

Date: September 8, 2016  
Speaker: Erik Thedéen, Director General  
Venue: UBS Annual Nordic Financial  
Services Conference 2016

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## **Capital requirements: A Swedish perspective on the review of the Basel capital standards**

I will take the opportunity to speak today about capital requirements and the current agenda in the Basel committee. These issues are topical in every sense of the word, even for the decision making body of the committee, GHoS (short for Governors and Heads of Supervision). My colleagues in GHoS and I will try to reach an agreement covering as many of the outstanding issues as we can. The complete regulatory reform package is expected to be endorsed by GHoS in January 2017.

I will not try to forecast the outcome of the negotiations. My purpose is instead to discuss some of the key issues now on the table in Basel from a Swedish perspective.

### **The issues**

As you are well aware, the revised Basel Accord – commonly known as Basel 3 – was adopted in 2010. It has been implemented in EU legislation in the form of a directive, CRD 4, and regulations, CRR. Although what is now on the table is sometimes referred to as “Basel 4”, it is not a full scale review of Basel 3. And more importantly, it is not Basel 4 since the mandate to review the Basel standards comes with a constraint of not significantly increasing overall capital requirements. The main purpose is to strengthen the regulatory framework of banks by complementing the current agreement in some specific areas. This is to be done under the main principles of more simplicity (than current Basel 3), more risk sensitivity, and more comparability between banks and jurisdictions.

The Basel Committee has publicly consulted on these proposals. Hence, the broad elements of the discussions are known to market participants and other stakeholders. Let me just highlight some key outstanding issues.

One is to finalize the leverage ratio (LR). The LR is a non-risk sensitive capital requirement meant to act as a backstop to the core risk-weighted requirements. Here the design is already more or less decided. Remaining issues include the

minimum level (although 3 percent appears to be no longer contested) and to what extent higher requirements shall apply to systemically important banks, including whether these add-ons shall act as buffers (as opposed to binding minimum requirement). But, as the LR is one part of this overall reform package, nothing is decided until everything is decided.

Another key area is revisions to the standardized approaches for assessing capital requirements for credit risk and operational risk. A related is the review of the internal models banks can use (subject to regulatory approval) to assess certain risks to determine capital requirements.

One objective here is to reduce excessive and unwarranted variations in risk-weighted assets across banks that apply internal models. Studies have indicated that banks' models produce quite different risk assessments of what should be very similar exposures. Clearly, this is a cause for concern as it leads to different capital requirements for similar assets. It also suggests that risk weights are too low for some banks (at least). The *risk-sensitive* requirements are meant to be just what the name says. If risk is (systematically) measured incorrectly, the requirements are not fit for purpose.

The use of internal models is expected to be constrained in the new agreement for all risk categories. This can be achieved in different ways. One is by further limiting model input parameters. Another set of measures work by excluding modelled approaches altogether for certain risk types or exposure classes that are judged too difficult to model in accurate and credible ways. For example, internal models will not be allowed for operational risk.

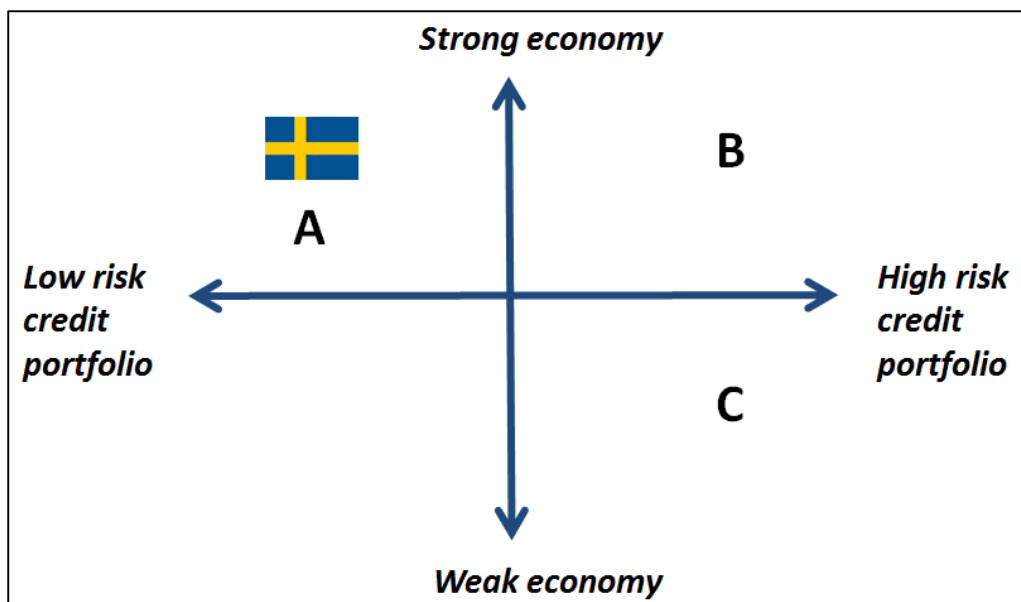
Finally, so-called output floors are discussed. This means that risk weights are constrained so that they cannot fall below certain levels set in relation to the standardized approaches. Again, this is a means to reduce unwarranted variations in risk weights in data-based internal models by excluding model results that are significantly lower than the standardized – and globally harmonized – approaches.

### **The international setting for the discussions**

So, these are the main issues. It is also important to note that the objective of the process is to agree on globally harmonized minimum standards. This is no simple task, since you do not need to be an expert to know that banking systems around the world look very different. One reason is that countries that are members of the Basel Committee, and thus participate in the standard setting, are different in terms of institutional set up, economic position, etc. Such differences affect also the views taken on the design of bank capital standards.

I will not go into the positions taken by different parties in the negotiations, but to understand the context it is useful to think about a set of typified cases and

consider how the banking systems – and economies – are affected by the choices now discussed in Basel. Let me consider two dimensions as shown in this diagram.



One dimension is the type of banking system and the degree of risk on banks' balance sheets that this entails. At one end we have countries with universal (or retail-oriented) banks and robust social and institutional frameworks. Here the average risk level tends to be low, especially if banks have significant amounts of household mortgage lending (issued under high credit standards and under legal frameworks where household cannot escape debts via bankruptcy). It probably does not come as a surprise if I point to Sweden as an example.

At the other end of this spectrum, we have countries where average asset risks are quite high, for example, because banks' balance sheets are dominated by corporate and consumer credits and where mortgages are relatively more risky. Here the US can serve as the illustrative case.

The other dimension is the strength of the domestic economy. If I again use Sweden and the US as examples, they are both placed at the strong end of this spectrum. Both have a robust current outlook. They also have fiscal space and flexible exchange rate regimes. This makes it possible to withstand and counteract future economic downturns. Of course, a strong and resilient economy also mitigates – other things equal – risks in the banking system, directly but also indirectly by providing banks with more stable earnings.

The contrasting case here is a country with a weak economy and limited fiscal and monetary flexibility. In such a situation, the banking system tends to be weak, credit losses high, and profitability low.

So we have three stylized cases: A, B, and C (with Sweden – completely by coincidence – as case A). Let us now consider how countries with these different positions would be affected by the changes now considered in Basel. Take the US (case B in the graph). Their banks have a large share of high risk assets and thus high average risk weights. This is as it should be, given banks' business models. For example, it is obvious that a residential mortgage in the US is quite risky. So, for the US a high leverage ratio or high output floors on internal models is more or less *status quo*, or possibly even less stringent than binding model-based requirements.

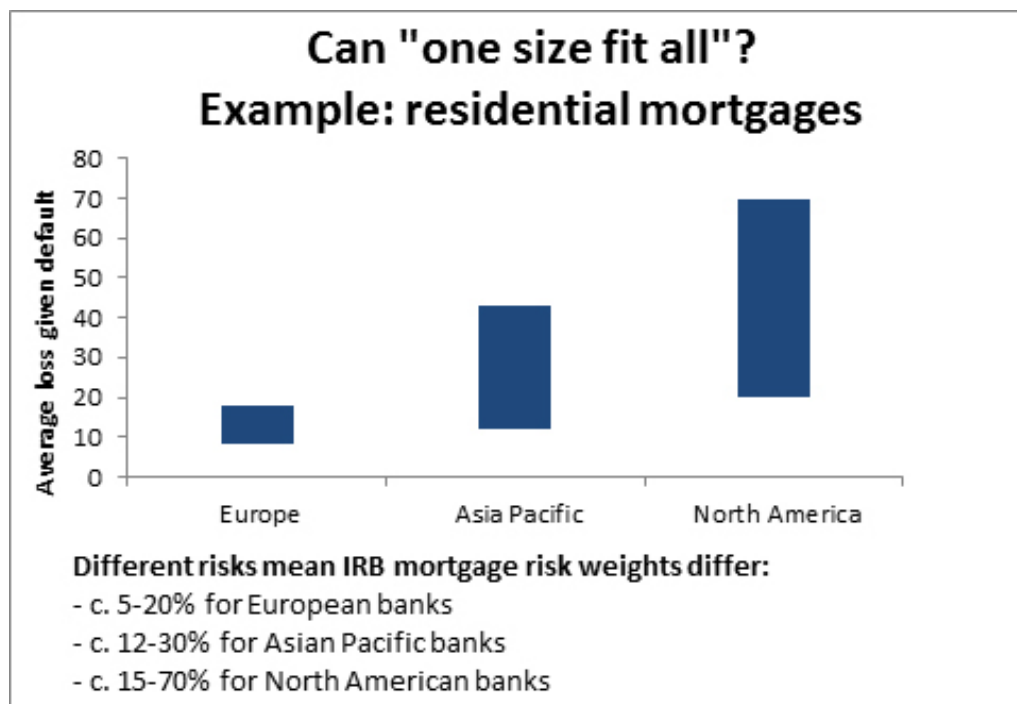
Next consider a country of type C, with a weak banking system and a weak economy. Model-based risk weights are high, because credit losses have been high. And for the same reason, the capital positions of banks have been eroded so they have small capital buffers. Their ability to support the economy by providing credit has been similarly eroded. For a country in this position, regulatory changes that lead to an overall increase in capital levels come at considerable cost. Higher capital requirements – or even just regulatory uncertainty – make it even more difficult for banks to raise capital. Banks may respond by rationing credit which will make the economy even weaker and lead to additional credit losses. The outcome may well be another turn in a downward economic spiral. This puts the country in a position where the fine tuning of the rules regarding models is not that important as long as the overall result is not an increase in total capital requirements.

So what about Sweden?

Due to a long period of benign economic developments model-based risk weights tend to be low. Indeed, they are so low that Finansinspektionen has decided to override them on Swedish residential mortgages and raise them for corporate exposures (for specific and partly different reasons). But it is another matter if risk weights in Sweden – via high output floors – were to be permanently aligned to the US mortgage experience or losses on corporate credits in a country of type C. (And considering that the Basel Committee has a global reach, one could point to countries around the table that differ even more starkly from Sweden in institutional, political, and economic terms.) Then we no longer have capital requirements that are sensitive to the risks taken by Swedish banks. A key principle of the Basel framework is then breached: The link between capital and risk is broken.

Therefore there are limits to the degree of international standardization of capital regulations. Countries do differ and so do banking systems. It is simply not the case that all banks – or banking in all jurisdictions – are equally risky. This assertion is borne out both by experience from past and recent crises and by market data. For example, there are systematic differences in credit ratings, funding costs, and rates on credit default swaps between banks in different countries.

This can also be illustrated with data on credit losses presented by the Basel Committee.



Source: Basel Committee

This chart gives an indication of risk in mortgage portfolios for banks in Europe, Asia Pacific, and North America. Losses on defaulted mortgages – the light blue bars – are by far the lowest in Europe, between 8 and 18 percent.

In North America (which covers the US and Canada), on the other hand, losses on defaulted mortgages have been between 12 and 70 percent. This obviously produces dramatic differences in risk-based capital requirements. According to the same report average risk weights range from 5 to 25 percent in Europe compared to up to 130 percent for certain North American (in practice US) banks.

Given these fundamental differences in underlying risk – related to differences in legal framework and whether banks can claim repayment from the borrower after default – it is clear that completely standardized and globally harmonized requirements are not appropriate. If the fundamental objectives of the Basel process are to be achieved, it simply does not work to push differently shaped pegs through a standardized slot. You have to have more than one slot.

Or you have to start thinking about reshaping the pegs. There might be reasons to do so. After all, many proposals to fundamentally reform banking have been put forth, not least since the crisis. For example, as an alternative to universal banks one can contemplate narrow banks combined with securities based credit markets (although in the financial crisis many universal banks performed well

whereas banking systems that relied more on capital markets performed quite badly).

But in any case: To completely reform a country's banking system is not a task to be taken on lightly. And you most certainly do not want the globally standardized Basel Accord to be the main driver of such an important process.

### **Finansinspektionen's concerns**

To further explain the consequences of too much standardization, let me take a step back to consider what we want capital requirements to achieve. The answer is straightforward: They should protect claimholders against losses and they should give banks incentives to manage risk carefully, thereby contributing to financial stability. They should also build resilience to allow the financial system to function also in periods of uncertainty and stress.

(The nature of banking is such that claimholders include the state, directly, as the ultimate guarantor of deposits and, indirectly, as responsible for financial stability and economic stability in general. Therefore, capital requirements – and rules more broadly – must be set by the state.)

To serve their purpose, capital requirements should be sensitive to risks. Simply put: A bank that takes on more risk should have higher capital requirements to offer claimholders the same degree of protection. Inevitably, this also means that a bank that takes on less risk should have lower capital requirements, other things equal.

What happens if regulations do not take risk differences into account?

First and foremost, the incentives facing banks are changed. Banks' behavior will be adjusted to the rules, and less to the actual risks they bear. Effectively, the link between capital requirements and banks' internal risk management is broken. Paradoxically, the least risky banks will see the biggest increase in capital requirements.

As a result, banks will have incentives to reduce holdings of assets that have low risks (relative to their effect on capital requirements). And vice versa: they will be inclined to hold more assets that are risky. For any given capital level, banks will tend to become more risky. Claimholders, including the state, will have less protection.

Even more fundamentally, this may lead to structural changes that introduce new risks. For example, we are likely to see securitization of low risk assets. This means that the assets that remain on banks' balance sheets will expose them to bigger risks without this being reflected in higher capital requirements. Again, one can contemplate having such a financial system, but it is not a

reform to be introduced through the backdoor, without careful analysis and deliberation.

Consequently, Finansinspektionen does not support initiatives that would significantly and permanently reduce the risk-sensitivity of capital requirements. This affects our view on the leverage ratio. If set too high, a leverage ratio can be harmful to financial stability, especially for banking systems with a large share of low-risk mortgages and relatively low-risk corporate lending as is the case in Sweden.

But similar concerns are raised by some of the proposals regarding internal models. Again, let me take a step back: What is the purpose of internal models?

Internal models are intended to make risk assessments more precise. The idea is that statistical modelling should enable a bank (and its supervisor) to measure more accurately factors such as the probability of default (PD) and the loss given default (LGD) in the bank's various assets and activities, both at the level of the individual credit and for the credit portfolio as a whole. A bank that takes on higher risks based on these measures should hold more capital (and vice versa).

The desire to measure risk more accurately is well in line with the purpose of capital requirements. But internal models have limitations and entail challenges that must be dealt with. In particular, they tend to become so complex that only technical experts understand what is going on inside the models. Moreover, many of the inputs to the models are hard to measure (even ignoring that history may be a poor guide to the future). Add to this that models are *internal*, that is, initially set up by the banks themselves (although within the framework given by regulation and supervisors). Given that capital is a more expensive source of funding (and expectations among lenders of some, albeit limited, public support) banks have incentives to design models so that risks appear low and thus result in lower capital requirements. So, to work as intended, models must be set up with caution and be carefully examined by supervisors.

Aware of these caveats, Finansinspektionen has investigated how Swedish banks handle internal models for corporate credits. Several concerns were borne out. In particular, we found that banks had not taken sufficient account of the possibility that there may be deeper downturns, and correspondingly higher losses, than data from the long benign period in the Swedish economy indicate. Accordingly, we have required banks to assess credit risks based on a less optimistic view of the future. In essence, this amounts to having them put more black marbles – representing bad years – into the metaphorical urns they use in their statistic modelling. But models still reflect that loss experiences differ across banks (and across countries).

Previously, Finansinspektionen raised the minimum risk weights on residential mortgages to reflect micro- and macroprudential risks. The required risk weight is roughly five times higher than loss data would indicate (although this

includes also a significant macroprudential buffer). This can be seen as a constraint on the output from models.

Our actions show that history cannot be the only guide to risk modelling and that supervisory interventions may be necessary to create sufficient safety margins. Credible risk modelling is crucial for market confidence in bank capital, especially in less benign market conditions when investors become more averse to risk. We cannot have capital rules that become a source or even a transmitter of disturbances to financial markets.

And let me emphasize that this ought to be a concern not just for supervisors. When a bank is given permission to use an internal model, it is the responsibility of top management to ensure that the models are applied with sufficient caution. CFOs and CEOs (and even boards) must pay attention not just to the results of the model (and welcome any report that capital requirements have come down). They must also ensure that models are set up and applied with sufficient caution. If not, regulators will have to intervene even more forcefully. Ultimately, the benefits of internal models may be lost. This would come at significant costs, not just to the banks themselves.

Finansinspektionen therefore support the general aim in Basel to increase the robustness and reliability of banks' internal models. To this end, limits on their application and construction must be set. At issue is *how* such limits should be designed. Here many proposals are on the table, some quite complicated (and with an array of names and acronyms).

One such approach is called Foundation IRB. It may have advantages for some types of risks. One key feature is that measures of the probability of default (PD) are still to be derived from the bank's model (subject to general constraints). However, how much a bank stands to lose if a borrower defaults (LGD) is to be set by regulators. The argument is that LGDs for some types of lending are much harder to estimate at the level of the individual bank than the PDs. Still, there are systematic differences in LGDs across countries that should be acknowledged also under such an approach.

Another proposal is based on so-called output floors. Here the idea is to set a floor on risk weights as a percentage of the risk weights in the standardized approach, that is, the model used by banks that do not have internal models. As I have already indicated, this is a problematic approach, not least from a Swedish point of view. If that percentage is high and the standardized approach is influenced by, say, US or Argentinian experience of credit losses, Swedish banks would end up with risk weights that are not related to actual risks.

Output floors that are not designed to reflect differences across countries are thus subject to the same critique as the leverage ratio. The banks' incentives to manage actual risk exposures are weakened. Capital requirements that fail to take such fundamental differences into account are therefore not more fit for purpose than ones that underestimate risk by improper application of internal models by banks.



This is not to deny that risks are hard to measure. But to give up trying is not the solution. We have to accept some degree of complexity in the rules. (And in practice a tool like the leverage ratio is better described as *crude* than simple; a host of construction and measurement issues need to be resolved also in that case.) If we do not acknowledge differences between countries and allow some complexity, we may end up with banking systems that – at least in countries like Sweden – are *more* risky. Then we would have failed in our mission.

### **Concluding comments**

Finansinspektionen has shown in our application of the current capital rules that we consider high capital levels justified. Banking is a risky business and in the period before the global financial crisis in 2008 capital levels were allowed to fall too low. That capital requirements are high is therefore appropriate. Through our decisions, we have ensured that Swedish banks have requirements that by far exceed international standards. We have done this while retaining risk sensitivity in the system.

In one area we have gone further. This is the increase in the minimum risk weight on residential mortgages from 15 to 25 percent. In this case we are using capital requirements as a macro-prudential tool. The purpose is to reduce systemic risks and to make the Swedish economy more resilient in a period where lending to housing is a stability concern. These concerns are so serious that they warrant going beyond what conventional risk measures suggest.

But macro-prudential policies should respond to cyclical conditions. In the future, we may at some point want to use risk weights to offset a severe tightening of credit that would pose a threat to economic stability. Rules that permanently fix weights at some internationally agreed level would prevent such active use of capital requirements. This would constrain Finansinspektionen's ability to take macro-prudential measures tailored to the situation in Sweden. Here is another reason why the Basel framework must not prevent adjustments to national conditions.

So, Finansinspektionen does not share the view that risk sensitive requirements lead to capital levels that are too low. The key issue is how the rules are applied.

But as I have tried to make clear, it is not just capital levels that matter. Capital requirements should also be sensitive to differences in risk. And risks differ between countries in ways that must be acknowledged by the regulations.

We will therefore continue to argue – in the Basel Committee and elsewhere – for the principles that we already apply in Sweden to foster resilience in our banking system: risk-sensitive but yet high capital requirements.

Moreover, capital requirements should have significant buffers relative to the minimum requirements so that also significant losses can be absorbed and managed by the bank itself, under the guidance of the supervisor. As you know, buffer requirements is another central feature of Finansinspektionen's application of capital requirements and we want maintain that flexibility also in the revised capital framework. It would take me too far afield to discuss that aspect today, however.

Thank you!