conversely, in a sharp downturn with higher bank losses, it may be appropriate to reduce both the key policy rate and the countercyclical buffer.

Chart: Credit cycles and business cycles in Norway

Having more economic policy instruments available can make it easier to achieve several objectives at the same time. But the countercyclical capital buffer is not a new stabilisation policy instrument on par with monetary policy. The countercyclical capital buffer is held to lean against the financial cycle, which is longer than a normal business cycle. Economists at the Bank for International Settlements (BIS) find that the average length of the financial cycle in advanced economies is around 16 years.⁵ The length of the business cycle, on the other hand, is 8 years at most. The difference is illustrated in the chart. Twenty years passed from the start of the banking crisis in 1988 to the financial crisis.

Capital adequacy requirements are only one of several factors influencing bank lending margins and rates. And bank lending rates are only one of many factors that are given weight when the key policy rate is set.

Our knowledge and experience of macroprudential regulation is at an early stage. Financial market participants can find ways to circumvent regulation. Taking into account the risk of a build-up of financial imbalances will therefore continue to be one of the criteria for an appropriate interest rate path and an important element of a robust monetary policy framework.

Payment system

Norges Bank's role in monetary policy is laid down in the Norges Bank Act. The Act also assigns responsibility to Norges Bank for promoting an efficient payment system.⁶ The payment system and the systems for settlement of securities and foreign exchange

⁵ Drehmann et al. "Characterising the financial cycle: don't lose sight of the medium term", BIS WP 380, June 2012.

⁶ Section 1 of the Norges Bank Act. In addition, the Payment System Act confers on Norges Bank the responsibility for licensing and supervision of systems for clearing and settlement of interbank money transfers.

transactions are crucial to financial stability. A robust financial system is not only dependent on solid banks. The infrastructure must also be able to withstand shocks.

Large amounts are settled in the payment system every business day. If the system fails, payment flows can be interrupted, with serious consequences for banks, private individuals, the business sector and public administration. Pension and wage payments may be delayed, and businesses may not be paid for goods sold. Problems can spread from one bank to another if one of the banks cannot meet its payment obligations.

Today, payments are largely made by cashless means using deposit money. This places even greater demands on the payment system to function as intended.

Chart: Net settlements at Norges Bank

Norges Bank's system for net settlement of interbank payments is the core of the Norwegian payment system. There are 22 banks that participate directly in net settlements (first-tier banks), while 110 banks participate indirectly (second-tier banks), through a private settlement bank. The two most important private settlement banks in Norway are DNB and Sparebank 1 Midt-Norge.

Second-tier banks, normally small banks, have risk exposure towards their settlement banks. The risk to the payment system as a whole increases when many banks use the same settlement bank.

If a settlement bank encounters difficulties and there are no back-up solutions, there will be a risk of widespread disruption of the payment system. This risk can be reduced through good back-up systems.

Second-tier banks have recently improved their back-up solutions. Most banks have an account at Norges Bank. In the course of 2013, all 106 of the second-tier banks with an account at Norges Bank have submitted authorisations permitting the bank to be moved up automatically to first-tier level if the settlement bank should fail, enabling them if necessary to participate in net settlements at Norges Bank directly at short notice. This makes second-tier banks and the settlement system as a whole less dependent on the private settlement banks. The authorisations have strengthened financial stability.

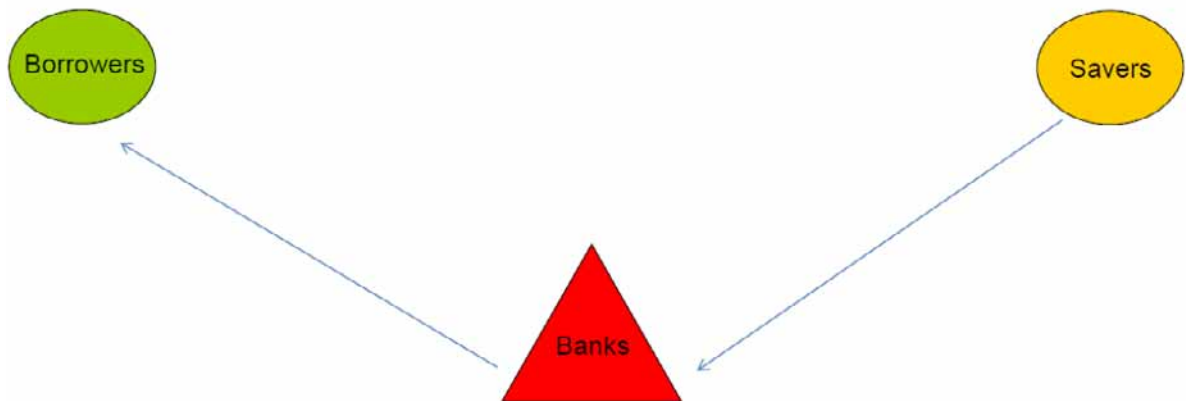
Banks participating directly in net settlements are required to have sufficient cover for their clearing positions. Satisfying this requirement is the banks' own responsibility. They can do this by either depositing funds at Norges Bank or pledging approved securities in favour of Norges Bank. Our analyses show that the great majority of second-tier banks have sufficient liquidity in Norges Bank's settlement system to be able to participate directly in the net settlements. However, clearing positions can vary widely. Banks participating directly in the settlements over time must maintain sound liquidity management.

Conclusion

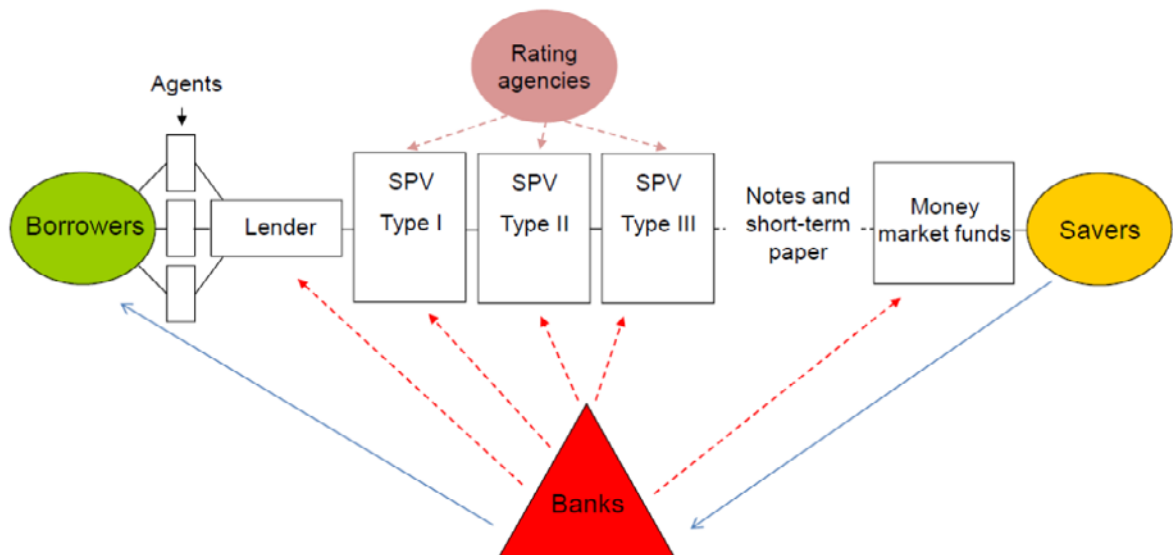
Allow me to conclude by highlighting that new and improved regulation of banks will help to reduce the likelihood of deep financial crises. One important contribution will be to ensure that those who take financial risks on behalf of others hold more capital. However, regulation must not be seen as a panacea for future financial crises. Good banking is essential for a sound and stable economy. Resilient banks are the first line of defence against shocks to the financial system. This is a responsibility I hope and believe Norwegian banks are willing to take.

Thank you for your attention.

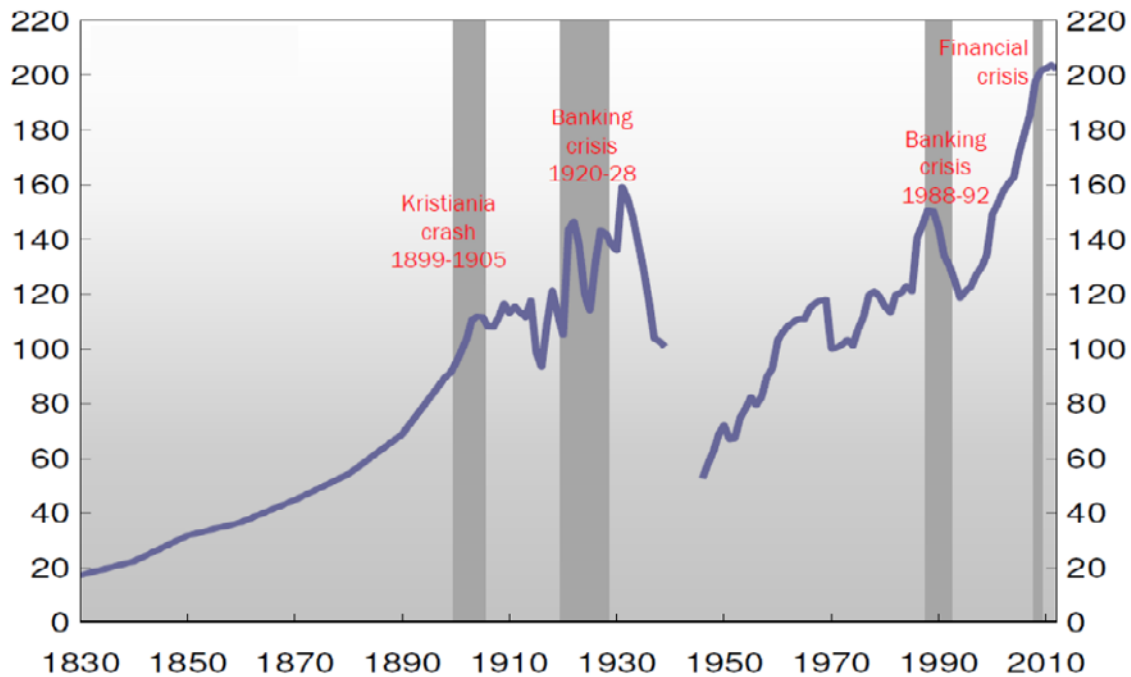
Banks play a key role



Securitisation resulted in complex and vulnerable structures

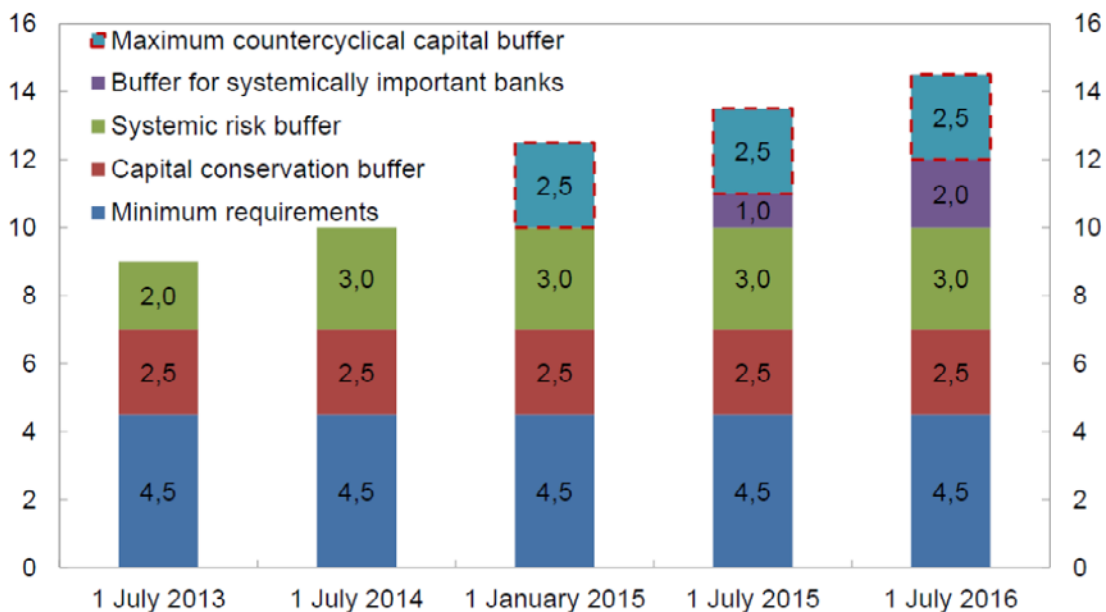


Total credit-to-GDP ratio



Sources: Statistics Norway and Norges Bank

New CET1 capital requirements for Norwegian banks



Sources: Ministry of Finance and Norges Bank

Criteria for an appropriate countercyclical capital buffer

1. Banks should become more resilient during an upturn
2. The size of the buffer should be viewed in the light of other requirements applying to banks
3. Stress in the financial system should be alleviated

Key indicators

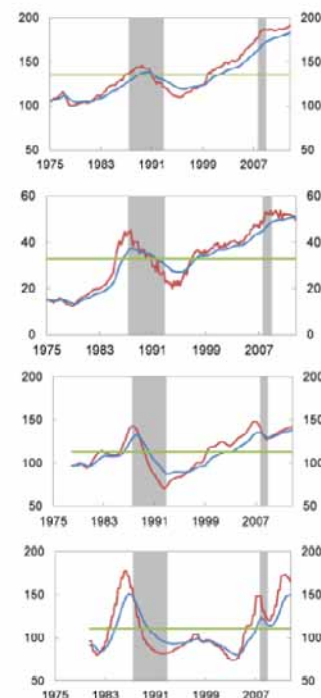
Credit
GDP

Banks' wholesale funding ratio

House prices
Disposable income

Commercial property prices

Indicator Trend Mean Financial crises

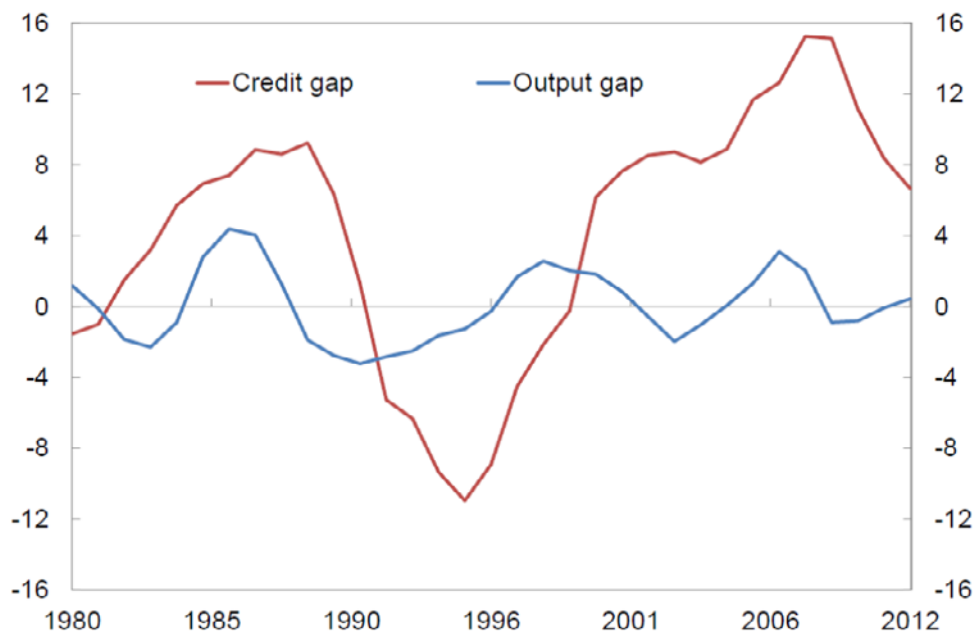


Sources: Statistics Norway, IMF, Norwegian Association of Real Estate Agents (NEF), Association of Real Estate Agency Firms (EFF), Finn.no, Eiendomsverdi, Dagens Næringsliv, OPAK and Norges Bank

Section 3 of the Regulation relating to a countercyclical capital buffer

“[...] The basis for the buffer decision shall contain an overview of the credit-to-GDP ratio and the extent to which it deviates from the long-term trend, as well as other indicators, and Norges Bank’s assessment of systemic risk that is building up or has built up over time.”

Credit cycles and business cycles in Norway



Net settlements at Norges Bank

