

Summary

The Basel Committee is now in its final round of negotiations for an additional capital requirement based on the leverage ratio. This requirement differs from the existing capital requirements since it does not take into consideration the underlying risk in a bank's assets. According to the proposal, the leverage ratio requirement should be a minimum requirement of 3 per cent of an amount that roughly corresponds to a bank's total assets.

The intention of the leverage ratio requirement is to limit banks' debt-to-equity ratios. A secondary objective is to reduce the risk that banks are able to lower their risk weights using internal models more than what is justified by the actual risk level. A leverage ratio requirement, therefore, could have positive effects and provide banks with more robust capital adequacy.

However, because a leverage ratio minimum requirement of 3 per cent is higher than the current risk-weighted minimum requirement, it will significantly reduce the banks' buffers. As a result, banks will have a smaller window of opportunity to reinstate their own funds before falling below the minimum requirements. This increases the risk that banks will breach the minimum requirements, which weakens financial stability.

After the Basel Committee agrees on the level of the leverage ratio requirement, the focus then shifts to the EU and the actual implementation of the requirement. During this step the EU must decide what consequences will apply in the event that the requirement is breached. A design in which either all or large parts of the leverage ratio requirement in practice consist of a capital buffer preserves the requirement's positive effects during normal conditions while avoiding the negative side effects in stressed conditions.



Introduction

The capital requirements on banks fulfil multiple economic functions. First, they protect banks' solvency so the banks are able to absorb losses during periods of economic difficulties. Second, they offer banks incentives to take well-balanced risks regardless of the economic conditions. Finally, they help maintain confidence in the financial system.

New capital adequacy regulations have been in effect for banks in the EU since 2014.¹ One regulation proposal that has yet to be decided on is an additional minimum capital requirement in the form of a leverage ratio requirement.² The proposal is currently being discussed at a global level within the Basel Committee, which since 2010 has been working to reform the global Basel Agreement on the capital adequacy of banks and credit market companies.³

The proposal contains a minimum requirement that a bank's leverage ratio must be at least 3 per cent of a non-risk-weighted exposure amount that roughly corresponds to the bank's total assets. The leverage ratio therefore establishes a minimum level for the amount of capital the banks must hold. It also limits the possibilities banks have to reduce their risk-weighted assets using internal models.

A leverage ratio requirement of 3 per cent under normal conditions would not raise the total capital requirements for the major banks in Sweden. However, it would result in a higher minimum requirement in nominal currency for many banks, which means that the risk that banks may breach the minimum capital requirements would probably increase during periods of financial stress. This could have negative consequences for financial stability and exacerbate the macroeconomic development during conditions that are already unfavourable.

Analysis of the leverage ratio requirement to date has primarily focused on the requirement's effects under normal conditions. The aim of this FI Analysis is to highlight a perspective that has not received much attention, namely the effects of the requirement in stressed conditions following significant capital losses.

What is the leverage ratio requirement?

The leverage ratio requirement was one of the Basel Committee's original proposals for reducing the risk of future financial crises. The Committee published the proposal as part of the global Basel III framework in December 2010.⁴ The Committee then published a more comprehensive framework for the leverage ratio requirement in January 2014.⁵

The objective of the requirement is to prevent banks from holding too little capital in relation to their total exposures. It is proposed to constitute a minimum level for the bank's Tier 1 capital, regardless of the risk assessments that serve as a basis for the risk-weighted capital

1 Capital Requirements Directive IV (CRD IV) and Capital Requirements Regulation (CRR) entered into force in 2014.

2 See EBA (2016).

3 The term "banks" will hereafter be used to refer to banks and credit market companies.

4 See BCBS (2010).

5 See BCBS (2014).

requirement. According to the proposal, the requirement functions as a minimum requirement that supplements the risk-weighted capital requirements. The Committee defines the leverage ratio as:

$$\text{Leverage ratio} = \frac{\text{Capital}}{\text{Exposure amount}}$$

According to the proposal, “Capital” in this equation corresponds to a bank’s Tier 1 capital as defined in BCBS (2010). This Tier 1 capital may consist of share capital, accumulated profits and perpetual liabilities. “Exposure amount” corresponds to a bank’s assets on its balance sheet adjusted for derivative exposures, securities financing and certain off-balance sheet items, such as loan commitments, and therefore is not the same as the bank’s total assets from an accounting perspective.⁶

The leverage ratio requirement does not take the risk in a bank’s exposures into consideration. This is because the exposure amount is calculated as the sum of reported and other non-risk-weighted amounts. The leverage ratio is thus significantly different from a capital ratio as defined by the capital adequacy regulation. This capital ratio uses risk-weighted assets, which correspond to the sum of all exposures multiplied by different risk weights, instead of the exposure amount. The risk-weighted assets are therefore larger the higher the underlying risk of the exposures is estimated to be. The leverage ratio, on the other hand, is not affected by the estimated underlying risk.

THE PROPOSAL AND THE FUTURE PROCESS

The Basel Committee proposes the leverage ratio as a minimum requirement and specifies that a bank’s Tier 1 capital must consist of at least 3 per cent of the exposure amount. The Basel Committee is planning to make final adjustments to the requirement in 2017, after which it can be added to Pillar 1 in the global Basel Agreement. Because the Basel Agreement is simply that, an agreement, the requirement will not become applicable in national legislation at this time.

The requirement could become binding in Swedish law if it is included in the capital adequacy regulations at the EU level. In order for this to happen, the requirement must be proposed by the European Commission and then adopted by EU Parliament and the European Council in the form of a Regulation or a Directive. If the requirement is implemented as a regulation, it enters into force immediately. If the requirement is implemented as a directive, Sweden as a Member State is obligated to implement it in Swedish law. The normal process through which this occurs is that the Government commissions an inquiry and uses the proposal from this inquiry to submit a bill to Parliament. Parliament then decides how the requirement will be implemented.

What do the existing capital requirements entail?

Because the leverage ratio requirement is defined as the share of Tier 1 capital in relation to the exposure amount, it is relevant to compare

⁶ See BCBS (2014).

the leverage ratio requirement to the risk-weighted Tier 1 capital requirements. The total risk-weighted Tier 1 capital requirement consists of several components that are described in Table 1. There is a Pillar 1 minimum Tier 1 capital requirement of 6 per cent of the bank's risk-weighted assets plus the combined buffer requirement. Finansinspektionen (FI) also calculates a total capital assessment of the capital requirement for each individual bank as part of its annual Supervisory Review and Evaluation Process, which results in what is called the Pillar 2 capital requirement.

Table 1. Average Tier 1 capital requirements for the four major Swedish banks, Q2 2016, per cent of risk-weighted assets

Pillar 1: Minimum Tier 1 capital requirement	6.0
Sub-total: Pillar 1 Minimum Tier 1 capital requirement	6.0
Pillar 2: Interest rate risk in the banking book, concentration risk, pension risk and other	1.9
Pillar 2: Risk-weight floor on mortgages	3.6
Pillar 2: Systemic risk buffer	2.0
Sub-total: Pillar 2 requirements that must be covered by Tier 1 capital	7.5
Systemic risk buffer	3.0
Capital conservation buffer	2.5
Countercyclical capital buffer	0.8
Sub-total: Combined buffer requirement that must be covered by Tier 1 capital	6.3
Total Tier 1 capital requirement	19.8

Source: Finansinspektionen.

The Swedish banks' capital requirement is also affected by the Basel I floor. With the exception of certain types of exposures, this floor corresponds to 80 per cent of the capital requirement under the Basel I framework from 1988. The Basel I floor was implemented as a part of the transition rules when the capital requirements were adjusted after the Basel II agreement in 2005. The floor was intended to be temporary, but it is still in place in some countries.⁷ The EU's Capital Requirements Regulation states that the Basel I floor will apply until 2017. Until this date, the Basel I floor constitutes a minimum capital requirement. However, it is up to FI to decide if the floor is to be applied in Sweden and to assess how serious potential breaches to the floor may be.

CONSEQUENCES OF BREACHES TO THE CAPITAL REQUIREMENTS

Banks that do not meet the capital requirements may be subject to different types of measures depending on the requirement that was breached. The capital requirements fulfil slightly different functions and therefore different measures are taken in the event of a breach.

Breaches to the minimum requirement

If a bank does not fulfil the Pillar 1 minimum capital requirement or the Basel I floor, FI is obligated to intervene. A minimum requirement therefore constitutes a binding lower threshold. The Banking and Financing Business Act lays down a number of alternatives for how FI can intervene. If FI decides to recall the bank's authorisation, the Act grants FI the right to decide on how the bank's business should be

⁷ See Niemeyer (2016).

wound down. A bank can also be entered into a resolution, i.e. an orderly reconstruction or winding down under state controls. This may occur on the condition that FI makes the assessment that the bank is failing or is likely to fail given a number of other conditions.⁸

Breaches to the combined buffer requirement

When a bank's capital falls below the total capital requirement, the bank is in violation of the combined buffer requirement, which introduces automatic restrictions. Somewhat simplified, the Capital Buffers Act says that a bank that does not meet the combined buffer requirement becomes subject to restrictions in its possibilities for paying dividends, making certain coupon payments and undertaking to pay variable remuneration such as bonuses.

The bank must also submit a capital conservation plan to FI about the steps it will take to reinstate compliance with the combined buffer requirement. If FI makes the assessment that the capital conservation plan will not reinstate the own funds, FI is obligated to intervene via an order or by deciding on additional restrictions on the bank's right to make equity transfers, such as dividends.

The buffers also provide the bank with some management room in order to reinstate its capital under FI's supervision despite the fact that losses have driven the capital below the total capital requirement. The consequences, under certain conditions, are therefore not as drastic as in situations where the minimum requirement has been breached. Given that the buffers can be used to avoid a breach to the minimum requirement, they reduce the risk that a bank must be wound down or placed in resolution, which in turn would affect financial stability. Buffers therefore have a positive effect on a bank's and the financial system's stability.

Function of the Pillar 2 requirement

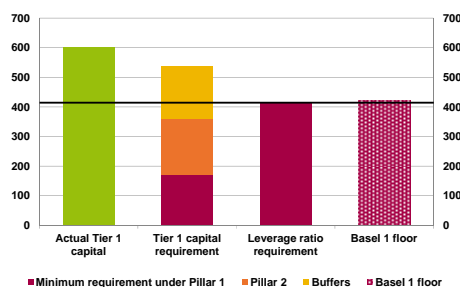
The consequences of a bank falling below the total capital requirement in Table 1 depend on the handling of the Pillar 2 requirement. Both the level of the Pillar 2 requirement and the consequence of falling below this level are determined with discretion by FI and depend on the circumstances at any given point in time. While FI currently does not make a formal decision about the bank's Pillar 2 requirements, it is known what the requirements are. If FI were to make a formal decision about the Pillar 2 requirements, they would be part of the minimum capital requirement.

If a bank is under severe financial stress, its risk profile can change very quickly. For example, certain risks included in the assessment of the Pillar 2 requirement may have materialized in the form of losses, which could mean there are no longer grounds for requiring the firm to hold capital for them. FI can thus adapt its determination of the Pillar 2 requirements to the prevailing circumstances. Large parts of the Pillar 2 capital requirement, therefore, can be viewed in practice and under certain circumstances as an additional capital buffer.

In their function as a buffer, the Pillar 2 requirements contribute to increasing the resilience of the banking system. In practice they take the form of a loss-absorbing capital requirement and increase the room for the bank to reinstate its own funds under the supervision of FI. The Pillar 2 requirements therefore also help prevent breaches to the Pillar 1 minimum requirement.

⁸ See the website of the Swedish National Debt Office (www.riksdagen.se) for more information about the resolution procedures.

Diagram 1. Capital and capital requirements for the four Swedish major banks, Q2 2016 (SEK billion)



Source: Finansinspektionen.

Note: The Basel I floor may be covered by both Tier 1 and Tier 2 capital. The level for the Basel I floor in terms of Tier 1 capital is therefore lower in practice than what is demonstrated in the diagram. The Basel I floor is expected to be withdrawn in 2017. The horizontal black line indicates the level of the leverage ratio requirement in SEK.

Banks' voluntary management capital buffers

In addition to the capital requirements set by FI, banks normally also hold their own "management buffers" in the form of extra loss-absorbing capital. This allows the bank to reduce the risk of restrictions and interventions by FI for breaches to the total capital requirement due to normal fluctuations in capital requirements and own funds.

The size of the management buffer is a balance between return and risk. Banks often do not want to have more capital than necessary, and the more capital a bank is holding, the lower its return on equity. On the other hand, however, neither do banks want to find themselves in violation of the regulations due to unexpected losses and changes in market value. The larger their voluntary buffer, the lower the probability that they will be subject to restrictions from FI. Just like capital buffers, the banks' management buffers have a positive effect on financial stability.

How does the leverage ratio requirement fit with the existing capital requirements?

According to FI's calculations, a leverage ratio of 3 per cent would not currently result in any need for new capital among the major Swedish banks (see Diagram 1). Assuming that the risk-weighted assets and exposure amounts remain the same, the leverage ratio requirement would correspond on average to 15.8 per cent in terms of risk-weighted assets as at Q2 2016. This is less than both the actual Tier 1 capital ratio of the major Swedish banks' (22.7 per cent) and the total average risk-weighted Tier 1 capital requirements (19.8 per cent).

However, the leverage ratio requirement would be significantly higher than the current risk-weighted minimum Tier 1 capital requirement, and even exceed the sum of the Pillar 1 minimum requirement and the Pillar 2 requirement. The leverage ratio requirement does not exceed the total Basel I floor, but the floor is expected to be withdrawn in 2017. In other words, the Basel I floor does not constitute a minimum level in the proposed future regulation. This analysis therefore describes the effects of the leverage ratio requirement under the assumption that the Basel I floor no longer applies.

Establishing the leverage ratio requirement as a minimum requirement would have a significant impact on the size of the buffer in future capital adequacy regulations. The requirement would significantly reduce the amount of capital between a bank not meeting the total risk-weighted capital requirement and the bank not meeting the leverage ratio minimum requirement. This would also reduce the possibilities during a crisis to draw on parts of the combined buffer requirement and the Pillar 2 requirement.

EFFECTS ON FINANCIAL STABILITY

If the leverage ratio requirement of 3 per cent is implemented as a minimum requirement, the level of the requirement would therefore introduce an increased risk that a bank would fall below one of the minimum capital requirements. As described above, the minimum capital requirements should be interpreted as a binding lower bound. FI is also obligated to intervene if a bank falls below a minimum requirement. If a bank breaches the minimum requirements, there is a

considerable risk that the bank must be wound down or entered into resolution.

Generous buffer mechanisms are particularly important since the course of events during the winding down or entry into resolution of a bank can involve a large degree of uncertainty. Authorities must make a number of decisions that have serious consequences for the bank's operations and for the value of the bank's liabilities and equity. It may also be unclear when a bank is being wound down how long it will take before the assets can be sold to repay the bank's liabilities. As a result of all of these factors, a bank that is approaching a minimum capital requirement is a cause for concern among investors, lenders and other participants on the financial markets. This could lead to higher funding costs for the banks, which could accentuate the bank's problems.

Uncertainty regarding other participants in the financial markets would probably increase as well since banks often have liabilities to a large number of counterparties. There is often a certain degree of mutual dependence between participants in the financial markets, for example in the banks' liquidity management. As a result, even if the authorities have orderly procedures for winding down and resolution, a scenario where one bank must be wound down or entered into resolution could cause contagion effects throughout the financial system. These effects could then have consequences in the form of increased funding costs or even limited access to funding.

If funding costs in the financial system were to rise, there is a risk that firms and households would experience higher financing costs. There is also a risk that financial stability would be affected in that asset values in the economy would fall, thus decreasing the value of household savings.

Furthermore, it is conceivable that the proposed leverage ratio requirement could result in banks reducing their lending at an earlier stage in order to improve the relationship between their own funds and total assets and ultimately prevent a situation where they must be entered into resolution. The combination of these factors could slow growth in the real economy and result in higher unemployment.

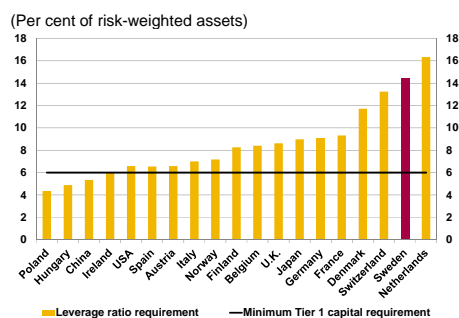
High capital levels are one of the cornerstones of a stable banking system, but if these types of self-perpetuating effects are to be prevented, the capital must be able to absorb losses before the bank breaches the minimum requirement. This assumes that the capital requirements include buffers.

LEVERAGE RATIO REQUIREMENT AND MANAGEMENT BUFFERS

It is possible to argue against the assumption that the leverage ratio requirement would increase the probability of breaches to the minimum capital requirement. Banks could choose to increase their voluntary management buffers as a result of the higher minimum requirement. Increasing their Tier 1 capital would allow banks to maintain the same probability of breaching the minimum requirement as before the implementation of the leverage ratio requirement.

However, this argument rests on several important assumptions that are not reasonable. First, banks would only raise their buffers as a result of the leverage ratio requirement if they, in practice, use the minimum capital requirement and not the total capital requirement in their capital planning. FI's supervision dialogue with the banks indi-

Diagram 2. Leverage ratio requirement of 3 per cent restated as per cent of risk-weighted assets



Source: EBA (2016) and FDIC (2016).

Note: The bars refer to the average for banks in each country. For the EU countries, the averages are based on data of fully loaded leverage ratios and Tier 1 capital ratios prior to stress from EBA's 2016 stress test that was based on data as per 2015. The averages for the non-EU-countries are based on the banks' own reported leverage ratios and Tier 1 capital ratios as per June 2016 in FDIC's Global Capital Index.

icates that the total capital requirement – not the minimum capital requirement – in practice is the binding lower bound in their capital planning. Assuming that the total capital requirement does not change when the minimum requirement is raised, the banks would not need to increase the voluntary buffers in their capital planning.

The above argument also makes the assumption that banks' assessments of what constitutes an optimal capital buffer are the same as the assessment that serves as a basis for the regulation's current buffer requirement. There are grounds to question this assumption since banks and authorities have different goals and incentives. Banks face incentives to maximise their return on equity. Authorities, on the other hand, aim to ensure the stability of the entire financial system, since both the direct and indirect social costs of a single bank default could be high. It is therefore probable that the banks' assessment of the optimal capital buffer is lower than that of the authorities. It can therefore be expected that the banks will make very small adjustments to their management buffers as a result of the leverage ratio requirement.

EFFECTS OF THE LEVERAGE RATIO REQUIREMENT IN OTHER COUNTRIES

There is a risk that the leverage ratio requirement will have the same effect on banks in several other countries as in Sweden. The effects should be most visible in countries where banks have a high percentage of assets with low risk weights according to the current capital adequacy regulation. This is because lower risk weights generate lower risk-weighted assets and lower risk-weighted capital requirements, while the leverage ratio requirement stays the same for a given balance sheet total regardless of the underlying risks.

There is a risk that the effects could also be particularly visible in the Netherlands, Switzerland and Denmark, besides Sweden. These countries, and the rest of the EU, are also subject to the binding rules of the Capital Requirements Regulation that contain a Tier 1 capital requirement of 6 per cent of risk-weighted assets. The leverage ratio will therefore entail a higher actual minimum capital requirement under Pillar 1 in a large number of countries (see Diagram 2).

How can the negative effects be mitigated?

The implementation of a leverage ratio requirement of 3 per cent as a minimum requirement, as discussed, would result in an increased minimum capital requirement for banks in Sweden and a number of other countries. However, the total capital requirement for the major Swedish banks, including buffers, would not change. It is therefore probable that the leverage ratio requirement would increase the risk that banks would violate the minimum capital requirements, which could lead to them being wound down or placed in resolution. This in turn would probably have negative consequences for financial stability and the real economy.

These arguments therefore indicate a need to thoroughly analyse what possibilities are available for reducing the potentially negative consequences of a leverage ratio requirement. For example, one alternative in practice could be to design all or large parts of the requirement as a capital buffer. If a bank were to fall below the leverage ratio require-

ment, the response would entail different measures than what would be the case for a breach of the risk-weighted minimum requirement. This type of design could benefit financial stability.

Whether or not this can be done largely depends on the focus of the implementation of the leverage ratio requirement at the EU level. The EBA submitted a report on the leverage ratio requirement to the European Commission on 3 August 2016, stating that the primary focus within the EU is to implement the requirement as a minimum requirement. However, the European Commission has not yet decided on its proposal for the implementation of a leverage ratio requirement within the EU. The proposal must also then be submitted for negotiation within and between the European Council and the EU Parliament. It is therefore too early to say which rules will apply in the event of breaches to the leverage ratio requirement. The next step in the process is for the European Commission to submit its report to the European Parliament and European Council on the impact and effectiveness of the leverage ratio requirement.

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