

GROUP OF EXPERTS
ON A MINIMUM LEV-
ERAGE-RATIO RE-
QUIREMENT FOR
CREDIT INSTITU-
TIONS

DECEMBER 2015

This document is an English translation of the original Danish text. In the event of discrepancies between the original Danish text and the English translation, the Danish text shall prevail.

INTRODUCTION

The Group of Experts on a minimum leverage-ratio requirement for credit institutions was appointed in September 2014, based on the political agreement concerning Bank Package 6 of October 2013.

The Group of Experts is tasked with determining its position concerning three overarching questions. First of all, the Group of Experts must assess the need for implementing a minimum leverage-ratio requirement at EU level and, in the event, specify the appropriate level for such a requirement. Secondly, the Group of Experts must assess the need for implementing lower limits for the risk weightings used in the institutions' internal models for the setting of capital adequacy requirements. Finally, the Group of Experts must assess the possible socio-economic consequences arising from the imposition of additional requirements on financial institutions' equity via a minimum leverage-ratio requirement.

In addition, the Group of Experts must consider whether a minimum leverage-ratio requirement should be differentiated, whether it should be provided for by law (pillar I) or by a supervisory authority (pillar II), as well as which sanctions should be triggered by a violation of the minimum leverage-ratio requirement.

The concepts *leverage ratio* and *minimum leverage-ratio requirement* are used in the following. "Leverage ratio" is defined as an institution's Tier 1 capital divided by the institution's non-risk-weighted exposures (e.g. lending). In this context, "minimum leverage-ratio requirement" means the minimum regulated leverage ratio.

The capital adequacy requirements to which the institutions are currently subjected weight exposures according to an assessment of how risky they are. Considerations concerning the introduction of a minimum leverage-ratio requirement at EU level should be seen in the light of the fact that, in 2011, the Basel Committee recommended that a minimum leverage-ratio requirement for financial institutions be implemented from 2018.

It is still not known whether a harmonised minimum leverage-ratio requirement will be implemented at EU level from 2018. The Commission must present a report to the European Parliament and the Council of Ministers no later than the end of 2016 in which the consequences and effects of a minimum leverage-ratio requirement must be elucidated. The Commission may let the report be accompanied by draft legislation for the European Parliament and the Council of Ministers concerning the implementation of a minimum leverage-ratio requirement.

The Group of Experts' work must form the basis of the determination of a Danish position in conjunction with the discussions under the auspices of the EU concerning a harmonised minimum leverage-ratio requirement for financial institutions.

1. SUMMARY AND RECOMMENDATIONS

The Group of Experts on a minimum leverage-ratio requirement for financial institutions is in agreement about a number of recommendations that can form the basis for the Government's position for forthcoming EU negotiations on the implementation of a harmonised minimum leverage-ratio requirement for financial institutions.

Principal recommendations

The Group of Experts recommends the following:

- that risk-based capital adequacy requirements should continue to constitute the backbone of regulatory capital requirements, and that the risk-based capital adequacy requirements should also be those which are binding for the institutions;
- that the Government should accede to a harmonised minimum leverage-ratio requirement at EU level under pillar I of basically 3%;
- that the configuration of the minimum leverage-ratio requirement should take account of special institutions with a particularly safe business model, such as Denmark's mortgage-credit institutions, for instance;
- that the Government should await forthcoming EU negotiations before possibly implementing a minimum leverage-ratio requirement into Danish law;
- that a violation of the minimum leverage-ratio requirement should be sanctioned on the basis of a specific, individual supervisory assessment;
- that the Government should ensure that the Danish FSA can continue to enter into dialogue with institutions deemed to be excessively exposed in terms of leverage. It must be ensured that any supplement to the capital adequacy requirements (pillar II) is risk-based, and not only with the purpose of imposing a simple minimum leverage-ratio requirement that is higher than the fixed 3%;
- that efforts should be made at international level to improve the ability of (internal) risk-assessment models to describe the actual risks of institutions with greater precision.

The Group of Experts advises against the following:

- letting the minimum leverage-ratio requirement vary with the activation of the counter-cyclical risk-based capital buffer;
- differentiating the minimum leverage-ratio requirement according to the systemic importance of the financial institutions.

Background

The Ministry of Business and Growth (2013) (the Rangvid Report) found that the financial crisis in Denmark was generally characterised by relatively high and seemingly tenable economic growth which generated widespread optimism – with an ensuing general underestimation of risks, procyclical financial policy, procyclical regulation of the financial sector, relaxed financial terms, risk-seeking financial institutions and inadequate corporate governance of a number of banks. Thus, the crisis was the result of many interacting factors.

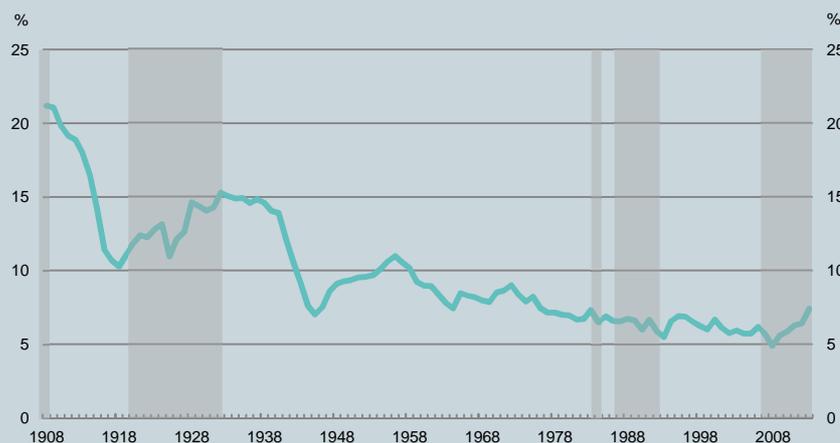
The appointment of a group of experts to examine a minimum leverage-ratio requirement should be seen in the light of the fact that the Rangvid Report found that the regulation of

the capital adequacy area also affected the sector when the crisis emerged. The Rangvid Report specifically indicated that solely basing regulation on either requirements weighting the risk of exposures or on an unweighted capital adequacy requirement could have unintended consequences.

Capitalisation of Denmark's banks

Over the past century, the capitalisation of Denmark's banking sector has fluctuated with a clear tendency towards declining equity as a percentage of the sector's total exposures (leverage ratio). Around 1930, the leverage ratio of the banking sector as a whole was around 15% (see Figure 1.1). From the mid-1970s up until today, the leverage ratio has been around 5–7%. When the financial crisis escalated in 2008, the leverage ratio was around 5%. Thus, the capitalisation of the sector as a whole has sharply declined over time, measured in terms of the combined balance sheet. Part of the explanation for this decline could be modified business models and loan portfolios, as well as changed write-down rules. The general picture of the sector's leverage ratio blurs the significant differences of the individual institutions' leverage ratio. Thus, the biggest (systemically important) institutions generally have the lowest leverage ratio.

Figure 1.1. Banking sector equity as a percentage of the balance sheet (simple leverage ratio), 1908–2013



Note: The figure shows total equity as a percentage of Danish banks' balance sheets. Before 1983, savings and cooperative banks are not included due to insufficient data. Thus, the figure includes commercial banks only. The shaded areas illustrate the periods identified as bank crises. A similar time series is not available for mortgage-credit institutions. The data was gathered by Kraka's financial crisis commission from Statistics Denmark, Statistical Yearbooks. The identified bank crises are from Abildgren et al. (2011).

Source: Kraka (2014) and Abildgren et al. (2011).

The leverage of Danish banks generally increased up to the crisis. The banking sector's leverage has declined since 2008, as banks as a whole have reduced their balance sheets to a certain extent, including reduced lending, and the sector's capital base has been strengthened, also as a result of expectations of higher capital adequacy requirements, market pressure and the vulnerable situation which some financial institutions had put themselves in. A similar picture of banks' leverage trend prevailed during the previous financial crisis in the early 1990s. Mortgage-credit institutions did not deleverage during the recent financial crisis, but on the contrary have kept their leverage levels more or less the same.

There are examples where equity, in relation to both the total balance sheet and risk-weighted assets, had reached a very low level in some of Denmark's biggest financial institutions at the onset of the financial crisis. The Rangvid Report concludes that because Denmark's biggest financial institution, Danske Bank, had made itself vulnerable – as a result of excessively high leverage and other factors – Denmark's financial stability was destabilised. The Group of Experts concurs with the Rangvid Report in finding that some institutions had a low, and insufficient, level of capitalisation in the run-up to the financial crisis. As a result, some institutions needed an infusion of external capital. In the perception of the Group of Experts, well-capitalised financial institutions are a crucial foundation for financial stability and for viable developments in the dissemination of credit, growth and employment. The capital base of a financial institution must be sufficient to enable it to resist (absorb) a loss on the institution's assets, beyond that which is absorbable by the institution's ongoing earnings.

In the view of the Basel Committee, the build-up of excessive leverage by financial institutions is one reason why the international financial crisis occurred. In several instances, financial institutions had built up excessive leverage at the same time that they were reporting a high capital base in relation to risk-weighted exposures. According to the Basel Committee, during the most severe part of the crisis, the market forced financial institutions to deleverage, which led to downward pressure on asset values. According to the Basel Committee, this intensified the negative interplay between the institutions' losses, capitalisation and supply of credit. This had a negative impact on the economy as a whole.

The Group of Experts did not consider whether this description aptly describes the financial crisis in Denmark. It can be ascertained, however, that the financial crisis in Denmark did not lead to a decline in overall lending, in spite of a drastic decline in GDP. Lending has shifted from the banking sector to the mortgage-credit sector since the crisis, however. But the description of the international financial crisis serves as an example of how the risks of a high debt-to-equity ratio can materialise in a stressful situation. It is also noted that the reason it was decided in Denmark to make it possible for solvent banks and mortgage-credit institutions to apply for a state-funded capital injection in 2008–2009 (Bank Package II) largely arose from concerns about an imminent credit crunch. In other words, it was a situation where healthy, creditworthy businesses and households were also unable to borrow money.

With the existing legislation from 2007, based on what is known as the Basel II standards, which were continued in Basel III in 2011, financial institutions may – within a fixed regulatory framework and under supervision – make use of "internal models" for estimating the risk weighting that is included in the specification of their risk-weighted assets to credit risks.¹ The risk-weighted assets are the basis on which the capital adequacy requirement for financial institutions – the solvency need – is determined. The purpose of internal models is to make the capital adequacy requirement more sensitive to risk to ensure that higher risks trigger higher capital adequacy requirements. Currently, six Danish credit institutions² use an internal model for credit risk. All other financial institutions calculate their solvency ratio based on the standard method. With the standard method, risk weightings for the individual exposures are provided for by law. These weightings are identical for all institutions.

From a theoretical financial perspective, it is clear that a capital adequacy requirement ascertained in relation to risk is the correct approach. It makes sense that a low-risk

¹ Legislation also makes it possible to use internal models for market risk and operational risk. Credit risk constitutes the vast majority of total risk in the financial institutions, however, which is why the internal models in this report primarily concern internal ratings-based (IRB) models for credit risk.

² Danske Bank, Nykredit, Nordea Bank Danmark, Jyske Bank, Sydbank and Lån & Spar Bank.

institution does not have to maintain the same volume of capital as a high-risk institution for a given balance-sheet size. Thus – in line with an objective of having a uniform, socially acceptable probability of solvency problems across institutions with differing risk profiles – risk-based capital adequacy requirements should also form the backbone of the capital adequacy requirements stipulated for financial institutions going forward.

The possibility (from 2007) of using internal models meant that institutions which were permitted to use internal models significantly reduced their risk weighting. A transitional rule (the “Basel I floor”), which is still in effect, ensured however that the capital adequacy requirement could at most be reduced by 20%.

Part of the actual reduction of the capital adequacy requirement can be explained by a more precise assessment of the risks inherent in specific exposures. Both the Basel Committee and the European Banking Authority (EBA) also point out that there are also differences in the capitalisation transverse to otherwise uniform institutions, which is due *inter alia* to a certain degree of freedom for the institutions, e.g. in relation to the design of the internal models and as a result of differences in supervisory practice across the Member States.

The risk of excessive leverage juxtaposed with uncertainty about the internal models prompted the Basel Committee to recommend that financial institutions must live up to a minimum leverage-ratio requirement. The minimum leverage-ratio requirement must supplement the existing risk-based capital-adequacy requirement.

The minimum leverage-ratio requirement is too simple to precisely address model-based uncertainties in the internal models. Therefore, the Group of Experts generally assesses that a healthy approach to the assessment of risk in financial institutions and the Danish FSA's supervision continue to be and should be the primary protection against model-based risks in the internal models. In this context it is crucial to have continuous focus on ensuring that the Danish FSA has sufficient expertise to supervise the IRB models.

A minimum leverage-ratio requirement can ensure a minimum equity in the financial institutions

Pros and cons of a minimum leverage-ratio requirement

With internal models, the risk weightings of some assets are determined at a very low level and significantly lower than under the standard method, and this lowers the combined risk-weighted assets and capital adequacy requirement as a result. The possibility, from 2007, of using internal models is assessed as having contributed to the fact that in the lead-up to the financial crisis it was possible for some institutions – measured in terms of the fulfilment of risk-based capital-adequacy requirements – to appear sufficiently capitalised, while being highly leveraged with low equity at the same time. In accordance with the Rangvid Report, the Group of Experts finds that some Danish financial institutions had made themselves vulnerable by having low equity when the financial crisis escalated in the autumn of 2008. In other words, there was great confidence in the fact that the models precisely assessed risks without the requisite respect for the uncertainty related to describing reality by means of statistical models. In some situations, the financial institutions' assessment of risk was overly optimistic in the years leading up to the financial crisis. The optimism was broadly based in society, however, and applied not only to the financial institutions.

It should be noted at the same time, however, that Denmark's banks, which failed and were subsequently resolved, were institutions which used the standard method and had a leverage ratio substantially higher than 3%, which was the Basel Committee's starting

point for a minimum leverage-ratio requirement.³ Some Danish institutions with a low leverage ratio were also significantly challenged by the crisis, however.

The Group of Experts finds that there are certain challenges relating to the use of internal models for estimating risk weightings of institutions' exposure for specifying their capital needs and that there are some challenges to applying a risk-based approach to capital adequacy requirements in practice. Therefore, the Group of Experts deems it positive that the Basel Committee and the EBA are monitoring the use of internal models. The purpose of their efforts is to address the problem of variations in risk-weighted assets which are not attributable to differences in risks, and they have thus primarily focused on rendering the use of internal models more uniform.⁴ The Group of Experts finds that internal models should continue to be a bearing element of the risk management process and are also of the view that, paralleling the effort to render the use of internal models more uniform, an effort should be made to improve the ability of risk-weighting models – and consequently also of standard models – to describe actual risks with greater precision.

The Group of Experts also deems it positive that it has been decided (both in the EU and in Denmark) that financial institutions must already now calculate, announce and take a position on their leverage ratio. This will make it possible to strengthen the market discipline and create greater transparency about leverage levels across financial institutions. It could also be considered whether to take a similar approach to intensifying the focus on capital targets based on market values wherever possible, i.e. for listed companies. The information value inherent in market-value-based equity targets, for instance, is largely ignored in the existing regulation. Some members of the Group of Experts deem this regrettable. The Group of Experts recommends that this approach be clarified in more detail and that the introduction of information requirements for financial institutions' market-value-based leverage ratio at EU level be considered.

In the assessment of the Group of Experts, there are factors which call for the introduction of a minimum leverage-ratio requirement to supplement the risk-based capital adequacy requirements in spite of endeavours to narrow the framework within which the risk-weighted assets are specified. A minimum leverage-ratio requirement can to a certain extent potentially protect against a situation where uncertainty relating to financial institutions' internal models or to the standard model for assessing risks results in the institutions' risk-weightings becoming too low in relation to the actual risk and the institutions' capital base thus becoming unsustainably low. Thus, the minimum leverage-ratio requirement, when combined with the risk-based capital adequacy requirement, serves to protect against excessive leverage and increases the resilience of institutions, including during crises.

The minimum leverage-ratio requirement also has the potential to help ensure that risks are not being underestimated as a result of insufficient data. This is because there is a risk that internal models and risk assessments do not generally take account of unforeseen events which could have widespread systemic consequences, but where the probability of their occurrence is underestimated.

In assessing the minimum leverage-ratio requirement, it is particularly relevant to be aware of how the minimum leverage-ratio requirement interacts with the risk-based capital adequacy requirement, including whether the binding requirement of the institutions' capital during a business cycle is, generally speaking, the risk-based capital adequacy requirement or the minimum leverage-ratio requirement, i.e. which of them imposes a bigger requirement on the institutions' capital base.

³ See p. 287 of the Rangvid Report.

⁴ See e.g. the Basel Committee (2014b).

In the view of the Group of Experts, if the minimum leverage-ratio requirement is too high in relation to the risk-based requirement, this could incentivise financial institutions to include relatively riskier assets on the balance sheet, if the minimum leverage-ratio requirement generally becomes the binding requirement. In such instances, increasing the risk will not directly increase the capital adequacy requirement for the institution, as the associated increase of risk-weighted assets will not affect the minimum leverage-ratio requirement, as the institution must have the same amount of capital regardless of the level of the assets' risk. Such a conversion can potentially make financial institutions more risky and have consequences for financial stability.

Risk-based capital adequacy requirements are disciplined in relation to risk-taking, as they consider the risk of the individual types of assets. Risk-based capital adequacy requirements – including the use of internal models – incentivise the institutions to have expedient risk management and portfolio composition. A minimum leverage-ratio requirement that generally becomes the binding capital adequacy requirement for institutions can weaken the institutions' incentives in this direction.

The Group of Experts assesses that, when weighing the possible advantages of a minimum leverage-ratio requirement against the adverse incentives possibly related to this, having a minimum leverage-ratio requirement as a “backstop” for the risk-based requirement could be a way of ensuring a minimum level of equity in financial institutions, without the possible negative consequences in the form of risk conversion becoming too great.

A key consideration is that the risk-based requirement should generally be the binding requirement. The Group of Experts notes that, in a Danish context, this will be the case in the event that the minimum leverage-ratio requirement is around 3%. Even if a minimum leverage-ratio requirement is not binding for the financial institution overall, it could affect the individual institution's business decisions, however. A minimum leverage-ratio requirement of 3% may seem low, but it is a consequence of the level of the determined risk-based capital adequacy requirements. In this context, the Group of Experts emphasises that, all things being equal, it is possible to improve the leverage ratio by tightening the risk-based capital adequacy requirements instead of having a minimum leverage-ratio requirement.

Economic consequences of tighter requirements for institutions' equity

In the event that a minimum leverage-ratio requirement is implemented for Denmark's institutions, this could mean that some financial institutions would have to raise more capital or deleverage, depending on the level of the requirement. In the event that the risk-based capital adequacy requirement in general is a binding capital adequacy requirement, the need to raise new capital resulting from the implementation of a 3% minimum leverage-ratio requirement is, in the event, expected to be limited, and accordingly the economic consequences of modified capital levels in this situation must also be expected to be limited.

The Group of Experts finds that a requirement for more equity could increase institutions' financing costs to a certain extent. The higher financing costs for more equity could be due, *inter alia*, to the fact that there could be great costs of allowing an SIFI to go bankrupt, which is why there could be an expectation in the market that the state will intervene to save a failing financial institution and indemnify creditors and shareholders against loss. If such implicit state guarantees for financial institutions' outside capital exist, the creditors' required rate of return will not fully reflect the underlying risk of the foreign capital, thus incentivising the financial institutions to reduce their equity financing and increase their leverage.

It is worth noting in this context that after the crisis, financial regulation, particularly the European Union's Bank Recovery and Resolution Directive (BRRD), is focused on reducing implicit state guarantees for banks, including by means of the principle of the write-down of shareholders and creditors' receivables ("bail-in").⁵

Higher financing costs related to more equity can also be due to non-risk-based contributions from banks to depositor guarantee schemes (see Appendix 11).

An adaptation to higher capital levels could curb financial activity if banks implement the adaptation primarily by reducing their assets, e.g. lending, instead of raising their levels of capital. It is in this context, *inter alia*, that the decision by the EU and Denmark to implement a relatively long phase-in period for the new capital adequacy requirements (from 2014 up until 2019) should be seen.

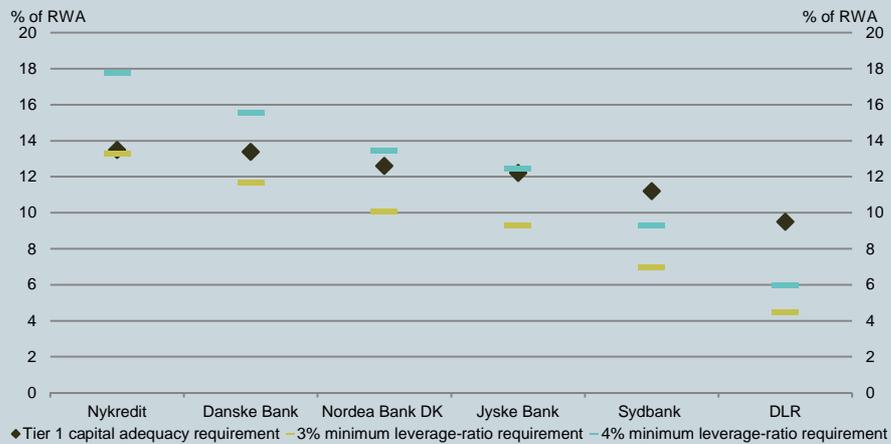
Overall, the Group of Experts finds that the fact that there could be costs incurred by financial institutions for higher capital adequacy requirements is not an argument by itself against a minimum leverage-ratio requirement, as the regard for the economy as a whole of having more equity in banks carries more weight from a regulatory perspective.

Comparison of a minimum leverage-ratio requirement and a risk-based capital adequacy requirement

The point of departure for the Basel Committee is that a minimum leverage-ratio requirement should be set at 3%. When also taking account of a complete phase-in of capital buffers, the risk-based Tier 1 capital requirement is currently tighter than a 3% minimum leverage-ratio requirement for all Danish SIFIs, when the requirements are calculated at group level (see Figure 1.2). For Nykredit, the risk-based capital adequacy requirement is only marginally tighter than a 3% minimum leverage-ratio requirement, however.

⁵ BRRD brings the European regulations into accordance with the underlying principles of Denmark's bank packages, which have been using bail-in as a guiding principle for a number of years.

Figure 1.2. Comparison of a minimum leverage-ratio requirement and a risk-based Tier 1 capital requirement for SIFIs (group level), Q2 2015

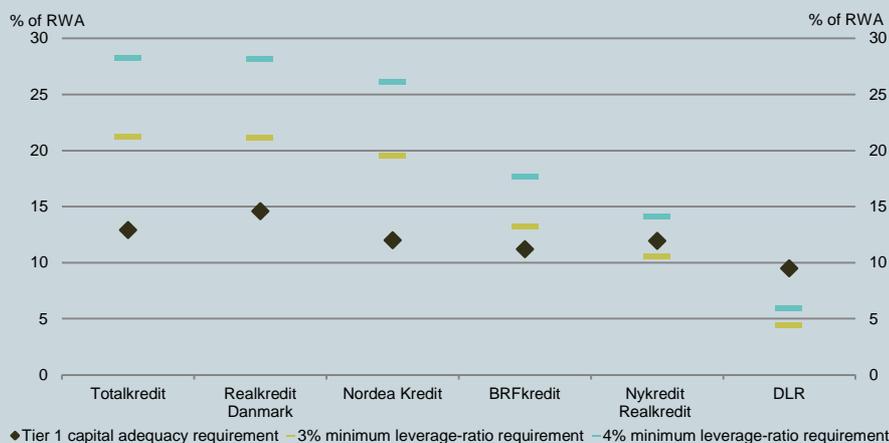


Note: The risk-weighted Tier 1 capital requirement is the sum of a 6% Tier 1 capital requirement, 75% of the solvency supplement at the end of Q2 2015 (in accordance with the executive order on individual solvency supplement, sent for consultation on 30 October 2015), a fully implemented capital preservation buffer, and a fully implemented SIFI buffer. The minimum leverage-ratio requirement is determined against the backdrop of unweighted exposure targets at the end of Q2 2015. The minimum leverage-ratio requirement and the risk-weighted requirement are determined in relation to the risk-weighted assets. The ratio between a risk-based requirement and a minimum leverage-ratio requirement for equity is dynamic and can develop over time. The relationship between these two requirements will depend on developments in the relationship between an institution's exposures to risk and the exposure target, as well as the development in the relationship between the relevant percentage of the risk-based requirement and the minimum leverage-ratio requirement.

At institutional level, a 3% minimum leverage-ratio requirement will mean, however, that the minimum leverage-ratio requirement in four mortgage-credit institutions will actually be higher than the risk-based Tier 1 capital adequacy requirement (see Figure 1.3).

For Danish banks which are not SIFIs, a 3% minimum leverage-ratio requirement will usually not be the binding requirement at present. The risk-based capital adequacy requirement will continue to be the binding requirement.

Figure 1.3. Comparison of a and a risk-based Tier 1 capital requirement for mortgage-credit institutions (institutional level), Q2 2015



Note: The risk-weighted Tier 1 capital requirement is the sum of a 6% Tier 1 capital requirement, 75% of the solvency supplement at the end of Q2 2015 (in accordance with the executive order on individual solvency supplement, sent for consultation on 30 October 2015), a fully implemented capital preservation buffer, and a fully implemented SIFI buffer. The minimum leverage-ratio requirement is determined on the basis of the unweighted exposure target at the end of Q2 2015. The minimum leverage-ratio requirement and the risk-weighted requirement are determined in relation to the risk-weighted assets. The ratio between a risk-based requirement and a minimum leverage-ratio requirement for equity is dynamic and can develop over time. The relationship between these two requirements will depend on developments in the relationship between an institution's exposures to risk and the exposure target, as well as the development in the relationship between the relevant percentage risk-based requirement and the minimum leverage-ratio requirement.

Recommendation concerning a minimum leverage-ratio requirement

The Group of Experts finds that the minimum leverage-ratio requirement should only make greater requirements than the risk-based capital adequacy requirement in special situations where the institutions' Tier 1 capital, as a percentage of total exposure, becomes unsustainably low. It is important to maintain that capital adequacy requirements for financial institutions must be risk-based. In general, the risk-based capital adequacy requirement should be the binding requirement, both for banks and for mortgage-credit institutions. This also means that if there is a wish to improve the capitalisation of financial institutions by means of regulations, the Group of Experts finds that the primary instrument for this should be the risk-based capital adequacy requirements. A change to the risk-based capital adequacy requirement could possibly be accompanied by a suitably calibrated change to the minimum leverage-ratio requirement which respects the above-mentioned interplay with the risk-based capital adequacy requirement.

On this basis, it is recommended that the Government can accede to the introduction at EU level of a harmonised minimum leverage-ratio requirement of basically 3% under pillar I. The recommendation should be viewed in the light of the fact that some institutions had a declining and very low equity level, in relation to both the balance sheet and the total risk-weighted assets when the financial crisis escalated in the autumn of 2008. Subsequently, a pressure emerged for Danish financial institutions to deleverage. In the specific situation, the pressure was relieved, however, when the state, with Bank Package II, provided the option of a state-funded injection of capital, which a number of financial institutions chose to draw on.

The Danish FSA already has the option, under pillar II, of setting a higher individual solvency requirement resulting from high leverage. As mentioned above, it is recommended that the Government accedes initially to a 3% minimum leverage-ratio require-

ment under pillar I. It is worth mentioning in this context that the Danish FSA should continue to have the possibility of entering into dialogue with institutions that are assessed as being excessively exposed to leverage. It must be ensured that any supplement to the capital adequacy requirements (pillar II) is risk-based, and not only with the purpose of imposing a simple minimum leverage-ratio requirement that is higher than the fixed 3%.

In the assessment of the Group of Experts, the business model of Denmark's mortgage-credit institutions is particularly secure and characterised by being less exposed to risks relating to high leverage.⁶ The average risk weighting of mortgage-credit institutions is lower than that of banks. The lower average risk weightings are attributable to some well-founded factors. First of all, the mortgage-credit sector's sphere of activity is limited and the institutions are largely exposed only to the borrower's credit risk and thus to a lesser extent to other factors such as market risk. Secondly, the fact that the mortgage-credit institutions have security in the innermost part of the collateral means that the borrower will only default on the mortgage-credit loan in instances where subordinate debt (typically in a bank) has been lost.

It should also be noted more generally that the mortgage-credit institutions do not by design experience "bank runs" during a crisis or in stressful periods, as the mortgage-credit institutions do not finance their loans by deposits. The refinancing risk of mortgage-credit institutions – resulting from the fact that there are differences in the term between the loan and the bonds issued for some types of mortgage-credit loans – is managed by refinancing legislation.

Finally it is noted that the lessons learned in the recent crisis show that the mortgage-credit institutions did not deleverage during a period of substantial financial pressure. As the Rangvid Report emphasises, this must also be seen in the light of the initiatives implemented during the crisis to shore up the stability of the financial sector, including the mortgage-credit sector.

For this reason, the Group of Experts recommends that the configuration of the minimum leverage-ratio requirement takes account of special institutions with a particularly safe business model, such as Denmark's mortgage-credit institutions, for instance. This can be done by ensuring, for example, that a non-differentiated minimum leverage-ratio requirement is only met at group level or that a minimum leverage-ratio requirement is differentiated at institutional level.

The Group of Experts also recommends that the Government should await the forthcoming EU negotiations before possibly implementing a minimum leverage-ratio requirement into Danish law. In the view of the Group of Experts, it would be inexpedient to implement national legislation now and then possibly have to amend it after a few years, once an EU decision is possibly made. At present, Denmark's financial institutions are, on the whole, better capitalised in terms of solvency than at the beginning of the financial crisis, and Denmark's Group 1 banks have increased their leverage ratio from around 3% in 2009 to more than 4% in 2015.

Differentiation according to systemic importance

The minimum leverage-ratio requirement will have to be met together with the risk-based capital adequacy requirement. Which of the two requirements is the higher, and thus the binding requirement for the individual financial institution, will depend on the institution's average risk weighting and on the levels and design of the minimum leverage-ratio requirement and the risk-based capital adequacy requirement respectively.

⁶ As far as the mortgage-credit institutions' business model is concerned, it also includes mortgage-credit-like loans in banks, as well.

A uniform minimum leverage-ratio requirement for all of Denmark's financial institutions will, all things being equal, mean that a minimum leverage-ratio requirement will be binding for Denmark's SIFIs in fewer instances, as these institutions will generally have a higher risk-based capital adequacy requirement as a result of the SIFI capital adequacy requirement. This seems to indicate that there can be a basis for differentiating the minimum leverage-ratio requirement to ensure consistency between capital adequacy requirements and SIFI rules. By contrast, Denmark's SIFIs also have the lowest average risk weightings and leverage ratios. All things being equal, this seems to indicate that a minimum leverage-ratio requirement will be binding for these institutions to a greater extent.

The significance of Denmark's SIFIs to financial stability, credit brokering and the national economy in general prompts the conclusion that these institutions should comply with a minimum leverage-ratio requirement that is higher than other financial institutions.

All things being equal, the risk-based SIFI requirement will implicitly mean a higher minimum leverage-ratio requirement for SIFIs. How much higher will depend on the institution's average risk weighting and the amount of the risk-based SIFI requirement.

Differentiating a minimum leverage-ratio requirement can complicate an otherwise simple requirement. This is an argument against differentiating the minimum leverage-ratio requirement. For the sake of simplicity, the Group of Experts advises against differentiating the minimum-leverage ratio requirement according to the systemic importance of the financial institutions.

A minimum leverage-ratio requirement that varies with the contracyclical buffer

Similarly, it can be expedient to allow a possible minimum leverage-ratio requirement to vary with the activation of the contracyclical risk-based capital buffer. If the minimum leverage-ratio requirement does not vary with the contracyclical buffer, the minimum leverage-ratio requirement will be tighter in periods during which the contracyclical buffer is not activated, all things being equal.

A requirement varying with business cycles would render the otherwise simple minimum leverage-ratio requirement more complex. In the view of the Group of Experts, ensuring the simplicity of the minimum leverage-ratio requirement carries more weight here, too. Therefore, the Group advises against having the minimum leverage-ratio requirement vary with the activation of the contracyclical capital buffer.

Sanctions

A minimum leverage-ratio requirement should be the binding capital adequacy requirement only in special situations, cf. above. In this light, it is generally expected that the risk-based capital adequacy requirements will be violated before the 3% minimum leverage-ratio requirement is violated. There may be special situations, however, where the minimum leverage-ratio requirement will be violated before the risk-based capital adequacy requirement and thus also before the capital buffers.

Owing to the fact that it can vary whether the minimum leverage-ratio requirement is violated before or after the solvency requirement, the Group of Experts recommends that violations of the minimum leverage-ratio requirement be sanctioned on the basis of a specific, individual supervisory assessment. In this context, it will be expedient to require the institutions to draw up a plan for deleveraging and once again being able to meet the minimum leverage-ratio requirement.

Floors under risk weighting

The Group of Experts acknowledges that floors under risk weighting can safeguard against insufficient risk weighting for certain exposure classes. However, the Group of Experts assesses that an obvious advantage of a minimum leverage-ratio requirement compared to floors under risk weighting is that the minimum leverage-ratio requirement is more transparent. A minimum leverage-ratio requirement is a simple supplement to the risk-based capital adequacy requirements, which contrasts with the floors under risk weighting that operate “inside the internal models” and reduce these models’ sensitivity to risk. Reducing the models’ sensitivity to risk is not desirable from a theoretical financial-economic perspective and can have even greater consequences for institutions’ adaptation to rules than the minimum leverage-ratio requirement.

Insufficient risk weighting of high-risk lending within the same class of exposures cannot be addressed with floors under the risk weightings, which risk incurring higher capital adequacy requirements on low-risk commitments, regardless of consensus about an area truly being a low risk. Floors under risk weightings will also reduce institutions’ incentives to hedge risks below the floor level, as any improvements of the capital base are unattainable.

At present, the Basel Committee is working on proposals aimed at reducing the variation of risk weightings in the internal models that is not due to differences in risk. In this light, the Group of Experts assesses that the outcome of the Basel Committee’s efforts should be observed before drawing any more firm conclusions about the need to implement floors under risk weightings in institutions which use internal models.

It is the view of the Group of Experts that any minimum leverage-ratio requirement and any proposals concerning floors under risk weightings should be seen as a whole, to avoid implementing redundant regulation.

