Minimum requirement for the banks' capital if risk weights for Swedish mortgages are raised

The Riksbank deems that the risk weight floor for Swedish mortgages should be raised further to counteract the risks associated with the high and still growing indebtedness of the household sector. This Box presents minimum requirements for the banks' capital for an individual mortgage before and after an increase of the risk weight floor for Swedish mortgages. All in all, an increase of the risk weight floor to 25 per cent means that the banks will need to increase the proportion of CET 1 capital against their mortgage exposures compared with the rules that are currently applicable.

Capital requirements for Swedish mortgages have varied under different regulations and transitional rules. The provisions governing the proportion of the banks' total capital base for mortgages that may be formed by additional Tier 1 capital and Tier 2 capital have also varied.[21] Furthermore, the definition of core Tier 1 capital has changed. This affects the possibilities of comparing capital requirements for banks over time.[22]

Minimum requirement for the banks' capital for Swedish mortgages from a historical perspective

Until the end of 2006, the risk weight for a loan against collateral in the form of housing amounted to at least 50 per cent. During this period, the major Swedish banks were legally required to have a capital base exceeding eight per cent of risk-weighted assets. The major banks were thus forced to have a capital base of four per cent of the mortgage's amount. According to the legislation in force at the time it was also obligatory for banks to have core Tier 1 capital equal to at least 1.7 percentage points of the mortgage's amount.

In 2007, the Basel II Accord was introduced in Sweden, under which the risk weights for mortgages could either be calculated by the banks themselves with the use of internal credit risk models or set at least 35 per cent according to the so-called standard method. In that the major banks started to apply internal credit risk models, the actual risk weights for mortgages were reduced to about 6 per cent. At the same time, the transitional rules between Basel I and Basel II were gradually phased in.[23] For a long period, the capital requirements related to major Swedish banks' mortgages were determined by these transitional rules. In 2007 and 2008, the capital requirement for mortgages was thereby lowered to 3.8 and then 3.6

[21] The capital base includes the total of core Tier 1 capital, additional Tier 1 capital and Tier 2 capital. Core Tier 1 capital is the capital with the highest quality at a bank. It consists of equity, that is share capital and accumulated non-distributed profits after deductions for certain items.
[22] A more detailed review of various capital measures is presented in the Box "How is a capital ratio calculated?", *Financial Stability Report* 2013:1, Sveriges Riksbank.
[23] The transitional rules were introduced for reasons of caution in conjunction with the transition between Basel I and Basel II. See the Box How is a capital ratio calculated?, *Financial Stability Report* 2013:1, Sveriges Riksbank.

per cent of the mortgage's amount, of which 1.6 and 1.5 per cent, respectively, must be made up of core Tier 1 capital. Between 2009 and 2010, under the transitional rules, the capital requirement for mortgages was 3.2 per cent of the mortgage's amount, 1.1 percentage points of which had to be made up of core Tier 1 capital. For 2011 and 2012 the core Tier 1 capital requirement decreased to 0.8 per cent of the mortgage’s amount.

The charts in this Box illustrate the minimum size of the capital base and core Tier 1 capital as a proportion of the amount of the mortgage that Swedish banks have had to retain over time. Chart B1:1 specifies in more detail how various requirements for the banks' capital have changed over the same period.

The effect of raising the risk weight floor for Swedish mortgages

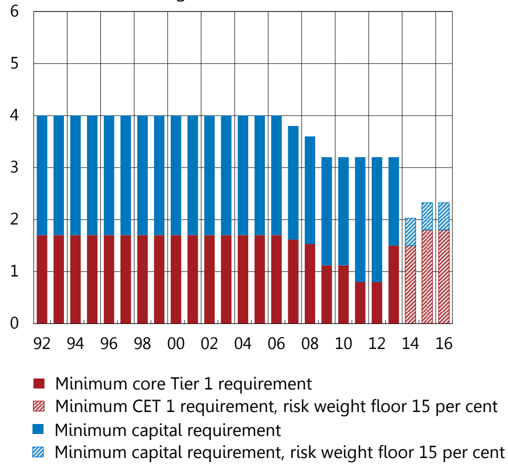
In May 2013, Finansinspektionen introduced a risk weight floor for Swedish mortgages of 15 per cent. This means that the minimum requirement for the banks' core Tier 1 capital has increased compared with the situation in 2009–2012.[24] Furthermore, other reqirements for the banks' capital ratios will be increased as of 2015, which mean that the banks will have to retain slightly more core Tier 1 capital. However, at the same time, the requirement for the total capital base that the banks would have to retain for mortgages would decrease if transitional rules cease to apply on 1 January 2014 (see Chart B1:1 and Table B1:1).

However, an increase of the risk weight floor to 25 per cent means that the banks will need to retain more core Tier 1 capital against their mortgage exposures as under the transitional rules (see Chart B1:2 and Table B1:1). However, in terms of the total capital base, a risk weight floor of 25 per cent and the transitional rules are approximately equivalent. An increase of the risk weight floor to 35 per cent would, in turn, increase the requirement for the banks' core Tier 1 capital above the level that applied to the minimum requirement for the total capital base for mortgages prior to 2007 (see Chart B1:3 and Table B1:1).

The Riksbank's calculations show that a further SEK 25 billion in CET 1 capital would need to be tied up in the banking system if the minimum requirement for the major banks' CET 1 capital was 10 per cent and the risk weight floor was raised to 25 per cent. At present, the banks are deemed to have sufficient CET 1 capital to comply with this minimum requirement. If the requirement for CET 1 capital instead amounts to 12 per cent, the banks will have to further increase their CET 1 capital by about SEK 32 billion to fulfil the minimum requirement. Raising the risk weight floor to 35 per cent

Chart B1:1. Minimum requirement for the major banks' capital for Swedish mortgages, historical and with a risk weight floor of 15 per cent

Per cent of lending

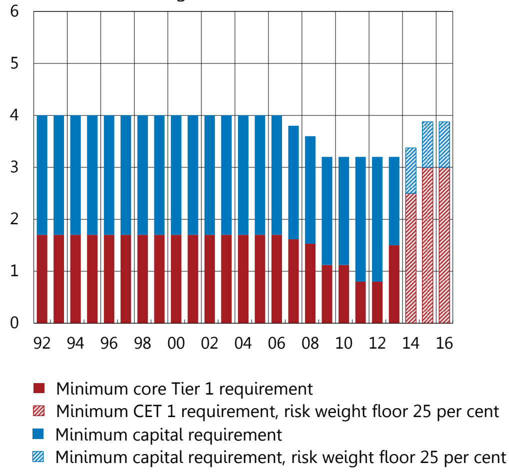


Note. The solid coloured bars show the statutory minimum requirement for core Tier 1 capital and other capital base under Basel I and the currently applicable transitional rules. The total height of a two-coloured bar thus specifies the size of the minimum capital base that the banks must retain for their mortgages as a proportion of the amount of the mortgages. The red parts of the bars show the lowest requirement for core Tier 1 capital as a proportion of the amount of the mortgage, while the blue parts show that part of the lowest capital base requirement for the major banks' mortgages that can be attained with the use of other capital.

Source: The Riksbank

Chart B1:2. Minimum requirement for the major banks' capital for Swedish mortgages, historical and with a risk weight floor of 25 per cent

Per cent of lending

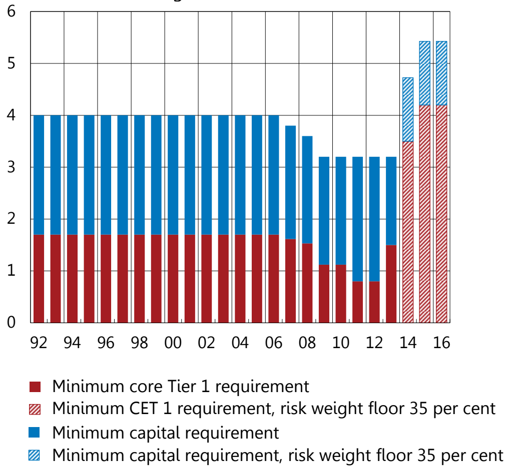


Note. See note to Chart B1:1. The striped bars show the statutory minimum requirement for CET 1 capital and other capital base under Basel III after the risk weight floor for Swedish mortgages is raised to 25 per cent.

Source: The Riksbank

[24] The risk weight floor was introduced as a part of Finansinspektionen's total capital assessment in Pillar 2. This means that the risk weight floor does not affect the reported CET 1 ratios of the major Swedish banks. On the other hand, the risk weight floor means an increase of the total capital requirement for the banks.

Chart B1:3. Minimum requirement for the major banks' capital for Swedish mortgages, historical and with a risk weight floor of 35 per cent
Per cent of lending



Note. See note to Chart B1:1. The striped bars show the statutory minimum requirement for CET 1 capital and other capital base under Basel III after the risk weight floor for Swedish mortgages is raised to 35 per cent.

Source: The Riksbank

under a requirement for CET 1 capital of 12 per cent would entail the banks needing to tie up a further SEK 60 billion in CET 1 capital.[25]

Increasing the risk weights would thus mean that the banks would have to retain more capital per lent krona than would otherwise have been the case. A larger proportion of equity implies a reduction of the banks' return on equity. To keep return on equity at an unchanged level, the banks could choose to raise lending rates to their mortgage customers, which could reduce demand for mortgages. At the same time, confidence in the banks may increase as the banks are holding a larger proportion of equity. In turn, this could reduce the required return placed by investors on equity and debt funding, which could reduce the need to raise lending rates for mortgage customers.

However, if the banks cannot hold return on equity at an unchanged level, higher risk weights may also make it less profitable for the banks to grant mortgages. In this case, the supply of mortgages would also decrease. However, the decision to raise the floor for risk weights for Swedish mortgages only affects those banks that, in accordance with internal credit risk models, apply risk weights below the established floor. Raising the risk weight floor thus affects the banks to different degrees.

[25] This data refers to the four major Swedish banks and Landshypotek, Länsförsäkringar Bank and SBAB. The capital requirement of the last mentioned three banks has been calculated on the basis of a minimum requirement for core Tier 1 capital of seven per cent.

Table B1:1. Capital requirements and risk weights over time for mortgages granted by the major Swedish banks

	Year	A. Minimum requirement capital base ratio	B. Minimum requirement core Tier 1 capital ratio	C. Risk weight mortgages	D. Risk weight according to IRB	E Minimum requirement Capital base (A×C)	F. Minimum requirement core Tier 1 capital (B×C)
Basel I rules	1992–2006	8.0%	3.4%	50.0%	-	4.0%	1.7%
Transitional rules	2007	8.0%	3.4%	47.5%	6%	3.8%	1.6%
	2008	8.0%	3.4%	45.0%	6%	3.6%	1.5%
	2009–2010	8.0%	2.8%*	40.0%	6%	3.2%	1.1%
	2011–2012	8.0%	2.0%**	40.0%	6%	3.2%	0.8%
Transitional rules and risk weight floor of 15%	2013	8.0%	10.0%	15.0%***	6%	3.2%***	1.5%***
Basel III and risk weight floor of 15%****	2014	13.5%	10.0%	15.0%	6%	2.0%	1.5%
	2015–2016	15.5%	12.0%	15.0%	6%	2.3%	1.8%
Basel III and risk weight floor of 25%	2014	13.5%	10.0%	25.0%	6%	3.4%	2.5%
	2015–2016	15.5%	12.0%	25.0%	6%	3.9%	3.0%
Basel III and risk weight floor of 35 %	2014	13.5%	10.0%	35.0%	6%	4.7%	3.5%
	2015–2016	15.5%	12.0%	35.0%	6%	5.4%	4.2%

Note. According to transitional rules, the minimum requirement for 2007 must amount to at least 95 per cent of the capital requirement calculated according to the older Basel I rules, which corresponds to a risk weight of 95% x 50% = 47.5% for the major banks. At the same date, the actual risk weights for mortgages according to the banks' internal ratings-based models (IRB) amounted to about 6 per cent on average. For 2008, the minimum requirement is at least 90 per cent of the capital requirement under Basel I. The corresponding minimum requirement for 2009–2013 amounts to 80 per cent. Note that the effects of the banks' minimum requirement under the transitional rules have been calculated in a slightly simplified fashion using a single transaction as a starting point, rather than the bank's total exposures.

* In December 2008, the maximum proportion of additional Tier 1 capital that may be included in the Tier 1 capital when calculating the capital base was raised from 15 per cent to 30 per cent, meaning that the minimum requirement for the core Tier 1 capital ratio was reduced.

** On 31 December 2010, the maximum proportion of additional Tier 1 capital that may be included in the Tier 1 capital when calculating the capital base was raised from 30 per cent to 50 per cent, meaning that the minimum requirement for the core Tier 1 capital ratio was reduced.

*** In May 2013, Finansinspektionen introduced a risk weight floor for Swedish mortgages of 15 per cent. The risk weight floor was introduced as a part of Finansinspektionen's total capital assessment in Pillar 2. As the total capital assessment is forward-looking, this assessment considers the new higher capital requirements that are expected to come into effect when the regulations of the Basel III Accord are introduced into Swedish law. This implies a CET 1 ratio requirement of at least 10 per cent as of 1 January 2013 and at least 12 per cent as of 1 January 2015. The minimum requirement for CET 1 capital thus amounts to 10% x 15% = 1.5%, but the minimum requirement for the capital base is the same as before.

**** In the calculation of this data, it has been assumed that the transitional rules will cease to apply as of 2014. No decision has been taken as to whether the transitional rules will continue to apply after 2013.