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Will the banks withstand the next crisis – what role will capital requirements play?

Discussing how the banks will withstand the next crisis is undoubtedly a suitable topic in October 2018, which marks exactly ten years since the most difficult phase of the financial crisis. I will try to describe some of the work that has been done by regulatory and supervisory authorities over the past ten years and what is left to do. In general, I can say that today's Swedish banking system is more resilient to crises. A critical factor in the resilience of the banking system is whether individual banks have sustainable business models that can be profitable even if today's strong market conditions were to take a turn for the worse. From FI's perspective, however, I would like to highlight three important reasons for why the Swedish banking system is better equipped for crises today: higher capital requirements and stronger own funds in the banks, the implementation of regulation and supervision in the area of liquidity, and the creation of a resolution framework, i.e. how we manage crisis-stricken banks. Today I will primarily outline the role played by the capital requirements.

Why are capital requirements an important tool for supervisory authorities?

The new capital and liquidity regulations come primarily from Basel III, which is one of the direct results of the financial crisis. There was an insight in the early days after the crisis that the design of banking regulation needed to change, and intensive efforts over the past ten years have resulted in the formulation of these international standards (strictly speaking, Basel III is not a regulation). Many major changes were introduced, and almost everything is finished – although the implementation of Basel III into applicable law is left, which will create a new regulation that can be used by supervisory authorities and banks.

How will the change in capital requirements affect the Swedish financial market?

To answer this question, we need to take a step back and reflect over why we have such far-reaching regulation of both the banks' operations and their own

funds in particular. Why do authorities place so many requirements on SEB, for example regulating the appearance of the balance sheet, but not on a company like ERICSSON?

In comparison with other types of companies, banks utilise a high percentage of debt in their financing. This is in part due to the banks' role to receive deposits from the public, but it is also due to microeconomic considerations. The reasons behind a company's choice of financing and the consequences of such a decision have been subject to relatively comprehensive academic theories. For banks, this work focuses on the high degree of debt, i.e. the low percentage of equity in relation to banks' other financing¹. This relationship is consistent with the capital structure theory put forward by Modigliani and Miller (1958 and 1963).² In its simplest form, this theory is based on very stylised assumptions under which interest expenses are not tax-deductible and bankruptcies do not occur. Based on such assumptions, a corporation's value and financing costs are independent of the extent to which the corporation chooses to use equity or debt as a source of financing.

Since interest expenses are tax-deductible, however, debt financing is less expensive, and a firm is therefore able to increase its return by opting to use the lowest possible proportion of equity. In contrast, a firm with low levels of equity is less resilient and thus is subject to a higher risk of entering bankruptcy. If the firm opts for a high debt/equity ratio, its lender may require a higher interest rate as compensation for the higher risk of bankruptcy. This increases the cost of debt financing, which creates an upper limit for the percentage of this type of financing that is optimal for a firm. In other words, there is a disciplinary market mechanism.

To a large extent, the banking system has been underwritten by both implicit and explicit government guarantees since large banks have been considered too important for the payment system and the economy for the government to allow them to enter bankruptcy. Often, the government has also taken action to ensure that smaller banks do not enter bankruptcy, either. Government guarantees in practice have served as loss protection for the banks' creditors. These guarantees have resulted in the disabling of an important market

¹ There may be different reasons why banks choose to largely fund themselves with debt. For a bank, for example, deposits are not just a form of funding but also a production factor, see Cline, W. R. (2015), "Testing the Modigliani-Miller Theorem of Capital Structure Irrelevance for Banks", *Peterson Institute for International Economics Working Paper No. 15-8*.

² Because of the capital requirements imposed on banks by the government, banks, unlike traditional firms, cannot determine their level of debt entirely by themselves, and only capital above the minimum capital requirement can fully absorb losses from the perspective of the bank's shareholders. Modigliani and Miller's theory about funding is based on all equity being able to be used as a buffer against losses and therefore does not fully apply to banks. See Modigliani, F. and Miller, M. (1958), "The Cost of Capital, Corporation Finance and the Theory of Investment", *American Economic Review*, vol 48, pp. 261-297, and (1963), "Corporate Income Taxes and the Cost of Capital: A Correction", *American Economic Review*, vol. 53 pp. 433-443.

mechanism; the increase in the cost of debt financing has not matched the increase in the risk in the bank's operations, for example if the bank opted for a high equity/debt ratio. The combination of the tax-deductibility of interest expenses and the guarantees on the bank's borrowing means that it is usually profitable for banks to fund their business with a very high percentage of loans.³ If the authorities did not place capital requirements on the banks, the banks would face strong incentives to hold very limited equity.

A high debt/equity ratio at the banks means that the banks are vulnerable to shocks and losses, in part because unexpected major losses could actually wipe out their equity and in part because mere suspicions of extensive losses can erode the confidence of customers and financiers in the bank. In such situations there is a risk that banks might not be able to fulfil their role in the financial system as lenders and payment intermediaries, which could have significant adverse consequences for the economy. In a worst-case scenario, banks may be forced into unstructured default, which would have extensive contagion effects and thus result in even more adverse consequences. It is therefore of great public interest for banks to hold enough capital to avoid default and continue to operate even if they were to suffer major losses. The government therefore requires firms that conduct banking operations to hold a level of capital that is sufficient to cover losses that could arise in the event of severe financial stress.

The purpose of regulating banks' capital levels, therefore, is to ensure that a bank also has strong resilience to large, unexpected losses. This provides both large and small banks with improved functionality during stressed situations. However, the entire financial system – and not just individual banks – needs to be protected. Because problems in a large bank can spread to others, banks must also maintain capital to reduce such systemic risks. The more important an individual bank is to the rest of the financial system, the more extensive the risk of dangerous contagion effects if the bank were to experience problems, and the capital requirement therefore needs to be higher to cover the systemic risk.

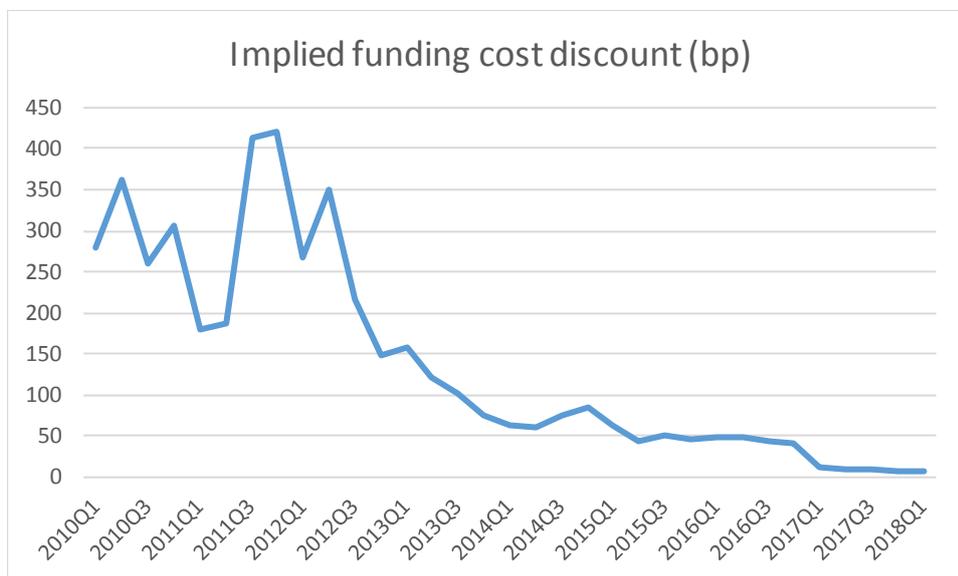
Preventing Too Big to Fail has been an important goal since the financial crisis

For a number of different historical reasons, the banking system in many countries is dominated by large national banks. This market structure emerged from a continuous process of consolidation and an effort to achieve economies of scale, which has further enhanced the occurrence of implicit government guarantees. One problem with this development is that large banks can easily become so important that they pose major risks to the national economy in the event of a crisis, i.e. they become Too Big to Fail. This leads to a situation where it is in the interest of the public to maintain the bank's operations even if

³ For more information about why banks prefer debt financing, see Juks, R. (2010), "Why banks prefer leverage?", *Penning- och Valutapolitik* 2010:3 pp. 23-36, Sveriges Riksbank.

the private capital market is not willing to provide new funding. As a result, which I already mentioned, the government, through some form of support, often guarantees the bank's continued existence. The probability that such a situation could occur creates major problems. In addition to the public sector having to carry the costs that should be carried by the bank's financiers, it gives the banks incentives to take higher risks, for example through rapid credit expansion. Bond holders and other debt-investors perceive the bank as safer, and the bank benefits from lower costs for debt financing than what its underlying risk-taking should justify, which in turn results in higher risks for the economy. The reduction of these types of links between governments (tax payers) and large banks has been a very important goal for new regulation issued after the financial crisis.

There are different ways to make major banks less critical to the financial system: there are not only various types of more extensive capital requirements but also perhaps primarily through the creation of a so-called resolution framework for structured management of systemically important banks that are about to fail. A fundamental pillar in this framework is that the bank's lenders must be part of the resolution and carry the losses in a bank in default. For resolution to work in practice, the law must establish without doubt for the banks' debt investors that certain types of bonds will carry losses if the bank's equity is not sufficient. For such a debt write-down and conversion to equity to function if needed, the bank's balance sheet must be prepared well before a crisis. In Sweden, like in the rest of the EU, this work is ongoing.



Has the work to reduce the link between governments and banks been effective? It is possible to get an indication of this by estimating the too-big-to-fail premium, i.e. the discount that applies to the major banks' funding costs due to the market expecting some form of government support if the bank experiences problems. FI's estimates show that the premium has decreased sharply since the financial crisis. The estimates are based on the credit rating firms' assessment of the probability of government support. If the assessment

is that such support were to become relevant, this is included in the major banks' credit rating and a higher rating can then be translated to lower funding for the bank. The sharp decrease in the too-big-to-fail premium is due in part to the decrease in the implicit commitment for the Swedish government through the implementation of the resolution framework and in part due to FI's higher capital requirements. The reduction in the premium has probably also been enhanced by the fall in the market's risk premiums in general as a result of the large supply of liquidity, so some prudence in the interpretation is required.

Emergence of the Basel standards

It can be interesting to place Basel III in a historical context; it then becomes clear how much more extensive the regulation of the banks has become and how the approach to the quantitative risk models has changed.

The basis for the regulation government banks is formulated by different forums: from G20 organs such as Financial Stability Board (FSB), which was started during the financial crisis, and the Basel Committee, which has an even longer history, to our legislative process with EU regulations, delegated regulations, directives and Swedish national application. Finansinspektionen participates in all of these forums.

The Basel Committee was formed in the mid-1970s to try to prevent counterparty risks that arose between different banks on the currency market after the fall of the Bretton-Woods system. At that time, banking regulation was basically a matter for the national government. The Basel Committee was expanded, and its work continued, reaching consensus on principles for how the supervision of large, internationally active banks should be conducted. In 1988, the Basel Committee presented the first international standard for banks' capital adequacy, which specified that capital should amount to at least 8 per cent of the risk-weighted assets as determined by basic standardised values. At the same time, major economic and political changes were occurring that led to rapid developments in the banking markets primarily in the 1990s. Subsequently, the Basel standards developed as well: quantitative models of credit risks, operational risks and market risks were designed and served as the primary component of the new Basel II framework. The goal was that the capital in the banks should be used more efficiently for the economy. The old Basel I standard had a weak link between risk and capital requirements, which meant that some types of lending required more capital than what was justified by the credit risk and vice versa. This gave the wrong incentives to the banks, and the standard worked poorly from a macroeconomic perspective.

Basel II was finalised in 2004, but implementation did not start in the EU until 2007 when the financial crisis was already knocking at the door. Basel II rests on the fundamental assumption that risks can always be measured and calculated, thus resulting in an expansion in the scope of the banks' risk measurement, risk modelling and risk control. Banks were given lower capital

requirements if they could design statistical models as allowed by the regulations. Almost immediately, and already before Basel II was even implemented in the EU banks, the Basel Committee made the assessment based on its impressions from the ongoing global financial crisis that capital adequacy needed to be tightened. In the acute phase of the crisis, the work progressed quickly. A consensus was reached already in 2010 on the first parts of Basel III. The most important objectives were to raise the capital requirements for large international banks and introduce a new focus on liquidity risks in regulation and supervision. Finally, in December 2017, the committee could agree on the final formulation of Basel III. The pendulum had now swung back the other direction, and the risk models that influenced the major banks' capital requirements were constrained while the capital requirement became more standardised. The assumption that basically all risks can be measured and modelled had been abandoned. Basel III is currently already influencing the banks, but according to the agreement it will be introduced first in 2022.

Impact of new standards for capital adequacy

Looking forward, what effect will Basel III have on the Swedish financial market? There are two areas in particular that can be looked at here in more detail. One first clear conclusion is that harmonisation is increasing, i.e. capital requirements and other minimum regulations will become more similar between countries. Because the financial systems' structures also differ significantly between markets, it has been a difficult balance between either adapting the regulations to these differences or having far-reaching requirements that will be formed the same in all markets. Under Basel III, the capital requirements will be more similar between banks and countries - differences in the banks' operations and risk levels have less of an impact.



Difficulties in far-reaching harmonisation can be illustrated if we look closer at how differently a large bank in the USA functions compared to a Swedish bank. When I compare USA's largest bank, JP Morgan Chase, with Sweden's largest bank, Svenska Handelsbanken⁴, it is obvious that there are major differences, which in and of themselves are a result of historical differences in how lending and saving have been structured in Sweden and the USA. Three-fourths of Handelsbanken's assets consist of lending, while the corresponding figure for JP Morgan is almost the complete opposite – lending corresponds to roughly only one-third of the bank's assets. If we look more closely at the type of lending at each bank, we discover that JP Morgan barely has anything on its balance that corresponds to our definition of traditional mortgages, but it has a higher percentage of credit card loans, car loans, etc. than Handelsbanken. More than half of Handelsbanken's lending consists of loans collateralised by residential property. JP Morgan instead has more assets associated with market risks and the bank's activities on the capital markets.

The differences in the two banks' assets and business models also leads to major differences in their funding. In JP Morgan's case, different types of deposits represent the majority of the banks' funding, while Handelsbanken instead has a heavy concentration of bond loans, almost half of which are covered bonds. Given this background, it is natural for the US and Swedish supervisory authorities to focus on different issues when global standards for capital requirements are being formed. From a US perspective, the management of market risks and liquidity risks is crucial, while from a Swedish perspective it is most important for the requirements to be well formulated with regard to credit risks associated with mortgages and the management of covered bond loans.

Supervision becomes more important

An important effect of more harmonised regulation with fewer possibilities for national adaptation is that supervision takes on an even more important role both in the form of traditional ongoing banking supervision and when focusing on the newer macroprudential area. From FI's perspective, we have thus far to a large extent used the general capital requirements to manage systemic risks by steering and increasing the resilience of banks. In the future, our supervision dialogue, in which we place specific requirements on individual banks, will become a more important tool, as will macroprudential measures that directly target lenders in the form of households or corporates. The amortisation requirement is an example of one such measure.

The trend toward harmonisation of the capital requirements will have an impact on the Swedish banks. Up until now, the Swedish capital requirements have been slightly different than in many other countries; they have been high and in part structured differently. The reason for this is that the conditions here

⁴ Differences in accounting standards mean that comparability between both banks is limited, but it is possible to make a general comparison.

have been very unusual. Sweden as a country is located outside the euro zone, has stable political institutions, strong public finances with low sovereign debt and strong underlying economic growth. The banking sector has been consolidated and re-built after the crisis in the 1990s. The Swedish banking system is large in relation to the national economy, and it is dominated by a handful of banks that are highly systemically important. Features unique to Sweden - and that are also its strengths - have both justified and enabled high requirements on Swedish banks. Thanks to favourable conditions in Sweden, the banking sector has been able to meet the high capital requirements and at the same time report good profitability.

The arguments have sometimes been raised in the public debate that high capital requirements have limited the Swedish banks' possibilities for issuing loans and that high Swedish requirements have hampered the banks' competitiveness and profitability. I take the position that there is a lot that indicates the opposite about the Swedish banks after the financial crisis: Despite our high capital requirements, credit growth in Sweden has been strong and the banks are reporting strong profitability. In reality, it seems that there has been some kind of link between the relatively high capital requirements in Sweden and the good profitability for the Swedish banks.

While lending has been increasing and the banks' profitability has been strong, however, large potential vulnerabilities have been building up on the national level; prices of both residential properties and commercial properties have gone up sharply as has the indebtedness of private individuals. Risk awareness may have been affected by the absence of a crisis with high credit losses in Sweden for as long as anyone can remember. The expansion of the major banks has also made Sweden somewhat of a Nordic hub in the banking sector, which means the risks in the Swedish banking sector could spill over into the rest of the Nordics and the Baltics.

One benefit to the global harmonisation of banking regulations in the form of stricter minimum requirements (i.e. requirements that neither the bank nor authorities may fall below) is that the bar will be raised, thereby decreasing the risk of regional bank crises spreading to the banks in other countries. This boosts confidence in the global financial system, which in turn promotes trade and integration. Another aspect of harmonisation, though, is that banks adapt, and in the long run more similar requirements will probably lead to the banks and the financial markets becoming more similar in their structure. This could lead, for example, to a bank-based financial system like the one in Europe, where lending is an activity primarily conducted by banks, developing into a more capital market-based system, where loans are often found elsewhere than as direct assets in the banks. If the capital requirement for certain types of lending in banks increases sharply and loses the link to how risk is assessed in the market, it is reasonable to expect that lending in the future will to a greater extent be provided by actors other than banks. There are both advantages and disadvantages to such a development, but the development needs to rest on fair

grounds. This leads to the second clear conclusion: it is important to ensure that the capital requirements are risk-based.

Important considerations behind risk-based capital requirements

Sometimes voices are heard in the debate advocating drastically different capital requirements for banks. The argument is made at times that the requirements should be lower, but often it is argued that the levels should be much higher than they are today and that the capital requirements should not assume that risk levels can vary between different types of banks. This is an interesting discussion, but I think it is important to highlight several fundamental considerations.

The market that we as an authority are regulating does not function as a closed system. The requirements we place on the Swedish banks influence what our banking system will look like in the future. The Swedish banking market is part of the internal market, and banks – for which capital requirements are appropriate – are not the only firms conducting financial business. An example of this is the emergence since the financial crisis of more lending from various types of funds. These funds are not banks, and they are therefore not subject to the requirements placed on banks. In particular, riskier lending in the corporate sectors, for example in conjunction with large investments and acquisitions, are increasingly financed neither via bonds on the capital market nor bank loans, but rather via direct loans from funds (which in turn can contain a leverage element). This moves risks out of the regulated banking sector.

It is clear that regulatory requirements, particularly regarding capital, affect how banks and other financial firms conduct their business. Very high capital requirements on specific types of lending at banks, for example, could result in the banks demanding more payment from customers for these loans to meet the bank's established return requirements. This in turn could increase the attraction for non-bank firms to offer the same form of lending using less capital, at less cost for the customer and more profitably. This pattern also raises the importance of finding a balance. A national banking system that is strictly regulated – and as a consequence could find its core activities limited – may not always be the best for financial stability and the national economy.

Innovation and competition are desirable, particularly from a customer perspective, but not if they occur by increasing the risk level in the financial system and simultaneously hindering opportunities for conducting supervision of these risks. However, I am fundamentally positive to a lending market that is more diversified and less dependent on the banks, even if such a development naturally requires ongoing analysis and assessment.

Whether or not the credit exposures that currently constitute assets in Swedish banks will be transferred to a greater extent to foreign banks or non-banks in the future, can, in other words, affect how risk-based the Swedish capital

requirements are. The change in the direction of the Basel Committee between Basel II and Basel III has largely been about how to formulate the link between risk and capital requirements. The fundamental issue is easy – everyone most likely agrees that higher risk-taking should require more capital and vice versa. Most people have also drawn the conclusion from the financial crisis that historical data and statistical modelling are not sufficient for making reliable forward-looking risk assessments of financial markets. History seldom repeats itself verbatim. There is a fundamental challenge in that banks, albeit within the limitations of the regulation, will design forecast models for their own credit risks that influence their capital requirements. This can easily lead to incentive problems since it is in the interest of the banks, based on their profitability targets, to minimise the capital that is bound in individual business transactions.

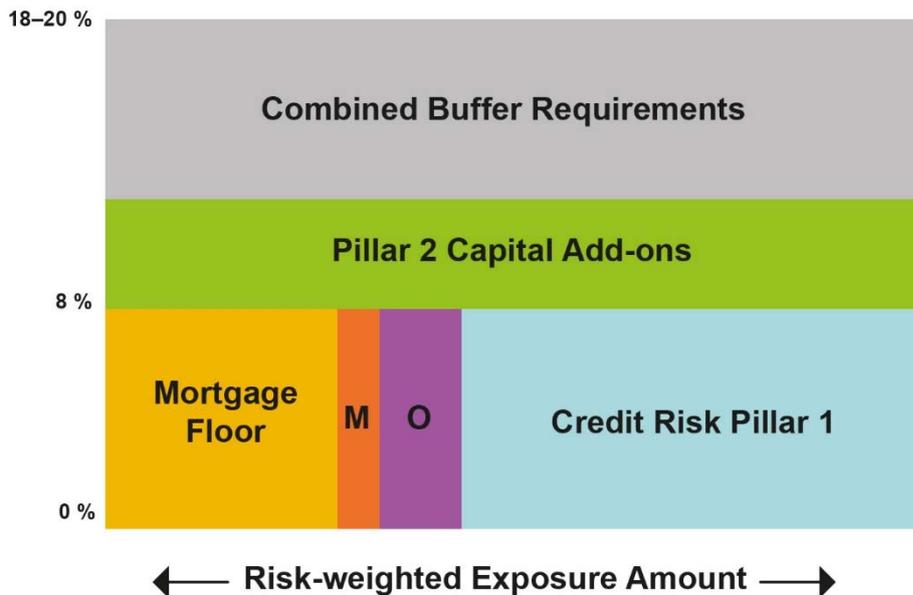
However, even if we are not overly confident in the statistical models, there is at the same time obvious and objective differences in the exposure risk between different types of banking activities. For example, there is a difference between a bank having and not having a guarantee or other collateral for its loan. There is also considerable value in banks having as reliable and forward-looking risk controls as possible and making well-informed business decisions based on their own risk assessment. This is not something that government authorities should regulate in detail.

Basel III no longer assumes that all risks can be modelled quantitatively, which is an important insight. In practice, this means that capital adequacy models are not allowed at all for risks where historical data is unreliable, e.g. operational risks, and may only occur to a limited extent for the exposure risk of loans to other banks or very large companies. For risks where loss events occur more frequently, models can still be used to a large extent, for example credit risks in lending to small and medium-sized companies. It is important to emphasise that there are many areas in which quantitative risk models are a prerequisite for a good analysis. The benefit of adopting a more nuanced approach to what is modelled quantitatively is that we can have capital requirements that reflect exposure risks better and more fairly. FI thus does not view the reduced prominence of risk models as a deviation from our position that capital requirements should be risk-based.

Role for internal credit risk models in the future capital requirements

Given the context, it can be valuable to try to describe the role of internal models for credit risks in the build-up of the Swedish capital requirements. Since we changed the design of the risk weight floor for mortgages, it is now possible to schematically describe the capital requirements according to the diagram. The size of the area indicates the capital requirement in SEK, and the height indicates the requirement expressed in per cent. The minimum requirement level is 8 per cent, and its equivalent in SEK is based on the size of the risk-weighted exposure amount, which consists of institution-specific

loss risks for primarily credit risks, market risks and operating risks. In addition to the minimum requirement – the capital requirement according to Pillar 1 – is Pillar 2, which consists of capital requirements we supervisory authorities place on individual banks if we consider there to be a need for higher resilience as a result of particular risks or weaknesses. Finally, there are the capital buffers, which in accordance with EU regulation and Swedish law we can place on the banks as a group primarily due to systemic risks and not due to exposure risks for individual banks.



The higher the exposure risks of a bank in its operations, the greater the risk-weighted exposure amount due to higher risk weights. For the Swedish banks – which have extensive lending activities – credit risks are the most dominant type of risk. For JP Morgan, which I used for comparison earlier, market risks and primarily operating risks are of relatively large importance for the risk-weighted exposure amount and thus the capital requirement. The role of internal credit risk models in the capital requirements in other words is – for the major banks with authorisation for internal models – to influence the size of the blue area, i.e. how wide it should be. If the capital requirements are risk-sensitive with regard to credit risks, this means that the blue area will vary in size for banks depending on the focus of their lending activities.

Some of the measures we have implemented in the past few years at the national level include the introduction of a risk-weight floor for Swedish mortgage exposures, the use of systemic risk buffers and Pillar 2 requirements to upwardly adjust the capital requirements for the major banks and applying a more prescriptive approach to some elements of bank’s internal models for corporate lending. As vulnerabilities related to indebtedness have built up and we have learned new lessons, we have acted with the tools that have been available with the goal of increasing the financial system’s resilience. However, the capital requirements have developed somewhat into a patchwork quilt since we are trying to always have as well-balanced requirements as

possible within the framework of the laws and rules we have to apply. Since the regulations are evolving rapidly, it also becomes important for us as a supervisory authority to do what we can to ensure the rule of law and create predictability. When it comes to the future capital requirements for banks, what we often come back to is that there are several principles, or functions, that we think are important for the capital requirements to be well designed. We want the requirements to be risk-based so that banks with higher exposure risks must hold higher capital and vice versa; the requirements are partly in the form of buffers so the capital can be used to cover losses without breaching the minimum requirements; the requirements cover risks from a broad perspective, including systemic risks; and, finally, the capital requirements are transparent and no more complex than necessary.

Introduction of the Basel III regulation

Compared to how things worked under the “simpler” Basel I requirements, today’s capital requirements cover more of the exposure risks experienced by the banks and are higher for some businesses and lower for others. In other words, they are more risk-based than before. How will the capital requirements then be developed over the next few years? The harmonisation that has already been mentioned is not just a trend for minimum capital requirements according to Basel; it is also very much a development that will be included in the new capital adequacy directive that is currently on the negotiating table in the EU⁵. One of the objectives of the new directive, CRD5, is to achieve more harmonisation in how capital buffers and Pillar 2 requirements are formulated and applied within the EU. This focuses mainly on, in other words, the capital requirements that the EU has introduced in addition to the Basel standard. This new directive is in line before Basel III for EU negotiations, and CRD5 will therefore be finalised before Basel III.

Finansiinspektionen has been involved in the work to develop Basel III, and we consider the new standard to be a good and important step forward. However, we have also been clear that there are aspects that are more problematic. We think the question that the Basel Committee raised during the financial crisis is fundamentally correct: How should the capital requirements for large international banks become more robust and comparable? Ten years on we can see that several different answers have been presented to this question. One important area that was previously mentioned is the resolution framework, which should make it possible to manage crisis-stricken banks without needing to use government support. The answer in Basel III, besides limiting the use of quantitative risk models, was to introduce two elements: a leverage ratio requirement as a capital requirement without any link to the bank’s risk level and an output floor that makes the banks’ risk weights largely dependent on

⁵ The same EU negotiations also include changes to the Capital Requirements Regulation (CRR), the Bank Recovery and Resolution Directive (BRRD) and the Single Resolution Mechanism Regulation (SRMR).

standardised approaches. These are being implemented as new capital requirements that banks must meet.

One aspect that is important for Swedish banks is that the supervisory authorities in the EU have put together an answer to how the capital requirements from an EU perspective must be made more robust and comparable. This work is occurring in the form of guidelines and technical standards without a direct link to the CRD negotiations. The starting point is to improve the actual risk models by regulating at an earlier stage how they are formulated and used. Banks' internal models are already subject to relatively detailed regulations in the EU, but in our regulation as well we will need to abandon the underlying assumption that all risks can be fully measured and modelled. Limiting the models to the factors for which statistical data provides better forecast value can increase the reliability of the banks' own funds.

More guidance is needed through supervision, so the design of the models becomes more similar between banks and important terms such as "definition of default" are applied consistently. This is an extensive project that will stretch over the next two years and affects all major banks in the EU. Most of the banks' capital models for credit risk will need to be recalculated and tightened so they result in risk weights that are less dependent on the business cycle, have greater margins of conservatism and are based on deeper macroeconomic recession scenarios than before. For FI, this is an important area through which we regularly communicate our expectations to the banks. Through this type of ongoing supervision, we can also take into consideration and prevent risks and vulnerabilities that we observe at a national level.

A more problematic aspect of the large number of new requirements aiming to reduce the risk of crises in the banking sectors, and the economy incurring high costs as a result of these crises, is that there is a risk that the regulations as a whole will become very complex. Up until now, banks have had one capital requirement to comply with⁶. In the future, several different requirements will apply at the same time, including both the various capital requirements in the form of the risk-based requirement, the leverage ratio and the output floor based on standardised approaches as well as the resolution authority's MREL requirements on own funds and eligible liabilities. These requirements⁷ affect the level and composition of banks' capital and liabilities in different ways. And which requirement that is the most binding for a specific bank can vary over time. The complexity that can emerge from this approach could be a vulnerability in and of itself for financial stability if it is not clear which requirements will be key for a certain bank in a certain situation. It would be beneficial if the EU implementation of Basel III could strive for transparency

⁶ Some banks have already had an additional capital requirement from the transition between Basel I and Basel II, which resulted in a temporary capital floor. This floor was not removed as originally intended but rather was repealed on 1 January 2018.

⁷ A Net Stable Funding Ratio (NSFR) is also being introduced as a minimum requirement on the level of funding and maturity in relation to the bank's assets.

by limiting unnecessary complexity and far-reaching micro-regulation, since this otherwise introduces a risk of hindering both banks and supervisory authorities in their efforts to work efficiently and in a risk-based manner.

What is required for the banks to withstand the next crisis?

Supervision more in focus when the capital requirements are harmonised

I have today tried to highlight the considerations that need to be made to ensure that the capital requirements strengthen financial stability. The regulations for capital adequacy will become more harmonised, which makes supervision that much more important. This means that FI will continue to carefully monitor the Swedish risks and vulnerabilities.

Macroprudential measures increasingly important

FI's toolbox contains much more than just capital requirements; supervision measures from micro- and macro-perspectives will be increasingly important for us. Systemic risks are an area where we are seeing future changes to the framework. Macroprudential measures are not meant to only increase resilience in the banks, but also to a greater extent aim to reduce risk build-up among borrowers - both households and businesses.

Risk-based capital requirements still important, but tighter models

An extensive project is under way within banking supervision to make models for credit risks more robust and thus improve reliability of the banks' own funds. Working with supervision is also particularly valuable since we need to be able to manage risks that today are found in the Swedish banks' assets but that in the future might be largely moved outside the banking system. If lending through forms other than bank loans gains a larger role, this development can fundamentally be positive by leading to greater competition, but it still requires ongoing analysis to avoid new systemic risks. The Swedish banking market is not a closed system. The exposures that the banks will experience in the future are in part steered by the capital requirements, which is why these requirements need to be risk-based.

No mechanical increase in the capital requirements, but buffers are needed

What will the Swedish banks' capital requirements look like in a few years when the new regulations we are discussing today have been implemented? It is not possible to provide a definitive answer at this stage, but our overall assessment is clear. We consider the Swedish banks in general to have satisfactory capital levels given the current risk assessment. This conclusion has not changed. FI does not intend to let the total capital requirements automatically increase as a result of Basel III or the review of the banks' credit risk models. For financial stability, though, it is simultaneously of importance for there to be a considerable share of capital buffers available, which means that it is not possible to rule out that well-balanced total capital requirements in SEK may need to be higher after the new regulation is implemented in full.

In conclusion, let me reconnect to the theme of my speech: will the banks withstand the next crisis? I can say that resilience in many ways is stronger than before, but the next crisis will be different. The regulations in the banking sector will never be complete; they will always need to be improved.

We cannot expect financial crises to be a problem of the past. There will be banking crises or macroeconomic crises, but, regardless of which emerges, financial stability will be challenged again. I believe that what is most important for creating good resilience to future crises is analysis and an understanding of the risks. This applies to both FI and the banks.