

#### Recommendation

# Increase of the countercyclical capital buffer rate

1 October 2019

The Systemic Risk Council, the Council, recommends that the Minister for Industry, Business and Financial Affairs increase the countercyclical capital buffer rate in Denmark from 1.5 per cent to 2.0 per cent from 30 December 2020.<sup>1</sup>

The Council expects to recommend a further increase of the buffer rate by 0.5 percentage point in the 1st quarter of 2020 unless the risk build-up in the financial system slows down considerably. The incremental increases follow the Council's strategy to increase the buffer rate gradually to a level of 2.5 per cent.

The countercyclical capital buffer should contribute to limiting negative effects on the real economy of a future financial crisis. The buffer is to be released if stress occurs in the financial system and there is a risk of severe tightening of lending to households and firms. Therefore, the Council is ready to recommend a reduction of the buffer rate with immediate effect if such a situation occurs.

When the Council finds that the countercyclical capital buffer rate should be changed, it publishes a recommendation addressed to the Minister for Industry, Business and Financial Affairs. The Minister is responsible for setting the buffer rate in Denmark. The Minister is required, within a period of three months, to either comply with the recommendation or present a statement explaining why the recommendation has not been complied with.

# The buffer should be built up before the tide turns

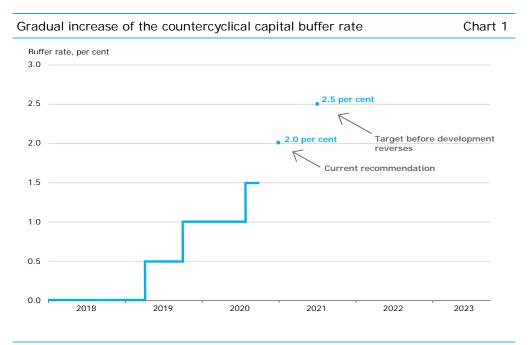
It is still the assessment of the Council that risks are building up in the financial system and that the conditions exist for a further build-up of risk. The Danish economy is still in an upswing, and financial conditions are generally accommodative. The sustained low level of interest rates increases the risk of asset bubbles building up and provides an incentive for increased risk-taking. A few indicators point to slightly weaker development, but the build-up of risk has not slowed down substantially. Hence, the Council pursues its announced strategy to recommend an increase of the buffer rate in this quarter.

The buffer must be built up before financial imbalances grow too large, making the financial sector vulnerable to negative shocks. The buffer can be released if risks materialise and there are signs of a financial crisis. Releasing the buffer aims to prevent the banks and mortgage credit institutions from reducing credit supply due to capital shortfalls.

The buffer must be of a certain size to make a difference when, at some point, it becomes necessary to release it. Consequently, the Council's opinion is that, unless the risk build-up in the financial system slows down considerably, the buffer should be built up to 2.5 per cent. The gradual build-up of the buffer is illustrated in Chart 1.

The buffer rate applies to credit exposures in Denmark. A bank's institution-specific countercyclical buffer rate is a weighted average of the buffer rates in the countries where the bank has credit exposures. The institution-specific buffer is calculated by multiplying the weighted buffer rate by the bank's total risk-weighted exposures. In Denmark, banks, mortgage credit institutions and investment firms are required to maintain a countercyclical capital buffer.

The Council's assessment of the buffer rate is based on an overall assessment of financial system developments. Besides a number of indicators of financial developments, the Council considers other relevant information, including other policy measures and other requirements imposed on the institutions.



Note: The buffer rate is determined by the Minister for Industry, Business and Financial Affairs 12 months in advance.

# Risk build-up in the financial system

The Danish financial system is highly affected by international market developments. Increased risks for the global economy have resulted in stronger fluctuations and uncertainty in the financial markets during 2019. However, risk perception in the financial markets has been very low for many years. Combined with the generally very low interest rate environment, this has led to search for yield and risk-taking among financial companies, both abroad and in Denmark. Market participants expect negative money market interest rates for a long time to come, both in Denmark and in the euro area.

Several large countries' fiscal and monetary policy scope has been limited by high debt and low interest rates. This reduces their opportunities for mitigating the negative effects which may arise should risks materialise. This emphasises the importance of credit institutions (banks and mortgage credit institutions) being resilient against the effects of an international downturn.

The Danish economy is still in an upswing, and asset prices are generally high. Prices in both the housing market and the commercial property market have risen for several years, but the growth rates have flattened since mid-2018. Prices of single-family houses continue to increase moderately. Price growth for owner-occupied flats has slowed down, while the number of sales has declined. Price levels in Copenhagen are, however, still high, supported by the low interest rate environment.

The institutions show signs of higher risk appetite, although overall credit growth is moderate. In general, the institutions have built up considerable capacity for increasing lending, and credit standards have been eased for corporate customers for a prolonged period of time. Increased competition for customers may lead to lower credit quality.

<sup>2</sup> Legislation allows the buffer rate to be set higher than 2.5 per cent if this is warranted by the basis for assessment.

The long period of low interest rates and accommodative financial conditions, combined with the economic upswing, provides a basis for further build-up of credit risk. Risks are amplified by the already high level of total credit.

The indicators in the Council's information basis have been elaborated on in Appendix A.<sup>3</sup> There is no mechanical relationship between the indicators and the buffer rate, given the uncertainty of measuring systemic risk developments, including that historical indicators are not necessarily adequate for indicating future developments. Consequently, the Council's assessment of the buffer rate is based on an overall assessment of the indicators in a longer-term perspective and other relevant information.

The institutions have capital to meet the requirement

With their current capitalisation, the vast majority of the credit institutions will be able to comply with a 2.0 per cent countercyclical buffer requirement. <sup>4</sup> The higher buffer requirement enters into force 12 months after the Minister's announcement of an increase. This gives the institutions one year to meet the requirement.

An increase of the buffer rate by 0.5 percentage point will add kr. 7 billion to the total regulatory equity requirement for Danish institutions. By comparison, earnings totalled kr. 32 billion in 2018, and the sector's excess capital adequacy totalled kr. 100 billion in mid-2019.

As a result of the higher requirement, a larger share of the institutions' balance sheets must be financed by equity. This can be achieved by retaining earnings instead of distributing them as dividends or share buy-backs. In 2018, the institutions' dividends totalled kr. 17 billion and their share buy-backs totalled kr. 10 billion. Earnings always accrue to the shareholders, irrespective of whether they are distributed or retained.

The requirement that the institutions must maintain a countercyclical capital buffer is not a "hard" requirement, meaning that institutions in breach of the requirement will not lose their banking licences. Instead, they will be required to submit a capital conservation plan to the Danish Financial Supervisory Authority, and bonus and dividend payments etc. may also be limited if they fail to comply with the combined capital buffer requirement.<sup>5</sup>

The countercyclical capital buffer was introduced in international regulation after the financial crisis as part of an extensive set of reforms to make the financial sector more resilient. The buffer is applied in 13 other European countries, cf. Appendix B.

### The buffer is to reinforce the institutions' resilience

The countercyclical capital buffer is an instrument for strengthening the resilience of the institutions by increasing their capitalisation in periods when risks are building up in the financial system. The buffer must be built up before financial imbalances grow too large and increase the risk that a negative shock to the financial system leads to a financial crisis.

If financial stress occurs and there is a risk of severe tightening of lending, the buffer can be reduced so that capital is released. In so far as the institutions do not use the released capital for absorbing losses, it may be used for new lending or to maintain their excess capital adequacy. This helps the credit institutions to maintain a suitable level of lending in periods of stress in the financial system.

See also the Council's buffer assessment method at the Council's website <u>www.risikoraad.dk</u>.

<sup>4</sup> The institutions must meet the countercyclical capital buffer requirement with Common Equity Tier 1 capital.

In addition to the countercyclical capital buffer, the combined capital buffer requirement consists of the capital conservation buffer for all institutions and a SIFI buffer for systemically important institutions, SIFIs.

In that way the buffer contributes to limiting the negative effects on the real economy.

In a situation where the Minister decides to release the buffer, this can be done with immediate effect. When the buffer rate is increased, it takes 12 months from the Minister's announcement of the decision until the institutions must comply with it.

The Council's strategy is a gradual phasing-in of the buffer. This makes it easier for the institutions to adapt to the new, higher capital requirements e.g. by retaining earnings. The Council thus expects the potential impact on lending to be limited.<sup>6</sup>

The buffer is primarily an instrument for strengthening the resilience of the credit institutions. It cannot be used as an instrument to manage the business cycle, either in an upswing or in a downturn. The buffer must be released if there is a risk of severe tightening of lending to households and firms, and not necessarily in an economic slowdown.

# Other capital requirements

The Council also includes other policy initiatives in its considerations regarding the countercyclical buffer rate, including the phasing-in of future requirements for the institutions. At mid-2019, the vast majority of the Danish institutions had sufficient capital to meet both the buffer requirements<sup>7</sup> that have been phased in until 2019 and a countercyclical capital buffer of 2.0 per cent in Denmark. The countercyclical capital buffer differs from other buffer requirements in that it can be eased in times of financial stress, whereas the other requirements apply in both good and bad times.

Besides the buffer requirements, the institutions will be subject to other forth-coming requirements, including the requirement that a bank must have a certain volume of capital and debt instruments that can absorb losses in a crisis situation, known as the MREL.<sup>8</sup> The purpose of the MREL differs from the purpose of the countercyclical capital buffer, cf. also Appendix A.

The Danish Financial Supervisory Authority's overall assessment is that the phasing-in of the individual MRELs by 2023 will have little impact on the banks' ability to meet a countercyclical capital buffer requirement of 2.0 per cent. The Danish Financial Supervisory Authority expects the small banks to be able to meet their MRELs via their existing capital base as well as retained earnings, while the large institutions will extensively be able to meet the requirement by issuing MREL instruments.

Another future requirement is a minimum leverage ratio requirement for the institutions, to be met as from 2021 when new EU regulation enters into force. While the buffer is calculated as a ratio of risk-weighted exposures, the leverage ratio is calculated relative to unweighted exposures. The leverage ratio requirement will entail a higher capital requirement than the risk-based minimum requirement for groups with a very large share of assets with very low risk weights, such as mortgage loans. This means that, in a crisis, some systemic groups will not be able to fully use their capital buffers to absorb losses before they breach the minimum leverage requirement.

Danish experience shows that the increased capital requirements introduced under the international post-crisis regulation have not resulted in declining lending, cf. Brian Liltoft Andreasen and Pia Mølgaard, Capital requirements for banks – myths and facts, *Danmarks Nationalbank Analysis*, No. 8, June 2018.

<sup>7</sup> The buffer requirements comprise the capital conservation buffer for all institutions and a SIFI buffer for systemically important financial institutions, SIFIs.

<sup>8</sup> The MREL is a minimum requirement for own funds and eligible liabilities. These own funds and eligible liabilities can absorb losses and recapitalise an institution in a resolution situation.

Among the forthcoming requirements for institutions are the Basel Committee's recommendations for adjustment of the capital requirements, published in December 2017. Their purpose differs from that of the countercyclical capital buffer, cf. Appendix A. The Basel Committee envisages phasing-in of the adjusted requirements from 2022 to 2027. The requirements must be adopted by the EU before they are imposed on Danish institutions.

The Council's recommendation is in compliance with current legislation.

Lars Rohde, Chairman of the Systemic Risk Council

# Statements from the representatives of the ministries on the Council

"Legislation regarding the Systemic Risk Council stipulates that recommendations addressed to the government must include a statement from the representatives of the ministries on the Council. Neither the representatives of the ministries nor the Danish Financial Supervisory Authority have the right to vote on recommendations addressed to the government.

The government notes the Council's recommendation to the government to set the rate of the countercyclical capital buffer at 2 per cent with effect from 30 December 2020. The Minister for Industry, Business and Financial Affairs will announce the government's decision on the rate of the countercyclical capital buffer for the 4th quarter of 2019 as soon as possible."

# Appendix A: Elaboration on the information basis

#### Indicators

The Council includes selected key indicators in its assessment of the buffer rate to capture the build-up of systemic risk at various stages of financial development. Supplementary indicators and other relevant information are also taken into account in the assessment to provide a more detailed picture than that painted by the key indicators.

The early stage of a financial upswing is often characterised by increasing risk appetite among investors. <sup>9</sup> This is reflected in higher asset prices, including prices of residential and commercial properties, and eased credit standards for households and firms. At a later stage, households and firms may increase their debt in the expectation that property prices will continue to rise. This means that some indicators, such as property prices, signal the build-up of systemic risk ahead of other indicators, e.g. lending to households and firms.

The indicators included by the Council in the information basis are outlined below, divided into relevant categories. 10

## Risk perception

The financial stress indicator is at a low level and has been so for a number of years. The last six months have seen more fluctuations and uncertainty in the financial markets.

Risk perception in the financial markets has been very low for some years. At the same time, the level of interest rates and expected returns on traditional investment products have been very low. To compensate for the low expected returns, financial companies have assumed greater risks in the form of more risky lending and investments. Given that monetary policy is set to remain accommodative, this development can be expected to continue, increasing the risk of asset bubbles and systemic risk build up.

#### Real estate market

In the housing market, prices for owner-occupied flats, especially in the larger urban areas, have slowed down since mid-2018. The number of sales has declined recently, but from a high level. However, prices in Copenhagen remain high after several years of strong growth, supported by the very low level of interest rates.

Single-family houses have seen moderate growth in prices and activity during the economic upswing. Growth has spread from the Copenhagen area to the rest of Denmark. Over the last half year, price growth has been lower while trading activity has been stable. House price confidence indicators show expectations of continued house price growth nationwide, but at a slower pace, in future.<sup>11</sup>

Activity and prices in the commercial real estate market remain high despite a flattening in the 1st half of 2019. The required rates of return on rental properties are low, driven by the low level of interest rates and high demand from Danish and foreign investors.

For further details, see the Council's method paper on the countercyclical capital buffer at the Council's website

The categories are described in the Council's method paper on the countercyclical capital buffer, see <a href="https://www.risikoraad.dk">www.risikoraad.dk</a>.

<sup>11</sup> Cf. Nykredits Huspristillid (the Nykredit house price confidence indicator) and Greens Analyseinstitut for dagbladet Børsen (the Green analysis institute for the daily Børsen).

## Credit standards and credit developments

The level of total lending by credit institutions to households and firms is high and has risen moderately since 2015. Lending growth is higher for corporate lending than for lending to households. Moderate lending growth can mask build-up of risk, e.g. if credit quality requirements are eased and new loans are granted to more risky firms.<sup>12</sup>

There are indications that the riskiness of credit extension to the corporate sector has increased since 2013. According to Danmarks Nationalbank's lending survey, the banks have stated that competitor behaviour has contributed to easing of credit standards for corporate customers throughout this period. This is reflected in e.g. low interest rates on new loans.

Every quarter, all EU member states must calculate and publish a "credit-to-GDP gap" and a buffer guide calculated on the basis of the credit-to-GDP gap. The background is that the credit-to-GDP gap has been a good indicator for predicting systemic bank crises across a number of countries in retrospective analyses. However, using the credit-to-GDP gap as an indicator of current credit developments presents a challenge. One of the weaknesses of the indicator is that it relies on a statistically calculated trend that is boosted by the very high lending growth and high level of lending in the pre-crisis years. This results in a highly negative credit-to-GDP gap in Denmark. He credit-to-GDP gap is also negative in several other countries, including in countries with positive countercyclical buffer rates. Due to the challenges of using the credit-to-GDP gap as an indicator of the current credit development, the Council includes various credit development indicators in its assessment.

### Risk build-up in credit institutions

Favourable developments in the financial sector in recent years – together with large deposit surpluses in several institutions – have contributed to the build-up of significant capacity to increase lending among the institutions in general. Combined with limited growth in demand for loans, this has intensified competition for customers. In an environment of optimism and stronger risk appetite, banks might ease credit standards and lower credit quality which could result in losses in an economic downturn.

The institutions' earnings have fallen since 2017, but remain at a high level. The listed institutions still distribute a large share of their earnings to shareholders in the form of dividends and share buy-backs.

### Model-based indicators

Estimates of the financial cycle show that financial developments are on the upswing. Analyses of the financial cycle in Denmark show that the cycle is driven primarily by fluctuations in house prices and lending and that house prices have a tendency to move ahead of lending. <sup>16</sup> The estimates should be interpreted with caution as they do not provide an accurate picture of the current financial cycle. Consequently, the Council applies two different estimates to take model uncertainty into account. In addition, there is uncertainty at the end of the ref-

See notification from the Danish Financial Supervisory Authority, Banker mere risikovillige ved l\u00e4n til virksomhedsk\u00d8b (Banks' risk appetite is higher for lending for company acquisitions), 22 November 2018.

In principle, the buffer guide should function as a common point of departure for when to activate the buffer and the level of the buffer rate. In order to avoid "inaction bias", the credit-to-GDP gap and buffer guide played a key role in international recommendations and legislation on the countercyclical capital buffer. The recommendations and legislation also state that decisions on the buffer rate should not be based only on the buffer guide, but that other quantitative and qualitative information must be included and published. For sources for recommendations and legislation, see the Council's method paper on the countercyclical capital buffer at <a href="www.risikoraad.dk">www.risikoraad.dk</a>.

<sup>14</sup> The buffer guide is currently 0 per cent. According to the mechanical calculation, it will not be positive until the credit-to-GDP gap exceeds 2 percentage points. The credit-to-GDP gap is seen in the chart pack in Chart A4 (right).

See e.g. European Systemic Risk Board, *A Review of Macroprudential Policy in the EU in 2017*, April 2018.

See Oliver Juhler Grinderslev, Paul Lassenius Kramp, Anders Kronborg and Jesper Pedersen, Financial Cycles: What are they and what do they look like in Denmark?, Danmarks Nationalbank Working Paper, No. 115, June 2017.

erence period, i.e. end-point problems. However, the method used reduces this uncertainty. <sup>17</sup>

### Other information

Besides indicators, the Council includes other relevant information in its assessment of the buffer rate, including other policy measures. The purposes of some of the forthcoming requirements differ from that of the countercyclical capital buffer.

The MREL is a minimum requirement for the institutions' own funds and eligible liabilities, to be phased in by 2023 as a main rule. Eligible liabilities can absorb losses and recapitalise an institution in a resolution. The MREL differs significantly from the countercyclical buffer. The purpose of the MREL is to ensure that institutions can be restructured or resolved without the use of government funds, without such resolution having any substantial negative impact on financial stability. This differs from the purpose of the countercyclical capital buffer, which is to make it easier for the credit institutions to maintain a suitable level of lending in periods of stress in the financial system. The buffer should preferably be built up before such a period begins. The MREL may be met using several types of capital and debt instruments, whereas the buffer requirements can be met using Common Equity Tier 1 capital only.

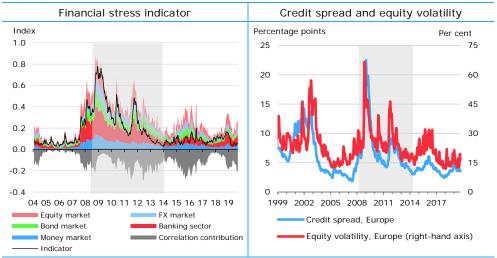
Among the forthcoming requirements for institutions are the Basel Committee's recommendations for adjustment of the capital requirements, published in December 2017. According to the Basel Committee, the purpose is to ensure more harmonised calculation of risk-weighted exposures across countries. The requirements to be adjusted are of a permanent nature, whereas the countercyclical buffer can be reduced when risks materialise. The Basel Committee envisages phasing-in of the adjusted requirements from 2022 to 2027. The requirements must be adopted by the EU before they are imposed on Danish institutions.

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<sup>17</sup> See the addendum on page 54 in Grinderslev et al., Financial Cycles: What are they and what do they look like in Denmark?, Danmarks Nationalbank Working Paper, No. 115, June 2017.

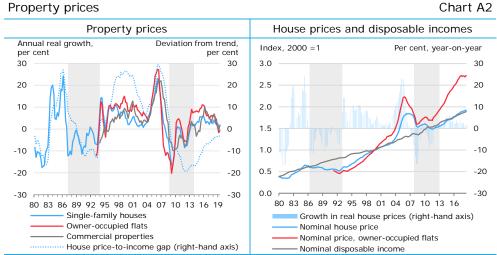
## Chart pack: indicators

Risk perception Chart A1



Note: Grey markings indicate financial crises. 4-week moving averages. The financial stress indicator aggregates the level of stress in five key submarkets/sectors, taking into account that simultaneous stress in several submarkets is a greater challenge to the financial system. A value of 0 indicates very low volatility and strong confidence in the financial system, while a value of 1 indicates that the five submarkets are all extremely dysfunctional and at the same time market participants are nervous. For further details, see the Council's method paper on the countercyclical capital buffer at <a href="https://www.risikoraad.dk">www.risikoraad.dk</a>. The most recent observations are from 22 September 2019.

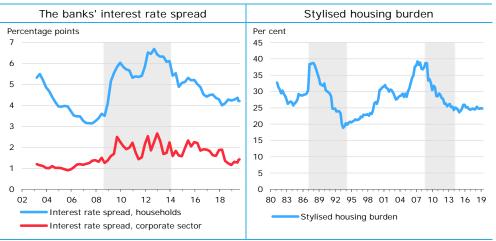
Source: Bloomberg, Nordea Analytics, Thomson Reuters and Danmarks Nationalbank.



Note: Grey markings indicate financial crises. The house price-to-income gap is defined as deviations of the house price-to-disposable-income ratio from its long-term trend (estimated by means of a recursive HP filter, lamb-da = 400,000), the house price being the cash price for a single-family house. For further details, see the Council's method paper on the countercyclical capital buffer at <a href="www.risikoraad.dk">www.risikoraad.dk</a>. The most recent observations are from the 2nd quarter of 2019.

Source: Statistics Denmark, the MONA databank and own calculations

Credit standards Chart A3

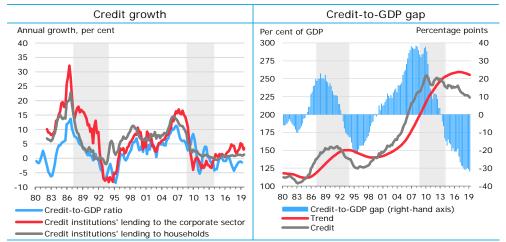


Note: Grey markings indicate financial crises. Left-hand chart: 3-month moving averages. The interest rate spread is defined as the banks' lending rate on new lending, excluding overdrafts, relative to Danmarks National-bank's rate of interest on certificates of deposit (Danmarks Nationalbank's lending rate before 2009). Right-hand chart: The housing burden is a stylised calculation of the financing costs when buying a single-family house as a share of average disposable household income. For further details, see the Council's method paper on the countercyclical capital buffer at <a href="https://www.risikoraad.dk">www.risikoraad.dk</a>. The most recent observations are from August 2019 for the banks' interest rate spread and the 1st quarter of 2019 for the stylised housing burden.

Source: Statistics Denmark, Association of Danish Mortgage Banks, Realkredit Danmark, SKAT (Danish tax authority), Danmarks Nationalbank and own calculations.

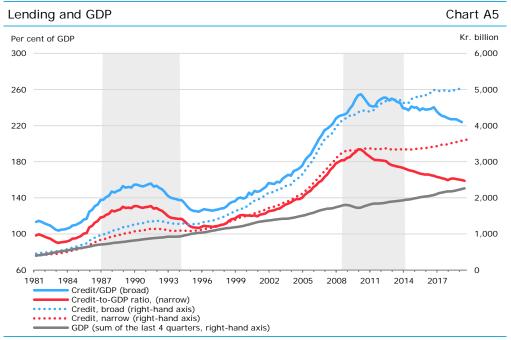
### Credit developments

Chart A4



Note: Grey markings indicate financial crises. Left-hand chart: In credit/GDP, lending is based on a broad definition of credit, while the other two lending series are based on a narrow definition. Right-hand chart: Lending is based on a broad definition of credit and the credit-to-GDP gap is defined as deviations between credit/GDP and a long-term trend (estimated by means of a recursive HP filter, lambda = 400,000). For further details and sources, see the Council's method paper on the countercyclical capital buffer at <a href="https://www.risikoraad.dk">www.risikoraad.dk</a>. The most recent observations are from August 2019 for lending by credit institutions to households and the corporate sector and the 1st quarter of 2019 for credit/GDP and the credit-to-GDP gap.

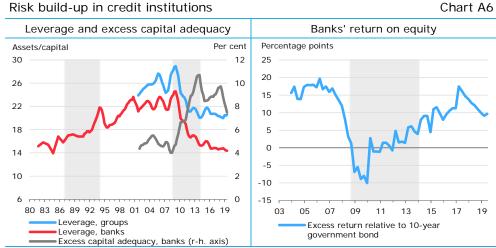
Source: Kim Abildgren, Financial Liberalisation and Credit Dynamics in Denmark in the post-World War II Period, Danmarks Nationalbank Working Paper, No. 47, October 2007, Statistics Denmark, Danmarks Nationalbank, the MONA databank and own calculations.



Note: Grey markings indicate financial crises. For details on the narrow and broad credit definitions, see the Council's method paper on the countercyclical capital buffer at <a href="https://www.risikoraad.dk">www.risikoraad.dk</a>. The most recent observations are from the 1st quarter of 2019 for Credit/GDP (broad) and Credit (broad), the 2nd quarter of 2019 for Credit/GDP (narrow) and GDP and August 2019 for Credit (narrow).

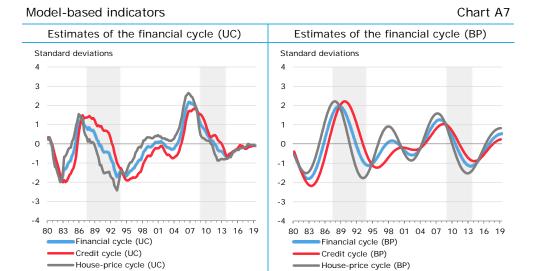
Source: Kim Abildgren, Financial Liberalisation and Credit Dynamics in Denmark in the post-World War II Period,

Danmarks Nationalbank Working Paper, No. 47, October 2007, Statistics Denmark, Danmarks Nationalbank,
the MONA databank.



Note: Grey markings indicate financial crises. *Left-hand chart:* 4-quarter moving averages. The increase in the excess capital adequacy from 2016 to 2017 is partly attributable to Nordea Bank Danmark having been eliminated from the data since the 1st quarter of 2017. *Right-hand chart:* Annualised quarterly data for the banks' return on equity. For further details, see the Council's method paper on the countercyclical capital buffer at <a href="www.risikoraad.dk">www.risikoraad.dk</a>. The most recent observations are from the 2nd quarter of 2019.

Source: Danish Financial Supervisory Authority, Bloomberg and own calculations.



Note: Grey markings indicate financial crises. Deviations from trend. The financial cycle is a simple average of the housing and credit cycles. UC indicates that the cycle has been estimated using an unobserved components model. BP indicates that the cycle has been estimated using a band-pass filter. For details, see Oliver Juhler Grinderslev, Paul Lassenius Kramp, Anders Kronborg and Jesper Pedersen, Financial Cycles: What are they and what do they look like in Denmark?, Danmarks Nationalbank Working Paper, No. 115, June 2017. The most recent observations are from the 1st quarter of 2019.

Source: Danmarks Nationalbank, Statistics Denmark and own calculations.

# **Appendix B: Other countries**

# The countercyclical capital buffer is applied in a number of other countries

The countercyclical capital buffer is applied in 13 other European countries, cf. Chart B1. Each country has its own method for assessing the buffer rate, and the level set depends on the country-specific financial development.

### Foreign institutions must also comply with a Danish buffer

Foreign institutions with credit exposures in Denmark must also comply with the Danish countercyclical capital buffer requirement. Mandatory reciprocity applies to the countercyclical capital buffer up to 2.5 per cent for EU member states. <sup>18</sup> Reciprocity means that relevant authorities in the different countries recognise each other's measures so that the institutions are subject to the same requirements.

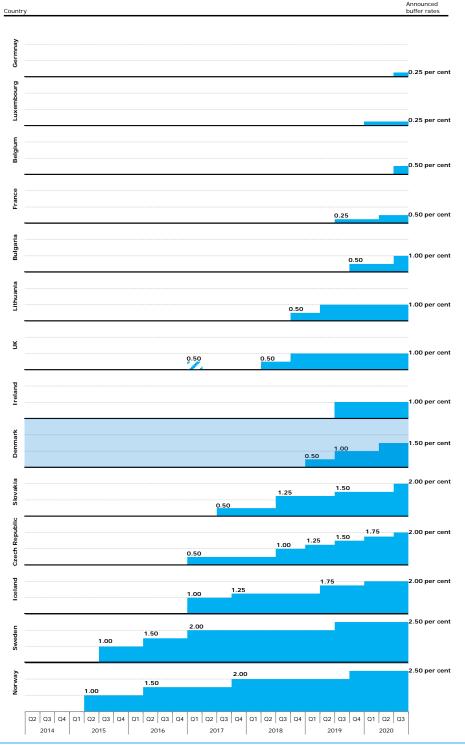
# No negative effects in other countries of a higher buffer in Denmark

According to the European Systemic Risk Board, macroprudential authorities must assess potential cross-border effects of macroprudential measures. The Council's approach to assessing such effects is described in the memorandum *Reciprocation of macroprudential measures* at the Council's website.

In the assessment of the Council, an increase of the countercyclical capital buffer in Denmark to 2.0 per cent will not make Danish institutions change their lending in other countries substantially. This is, inter alia, based on the fact that the largest cross-border exposures are primarily to countries with higher buffer rates than Denmark's, and because the strategy of the relevant institutions does not appear to have been affected by previous changes in the Danish buffer rate.

In general, a macroprudential measure is expected to have positive effects in other countries. A lower risk of systemic risks materialising in Denmark reduces the risk of spill-over effects to other countries exposed to developments in Denmark. However, there may also be negative implications. For example, tighter requirements in Denmark may increase Danish banks' risk-taking in other countries if they want a higher risk profile than permitted in Denmark under the tighter requirement. This may contribute to reducing credit standards and lead to the build-up of risks in other countries if those countries are in an expansion phase.

 $<sup>^{18}</sup>$  The same applies to countries with which the EU has concluded agreements in the financial area.



Note: The UK decision to raise the buffer rate to 0.5 per cent with effect from March 2017 did not take effect, as the buffer rate was reduced to 0 per cent following the outcome of the Brexit referendum in June 2016.

Source: European Systemic Risk Board's website and websites of national macroprudential authorities.