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FI's Pillar 2 capital assessment method for systemic risk associated with securitisation

Summary

Securitisation of credit risk is an effective tool for allowing banks[1] to transfer credit risk to external investors without affecting the relationship with their customers. Banks can thus reduce their capital requirements provided that the securitisation transaction meets the regulatory requirements that a significant portion of the credit risk has been transferred from the bank in question to investors. Securitisation may be used for a number of different purposes and is structured differently depending on the primary purpose.

Finansinspektionen (FI) believes there to be benefits to a development in which the Swedish demand for credit via securitisation can be met by a more diversified base of capital and funding sources and not just by methods that keep all risks within the banking system. More diversification of the banks' funding sources and a wider distribution of credit risk can lead to both efficiency gains and lower systemic risks. Securitisation can thus make it possible for banks − and society − to reduce certain types of risks.

At the same time, securitisation can increase or give rise to other risks that must be analysed and counteracted if necessary. FI is tasked in its supervision and regulations with taking a holistic approach to the risks associated with the banks' operations, which means that FI must also take into consideration systemic risks that arise outside the banks[2] and affect the economy at large. FI must therefore carefully analyse the effects of securitisation both for individual banks and for the economy.

Securitisation has so far been relatively uncommon in Sweden, but stricter capital requirements in recent years have created more incentives for banks to use securitisation, and the Swedish securitisation market may therefore develop quickly. Given that the Swedish banking sector currently has a well-functioning model for funding through covered bonds, FI makes the assessment at this time that the possibility to reduce their capital requirement would be the primary reason Swedish banks may move toward more securitisation. FI strives to work

[1] In this memorandum, the term "banks" is used for all institutions (banks, credit market companies and securities companies) that are subject to the capital adequacy rules.
[2] The financial system has three core functions: the mediation of payments, the conversion of savings into financing and risk management. Systemic risk refers to risks that threaten on of these three core functions.

proactively to prevent risks, and capturing and analysing emerging developments in the financial markets is therefore part of this work.

FI's analyses of securitisation and the potential risks indicate that it is necessary to establish a back-stop within Pillar 2[3] to limit the effects on the total credit supply from securitisations above a certain systemically critical level, i.e. where the transactions' structure and volume are judged to potentially have negative effects on the supply of credit following a sharp reduction in demand on the securitisation market.

Key for this assessment is the systemic risk that may arise when the securitisation market has closed for new issues at the same time as borrowers need or expect to extend their loans. In such a situation, the bank is left with the choice of either renewing the underlying loans and thus having the credit risk flow back to their balance sheets or denying borrowers new or extended loans. Assuming the first choice, the bank's credit risk rises, and thus its capital requirements. The sudden increase in its capital requirement can result in the bank reducing other lending, which can reduce the supply of credit in the economy as a whole. Assuming the latter, the borrowers' financing is terminated, which could have serious consequences for them, particularly if the objective of the loan is more long-term than the contractual maturity. If a significant portion of the loans in the Swedish economy are securitised (and thus dependent on the banks being able to issue new securities in the future) and the structure of the transactions does not result in exposures that mature evenly and well-spread-out over time, there is a greater risk that the credit supply will shrink. The scenario in question matches that of a financial crisis, but FI's objective is to safeguard the banks' capacity for managing the impact of such a crisis on their capital requirements.

The banks may decide themselves if they want to renew the loans in question. As part of its macroprudential assignment, however, FI must take into consideration the need for banks to have capital that will enable them to issue loans to borrowers even under stressed conditions. This is the basis for FI's capital assessment method. It is FI's assessment that the current regulations for securitisation do not take systemic risk into consideration, and this therefore justifies an additional capital requirement that only occurs in the presence of systemically critical securitisation transactions.

It is against this background that FI accounts in this memorandum for the method that will be used in conjunction with the supervisory review and evaluation

[3] Pillar 2 is the umbrella term for the rules governing banks' internal capital adequacy assessment processes and FI's supervisory review and evaluation process, of which FI's supervisory capital assessment constitutes an important part. For a more detailed description of Pillar 2, see FI's memorandum, *Kapitalkrav för svenska banker,* FI Ref. 14-6258. This memorandum s available in English on FI's website. (http://www.fi.se/contentassets/91a11ceca3f54525a4a0a24dbb514cf5/kapitalkrav-svenska-banker-140910ny.pdfhttp://www.fi.se/contentassets/91a11ceca3f54525a4a0a24dbb514cf5/kapitalkrav-svenska-banker-140910ny.pdf).

process (SREP) to assess banks' Pillar 2 capital requirement for systemic risk associated with securitisation.

The following is an overview of FI's general positions:

- FI will assess the banks' Pillar 2 capital requirements for systemic risk associated with securitisation based on the banks' capacity at maturity to extend loans which have been securitised in a scenario where the market has closed to new securitisation transactions.
- If a bank engages in securitisation transactions which cannot be judged to be systemically critical, FI's method will have no impact on the bank.
- FI will calculate a capital requirement for systemically critical securitisation transactions, i.e. if 1) the increase in the bank's total capital requirement arising as a result of the extension of previously securitised exposures entails a reduction in the total capital ratio in excess of a certain cut-off point, or, for systemically important[4] banks, 2) the nominal value of the securitised exposures is more than a certain per cent of the bank's total lending to the exposure class in a national market where the bank is systemically important.
- The Pillar 2 capital requirement for systemic risk is calculated as the sum of the total reduction in the capital ratio in excess of the cut-off point stated in Condition 1. If a systemically important bank only meets Condition 2, FI will calculate a capital requirement corresponding to the total reduction in the capital ratio, i.e. without the cut-off point in Condition 1, for the excess volume.
- FI will exempt the same type of exposures that are exempted from the floor for the maturity assumptions.[5] FI may also allow exemptions, or reduced capital requirements, for transactions that result in low systemic risk. In these cases it is up to the individual bank to demonstrate to FI why the transaction can be considered to result in a low systemic risk.

The proposal was submitted for consultation on 1 December 2016 and the consultation period closed on 26 January 2017. FI has taken into consideration the submitted consultation responses and has now decided on the capital assessment method described in this document. The method will be applied to institutions in Supervision Category[6] 1 (currently Nordea, Svenska Handelsbanken, Swedbank

[4] A bank is considered to be systemically important if it is classified as such in accordance with the national application of the EBA's identification method for O-SII or a branch that is considered to be significant in accordance with Article 51 of the Capital Requirements Directive.
[5] See FI's memorandum, *Kapitalkrav för löptidsantaganden inom pelare 2*, FI Ref. 16-2703. This memorandum s available in English on FI's website. (http://www.fi.se/contentassets/93166963a40e49fcaca8670e3ad2d3e7/pm-loptid-2016-05-24.pdf).
[6] FI's supervision is designed around four different Supervision Categories, where Category 1 consists of the largest, systemically important banks and Category 4 consists of the smallest banks. See FI's memorandum *Kategorisering av svenska kreditinstitut enligt O-SII-modellen för 2017*, FI Ref. 16-13939 (http://www.fi.se/contentassets/0250248503a34c45b9ba51805172c16d/uppdat-kategorisering-kreditinstitut-o-sii-2017.pdf) and FI's memorandum *Kategorisering av kreditinstitut för den löpande tillsynen och användningen av tillsynsmetoder*, FI Ref. 16-13938 (http://www.fi.se/contentassets/967c10f7a3134428bb66c8e89286aed0/osii_pm_kategoriseringfinistitut_20160926.pdf). These memoranda are only available in Swedish.

and Skandinaviska Enskilda Banken) and Supervision Category 2 (currently SBAB Bank, Svensk Exportkredit, Kommuninvest, Länsförsäkringar Bank, Landshypotek, Skandiabanken, Nordnet Bank and Avanza Bank) starting with SREP 2017.

FI evaluates its Pillar 2 measures on a continual basis. The method may therefore be changed depending on developments within the market and regulatory framework. If changes are made, the new method will be submitted for consultation.

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1 Introduction

1.1 Background

Under today's risk-sensitive capital requirements, the more risk a bank[7] undertakes through its exposures, the more capital it will need to hold. In their efforts to improve profitability, banks therefore face incentives to find different methods for reducing their capital requirement. If a bank is able to reduce its capital requirement by restructuring its balance sheet or reducing its credit risks (and thus the amount of capital it must hold to cover these risks), without experiencing an equivalent reduction in its net income, its return on equity and dividend capacity rises. Risk-sensitive capital requirements otherwise reduce in general the possibilities for banks to lower their capital requirements without at the same time lowering to the same extent the risk in the operations.

One method that the banks can use to reduce their capital requirement and at the same time keep a significant part of the profitability in their operations is to securitise exposures, i.e. claims on parties who have borrowed from the bank. Securitisation entails transferring the credit risk in a portfolio to investors via securities, often after the risk has been divided into different tranches. This means that the relationship between the borrower and the bank is normally preserved even though the borrower's credit risk has been transferred to investors on the capital market. In many cases, however, the borrower is not aware that the credit risk has been transferred.

According to securitisation regulations, the bank that initiated the transaction is allowed to reduce its total capital requirement through securitisation on the condition that a "significant portion" of the credit risk can be considered to have been transferred to investors. The reduction in the capital requirement occurs through a reduction in the risk-weighted exposure amounts. The securitisation transaction thus enables the bank to free up capital. More capital is freed up when the capital requirements (as a per cent) are high than when they are low since the requirements are calculated using the risk-weighted exposures amounts for the securitised exposures. This becomes particularly relevant when a significant portion of the capital requirements cover risks other than direct exposure risks, which is the case in Sweden when it comes to systemic risks.

Securitisation is an important source of funding and risk management for banks in many international markets, even if securitisation volumes have shrunk since the most recent financial crisis. In many countries, and in particular in Europe, the banking system has not yet recovered from the financial crisis. This significantly restrains the supply of credit and thus the economy in these countries. Several initiatives have therefore been taken after the financial crisis at the international

[7] In this memorandum, the term "banks" is used for all institutions (banks, credit market companies and securities companies) that are subject to the capital adequacy rules.

level to restore the market's confidence in securitisation and stimulate lending to corporates and households.

In Sweden, securitisation has to date been relatively uncommon. Swedish banks have instead used covered bonds to generate funding and worked with other measures to manage or reduce their credit risk. However, due to their business models and the capital adequacy regulations, the banks may be facing strong economic incentives to use securitisation, in particular as a result of the stricter capital requirements in recent years (see the description in Section 2 and Appendix 3). Furthermore, international regulation is moving toward capital requirements that are not as risk-sensitive (see Section 5.7). If such capital requirements were to become key factors for determining banks' capital needs, Swedish banks could face even greater incentives to turn to securitisation.

Securitisation can be effective if it reduces all of the risks that the capital requirements aim to cover and results in no new risks. As described in this memorandum, however, this does not always fully apply.

1.2 Objective of the method

Finansinspektionen (FI) takes a positive stance towards developments that diversify capital and funding sources and thus improve the distribution of risk for Swedish banks. Therefore, the method FI is now introducing does not aim to restrict banks from using additional tools to achieve this goal through securitisation, but rather to prevent the financial system and credit supply in the economy from becoming more vulnerable as a result of securitisation.

It is FI's current assessment, however, that the banks' primary objective for securitisation is to reduce their capital requirement. As stated previously in this memorandum, the already high capital requirements in Sweden may strengthen the banks' incentives to turn to securitisation, and the development could therefore progress even more rapidly in Sweden than in other countries with even greater consequences for total lending. Future capital requirements that are potentially less risk-sensitive may also contribute to such a development. Given this background, FI makes the assessment that it is crucial to work proactively to ensure that banks have the capital to provide loans to borrowers even under stressed conditions. The measure aims to function as a back-stop that will limit the impact on the total credit supply from securitisation transactions above a certain systemically critical level.

In FI's view, the risk arises when it is not possible for banks to refinance securitisation transactions at the same time as borrowers have a need for or expect the loan to be extended. In such a situation, the bank no longer has the possibility to reduce its capital requirement for previously securitised exposures. Given economically favourable market conditions, the bank can be assumed to be able to enter into a new securitisation transaction to achieve a corresponding capital effect from a decision to extend the loans. Given impaired market demand, however, the

bank is faced with primarily two options, both of which are problematic from a systemic risk perspective since they can disrupt the supply of credit.

The first option is that the banks choose to renew the loans in question, which contributes to a stable, resilient credit supply but results in a larger capital requirement for the banks since the loans "flow back" with their full risk weight to the bank's capital requirement. This type of sudden increase in the capital requirement may result in a bank reducing its buffer to the capital requirement. This can have negative consequences for financial stability in that the bank's resilience to shocks is impaired. If the bank instead tries to preserve its buffer to the capital requirement, it may need to reduce other lending, which has knock-on effect for the credit supply at large.

Under the second option, the bank chooses not to renew the loans that were previously part of the securitisation transaction due to insufficient capital, which means that the borrowers' financing is terminated. This could have serious consequences for borrowers who have a strong need for and can reasonably expect an extension of their loans. If the borrowers' need for and purpose of the loan extend beyond the contractual maturity, and alternative financing is not available, their operations could be disrupted. In such a scenario the instability in the credit supply can also weaken the development of the entire economy.

Banks decide themselves if they want to issue and renew loans. As the macroprudential authority, however, FI must in part monitor that the supply of credit is provided over time, which also means ensuring that the supply of credit is stable. If a large part of the Swedish credit market is affected by time-limited transactions such as securitisation, there is a greater risk of a serious contraction in the credit supply following a shock to the securitisation market. Part of FI's assignment is to try to reduce the risk of such a scenario occurring. FI therefore needs to help ensure that a decision in such a scenario not to extend a loan is based on business-related grounds and not on a lack of capital. The capital assessment method thus aims to ensure that the bank's capital adequacy can withstand the credit risk that arises from the extension of loans. This leads to a stabilisation of the capital requirement over time, which in turn improves the conditions for a stable supply of credit.

The current regulations governing securitisation only take into consideration the banks' own credit risks during a securitisation. The Capital Requirements Regulation[8], which contains the provisions on capital requirements that apply to banks, does not address systemic risks that may remain, arise or be amplified by

[8] Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012.

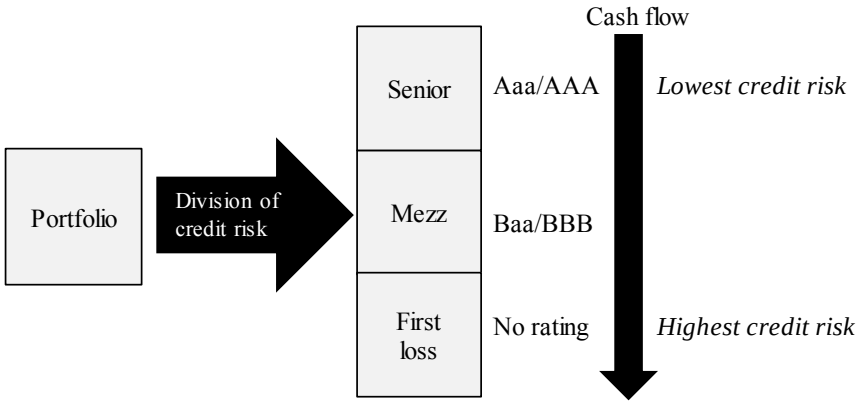
large securitisation transactions. It is these systemic risks that FI's method will cover under Pillar 2[9].

1.3 Securitisation

1.3.1 Traditional and synthetic securitisation

Securitisation transactions are normally structured by breaking down the credit risk in a specific loan portfolio, e.g. exposures to corporates or consumption exposures. This is done by separating issued securities into different priorities in terms of entitlement to the securitised portfolio's cash flows, i.e. classifying them into different positions/tranches. This order of priority in turn affects the risk level and return for investors as well as the issued securities' credit rating (if applicable). This is exemplified below in Figure 1. Investors holding "senior positions" have the highest priority, thus carrying the lowest risk of default and receiving the lowest return, while investors holding the lowest position in the ranking – the first-loss tranche – bear the greatest risk and receive the highest return ex ante. A transaction can also include intermediate (mezzanine) positions that absorb losses after the first-loss tranche.

Figure 1. **Example showing how credit risk is divided for securitisation**



Securitisation transactions can be used to achieve many different objectives and thus can be structured in many different ways. The transactions are normally structured as follows.

In a traditional securitisation, a bank (the originator[10]) packages and sells a portfolio that consists of risk exposures (e.g. loans) from its balance sheet. These

[9] Pillar 2 is the umbrella term for the rules governing banks' internal capital adequacy assessment processes and FI's SREP, of which the supervisory capital assessment constitutes an important part.

[10] Article 4(13) of the Capital Requirements Regulation defines originator as "an entity which: a) itself or through related entities, directly or indirectly, was involved in the original agreement which created the obligations or potential obligations of the debtor or potential debtor giving rise

are typically sold to a *Special Purpose Entity (SPE*), the only purpose of which is to finance the purchase of the portfolio by issuing *Asset-Backed Securities (ABS)* to investors on the financial markets. The total credit risk in these securities normally corresponds to the credit risk in the underlying loans. Credit losses up to a certain (expected) level or delayed payments during the period of the transaction can be covered by a credit or liquidity facility from the bank or a third party. These types of facilities introduce separate capital requirements for the guarantor (often the originator).

In a synthetic securitisation, the bank normally keeps the loans on its balance sheet and transfers the credit risk to the counterparty (i.e. the seller of credit risk protection) through different types of funded or unfunded credit risk protection, such as derivatives, guarantees and cash collateral. Synthetic securitisations also often utilise an SPE as the direct counterparty for the bank with the investors as the end risk-takers. The counterparty risk is often managed by the investors placing cash collateral and cash equivalents with the SPE.

Both traditional and synthetic securitisation can be used to reduce banks' credit risk and thus their capital requirements. However, traditional securitisation is primarily used as a source of funding in that the position that has the highest nominal value and the lowest credit risk is sold, i.e. the majority of the transaction in question except the position with the highest credit risk. In contrast to traditional securitisation, synthetic securitisation is not a source of funding for the bank but rather aims to reduce the credit risk, which results in a lower capital requirement. This is done by selling to investors the position that has the highest credit risk. This position has a relatively low nominal value but a large effect on the capital requirement, i.e. the opposite of traditional securitisation.

1.3.2 Transfer of significant credit risk

Securitisation is governed by the Capital Requirements Regulation[11] and guidelines from the European Banking Authority (EBA).[12] According to the guidelines, banks should notify FI about securitisation transactions that in the opinion of the banks will result in a Significant Risk Transfer (SRT) and thus a reduction in their capital requirement. The information that FI requests from the banks is provided in Appendix 1. As part of its supervision, FI is responsible for assessing whether the securitisation transactions reported by the banks meet the requirements set out in the Capital Requirements Regulation and the EBA's guidelines. This assessment takes into account, for example, the structure of the transaction, the credit risk of the underlying loans and other factors that affect the

to the exposure being securitised; or b) purchases a third party's exposures for its own account and then securitises them".

[11] Regulation (EU) No 575/213 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012.

[12] Guidelines on Significant Credit Risk Transfer relating to Articles 243 and Article 244 of Regulation (EU) No 575/2013, EBA/GL/2014/05.

transfer of credit risk. Only if these conditions can be considered to be met will the bank receive a lower capital requirement.

1.3.3 Requirements on risk retention

The Capital Requirements Regulation contains a risk retention requirement under which investors obligated to comply with the regulation, e.g. other banks, may only invest in securitisations in which the originator has retained an economic interest of no less than 5 per cent of the securitisation.[13] One of the aims of this requirement is to ensure that investors who must meet capital requirements only have exposures to securitisations where the originator retains incentives for risk control both when issuing the loan and during the term of the loan. The risk retention requirement is usually described as indirect since it targets the investor and not the originator. It therefore does not apply to investors who are not obligated to comply with the Capital Requirements Regulation, such as portfolio managers. However, many investors often demand that originators still retain significant risk in the securitised exposures. The risk retention requirement and the significant risk transfer requirement apply in tandem; the risk retention requirement shall ensure that the originator faces incentives to take responsibility, while the significant risk transfer requirement shall ensure that the remaining credit risk is actually transferred to the parties investing in the security.

1.4 The securitisation market

Securitisation has been used for several decades and has, with varying degrees of success, been common primarily in the USA but also in European countries such as the UK and France. However, risk management techniques that are based on securitisation have changed over time. At the beginning of the 2000s, they became much more complex and difficult to analyse. Some of the more complex techniques are considered to have been major contributors to the most recent financial crisis and one of the reasons the problems were so widespread. Under the *originate-to-distribute* business model, banks or other lenders regularly grant loans with the objective of selling them to a third party. The model is associated in particular with securitisation of sub-prime loans[14] in the USA during the most recent financial crisis.[15]

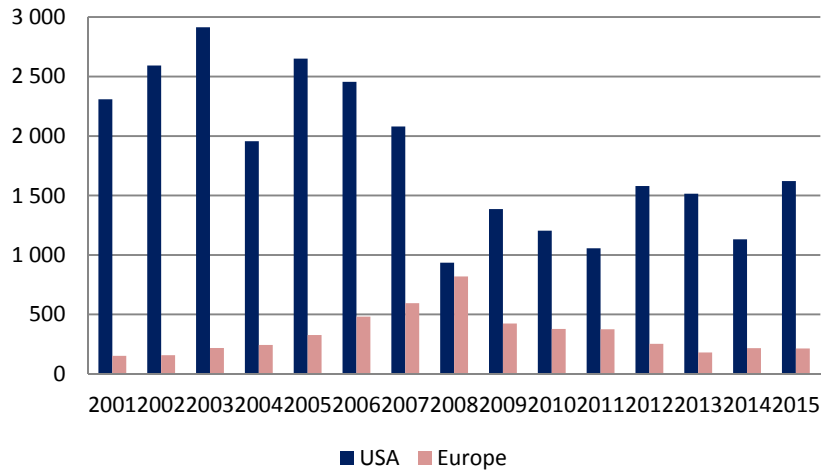
During 2009 and subsequent years, the situation in the financial market continued to be stressed and highly dependent on the central banks' and governments' measures to support the market. The US Government, for example, provided direct support to the securitisation market through the *Troubled Asset Relief*

[13] Article 405 of the Capital Requirements Regulation defines five different alternatives for how the bank can retain an economic interest of no less than five per cent.
[14] In terms of mortgages, subprime loans refer to borrowers with relatively poor creditworthiness, where the loan's risk to a significantly larger extent refers to the underlying collateral than what is the case with normal mortgages (prime loans), where the borrower has good creditworthiness.
[15] See, for example, Securitization: Lessons Learned and the Road Ahead, Segoviano, M., Jones, B., Lindner, P. and Blankenheim, J., IMF Staff Discussion Note, published in January 2015. (https://www.imf.org/external/pubs/ft/sdn/2015/sdn1501.pdf).

Program. After the crisis, activity on the global securitisation market decreased. Even though the US market has showed some recovery, the issue volumes in Europe continue to be low compared to the years before the crisis, and even then the volumes in Europe were significantly lower than in the USA. This is illustrated in Diagram 1. Since 2008, the majority of the securitisation issuances in Europe were held by the issuers themselves, largely to use them as collateral for loans at the European Central Bank (ECB).[16]

Diagram 1 shows the market for traditional securitisation. It is more difficult to gain an overview of the scope of the market for synthetic securitisation since there is no comprehensive overview, primarily because synthetic transactions since the financial crisis are commonly conducted bilaterally or with a smaller number of counterparties and contracts that are less standardised.

Diagram 1. **Issue volumes for traditional securitisation in the USA and Europe (EUR billion)**



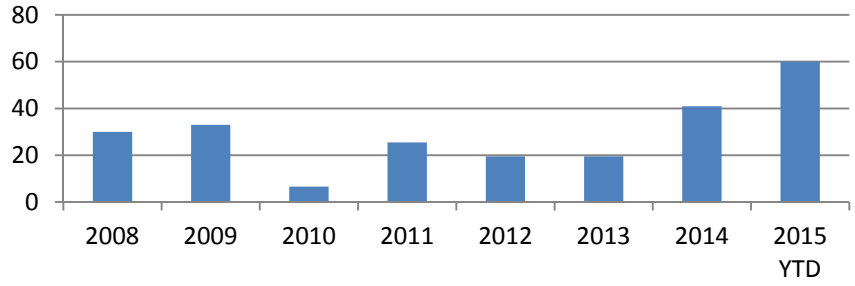
Source: The Association for Financial Markets in Europe (AFME)

Diagram 2 shows the data gathered regarding issues on the synthetic securitisation market in Europe from the EBA's report on synthetic securitisation.[17] The same report states that the synthetic securities market in the USA closed in 2007 and has still not recovered.

[16] See, for example, EBA Report on Qualifying Securitisation, European Banking Authority, published July 2015. (https://www.eba.europa.eu/documents/10180/950548/EBA+report+on+qualifying+securitisation.pdf).

[17] EBA Report on Synthetic Securitisation, European Banking Authority, published in December 2015 (https://www.eba.europa.eu/documents/10180/983359/EBA-Op-2015-26+EBA+report+on+synthetic+securitisation.pdf).

Diagram 2. **Issue volumes for synthetic securitisation in Europe (EUR billion)**



Source: EBA

Over the past few years several changes have been made to the international regulations for securitisation. The Basel Committee has revised its securitisation framework with the aim of rectifying deficiencies that came to light during and after the financial crisis.[18] The Basel Agreement on these matters enters into force in 2018 and will also be implemented within the EU. Furthermore, both the EBA and the Basel Committee, together with the International Organization of Securities Commissions (IOSCO), have proposed frameworks for simple, transparent securitisation. Provided that certain conditions are met, the framework would entail a lower capital requirement for securitisations. The aim of the framework is to promote the development of relatively simpler and more standardised securitisation, and thus increase lending to the real economy, particularly to small and medium-sized companies.

2 Economic incentives for securitisation

Securitisation can lead to economic benefits that must be weighed against any economic risks. The capital adequacy regulations and the banks' business models also create different economic incentives that are not necessarily in line with society's interests. Banks' incentives can amplify the economic risks. These incentives can be broken down into the following three components:

- If the capital requirement for certain exposures exceeds investors' assessments of the exposure risk, a bank can free up more capital than the exposure risk investors are using when pricing a securitisation. A *capital requirement-based profit* is thus generated for the bank.
- If the bank has priced an exposure, for example interest rates for mortgages or corporate loans, using a higher required rate of return than what investors are using when pricing a securitisation, a *return requirement-related profit* is generated for the bank.
- If the risk-weighted exposure amount that the capital requirement is based on more cautious (higher) exposure risk assumptions than investors' expectations for exposure risk during the duration of the securitisation, a *cycle-related profit* is generated for the bank. In extremely difficult

[18] Basel Committee on Banking Supervision, Revisions to the Securitisation Framework, published in December 2014 (http://www.bis.org/bcbs/publ/d303.pdf).

economic situations, the reverse situation is also conceivable, i.e. the exposure risk can be higher than what was taken into account in the risk-weighted exposure amounts. This can also be the case if the risk-weighted exposure amounts are improperly calculated.

The first two components, the capital requirement- and return requirement-based profits, can be viewed as structural and stable over time.

An in-depth analysis of economic incentives for securitisation is presented in Appendix 3.

3 Legal basis

3.1 Regulations set out in the CRR regarding securitisation (Pillar 1)

Securitisation is defined in Article 4(1)(61) of the Capital Requirements Regulation. Provisions regarding, for example, significant risk transfer and the calculation of risk-weighted exposure amounts for securitisation transactions are primarily set out in Articles 242−270 of the same regulation. The Capital Requirements Regulation distinguishes between two types of securitisation: traditional, which is defined in Article 242(10), and synthetic, which is defined in Article 242(11).

The handling of securitised exposures when calculating Pillar 1 risk-weighted exposure amounts, and where applicable expected loss amounts for the securitised exposures, is regulated primarily by Article 243 (traditional securitisation) and 244 (synthetic securitisation) of the Capital Requirements Regulation. In order for the originator institution to reduce its capital requirement, a significant credit risk shall be considered to have been transferred to third parties. In terms of synthetic securitisation, the transfer must occur through funded or unfunded credit risk protection. If the conditions for capital requirement reduction are not met, the originator must apply a risk weight of 1,250 per cent to all positions it holds in the securitisation or deduct these securitisation positions from its Common Equity Tier 1 capital in accordance with Article 36(1)(k).

In addition to the above-mentioned provisions in the Capital Requirements Regulation, EBA has issued guidelines[19] on the transfer of significant credit risk according to Articles 243 and 244 of the Capital Requirements Regulation.

3.2 The identified systemic risks

Economic analysis indicates that large-scale use of securitisation transactions leads to a systemic risk rather than a default risk for the banks, i.e. the type of risk that is managed by the Capital Buffers Act (2014:966) (the Buffers Act) and the Pillar 2 requirements determined in accordance with the Supervision Act. A bank's decision whether or not to extend a loan when the securitisation market has

[19] EBA/GL/2014/05 Guidelines on Significant Credit Risk Transfer relating to Articles 243 and Article 244 of Regulation (EU) No 575/2013.

closed for new issues is a business-related decision that lies with bank. However, from a systemic risk perspective, there may be serious consequences for the financial system and the real economy if the bank decides not to extend the loans because it will not be able to fulfil the capital requirements that would result from an extension of the loans.[20] Securitisation at a bank increases the risk in this scenario. This identified systemic risk is an additional element in the systemic risks for which the banks already must hold capital as part of the Pillar 2 capital requirements calculated by FI. As described below in Section 3.3, the systemic risk that can be enhanced or created by extensive use of securitisation is not covered by these capital requirements.

EU law states that systemic risk shall be covered by the systemic risk buffer and primarily the buffers for systemically important institutions.[21] These three buffers for systemic risk shall prevent or reduce long-term, non-cyclical systemic risks. The buffers for global systemically important institutions (G-SII) and other systemically important institutions (O-SII) are not utilised in practice as long as the systemic risk buffer is higher. If this is the case, it is the only buffer that applies.[22] FI has decided on a G-SII buffer for Nordea, with a gradual introduction up to 1 per cent, and on an O-SII buffer of 2 per cent.[23] Chapter 5, sections 2 and 4 of the Buffers Act lays down that the maximum buffer for G-SII is 3.5 per cent and for O-SII 2 per cent. Institutions are identified as G-SII at an international level on an annual basis[24], which means it is not solely a national decision by FI.

Today, the systemic risk buffer amounts to 3 per cent (CET 1 capital) of the total risk-weighted assets at group level, which is the maximum limit for FI's national discretion when setting an SRB on domestic and/or EU exposures (a higher limit requires approval from the European Commission pursuant to Chapter 4, sections 3 and 4 of the Buffers Act). This means that the systemic risk buffer in practice is currently as high as it is allowed to be, and the G-SII and O-SII buffers cannot be utilised to raise the ceiling.

The November Accord[25] from 2011 determined that 5 per cent was a reasonable level for the systemic risk buffer – in accordance with the systemic risks for the Swedish conditions that were identified at that time (and a gradual introduction was decided). FI therefore decided in 2014 to place the remaining 2 per cent under Pillar 2. The ability to add on additional capital requirements for systemic risk within the combined buffer requirement has been maximized (approval from the European Commission is judged only to be an extreme measure since the process is viewed as less appropriate and to some extent ineffective). An additional capital requirement for systemic risk, therefore, can only be compliant with EU law if it

[20] Bill 2013/14:228 p. 226.
[21] Articles 133(1)–131(3) of the Capital Requirements Directive, the provisions were introduced into Swedish law through the Buffers Act.
[22] Cf. Chapter 5 of the Capital Buffers Act (2014:966)
[23] FI Ref. 15-6960 and FI Ref. 15-8166.
[24] The Financial Stability Board identifies the institutions in consultation with the Basel Committee and national supervisory authorities.
[25] Agreement between the Ministry of Finance, the Riksbank and Finansinspektionen, see http://www.fi.se/sv/publicerat/pressmeddelanden/2011/nya-kapitalkrav-pa-svenska-banker/.

is included under the Pillar 2 regulatory framework, i.e. in terms of Swedish law in the Supervision Act.[26]

3.3 Increments to the additional own funds requirement – Pillar 2

The provisions of the Capital Requirements Directive and the Buffers Act grant national supervisory authorities the right to decide within the framework of Pillar 2 whether an institution shall have more own funds than what is set out in the Capital Requirements Regulation. Pillar 2 is the umbrella term for the rules governing banks' internal capital adequacy assessment processes and FI's SREP, of which the supervisory capital assessment constitutes an important part. As stated in FI's memorandum regarding capital requirements for Swedish banks, however, FI normally does not make a formal decision on additional own funds requirements but instead informs the bank about the outcome of FI's supervisory capital assessment.[27] An additional own funds requirement targets an individual institution and is always preceded by an assessment conducted by FI within the framework of the institution's SREP.

Pillar 2 includes all default risks to which an institution is or could become exposed and the risks that an institution poses to the financial system. Unlike Pillar 1, Pillar 2 encompasses all risks and risk elements, which includes systemic risks. The delineation between what FI may and may not include when it comes to systemic risks is ultimately determined by Chapter 2, section 1, point 2 of the Special Supervision of Credit Institutions and Securities Companies Act (2014:968) (the Supervision Act). The preparatory works state that the introduction of the Supervision Act clarifies that it must be possible to also consider risks to which an institution exposes the financial system (systemic risks) when determining an additional own funds requirement. It is mentioned in particular that capital adequacy in Pillar 2 may occur for systemic risk when the relevant systemic risk is not fully covered by either the own funds requirements or the buffer requirements.[28]

FI's interpretation of this provision was previously published on a number of occasions; see, for example, FI's memoranda *Kapitalkrav för svenska banker* and *Kapitalkrav inom pelare 2 avseende löptidsantaganden*.[29]

FI has expressed that it in general bases the application of the systemic risk increment in Pillar 2 on the same drivers of risk and indicators as for the systemic

[26] The preparatory works state that it should be possible to take into consideration when making a decision on additional own fund requirements if the applicable capital buffers do not cover all of the elements of the systemic risk in question, see Bill 2013/14:228 p. 226.
[27] See FI Memorandum, *Kapitalkrav för svenska banker*, FI Ref 14-6258. This memorandum is available in English on FI's website.
[28] Bill 2013/2014:228 p. 272f.
[29] FI Ref. 14-6258 and FI Ref. 16-2703. FI also decided in May 2015 on the method it intends to use for three important risk types: credit-related concentration risk, interest rate risk in the banking book and pension risk. However, none of these three are systemic risks and FI's position in this memorandum thus is not relevant for the assessment being made here.

risk buffer.[30] However, this does not mean that the same systemic risk is covered twice. The systemic risk that has been identified as being related to securitisation falls outside the previously identified systemic risks. Securitised exposures, namely, are excluded when calculating the bank's risk-weighted assets, which is the measure on which the Pillar 1 and Pillar 2 capital requirements are based in general. In order to be able to take into consideration the systemic risk associated with securitisation, it is therefore necessary to introduce a new capital requirement within Pillar 2.

3.4 Transparent assessment method

When there is cause to calculate an additional Pillar 2 capital requirement, FI intends, and considers it to be advantageous, to publish the method that will serve as the basis for how it will assess the capital needs for individual institutions. Even if a decision about an additional own funds requirement is specific to an institution, it is still possible to provide general information about the assessment method FI will use. This is because the risk that is taken into consideration is shared by all institutions that engage in securitisation transactions.

FI has already expressed in its memorandum regarding capital requirements for Swedish banks[31] that it aims to standardise and publish the methods for assessing additional types of risks that are included in the supervisory capital assessment. The purpose of developing methods and a general practice for this assessment is to ensure that the banks are treated equally. In its preparatory works for the Supervision Act (see Bill 2013/14:228 p. 229), the Government has also emphasised the importance of the Pillar 2 process being clear and transparent. Section 3, point 3 of Special Supervision and Capital Buffers Ordinance (2014:993) also states that FI, on its website, shall provide the general criteria and methods that are applied to SREP. It is FI's ambition to remit and publish the assessment methods that are used during the Pillar 2 process. FI has previously published memoranda detailing methods for four different types of risk.[32]

3.5 FI's supervision possibilities

Oversight of securitisation transactions assumes that FI is able to obtain specific information about the transactions from the banks. This is prescribed by Chapter 13, section 3 of the Banking and Financing Business Act (2004:297) and Chapter 6, section 1 of the Supervision Act.

3.6 Scope for the method and when it will start to be applied

[30] For more information, see FI Memorandum, *Kapitalkrav för svenska banker*, FI Ref 14-6258, p. 47. This memorandum is available in English on FI's website.
[31] See FI Memorandum, *Kapitalkrav för svenska banker*, FI Ref 14-6258. This memorandum is available in English on FI's website.
[32] *FI:s metoder för bedömning av enskilda risktyper* (FI Ref. 14-14414) and *Kapitalkrav inom pelare 2 avseende löptidsantaganden* (FI Ref. 16-2703). The former memorandum is available only in Swedish. The latter is available in English on FI's website.

The introduction of Pillar 2 capital requirements is a change in practice and not a new regulation. This implies that a formal date of entry into force will not be required. Rather, the change in practice is implemented in connection with publishing this memorandum immediately in FI's concerned processes.

The capital assessment method will be applied to institutions in Supervision Categories 1 and 2 in conjunction with its supervisory capital assessment in SREP starting in 2017.[33] FI intends to follow the developments on the securitisation market in Sweden closely and if needed also apply the method to institutions other than the current twelve largest banks.

3.7 Preparation

FI consulted with the Swedish Bankers' Association while drawing up a capital assessment method for systemic risk associated with securitisation transactions.

A proposal was submitted for consultation during the period December 1, 2016 to January 26, 2017. Consultation responses were received from FAR, Association of Swedish Finance Houses, Swedish Investment Fund Association, Kommuninvest, PGGM[34], Swedish National Debt Office, Swedish Bankers' Association and Sveriges Riksbank. Two commentators declined to make any comments (Swedish Investment Fund Association and FAR) and the others submitted feedback on the consultation proposal.

After the consultation, FI revised the memorandum to take into consideration the submitted feedback. The main points of feedback are provided and commented on under each position.

4 Description of the problem

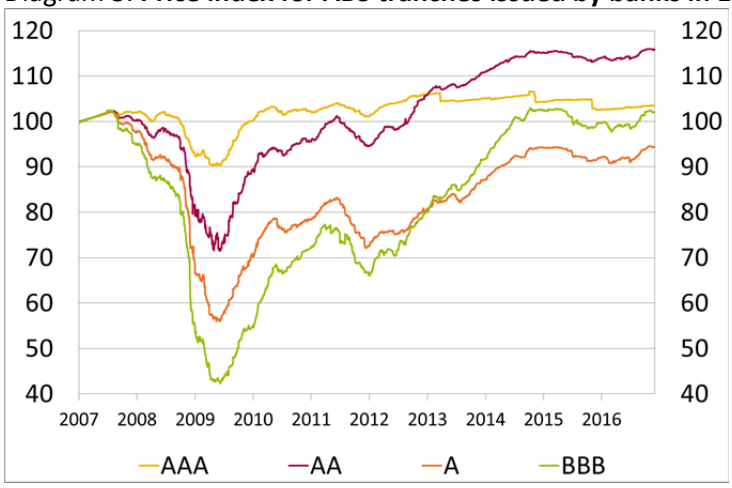
4.1 Refinancing when market liquidity is impaired

The capital requirement for a bank engaging in securitisation only includes the part of the securitised portfolio for which the bank continues to bear the credit risk.[35] This assumes that the transaction can be considered to have transferred a significant part of the credit risk to third parties. Credit risk that during the term of the transaction is taken over by investors on the capital market can thus to varying extents help reduce the bank's total risk level and by extension its total capital requirement.

[33] For 2017, Nordea, Svenska Handelsbanken, Swedbank and Skandinaviska Enskilda Banken belong to Category 1 and SBAB Bank, Svensk Exportkredit, Kommuninvest, Länsförsäkringar Bank, Landshypotek, Skandiabanken, Avanza Bank and Nordnet belong to Category 2. For more information, see FI Ref. 16-13939 and FI Ref. 16-13938 (in Swedish only).
[34] Dutch pension fund manager.
[35] Some additional capital requirements may arise, for example due to foreign exchange risks.

Given favourable economic conditions and stability on the financial markets, banks continue to have good access to funding and distribution of credit risk through the market. Given a negative course of events in the economy and on the financial markets, however, access to funding and risk coverage through the market may be affected in several steps. Growing financial uncertainty means that investors with high risk aversion will choose to sell the instruments they own. Selling pressure from rising risk aversion means that, all else equal, the price and market value of the instruments will fall. Investors who own these instruments and have highly leveraged balance sheets or use the instruments as collateral may therefore be forced to sell these holdings if the market is uncertain. These types of "fire sales" further feed the fall in prices. Several factors play a role in how far prices fall, include the type of instrument, the risk level of the underlying credits and the issuer of the instrument. During the most recent financial crisis, securities used for traditional securitisation were hit particularly hard by falling prices, in particular those with lower creditworthiness. This is illustrated in Diagram 3.

Diagram 3. **Price index for ABS tranches issued by banks in Europe**



Note: Indexed prices (100 = 2007-01-01)
Source: Markit iBoxx

During periods of financial stress, demand to invest in new instruments falls. At the same time, however, the cost of financing and risk coverage through the market rises since investors want to have more compensation for the risk they are taking. If a bank is dependent on regularly refinancing or entering into new securitisation transactions on the financial markets to maintain the positive capital effect from the transaction, it is vulnerable to falling or disappearing demand on these markets.

If risk aversion on the financial markets rises, it is likely that several different instruments will be affected to some extent, i.e. refinancing risk may occur for both securitisations and other financial transactions with determined maturities. Different requirements in the regulatory framework take into account that this risk causes refinancing problems for the bank, for example the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio Requirement (NSFR). As stated previously (and described in more detail below), deteriorating market demand can

also have serious effects through the bank's capital needs. The regulatory framework currently does not limit the scope of the refinancing risks that the bank may take which are linked to securitisations' effects on the capital need. FI's method introduces such a limit.

4.2 Borrowers' expectations and society's need for a stable supply of credit

As described in FI's previously published memorandum, *Pillar 2 Capital Requirements for Maturity Assumptions*[36], borrowers in many cases may expect and need to extend their loans once the contractual term has expired, which can entail that the actual maturity exceeds the contractual maturity. The extent to which this occurs is largely dependent on the borrower's objective for the loan. For example, the objective of many corporate loans is long-term financing of operations and the borrower thus expects continued financing even when the loan's contractual maturity is short. The actual maturity can also exceed the contractual maturity if the borrower's financial situation is weakened and the bank is not able to demand repayment upon expiration of the loan without increasing its risk of default and credit losses.

Securitisation differs from a sale of a credit portfolio in that, during a securitisation transaction, the relationship between the borrower and the bank is preserved. In a synthetic securitisation transaction, the assets do not even leave the bank's balance sheet. Customers are therefore normally not even aware that their loan has been securitised. This means that the bank continues to be responsible for the administration of the loans and communication with the borrowers whose loans have been securitised and that the bank continues to sell other financial services to the same borrowers.

However, the economy is affected by fluctuations in the supply of credit. Significant negative changes in the supply of credit can amplify economic downturns and thus introduce a risk of weakened financial stability. The opposite is also true since an expansion in credit that occurs too quickly could lead to financial bubbles, i.e. uncontrolled and unsustainable increases in some asset prices, which could create serious problems for stability. Society's need for stability and a long-term approach to the issuance of loans is currently taken into account in the capital requirements for the three systemic risk buffers, the objective of which is to prevent or mitigate long-term structural systemic risks.

4.3 Systemic risk associated with securitisation

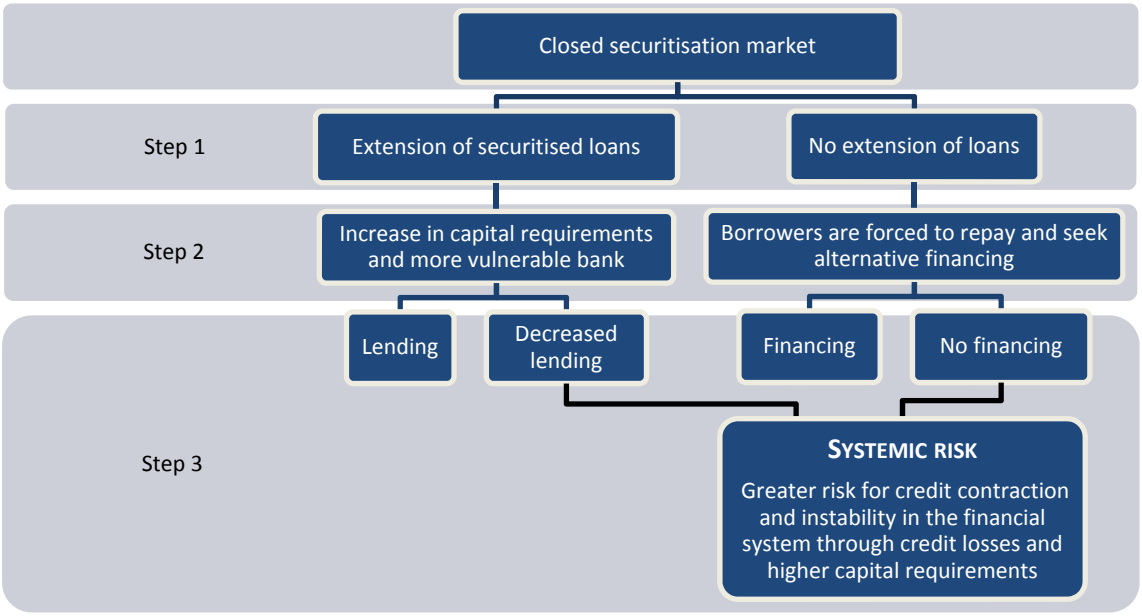
If market demand were to deteriorate sharply to such a point that it were no longer possible to engage in securitisation transactions or the costs of entering into new securitisations were to become very high, a bank can either take back the credit risks and the resultant increase in its capital requirements or terminate the loans that can no longer be securitised. Society's need for a stable supply of credit

[36] See FI's memorandum, *Kapitalkrav för löptidsantaganden inom pelare 2*, FI Ref. 16-2703.This memorandum is available in English on FI's website.

makes the bank's business-related decision relevant from the perspective of systemic risk. It is not possible to force a bank to issue or extend a loan, but it is possible to counteract the risk that insufficient capital will prevent the bank from providing the market with loans. This is the starting point in FI's capital assessment method.

Figure 2 illustrates a simplification of the risk analysis that serves as a basis for FI's capital assessment method for securitisation.

Figure 2: **Illustration of FI's risk analysis**



In a situation where the bank chooses to extend the loans, the loans need to be covered in full by the bank in its capital requirements, since the reduction effect from the securitisation has been nullified. When a bank experiences a reduction in its available capital, this can also reduce the possibilities of the bank to further manage the capital needs that arise as a result of the new credit risk. This could lead to an impairment in the bank's capacity to issue new loans in general compared to normal issuance levels.

In a situation where the bank instead does not extend the securitised exposures due to the stress that such an extension would entail for its capital position, the borrowers' financing is terminated. If this decision affects a large number of borrowers and large amounts, which could be the case if the bank's securitisations cover a significant portion of the Swedish credit market and the transactions are not structured with exposures that mature evenly and well-spread-out over time, this may give rise to shocks from a systemic risk perspective. It would most likely be difficult for borrowers to find a new source of financing if the economy as a whole is experiencing a downturn and other lenders are also in a position where they need to protect their own capital strength. In cases where the borrowers' objective or need for the loan is more long-term than the contractual maturity, and if there are no other possibilities for financing, the bank's choice not to extend the

loans can thus impair stability of the credit supply and amplify a credit contraction.

The four major Swedish banks are each considered to be systemically important as a result of their large market shares. They are also closely interconnected since they are jointly dependent on market conditions. Several banks can therefore suffer similar problems at the same time. Problems that individual banks may experience or the banks' business-related decisions can thus quickly affect the financial system as a whole and the total supply of credit. The negative effects could furthermore be amplified by the fact that the risk can be assumed to be procyclical, i.e. it can be expected to occur during situations in which the banks may be more sensitive to waning confidence and thus are particularly vulnerable if their capital position is put under pressure.

There is therefore a need for FI to take measures to safeguard the total supply of credit if this supply becomes heavily dependent on securitisation and thus can be threatened by problems on the securitisation market.

5 Capital assessment method

5.1 Fundamental assumptions for the assessment

5.1.1 FI's position

While assessing the Pillar 2 capital requirements for a bank, FI will apply the following assumptions:
a) no new securitisations can be issued during periods of heavily impaired liquidity on the securitisation market, and
b) the bank will renew exposures that have been securitised when they reach contractual maturity, with some exceptions.

5.1.2 Comments received regarding FI's position

Consultation comments on the method's assumptions were submitted by the Swedish Bankers' Association and PGGM and are reported in this section. The comments on the proposal as a whole, including its legal basis, are reported in Section 5.2.2.

The Swedish Bankers' Association rejects the proposal in its entirety and strongly opposes the assumptions on which FI bases its capital assessment method. The Swedish Bankers' Association states that the assumptions are extreme both individually and even more so combined. In terms of the reasoning that banks renew previous securitised exposures under impaired market demand, the Swedish Bankers' Association points to the fact that there is no contractual obligation to do so and the banks instead are obligated by law to assess each new loan based on the general conditions at the time of the new loan. The Swedish Bankers' Association writes in its consultation response that banks also are not entitled or obligated to

"perpetually" provide the market with loans. In terms of the assumption that no new securitisation transactions can be issued during periods of impaired market demand, the Swedish Bankers' Association believes this to be an extreme scenario which lacks empirical basis. The Swedish Bankers' Association also emphasises that entry into the securitisation market requires that transactions amount to a certain, relatively large volume, and that the proposal thereby limits the banks' possibilities to engage in securitisation.

PGGM states that it is not reasonable to assume that the market for synthetic securitisation would close before more traditional markets for funding and capital during periods of impaired market demand. PGGM instead considers there to have been a relatively stable investor segment over a long period of time. PGGM mentions as an example that it invested itself throughout the entire crisis and takes the position that banks on several occasions have been able to transfer credit risk to it through the securitisation market at a time when alternative capital markets were not available for the bank in question. According to PGGM, it is rather the regulatory framework, and not investors' demand, which over the past ten years has played a key role in the extent to which the banks can and want to engage in securitisation on the market.

5.1.3 Reasons for FI's position

Two fundamental assumptions are made in this memorandum. The first is that it is not possible to issue new securitisation transactions during periods of impaired liquidity on the securitisation market, and the second is that the borrowers behind the securitised exposures, with the exception of the loans specified in section 5.5.1, have a need for continued financing. In other words, the assumptions are based on the goal of creating conditions for stable, unchanged **lending** for both individual banks and the financial system as a whole.

In the presence of greater risk aversion on the financial market, a number of events usually occur at the same time, which means that uncertainty spreads quickly to other market participants and markets. The most recent financial crisis demonstrated that market demand can disappear completely or almost completely for a long period of time, which may make it impossible or significantly more expensive to issue new securitisations. Experiences from the most recent financial crisis also clearly demonstrate that issuance volumes can fall sharply during or after serious shocks (see Diagrams 1 and 2).

Given the consultation comments that have been submitted, FI would like to state the following.

The Swedish Bankers' Association is right in pointing out that banks normally are not obligated to renew or extend loans, even if this is expected by borrowers. However, FI is tasked with protecting the overall credit supply. It is from this macroeconomic perspective that the assumptions of the capital assessment method should be viewed. From a microeconomic perspective, the banks' individual management of their credit risk is important. As described in FI's memorandum

regarding maturity assumptions, banks should at the same time face incentives for and have the capacity to support long-term lending in order to reduce the risk that credit contractions during economic downturns become too sharp. The banks' ability to not take back the credit risk for previously securitised exposures does not eliminate the risk, either, of the imbalance that can arise in the total credit supply. Rather, this enhances the risk.

When it comes to the securitisation market during financial uncertainty, FI takes the position that it is clear that the securitisation market was not stable during the most recent crisis. Examples of individual transactions that were conducted during the crisis should therefore be set in relation to the total activity on the securitisation before the crisis occurred. It can also be noted that the most recent financial crisis is only an example of one crisis.

FI shares the Swedish Bankers' Association's view that the assumption of no new transactions reflects the risk of a worst-case scenario. In practice, it is naturally possible for banks that are internationally active to be able to find geographic markets or individual industries where the development is not as weak as in their home market, e.g. as a result of diversification and that investors in the transaction are not hit sufficiently hard themselves.

However, FI would also like to clarify that the financial stress that the method implies represents a scenario that occurs when the issue volumes are larger than those on the current market. This makes it a hypothetical assessment of the systemic risk. Securitisation of smaller, non-systemically-critical, transactions are not affected by the method. The Swedish Bankers' Association states in its consultation response, however, that market demand requires that transactions reach a relatively large volume. This implies in and of itself that it would actually be difficult for all Swedish banks to conduct securitisation transactions of significant size given impaired demand on the market.

In summary, FI's Pillar 2 capital requirements for systemic risk take into account the need for banks to have capital to provide loans to borrowers in the long run, i.e. throughout both positive and negative economic cycles. The importance of this, in FI's view, is the justification behind the conservative assumptions of the method.

5.2 A capital requirement for systemic risk associated with securitisation

5.2.1 FI's position

Within the framework of Pillar 2, FI will calculate a capital requirement for systemic risk if at least one of the following conditions for systemic risk associated with securitisation is met.

1. The reduction in the bank's total capital ratio resulting from the flowback of securitised exposures during a future 12-month period is more than 25 basis points

for institutions in Supervision Category 1 and 50 basis points for institutions in Supervision Category 2.

2. The nominal value of the bank's securitised exposures is more than 15 per cent of the bank's total lending in the exposure class[37] in question on a national market where the bank is systemically important[38].

The Pillar 2 capital requirement for systemic risk is calculated as the sum of the total reduction in the capital ratio that occurs in excess of the cut-off point stated in Condition 1 during all future 12-month periods for all of the bank's securitisation transactions.

If a systemically important bank meets Condition 2 but not Condition 1, FI will calculate the capital requirement that corresponds to the total reduction in the capital ratio, i.e. without the cut-off point that is stated in Condition 1, for the volume that exceeds 15 per cent. When making this calculation, FI intends to apply an even risk distribution[39].

If the bank meets Condition 2 only in one exposure class or on a national market where it is systemically important, an adjustment is made to take into account the reduction in the capital ratio from the exposure class or market in question.

5.2.2 Comments received regarding FI's position

The Swedish Bankers' Association states that the risk that FI has named "flowback risk"[40] in its consultation memorandum is not a real risk and that the proposal is in conflict with current EU law since a securitisation transaction that meets all regulations for credit risk transfer must result in a capital requirement reduction in accordance with the Capital Requirements Regulation. The Swedish Bankers' Association is also critical about the FI submitting a proposal that goes against international initiatives related to securitisation and that FI is pre-empting the European Commission's proposed revised Pillar 2 regulations. Given this, the Swedish Bankers' Association suggests that FI instead should clarify its application of the EBA's securitisation guidelines.

The Swedish Bankers' Association furthermore states that securitisation can be an important tool for the banks' possibilities to recover from financial stress and that it is therefore important not to obstruct the establishment of internal and external

[37] The exposure classes are defined in Articles 112 and 147 of the Capital Requirements Regulation.
[38] A bank is systemically important if it is classified as such in accordance with the national application of the EBA's identification method for O-SII or a branch identified as significant in accordance with Article 51 of the Capital Requirements Directive.
[39] "Even risk distribution" refers to using the same average risk weight for the loans for which a capital requirement is calculated and the loans for which a capital requirements is not calculated, respectively.
[40] In this memorandum, FI has clarified that the risk that the method's capital requirements are intended to cover is the systemic risk related to flowback from the bank's securitised exposures.

structures before a crisis incurs. Market entry also requires that transactions reach a certain, relatively large volume. Limiting the possibilities for securitisation would thereby, according to the Swedish Bankers' Association, counteract the underlying objective of the proposal, i.e. financial stability.

In terms of the design of the capital requirement, the Swedish Bankers' Association believes that the construction of the cut-off points would create undesirable incentives for the banks to reduce their margin above the capital requirements in a number of ways. The Swedish Bankers' Association also questions how the selected cut-off points were determined and believes that only Swedish loans should be included in an eventual method since FI refers to its macroprudential assignment and Swedish conditions.

PGGM focuses its consultation response on synthetic securitisation and emphasises the important of banks have access to different tools. PGGM takes the position that there is no justification for punishing a single tool, such as securitisation, so harshly. According to PGGM, securitised products do not result in a higher risk than other capital or funding sources. PGGM states that transactions with high structural risk could constitute a risk and that focus should be directed to ensuring that synthetic securitisations are as simple and transparent as possible. In terms of the capital requirement's design, PGGM states that the cut-off point of 25 basis points (for major banks) is too limiting. As an alternative method, it recommends that FI should only take into consideration securitisation transactions that fall due in the immediate 12-month period.

The Riksbank supports the proposal. The Riksbank shares FI's main reasoning about the importance of considering the risks that, from a stability perspective, could materialise when credit risk for significant loan volumes is temporarily moved from one bank to other actors. The Riksbank suggests that FI should consider an approach where the capital requirement for the flowbacks far in the future is lower than for flowbacks in the immediate future since the banks should face better conditions for managing risk that occurs further out in the time and there should also be a limit on how long of a period the securitisation market can be assumed to be limited or non-existent. Such an approach, in the opinion of the Riksbank, would also give banks incentives to conduct longer securitisation transactions. Finally, the Riksbank states that the proposal should be evaluated within two years of its introduction to ensure that the design of the method is appropriate and proportionate, does not improperly impede securitisations and has the intended effect on the real economy.

The Swedish National Debt Office supports the proposal. The Swedish National Debt Office states that it shares FI's assessment that the proposed measures should contributed to a stable supply of credit. As the resolution authority in Sweden, the Debt Office would like to state in particular that if the risk materialises, this could increase the probability that banks will end up in resolution and, when a bank is already in resolution, make it difficult for the Debt Office to carry out resolution measures.

The Association of Swedish Finance Houses presents a general position that there are several advantages to securitisation and does not think that Sweden should deviate from regulations and initiatives that are taking place at the European level.

Kommuninvest presents a general comment that securitisation can entail both opportunities and risks and that FI's position should focus on the capital requirements for securitisation being as risk-sensitive as possible.

5.2.3 Reasons for FI's position

The Swedish Bankers' Association is opposed to FI going against EU regulations through this Pillar 2 own funds requirement since the method according to the Association "obviously aims to neutralise the effect of these regulations". The regulations that the Swedish Bankers' Association is referring to are primarily the provisions of the Capital Requirements Regulation on calculating capital requirements for credit risk associated with securitisation. This method does not affect the firms' application of these regulations and thus not their capital requirement for credit risk. The effect that the Swedish Bankers' Association is referring to should instead be the total capital requirement that is affected only if the bank engages in securitisations in such a way that systemic risks arise that are not covered by the capital requirement for credit risk, and that therefore need to be covered by an additional own funds requirement, such as that referred to in Chapter 2, section 2 of the Supervision Act and Article 104(1)(a) of the Capital Requirements Directive. In FI's view, the procedure can therefore not be considered to be in conflict with EU law in the manner as presented by the Swedish Bankers' Association (see also Section 3 – Legal basis).

FI's capital assessment method does not have any impact if a bank does not securitise systemically critical volumes or structure transactions in such a way that can lead to negative effects from a systemic risk perspective. The method does not prevent banks from securitising exposures, but limits the capital incentives through a Pillar 2 capital requirement for the part of the bank's securitisation that exceed the conditions set above, i.e. when the transactions can create systemic risks. In other cases, the bank is not affected by the method.

In terms of any changes to the possibilities to base Pillar 2 requirements on systemic risks, FI considers it to be important to follow the development related to the Pillar 2 regulations in EU law. However, the proposed design of the revised Pillar 2 regulations has not advanced to a point that assumptions can be made about how the future regulation will actually be designed. As long as there is a need from a Swedish perspective to manage systemic risk, FI should take a proactive approach based on the current regulation.

In terms of ongoing international regulatory work that affects securitisation, FI takes the position that the current situation on the Swedish credit market is not the same as in many other EU countries. It is therefore natural for the need for different systemic risk measures to differ between countries within the EU. More importantly, FI's method has a different perspective and focuses on the risks that

may arise from a systemic risk perspective in the presence of a sharp fall in demand on the securitisation market, i.e. not risks associated with the actual credit risk transfer.

Given the comments received that FI's method would limit banks' use of additional tools for funding, capital or risk management, FI would like to emphasise that it is important to distinguish between the different aims and structures of the transactions. FI views transactions with the aim of funding and risk management to be advantageous – depending on their volume and structure. A capital requirement that only arises for systemically critical securitisation should not be too limiting to the development of a sound securitisation market in Sweden.

In terms of securitisation as a crisis management tool, FI is of the opinion that there are some benefits. During idiosyncratic crises, securitisation can, for example, make it possible for banks to free up capital and/or obtain funding since the tie with and thus dependence of the bank is broken. The introduction of a Pillar 2 capital requirement that only arises during systemically critical securitisation should not prevent necessary internal structures, such as system support, and external structures, such as relationships with investors, from being established before a crisis occurs.

However, during a systemic crisis, which the method aims to consider, the benefits of securitisation as a crisis management tool can be assumed to be limited. The Swedish Bankers' Association emphasises in its consultation response that market entry requires that transactions reach a relatively large volume. This supports FI's reasoning regarding the conceivable difficulty of Swedish banks to issue new transactions on the market during a systemic crisis. However, in a critical situation where FI sees that securitisation can be used to the Swedish banks' advantage, FI may lighten the capital limitations on systemically critical securitisation.

As one example of the portion of the Swedish credit market that can quickly be covered by securitisation transactions, it can be mentioned that Nordea executed a synthetic transaction in the autumn of 2016. The credit portfolio consisted of Danish and Swedish corporate exposures from 3,000 borrowers and initially amounted to EUR 8.4 billion, which constitutes almost 11 per cent of Nordea's total lending to Danish and Swedish firms.

Figure 2 in Section 4.3 illustrates the risk analysis that serves as the basis for this method. From a stability perspective, the systemic risk increases the greater the credit volumes encompassed by a securitisation transaction and the more the exposures' contractual maturities coincide in time. This means there is a greater probability that the bank will choose not to extend the loans, which in turn enhances the risk of a shock to the supply of credit. FI's capital assessment method therefore aims to take into consideration both the structure and the volume aspects of all of the banks' securitisations.

Below is a description of the method's capital requirements and the most significant consultation comments regarding the design.

The Pillar 2 capital requirement for systemic risk associated with securitisation is calculated based on the assumption that the bank renews previous securitised exposures with some exceptions. In other words, the method is designed on what FI considers to be desirable from a systemic risk perspective, namely that banks have the capacity to extend credits related to securitisation even during a financial crisis.

The capital requirement is therefore calculated based on the increase in the bank's total capital requirement (in excess of a certain cut-off point) that arises as a result of the bank extending the loans. Since the method is based on the effect of the bank's securitisations on the total credit supply, FI considers there to be cause in the calibration of the cut-off point to distinguish between banks that are individually considered to be systemically important (Supervision Category 1) and banks that together with one or several other banks can be systemically important (Supervision Category 2). In order to take into account that the ability of systemically important banks to manage flowbacks can have an impact on the supply of credit in the economy, FI intends to apply a lower and more prudent cut-off point for each bank that is individually considered to be systemically important. FI believes that an appropriate cut-off point for institutions in Supervision Category 1 (currently Nordea, Svenska Handelsbanken, Swedbank and Skandinaviska Enskilda Banken) is 25 basis points and for institutions in Supervision Category 2 (currently SBAB Bank, Svensk Exportkredit, Kommuninvest, Länsförsäkringar Bank, Landshypotek, Skandiabanken, Nordnet Bank and Avanza Bank) 50 basis points. The assessment is that banks conducting transactions under the stated cut-off points can be expected to hold sufficient capital or in another way manage the consequences of the securitisation market being closed to new transactions. Therefore, in these cases, a capital requirement will normally not be calculated.

The condition in question regarding the reduction in a bank's capital ratio takes into account the structural aspect of the transaction. The aim is to take into consideration the bank's ability to absorb flowbacks without this having a negative impact on the supply of credit as a whole. FI intends to also apply an additional condition to systemically important banks in order to exempt them from a Pillar 2 capital requirement. The reason for this is that there are grounds from a systemic risk perspective to take into consideration the consequences of a market that is unstable in the long term, where individual banks' flowbacks during a 12-month period do not exceed the method's cut-off point but where the sum of the Swedish banks' *total* flowbacks constitutes a significant part of a systemically important activity. This results in an elevated risk of instability in the supply of credit. Given this background, FI believes there to be a need to also ensure that the bank's securitised lending volume for an exposure class does not exceed a certain significant percentage of the bank's total lending in the same exposure class in a country where the bank can be considered to hold a systemically important role. FI makes the assessment that an appropriate cut-off is 15 per cent.

FI makes the assessment that the requirement on the banks to maintain a capital buffer to manage systemic risk according to the method should mean that the bank is building up capacity to extend loans without a serious effect on lending and at the same time meet borrowers' expectations and the needs of society for stable credit supply.

The Swedish Bankers' Association takes the position that it is not reasonable to consider exposures outside of Sweden since FI refers to its macroprudential assignment. FI's method is based on the risks to which the institution exposes the financial system. This means that the obligation of FI as laid down by the Supervision Act to decide on additional own funds requirement is not in and of itself linked to the macroprudential assignment to which the Swedish Bankers' Association is referring. On the other hand, neither is it a case of two separate events, since the systemic risks that bring rise to the capital requirement can be said to have been identified within the framework of the macroprudential assignment.

FI's assessment of systemic risk takes into account both structural risks and cyclical risks[41], of which the latter are being discussed in this memorandum. In its assessment of structural risk, FI takes into account, for example, links between financial firms and markets, and any contagion risks arising from cross-border operations. In this case it is not necessary to identify contagion risks to be able to determine the presence of systemic risk. If the bank's securitised exposures refer to lending to borrowers in a country other than Sweden where the bank can be considered to have a systemically important role, a decision not to extend the loans does not necessarily result in a direct systemic risk in Sweden. However, too large of an effect on the bank's capital adequacy can have a negative effect on the total credit supply regardless of the credit portfolio's geographic composition if the extension of the loans is at the expense of the bank's other lending to less prioritised borrowers. Given that it is the bank's capacity to renew loans that is key for systemic risk, FI makes the assessment that this circumstance already leads to the conclusion that even loans to borrowers outside of Sweden should be included in the method. The fact that the measures also mean that systemic risk outside of Sweden will be managed may be considered to be a positive effect, but as mentioned it is not critical for the assessment.

The Swedish Bankers' Association has stated that the capital requirement's design would lead to undesirable risks in that it creates incentives for banks in different ways to reduce the difference between actual capital and the capital requirements, e.g. by reducing own funds or increasing the risk-weighted assets. FI agrees that the technical design of the cut-off points, everything else equal, creates some incentives for the banks to in this way reduce their "management buffer", i.e. the capital that the banks voluntarily hold in addition to the total capital requirement.

[41] A detailed description of systemic risk and the link to macroprudential supervision can be obtained from the Financial Crisis Commission's Interim Report "Preventing and Managing Financial Crises", Financial Crisis Committee Interim Report (SOU 2013:6).

However, FI judges these incentives to be limited and that the benefits of a simple and predictable method targeting the negative effect that FI thinks the banks should have the capacity to manage, outweighs the disadvantages of such incentives being created on this buffer.

In terms of the Riksbank's proposal to consider a method where the capital requirement is higher for systemic risk that could materialise in the immediately future, and PGGM's proposal to only consider the immediate 12-month period, FI would like to state the following. FI shares the view that flowbacks that may occur in the far future can be considered to be less of a concern and that it should be possible for the maturity to impact the capital requirement. During its work to develop a method, FI considered only looking 1−3 years into the future. The final assessment, however, is that it would be procyclical to burden the bank with a higher capital requirement during the period when the risk actually can materialise. An alternative method with a shorter horizon also does not achieve the aim that a bank should also have the capacity to manage the capital effect of a financial crisis that is ongoing for an extended period of time. It is therefore FI's assessment that the risks that are created both by the transaction's structure and volume are best counteracted by presenting the banks with incentives to structure securitisations with even maturity dates and long maturities. This should be achieved through the manner in which the cut-off points have been defined.

Finally, FI would like to restate that it continuously evaluates its methods, but it does not normally apply formal oversight clauses, for example to evaluate the method within two years as suggested by the Riksbank. FI is aware, though, of the importance of and need for context-adapted methods and, if conditions were to deviate from those present today, can re-evaluate the capital assessment method for systemic risk associated with securitisation – just like with other Pillar 2 capital requirements.

5.3 Capital requirement level and type of capital

5.3.1 FI's position

The Pillar 2 capital requirement for systemic risk associated with securitisation shall have capital coverage in accordance with the same level and capital distribution as the Pillar 1 capital requirement, excluding the capital requirement for the capital conservation buffer and the countercyclical capital buffer but including the Pillar 2 buffer for systemic risk.

5.3.2 Comments received regarding FI's position

The Swedish Bankers' Association does not consider it to be reasonable for the method's capital requirement to be included in the Pillar 1 capital requirements. The Association justifies this by stating that the capital requirement entails an increment for macroprudential risk, i.e. a systemic risk, and, through credit risk transfer, no risk for the individual bank.

5.3.3 Reasons for FI's position

FI's memorandum *Kapitalkrav för svenska banker* states that the main rule is that risks covered by Pillar 2 basic requirements shall be covered by the same capital distribution as the Pillar 1 capital requirement, but that FI may deviate from the main rule for specific types of risk.[42]

Both the capital conservation buffer and the countercyclical buffer aim in different ways to cover losses that may arise under financial stress and thus prevent the bank from being in violation of the own funds requirements set out in the Capital Requirements Regulation. Given that the systemic risks associated with securitisation are assumed to arise immediately before or during such critical periods - when it can be assumed that these buffers will need to be activated - FI believes that both the countercyclical buffer and the capital conservation buffer should be excluded from the calculation of a Pillar 2 capital requirement for systemic risk. FI would therefore like to clarify that it believes the main rule should be disregarded when calculating an additional own funds requirement for systemic risk associated with securitisation under Pillar 2.

With regard to the Swedish Bankers' Association's view that the capital requirement for systemic risk should also exclude the Pillar 1 capital requirements, FI would like to clarify that the capital requirement aims to ensure that a bank has the capacity to manage an extension of its loans without creating a negative effect for the total credit supply, i.e. the method serves as a protection against the bank not having the possibility to act in a manner that would be desirable from a systemic risk perspective. The Pillar 2 capital requirement therefore assumes that the capital requirement for the securitised exposures flows back to the bank and is covered by the requirement that should apply in such a systemic crisis, i.e. with the exception of the countercyclical buffer and the capital conservation buffer.

5.4 Scope

5.4.1 FI's position

FI will apply the method to traditional and synthetic securitisation transactions that are considered to meet the conditions for transfer of significant credit risk to third parties and thus could reduce the bank's capital requirements. In individual cases, FI may expand the area of scope to include other forms of risk transfers which given systemically critical volumes or structures may give rise to the same systemic risk that may arise for securitisation.

5.4.2 Comments received regarding FI's position

[42] See FI Memorandum, *Kapitalkrav för svenska banker*, FI Ref 14-6258. This memorandum is available in English on FI's website.

The Swedish Bankers' Association questions the legal grounds also for a capital requirement for credit risk transfers other than securitisation transactions and states that it would be a remarkable encroachment against binding EU legislation.

The Swedish National Debt Office would like FI to specify the handling of different types of guarantees that can be included in the capital assessment method and the effect the proposal would have on them to make it easier for concerned institutions and other stakeholders to better predict the consequences of the proposal.

5.4.3 Reasons for FI's position

The identified systemic risks in this memorandum arise following the absence of refinancing possibilities for capital-requirement-reducing transactions that transfer risk to a third party at the same time as the bank keeps its relationship with the borrowers. Transactions where the bank continues to administer the loans and is responsible for communication with borrowers are clearly different than transactions where both credit risk and administration are transferred to a third party and where borrowers cannot be expected to have the same expectation of continued funding from the bank in question.

The capital assessment method will therefore apply to all traditional and synthetic securitisation transactions that are considered to meet the conditions for transfer of significant credit risk to third parties and thus reduce the capital requirements. The reason for this is that traditional and synthetic securitisation transactions, both of which can reduce capital requirements, contribute to the identified systemic risk. As described in section 2 and Appendix 3, the Swedish risk weight floor for mortgages generates particularly large incentives to securitise mortgages. These incentives only occur during traditional securitisation.

At the same time, FI also believes that systemic risk associated with securitisation could be relevant for transactions that are fundamentally similar to securitisation but are not covered by the definition of securitisation in the Capital Requirements Regulation. Given this, FI stated in the consultation memorandum that it may also apply the method to other forms of externally acquired credit risk protection that give rise to the same type of risks to the system.

Given the consultation comments it receives, FI would like to clarify that what was meant was a situation where the bank consciously circumvents the capital assessment method by structuring risk transfers that entail the same risks as securitisation but do not fall under the definition. This may refer to, for example, *sub participation*, when a bank remains as the counterparty and lender but transfers parts of the risk to investors. This type of transaction should also be viewed in the same manner as a securitisation based on FI's Pillar 2 assessment according to this memorandum. As previously described, systemic risk associated with similar transactions is only relevant when the transactions encompass systemically critical volumes and have a certain structure that together contribute to the risk of a reduced supply of credit in a future scenario.

5.5 Exemption from the method

5.5.1 FI's position

FI intends to exempt from the capital requirement for systemic risk associated with securitisation the same types of exposures that are exempted from FI's floor for maturity assumptions in the IRB approaches for credit risk, if it can be assumed that there is no expectation of an extension. The credit types in question are

- loans for the following three specific purposes:
  - specific financing for exports of goods and services (export credit),
  - bridge financing with a contractual maturity of at the most 12 months, and
  - non-revolving loans secured against receivables,
- bank guarantees that have a final termination date within two and one half years from the date of issue with no possibility for restructuring or extension,
- construction loans, and
- letters of credit.

FI may also exempt from the capital assessment method securitisation transactions that are judged to incur a low level of systemic risk.

5.5.2 Comments received regarding FI's proposed exemptions

The Swedish Bankers' Association finds it difficult to understand the reasoning behind the maturity limitations stated for the exposures. Furthermore, the Association states that securitisations can be structured without flowback, for example structures that may have long contractual maturities with issued securities but are amortised in advance as the underlying portfolio falls due.

PGGM does not think that securitisations structured in such a manner as to guarantee extension of the transaction would be desirable since such transactions would be difficult for investors to price correctly and expensive for the banks to carry out. PGGM proposes instead that FI should consider exempting transactions that include a call option for the originator, i.e. an option to terminate the transaction and take back the credit risk for the loans, from a capital requirement. The explanation for this is that the bank that is securitising would have better control over the maturity of its securitisations and could actively choose to terminate transactions during economically favourable periods when extension on the market can be expected to be possible or let the transaction be amortised down to the contractual maturity in a unfavourable market scenario.

5.5.3 Reasons for FI's position

If a bank chooses to securitise exposures where there are neither expectations of nor a need for extension, the systemic risk can be considered to be low. This could in turn justify exemption from the capital assessment method.

The securitised portfolio may contain loans for which the borrowers have neither a need for nor an expectation of continued financing. Even if such exposures also contribute to the total supply of credit, it is not probable that the termination of such loans would have the same negative effects on the economy as the termination of loans that are fulfilling a more long-term need for credit among borrowers. For such loans, FI considers the expected and contractual maturity to be the same. Since borrowers in these cases do not expect the bank to renew the loans at maturity, the systemic risk can be considered to be negligible. Given this, FI intends to exempt from the capital requirement for systemic risk the same types of exposures that are exempted in FI's decision memorandum *Pillar 2 Capital Requirements for Maturity Assumptions*. Regarding the maturity limitations that are set out in the position above, FI refers to this decision memorandum.

Securitisations may also be structured in such a manner as to manage or limit systemic risk. For example, they may guarantee a certain number of extensions to the transaction even during periods of sharply impaired market demand where a re-issue of a securitisation normally would not be possible. These types of transactions mean that any negative effects would materialise at a later point in time. As raised by the Swedish Bankers' Association, it is also possible for other aspects of the transaction to introduce a limited systemic risk. FI therefore requested consultation feedback on how any potential exemptions for securitisation could be designed. PGGM's proposal to allow exemptions for transactions with a call option is justified in that it would make it possible for the bank to avoid a situation where all of the bank's securitisations are in the same phase. FI agrees that a bank's possibility for redemption of a transaction could potentially limit the consequences of sharply impaired market demand depending on the design of the agreement. However, it is not sure that this would be sufficient for counteracting the risk of a serious contraction in the supply of credit following a shock to the market.

In summary, FI intends to allow exemptions from the capital assessment method for transactions where the individual bank can demonstrate to FI that the securitisation can be considered to entail a low systemic risk.

5.6 Calculation examples

Calculation example A

Group A is a systemically important bank in Supervision Category 1 whose total securitisation transactions for Swedish corporate exposures constitutes 3 per cent of its total lending to corporates on the Swedish market. Below is an illustration of the impact on the bank's total capital ratio that is the expected result from the increase in the bank's total risk-weighted exposures amount due to an extension of securitised exposures during the transaction's five years.

	Year 1	Year 2	Year 3	Year 4	Year 5
Effect on the total capital ratio	-0.15%	-0.18%	-0.30%	-0.35%	0.15%
In excess of the cut-off point (-0.25%)	-	-	0.05	0.10	-

The bank does not meet Condition 2 but meets Condition 1 for two 12-month periods (years 3 and 4), i.e. exceeds the cut-off point of more than a 0.25 per cent reduction in the total capital ratio. A capital requirement for systemic risk associated with securitisation is therefore calculated.

The total reduction in the bank's total capital ratio that exceeds 25 basis points amounts to 0.15 per cent (0.05 + 0.10).

The Pillar 2 capital requirement for systemic risk associated with securitisation corresponds then to 0.15 per cent excluding the countercyclical capital buffer and the capital conservation buffer's percentage of the Pillar 1 capital requirement, the countercyclical buffer, the capital conservation buffer and the systemic risk buffer under the Pillar 2.

In other words, 0.11 per cent (0.15 * (1 – (4.5 / 17.5))).

Calculation example B

Group B is a systemically important bank in Supervision Category 1 whose total securitisation transactions for Swedish corporate exposures constitute 20 per cent of its total lending to corporates on the Swedish market. Below is an illustration of the impact on the bank's total capital ratio that is the expected result from the increase in the bank's total risk-weighted exposures amount due to an extension of securitised exposures during the transaction's five years.

	Year 1	Year 2	Year 3	Year 4	Year 5
Effect on the total capital ratio	-0.20%	-0.20%	-0.20%	-020%	-0.20%
In excess of the cut-off point (-0.25%)	-	-	-	-	-

The bank does not meet Condition 1 but meets Condition 2, i.e. the nominal value for securitised Swedish corporate loans exceeds the cut-off point of 15 per cent of the bank's total lending to corporates in Sweden. A capital requirement is therefore calculated despite an annual reduction of the total capital ratio that is lower than the cut-off point in Condition 1.

The total reduction in the bank's total capital ratio for the 5 per cent (calculated with an even risk distribution, i.e. the same average risk weight for the exposures that a capital requirement is calculated for and the exposures that a capital requirement is not calculated for) that exceeds the cut-off point in Condition 2 is assumed here to amount to 0.25 per cent (0.05 * 5).

The Pillar 2 capital requirement for systemic risk associated with securitisation corresponds then to 0.25 per cent excluding the countercyclical capital buffer and the capital conservation buffer's percentage of the Pillar 1 capital requirement, the countercyclical buffer, the capital conservation buffer and the systemic risk buffer under the Pillar 2.

In other words, 0.19 per cent (0.25* (1 – (4.5 / 17.5))).

5.7 Future regulations

The capital assessment method described in this memorandum is based on the risk-weighted capital requirement being the determining factor behind a bank's capital need. However, international regulation is moving toward capital requirement models that are less sensitive to risk. For example, the Basel Committee announced a decision in January 2016 that the global standard for the leverage ratio must be implemented as a Pillar 1 requirement as of 1 January 2018. The Basel Committee has also proposed a new, permanent risk weight floor in relation to the standardised method that applies to every exposure. It is still not clear to what extent these less risk-sensitive or non-risk-sensitive capital requirements will affect the banks' capital needs.

FI has previously expressed its concern that less risk-sensitive capital requirements could create undesired incentives if these requirements become the binding factor for banks' capital restriction. If the leverage ratio requirement, where Core Equity Tier 1 capital is set in relation to the total exposure amount, becomes the primary capital restriction, banks will face incentives to make different business decisions than if a risk-weighted system is the determining factor. For example, this could strengthen banks' incentives to securitise exposures with low risk and return and keep the credit risk for high-risk exposures since in a less risk-sensitive system these would not lead to a higher capital requirement but the same high return. Appendix 3 illustrates the consequences of the leverage ratio requirement and risk weight floor from a perspective of incentives to securitise Swedish mortgages. The securitisation market could also strengthen the possibilities of the banks to not only sell exposures with low risk, but also take on exposures with high risk. Because the leverage ratio requirement does not consider the exposures' risk level, such business decisions would no longer result in higher capital requirements for the banks.

Given this, FI notes that there may be a future need to change the capital assessment method if the risk-weighted capital requirement is no longer the capital requirement that determines a bank's capital need. In such a scenario, the method will be re-submitted for consultation.

6 Data collection

In its assessment of systemic risk associated with securitisation, FI intends to gather information about all of the banks' securitisations in the form of an additional request for information as set out in Appendix 2.

7 Impact analysis

7.1 Consequences for banks and competition in the market

The Swedish market for securitisation and similar transactions is currently limited in scope. If FI's capital assessment method for securitisation were to be applied to Swedish banks today, it would preliminarily not result in any capital requirements. The method thus primarily has an impact on banks' future choices and not their current situation.

The method does not forbid securitisation, but removes capital requirement-related incentives for securitisation in excess of the cut-off points set by FI based on a systemic risk perspective.[43] In practice, the method affects primarily synthetic securitisation, i.e. transactions that are not conducted with the aim of obtaining funding but rather to reduce credit risk and capital requirements. As a result, Swedish banks could choose to refrain from very large transactions, which could have both desirable and undesirable effects. By not selling certain types of credit risk, banks, for example, may choose risk management measures that could be positive from a stability perspective. In the long run, Swedish banks' management of credit risk and access to alternative funding sources could be considered to be limited, which to some extent can weaken the competition situation for Swedish banks – both with regards to international companies and unregulated companies on the Swedish market.

Several initiatives have been introduced at the international level, both within Basel-IOSCO and the EBA, to stimulate the securitisation market and lending to the real economy (primarily to SMEs). FI's capital assessment method for securitisation is not entirely in line with the international initiatives. However, FI would like to state that the method should be viewed from a different perspective since it is based on the systemic risks that can materialise if liquidity on the market is cut off, i.e. not the risks associated with the credit risk transfer. As a whole, FI judges the potential systemic risks associated with securitisation above a certain systemically critical level to be so serious as to justify the method.

7.2 Consequences for society and the banks' customers

A Pillar 2 capital requirement for systemic risk associated with securitisation can entail that the funding cost for the bank in question will rise since capital normally

[43] However, a slight reduction in the capital requirement may still be possible since the proposal entails that the additional capital requirement be calculated without the capital conservation buffer requirement and the countercyclical buffer requirement.

is a more expensive form of financing than loans. However, the effect depends on the size of the capital requirement, i.e. how much of the securitisation exceeds FI's cut-off points for systemically critical securitisation.

In general, it is difficult to evaluate capital regulations' future effects on lending volumes and interest rates for households and non-financial firms. It depends on the uncertainty of the effect on the banks' total capital and funding costs – a larger share of equity can reduce the costs for other funding – and that the banks make business-related decisions based on grounds other than regulations. Furthermore, the banks react to events on the funding market. There is reason to believe that higher capital requirements affect the total funding costs in different ways depending on the situation on the capital market and the capital strength of the banks at the start of the transaction. In the event regulation results in higher costs for the banks, this can have an effect on households and non-financial firms in the form of lower lending volumes or higher lending rates, which in turn can lead to reduced consumption and reduced investments. However, FI makes the assessment that the risk of this is greater if there is no capital assessment method for securitisation. During economic downturns, the method can be expected to provide the banks' customers with better access to financing.

FI continuously analyses lending in society and the loan terms and conditions for corporates and households as well as changes to the interest rates and the components that factor into these changes. This includes studying the effects of the capital adequacy rules for SMEs. This work is presented, for example, in FI's biannual stability report and the annual mortgage survey.

7.3 Implications for Finansinspektionen

FI already works today as part of the SREP with an assessment of banks' Pillar 2 risks. The introduction of a capital assessment method for securitisation would therefore not require a major change in FI's tasks. The risk analysis and the gathering of information that would serve as a basis for the assessment, however, would increase FI's work load to some extent. The extent to which this would affect the authority's use of resources is determined by future activity on the Swedish securitisation market.

Appendix 1

Information to be submitted to FI for the SRT (Significant Risk Transfer) assessment

A bank that is engaging in securitisation (the originator) should submit the following information to FI for the assessment of the significant credit risk transfer in conjunction with the transaction.

When reporting the securitisation transaction, the originator should submit the information specified in this appendix if possible, at least in draft form. Once the transaction has been executed, the final version of the same documentation should be submitted to FI.

In addition to the information specified below, FI may request additional information if needed to assess the significance of the credit risk transfer.

General information

- The reason for the securitisation
- Relevant documentation (e.g. prospectus, contract, terms and conditions or other relevant documents)
- Presentation material for internal communication and for investors
- The articles the originator intends to apply to SRT according to Chapter 5 of the Capital Requirements Regulation

Parties to the transaction

- Description of all parties and their roles in the transaction
- Payment flows between the parties to the transaction
- Any relevant links between the investors or the credit risk protection sellers and the originator, and information if the originator provides third parties with significant financing
- Credit assessments from external credit rating institutions and an analysis of the reliability of such assessments.

Structure of the transaction

- Maturity and currencies
- Risk that is retained and fulfilment of the requirement on retained interest according to Article 405 of the Capital Requirements Regulation.
- Information about the underlying exposures (e.g. asset class, geographic market, maturity, rating, spread, collateral, risk weights, loss history and expected losses, etc.)
- Nominal value and thickness of the tranche
- Pricing and any ratings for securitised positions
- Any buy/sell/clean-up call options and replenishment periods (including approval criteria for the quality of the exposures)
- Description of any credit enhancement
- Description of any applicable excess spread

- Information about credit risk protection during synthetic securitisation, including:
  - Credit events covered
  - Premiums
  - Fulfilment of the requirements for credit risk protection set out in Article 274 of the Capital Requirements Regulation.
  - Any maturity and currency mismatches between the protection and the underlying exposures
  - A statement on the credit risk protection's enforceability from a qualified legal representative

Capital adequacy

- Risk-weighted exposure amounts before and after securitisation, and the calculation methods that were used
- Expected (EL) and unexpected losses (UL) according to the Capital Requirements Regulation and the originator's own estimates
- The stress assumptions applied to calculate the losses
- The time horizon that was applied (e.g. expected/contractual maturity, weighted average life of the assets, clean-up option) when calculating the above estimates
- Expected distribution of EL and UL per tranche
- Calculations of exposure amounts, risk weights and capital requirements before and after securitisation for each position
- Analysis of how sensitive the capital requirement is to changes in the underlying model parameters

Originator's own analysis of risks and SRT to third parties

- The originator's own assessment of the transaction's risks (an account of the relevant risks and how these are considered)
- The originator's own assessment of SRT (why the originator considers the capital reduction reasonable with regard to the risk that is transferred to third parties and an account of the size of the risk in per cent that the originator intends to transfer)
- The originator's costs for transferring the credit risk to a third party
- The originator's internal governance process (e.g. the committees that have approved the transaction) and internal systems/controls both for the initial assessment and ongoing monitoring that the conditions for SRT are met during the duration of the transaction

Appendix 2

Information for the assessment of systemic risk associated with securitisation

FI intends to obtain information about the banks' total securitisation activities to assess the systemic risk associated with securitisation. In addition to the information specified below, FI may request additional information if needed to assess the systemic risk associated with securitisation in accordance with the method in this memorandum. For banks that are not systemically important[44], only the first point applies.

1. Information about flowback for the bank's total securitisation activities, broken down by transaction and future 12-month periods.

	Year 0	Year 1	Year 2	etc.
Nominal value of the reference portfolio				
of which, relevant retained risk				
Maturing exposures				
Replenished exposures				
Clean-up call				
REA for reference portfolio pre-securitisation				
REA for reference portfolio post-securitisation				
REA released				
Total capital ratio pre-securitisation				
Total capital ratio post-securitisation				
Total capital requirement for the reference portfolio pre-securitisation				
Total capital requirement for the reference portfolio post-securitisation				
Total capital reduction due to securitisation				
Nominal value of maturing exposures which are assumed to be renewed by the bank				
REA of maturing exposures which are assumed to be renewed by the bank				
Total capital requirement of maturing assets which are assumed to be renewed by the bank				
Total capital ratio post-extension of maturing exposures				

[44] A bank is considered to be systemically important if it is classified as such in accordance with the national application of the EBA's identification method for O-SII or a branch that is considered to be significant in accordance with Article 51 of the Capital Requirements Directive.

2. Information about the bank's total securitisation activities, broken down by exposure class[45], geographic (national) market and future twelve-month periods.

[45] The exposure classes referred to here are defined in Articles 112 and 147 of the Capital Requirements Regulation.

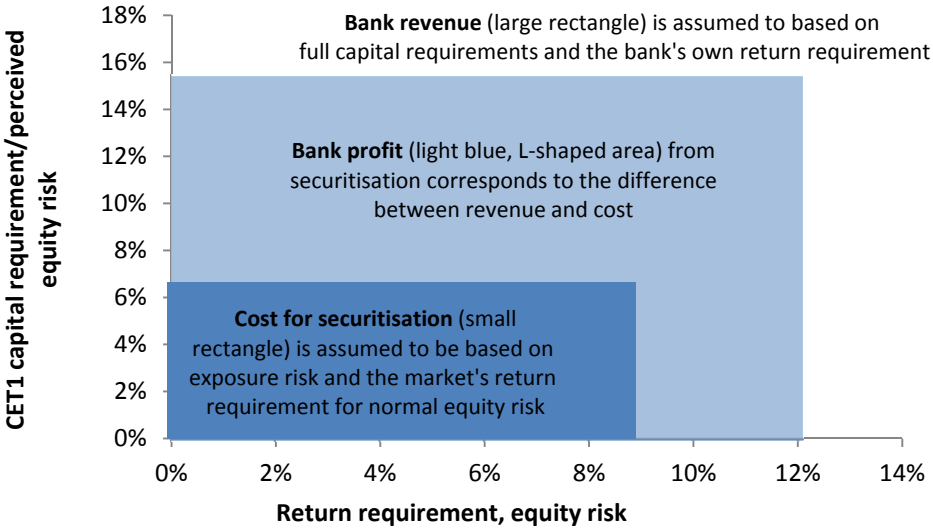
Appendix 3

Economic incentives for securitisation

Capital and return requirements

Figure 3 shows the banks' incentives to utilise securitisation as a result of financial gains related to capital requirements and yield requirements. The figure refers to corporate loans while corresponding incentives for Swedish mortgages are shown in Figure 4.

Figure 3: **Capital requirements, return requirements and financial profit from securitisation: corporate loans**



The dark blue area of Figure 3 reflects the bank's assumed annual cost for a securitisation. This cost corresponds to the product of two factors. These factors are the *exposure risk* investors are assumed to use in the assessment of a securitisation (Y axis) and the *market return requirements* this risk justifies (X axis). The exposure risk is assumed in the figure to correspond to the regulation's minimum requirement for Core Equity Tier 1 capital of 4.5 percentage points plus an assumed Pillar 2 requirement of 2 percentage points, i.e. 6.5 percent of the exposures' risk-weighted exposure amounts. The assessed risk naturally can be both higher or lower than the basis of the capital requirements. The return requirement is assumed to correspond to a general return requirement for equity risk, which in this example is assumed to be 9 percentage points. The product of the two is then the annual cost for equity risk of 0.6 per cent of the exposures' risk-weighted exposure amounts.

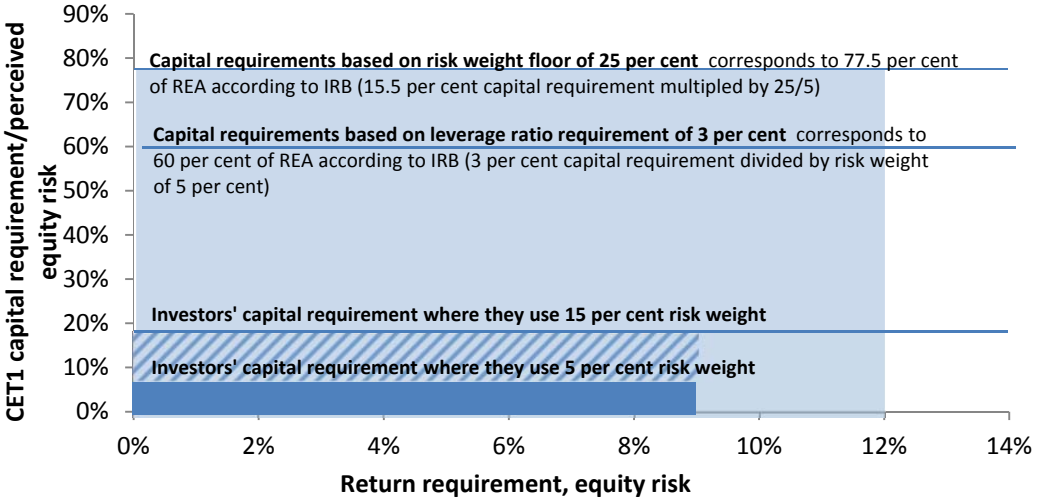
The bank's revenue for the securitised exposures is assumed to be based on the banks' total capital requirements and general return requirements, which in turn are assumed to exceed the market's return requirement since the bank prices loans to achieve a high risk-adjusted return. The capital requirement expressed as a per cent of risk-weighted exposure amounts is assumed to be 15.5 percentage points. This consists of a total minimum capital requirement, including Pillar 2, of 6.5

percentage points (the same as the exposure risk that investors are assumed to use) plus three components[46] in addition to the assumed exposure risk. The bank is assumed to price its exposures with a return requirement of 12 percentage points. The bank's annual revenue for the securitised exposures is then just under 1.9 percentage points.

The bank's profit, i.e. the difference between the revenue and cost, corresponds to the light blue area in the figure and is 1.3 percentage points. The profit margin in the example is almost 70 per cent, which may be considered to represent a very strong incentive to engage in securitisation.

Figure 4 below shows the corresponding calculation for Swedish mortgages. The analysis of a securitisation of mortgages is more difficult in that the banks' reported risk weights for mortgages are very low (around 5 per cent of the exposure amounts) due to exceptionally low historical credit losses for this exposure class. As a result, the pending leverage ratio requirement of 3 percentage points of the total exposure amount and the risk weight floor of 25 per cent lead to higher capital requirements than the Pillar 2 regulations. Figure 4 also shows the effects of investors, in line with FI, considering exposure risk in the mortgages to be higher than what the mortgages' reported risk weights imply.

Figure 4: **Capital requirements, return requirements and financial profit from securitisation: Swedish mortgages**



In Figure 4, the banks' *costs* for securitisation of mortgages are based on the same minimum requirement of 6.5 percentage points that is used above in the example for exposures to corporates in Figure 3. However, Figure 4 shows the effect of two alternatives: first, in cases where investors accept the banks' estimated risk, in line with a risk weight of 5 percentage points (dark blue area), and second, if investors instead share FI's assessment that the exposure risk is higher,

[46] These are a systemic risk requirement of 5 percentage points, a capital conservation capital requirement of 2.5 percentage points and a countercyclical capital requirement of 1.5 percentage points.

corresponding to a risk weight of 15 per cent[47] (lined area). The investors' assumed return requirement is the same as in Figure 3, i.e. 9 per cent for the equity market's return requirement.

With regard to the banks' *revenue* for mortgages, the analysis is even more complicated. Figure 4 shows the effect of the pending leverage ratio requirement of 3 per cent of the total exposure amount. This corresponds to 60 per cent of the reported risk-weighted exposure amount (3 per cent divided by 5 per cent). However, this is not binding as the banks' total capital requirement since the risk weight floor is 25 per cent. A capital requirement of 15.5 per cent applied to a risk-weighted exposure amount in line with the risk weight floor of 25 percentage points corresponds to 77.5 per cent of the banks' reported risk weights for mortgages (15.5 per cent capital requirement multiplied by the relationship between the risk weight floor and reported risk weight, i.e. 25/5). The banks' assumed return requirement, which they are assumed to use when pricing their mortgages, is the same as in Figure 3, i.e. 12 per cent. Even the pending leverage ratio requirement would have a significant effect on the banks' incentives; a pending capital requirement of 3 per cent of the total exposure amount corresponds to 60 per cent of the banks' reported risk-weighted exposure amounts. However, this is not binding for the mortgages of Swedish banks.

Under the above assumptions, the banks' *profit margin* for securitisation of mortgages is even larger than the profit for corporate exposures as a result of the additional effects of the risk weight floor. If investors price securitisation risk in line with the reported risk weights of 5 per cent, banks' profit margin is more than 90 per cent (revenue corresponding to 77.5 * 12 per cent and cost of 6.5 * 9 per cent). If investors share FI's view that the exposure risk is higher, the profit margin is just over 80 per cent (same revenue as above, 77.5 * 12 and cost of ((6.5*15/5)*9 per cent).

Economic cycles

As previously shown in Figure 3, banks are facing significant incentives only as a result of the differences between, on the one side, the banks' full capital requirements for given exposures and the exposures' assumed own (idiosyncratic) risk and, on the other side the banks' own return requirements, which they are assumed to use for pricing, and the market's assumed return requirement based on the exposures' estimated risk.

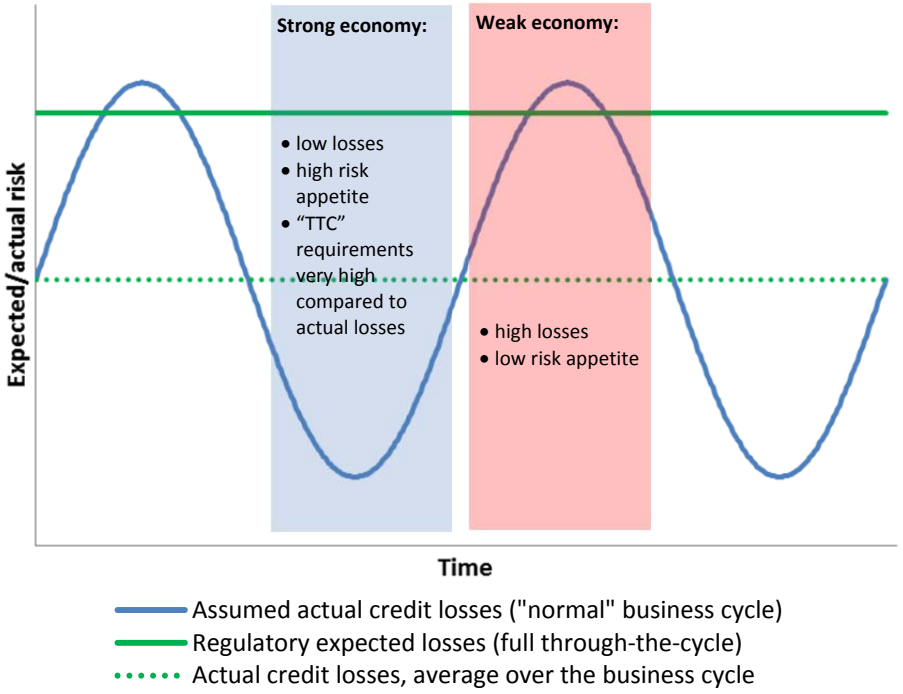
The capital requirements' construction and cautious design with regard to the effects of economic cycles create additional incentives that fluctuate considerably over time. The assumptions that lie behind the banks' risk-weighted exposures amounts, namely, are not based on a risk outcome at one given point in time. The assumptions in the capital requirements reflect either full economic downturns

[47] The risk weight floor has been raised in two stages, first to 15 per cent as a result of higher exposure risk than the basis of the Pillar 1 regulation, and then to 25 per cent taking into consideration additional macroprudential risks. See FI Memorandum, *Kapitalkrav för svenska banker*, FI Ref 14-6258. This memorandum is available in English on FI's website.

(this applies, for example, to assumptions of *loss given default* (LGD)) or long-term average relationships over cycles (this applies to *probability of default* (PD)). For a more detailed description of the assumptions in the risk weight formula and how FI assesses reasonable PD assumptions, see the memorandum, *FI:s tillsyn över bankernas beräkningar av riskvikter för företagsexponeringar*, FI Ref. 15-13020[48].

Figure 5 below illustrates how a given portfolio's credit losses (blue line) can be expected to develop over time (two business cycles) and how expected loss, as the term is used in the calculation of the banks' risk weights, can relate to actual realised losses over time. In this case, the through-the-cycle adjustments in the calculation are assumed as a rule to be expected loss. Even if FI's assessment method introduces a significantly larger through-the-cycle perspective, this is a simplification. This illustration also ignores that the banks' risk-weighted exposure amounts are based on unexpected loss, not expected loss. Unexpected loss is a significantly more cautious term than expected loss, but both are based on the same fundamental assumptions.

Figure 5: **Occurrence of credit loss events compared to expected loss in capital requirements**



During a strong economy (light blue area in the above figure), the difference between actual credit losses (blue line) and the assumptions that are the basis for the banks' risk-weighted exposures amounts and thus capital requirements (solid green line) is very large. Given the prudence of the regulations with regard to

[48] See FI's memorandum, *FI:s tillsyn över bankernas beräkningar av riskvikter för företagsexponeringar*, FI Ref. 15-13020. This memorandum is available in English on FI's website. (http://www.fi.se/contentassets/93166963a40e49fcaca8670e3ad2d3e7/pm-riskvikter-2016-05-24.pdf).

patterns in economic cycles, the average actual loss level (dashed green line) is also significantly lower than expected loss. This significantly enhances the fundamental incentives previously described. The incentive effects from economic cycles arise mainly for transactions that are expected to reach maturity or primarily during economically favourable market conditions, but the effects also arise for transactions with very long maturities, given that expected loss in the capital requirements is significantly higher than average actual loss.

It is also natural to expect that the unwillingness of investors to take on risk can vary and that they use cautious assumptions about the future even when facing strong economic conditions. Even with cautious assumptions the illustration above is relevant since it describes some of the fundamental drivers for the risk on which this memorandum is largely based. In a weak economy, expected *actual* loss rises sharply. Even if the outcomes are not necessarily worse than the expected loss (although this could very well be the case), there is naturally a large amount of uncertainty in this respect, in particular during economic downturns. Such uncertainty enhances the already high level of risk aversion that is to be expected during economic downturns.