Basel II – the new framework for bank capital

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Basel II is the commonly used term for the new framework for capital requirements on banks.[1] *It will supersede the present Capital Accord, agreed by the Basel Committee in 1988 and sometimes called Basel I. In Sweden and other EU countries the new framework will be implemented on 1 January 2007. The corresponding EU directive reflects Basel II, but includes a number of amendments, some small, others larger.*[2]

A lot of descriptive and analytical material has already been written on the technical aspects of Basel II, such as on risk measurement methods. But since the introduction of Basel II will have noticeable effects even for those of us who are not risk experts, there is a need to provide short and non-technical guidance on the main issues. That is the aim of this article. Hence, the text focuses on overarching issues rather than technicalities.

Why change from Basel I to Basel II?

In most countries, the law requires banks to hold a certain amount of capital, primarily in the forms of share capital and some quasi-capital debt instruments. The history of capital requirements shows a step-wise development towards increasingly sophisticated approaches.

The traditional requirement is that banks must hold a *minimum amount* of capital,[3] both to provide a cushion against losses and to discipline the bank's owners. Some countries also apply a *leverage capital ratio* of, for instance, 4 per cent of a bank's total assets as a backstop to ensure that the amount of capital stays in line with the size of the balance

[1] The full name is "International Convergence of Capital Measurement and Capital Standards – a Revised Framework"; June 2004, the Basel Committee on Banking Supervision, BIS.

[2] The EU Directive is called "Re-casting Directive 2000/12/EC of the European Parliament and of the Council of 20 March 2000 relating to the taking up and pursuit of the business of credit institutions and Council directive 93/6/EEC of 15 March 1993 on the capital adequacy of investment firms and credit institutions". It is sometimes called the Capital Requirements Directive (CRD), or alternatively, CAD III. While Basel II is mainly intended to apply only to internationally active banks, CAD III will cover all banks as well as other credit institutions and securities firms in EU member states.

[3] For instance, a bank established in the EU must have a minimum capital of 5 million euro.

sheet and thus with the risks. *Risk-based capital ratios* of at least 8 per cent for credit risk were formalised in the 1988 Capital Accord, and capital requirements for market risks were added in 1996. This is sometimes called the Basel Capital Accord or Basel I, for short.

With a risk-based ratio, different categories of borrower (in the case of credit risk) are assigned different risk weights, set in relation to the likelihood of the borrower not fulfilling his loan obligation. The capital requirement is then calculated as the amount of the loan multiplied by the risk weight times 8 per cent.[4] The Capital Accord is based on a relatively small selection of weights. The same risk weight is applied to all loans to companies and to individuals, with one exception – for loans to individuals collateralised by their own house or apartment there is a lower requirement. Obviously, such a crude categorisation does not reflect the risk that a particular borrower actually poses for the bank. A highly creditworthy company, say Volvo, would in practice represent a much smaller risk than, say, a recently started restaurant.

Since the Capital Accord was adopted, there have been significant developments in the theory and practice of measuring and managing risks. Moreover, new financial instruments, such as credit derivatives, have improved banks' ability to handle and mitigate risks. In recent years there has also been a rapid development towards larger and more complex banking groups with broader operations, both across the financial sector and across countries. The difference between internationally active large banks and local banks has grown.

There have been significant developments in the measurement and management of risks and new financial instruments have improved banks' ability to mitigate risks.

Thus, a thoroughly revised framework for capital requirements was called for. In order to keep pace with developments, such a framework should contain:

Thus a revised framework for capital requirements was called for.

- A closer relationship between the risk and the capital required in each case. Referring to the example mentioned above, a loan to Volvo should have a much lower capital requirement than a loan to the restaurant. Since the costs to the bank for acquiring the capital[5] should, in principle, be covered by the interest paid on the loan, the lower capital requirement would translate into a lower borrowing rate for Volvo.
- Different rules for banks that are more as opposed to less advanced in the management of risk and capital. Banks with less complex risks

[4] One example: an unsecured 500 million krona loan to a company would carry a risk weight of 100 per cent under the Capital Accord. The capital requirement would thus be: 500 million x 100 % x 8 % = 40 million. Assuming that the annual cost of share capital is 15 per cent, the capital requirement would then cost 6 million krona a year.

[5] The annual cost for this is generally estimated to be around 15 per cent. Investors in share capital demand a high yield to cover the presumed high volatility in share values plus the risk of total loss.

may use simpler rules. More advanced banks will be allowed to use more advanced alternatives, which put heavier burdens on them but lead to a closer relationship between the risk and the capital requirement and are thus more in line with the bank's own estimates of risk.

- Explicit capital requirements also for operational risk, in addition to credit and market risks. Operational risk factors are important for banks and should be taken into account in a revised capital framework.
- A broader framework that includes both quantitative and qualitative requirements on banks as well as requirements for public disclosure of some bank information. Such a broader approach to supervision would act as a basis for the monitoring of banks' risk management by banks, supervisory agencies and the general public.

Thus, there are several reasons for replacing the current capital rules by Basel II. The following is overarching and therefore perhaps the most important.

As banking instruments and operations have changed significantly, the regulations need to be updated.

To be effective, banking regulation cannot conflict unduly with the way banks actually conduct their business. Regulations that are too standardised or do not reflect realities will be an expensive hindrance because banks then need to operate double systems – one to provide the supervisors with the requisite information and the other for the bank's own management, for which the supervisory requirements have become inadequate. Banking instruments and operations have changed significantly since the inception of the present capital requirements, so an updated regulation is needed. Besides, the supervisors need a more flexible system to improve their capability to supervise banks with markedly different structures. In the new world of sophisticated banks and complex banking operations, supervisors have encountered growing difficulties with traditional, often insufficiently penetrating, methods of supervision.

Basel II reflects developments already underway

As a matter of fact, many banks have already implemented important parts of Basel II on their own initiative, in particular by improving systems for the management, measurement and mitigation of risks. Some banks have actually developed their risk measurement and management systems further than hitherto required by the supervisors because they see the new systems as useful instruments for better decision-making and hence lower losses. Under Basel II, internal bank systems that are found adequate by the supervisors may also be used to calculate a bank's statutory capital requirements. The possibility of reducing capital requirements

will be an additional incentive for the banks to optimise methods, portfolios and risk-taking.

Many features of Basel II have already been incorporated in supervisory methods. For instance, the concept of "risk-based supervision", whereby supervisors focus on the main risks in the banking system (often the larger banks and problem banks) and on the main risk-drivers within each bank, is being increasingly adopted by supervisors.

Supervisors are increasingly adopting the concept of "risk-based supervision".

Hence, Basel II could be seen as a framework that formalises some practices which the most advanced banks and supervisors are already using. But Basel II also incorporates a number of areas in which further development is warranted, for instance the measurement and management of operational risk. In such cases, Basel II could be seen as an instrument for furthering development.

Hence, Basel II could be seen as a framework that formalises some existing practices.

Why do banks need to be regulated?

Before discussing the Basel II framework in more detail, let us consider the basic question of the rationale for regulating and supervising banks in the first place. Would not banks develop more quickly and provide better and cheaper services if they did not have to carry the burden of resource-consuming, restrictive and costly regulations? Are there legitimate reasons for regulating and supervising banks more than other financial and non-financial institutions?

The answer lies in the banks' multiple roles, which are highly important and beneficial for the economy as a whole:

Banks have multiple roles.

- They provide payment services.
- They intermediate capital by providing a range of savings instruments and extending various forms of credit to borrowers.
- They handle and transform risks.

Some of these functions are by their very nature particularly vulnerable to disturbances. For instance, loans usually have a longer duration than deposits. Hence, in certain situations a bank may lose a large proportion of its deposits rather quickly while its loans remain outstanding. Such a situation may impose a severe liquidity shortage on the bank, which may ultimately collapse. Another example: The daily turnover of payments between the Swedish banks comprises very large amounts. A disturbance in the payment system – whether of a technical nature or due to one bank's failure to honour its obligations to the system on time – can quickly spread to other banks and even destabilise the overall financial system.

Some banking functions are particularly vulnerable.

Banks have a dominant role in some financial functions.

In some of the functions, banks have a monopoly or dominant role, with few alternatives. Only banks may receive deposits that are protected by the Deposit Guarantee Scheme. Banks have a dominant role in lending to small and medium-sized companies. Banks and their affiliates have a dominant role in the payments system. Thus, in many cases a bank customer has just a limited possibility of obtaining similar services from non-banks.

These three factors – that certain banking activities are intrinsically vulnerable, that even minor disturbances can threaten overall financial stability through contagion, and that the banks are the dominant providers of some key services – form the rationale for regulating banks and for doing so partly differently from other companies. That being said, all regulations should ideally pass a cost/benefit test. The total benefit to society of any regulation must exceed its total cost to society. This includes direct financial as well as other costs and benefits. A substantial potential cost to society is the expense of having to deal with a crisis in the financial system. Since an individual bank has no commercial reason to take this systemic cost into account, society has to ensure, e.g. through regulation and monitoring, that banks do not behave in ways that unduly increases the systemic risk.

Reasons for using capital requirements as a regulatory tool

The importance of the regulatory requirements lies in the "special nature" of banks.

There are many good reasons why banks, as well as non-banks and non-financial companies, should maintain an adequate risk-related amount of capital. However, the "special nature" of banks makes it more important to have regulatory requirements for the capital in banks than in other companies. Capital is needed:

- To reduce the risk that volatility in bank earnings, e.g., stemming from macroeconomic developments, leads to bankruptcy.
- Because in the event of a bank failure, equity capital is hit first, thereby reducing the residual cost to other parties, including tax-payers.
- To encourage prudence among bank owners because more of their own capital is at stake.
- Because, although capital requirements should not prevent banks from taking risks, the cost of capital for covering risks will lead to a more risk-aligned pricing of risks and to a considered strategy for taking risks.

- Because capital requirements will promote the development of common, "integrated", management processes and policies within a bank group – across entities, countries, risks, and operations.

Normally, large and internationally active banks do more than comply with the minimum 8 per cent level for capital adequacy. The banks themselves, their market counterparties and rating agencies have found it prudent for such banks to maintain capital ratios at 10 per cent or more. This will certainly continue to be the case under Basel II.

The structure of Basel II

Given the discussion above, we can draw some conclusions about the desired structure and content of a revised framework for capital requirements:

- It should link capital requirements closely to actual risks.
- It should encompass all material risks to banks.
- It should reflect the different operations, organisations and degrees of "sophistication" of different banks.
- It should provide incentives for in-bank developments that lead to "better management" and thus reduce the risk of bank failures. But it should also provide enhanced powers for supervisors to act against identified weaknesses in the management of banks.

To satisfy these demands, Basel II has become multifaceted.

It is built on *three pillars*:

- Pillar 1 encompasses the capital requirements for credit risk, market risk and operational risk.
- Pillar 2 contains the "supervisory review process", which outlines the demands on banks' management of risks and capital and defines the roles and powers of the supervisors.
- Pillar 3 sets out demands on banks for public disclosures. These shall include quantitative as well as qualitative information, in particular about a bank's management of risks and capital.

Banks may choose from different alternatives depending on their "level of advancement".

Under pillar 1, banks may choose from different alternatives, depending on their "level of advancement". For credit risk, Standardised Approach is the simplest level,[6] rather like the present Basel I but containing more risk weights, all fixed by the authorities. Banks may increase the range of risk

[6] In fact, there is even a simplified version of the Standardised Approach, intended for little advanced banking systems. In this version there are fewer alternatives, e.g. for risk weights, than in the Standardised Approach.

weights set by the supervisors by using credit risk assessments from acknowledged rating agencies, such as Moody's, Standard & Poor's, Fitch and so on.[7] The next level in pillar 1 is called "Internal Ratings Based" (Approach). In the IRB, the risk weights and thus the capital requirements are partly based on the individual bank's internal estimates. There is also an advanced form of IRB, in which an even larger part of the capital requirements is influenced by the banks' own calculations.

For market risks, there is also a simple and an advanced alternative to choose from. The treatment of market risk has not changed from the present Capital Accord to Basel II.

For operational risk, there are three alternatives, called Basic Indicator Approach, Standardised Approach and Advanced Measurement Approaches, AMA.

In every case banks have an incentive to move to a more advanced level since the required capital will then be more closely aligned with the bank's actual risk. In most situations this implies a lower capital requirement. However, when a bank opts for a more advanced alternative it has to prove that it has accurate and well-tested systems for its management, in particular for the management of risks and capital. Thus, a lower capital requirement for such banks would be matched by a lower risk of bank failure; in other words, this is fully in line with the objective of Basel II – that capital requirements reflect actual risks.

Basel II is more than capital requirements – pillars 2 and 3

Basel II includes rules for banks' management of risks and capital, supervisors, and public disclosures of information.

One of the major achievements in relation to Basel I, which was purely quantitative, is that Basel II also includes comprehensive rules for (*i*) banks' management of risks and capital, encompassing all material risks, not just those covered by the capital requirements under pillar 1, (*ii*) supervisors, who may demand additional capital or restrict operations in individual banks, and (*iii*) public disclosures of bank information. Basel II is intended to exert pressure so that the whole bank is managed in an integrated fashion, with good corporate governance. It also forces supervisors to develop processes to understand and monitor in depth how each bank actually operates. Some of these important "non-quantitative" components of Basel II are discussed below.

[7] For instance, in the absence of rating a non-financial company is assigned a risk weight of 100 per cent; if a rating exists, however, the risk weight for the same company could be 20, 50, 100, or 150 per cent, depending on the rating class.

STRONGER CORPORATE GOVERNANCE

Basel II calls for stronger corporate governance of banks. Banks' Boards of Directors must set the overall strategies for risks and capital, besides deciding which systems for risk management and controls are to be used in the bank. In addition, they must regularly monitor the bank's compliance with these systems and strategies. The CEO and other members of the management team are to apply the systems in the daily operations of the whole banking group and must report regularly to the Board – in particular when the rules have been violated. The bank's governance is supported by a strong internal audit function, which monitors not only compliance but also the validity of systems and controls. The audit function should report directly to the Board to reduce the risk of it being influenced by the management it monitors.

Boards of Directors must set overall strategies, decide systems for risk management and control and regularly check the bank's compliance with these systems and strategies.

Is stronger governance in banks a good thing? Yes, indeed. Many bank failures stem from lax or unwitting bank directors who gave the managers and operational experts too much leeway without taking an overall view on strategies and risks. Nick Leeson claims to have convinced Board members in Barings Bank that he had found a low-risk source of revenue in the derivatives market, which would provide high and sustained profits to the bank each year. Any member of a bank Board ought to know that risk and yield are closely linked.

BROADER ROLE FOR SUPERVISORS

Under Basel II the role of supervisors will be broader than at present. Among other things, they will:

- Endorse and validate individual banks' systems for risk, capital and internal audit.
- Check the actual application of these systems throughout the bank.
- Assess all material risks including concentration, and interest rate risk in the banking book.
- Assess risk in relation to available capital, and take corrective action when needed, including requiring additional capital for individual banks.

The revised and augmented role for supervisors under Basel II is a necessary development for several reasons. The increasing complexity of banking operations, instruments and organisations means that traditional supervision, such as focussing on individual transactions, is no longer effective, or indeed, feasible. Also, developments in financial instruments

The increasing complexity of banking operations makes the augmented role of supervisors necessary.

and markets have made it possible for banks to shift their risks as well as their assets and liabilities more rapidly than before. Even if they were to receive somewhat enlarged resources, supervisors would not be able to monitor the banks with a commensurate frequency.

The Basel II approach to this is three-pronged: (*i*) giving more responsibility to banks themselves to strengthen internal corporate governance; (*ii*) giving more powers to supervisors to ensure that banks establish robust management systems and operate in accordance with the rules, not only as they are written but also in line with their spirit; and (*iii*) giving external stakeholders increased means to analyse banks. Through this approach, it is hoped, supervisory work will be facilitated and supported by the bank's internal monitoring as well as by the monitoring conducted by external stakeholders. Taken together, this should mean that each bank's behaviour is scrutinised on a broad and frequent basis.

MARKET DISCIPLINE THROUGH PUBLIC DISCLOSURES

Academicians have been advocating for a long time that more of the supervision of banks should be left to market participants. Their reasoning is that market participants have an interest in identifying, analysing and publicising findings of positive or negative developments in a bank. That should elicit a reaction from various parties, for instance so that depositors start withdrawing their money. The mere risk of such repercussions would – the argument goes – lead bank managers to act with more forethought. A repeated proposal from academe is that banks should be obliged to issue debt instruments that are priced and traded on a liquid public market. Shifts in the market perception of a bank would immediately result in movements in the price of the debt instrument and thus signal the condition of the bank.

Basel II seeks to increase market discipline by requiring banks to publish more substantive and frequent information.

Basel II does not include this idea of issuing debt, but seeks to increase market discipline by requiring banks to publish more substantive and more frequent information than today about their risks, capital and other aspects. Banks must not only publish the actual numbers but also explain their strategies, management methods and governance structures. The only secrets a bank may keep in this regard are those which are close to the bank's internal business strategy.

Supporting market discipline by information disclosures is an important part of Basel II. At present, rules and practices on bank disclosures vary greatly between banks and also between countries. Many countries' supervisors demand far fewer and less detailed disclosures from banks than is presently the case in Sweden and even here requirements fall short of the desired degree of transparency. Whether or not more disclosures

will in fact lead to better market discipline depends to a very high degree on the recipients of the information. Investors, analysts and others must be prepared to scrutinise it carefully and publish their unbiased views. Banks' counterparties should be ready to react to it. The disclosure instrument will then influence the banks' behaviour as intended. Successfully implemented, this would provide a highly useful complement to the regular supervision, since, unlike investors and analysts, the authorities neither can nor should be involved in the operations of banks on an ongoing basis.

Challenges when drafting the new rules

The Basel II framework applies the same basic rules to all, but with a large number of "options".

In drafting the Basel II framework, the Basel Committee faced the dilemma that while similar rules should apply to all countries and all banks to ensure fair competition, countries and banks also need some differentiation for local circumstances. A solution was found by making the Basel II framework apply the same basic rules to all but with a large number of "options" whereby individual countries can adapt their own rules if they can show they have good reasons for doing so. For instance, if a country can demonstrate that the losses its banks have suffered from real estate loans are much smaller than those of other countries' banks, then it will be allowed to use an "option" of reduced risk weights for real estate loans.

Banks can choose from different layers of complexity.

Another dilemma when constructing Basel II was that banks differ. Imagine a small local savings bank with simple deposit and lending operations on the one hand and an international mega bank with a global presence and some extremely sophisticated financial services on the other. How can you construct regulations that cope with the complexity of the latter without placing an unreasonable burden on the former? That is why Basel II provides different layers of complexity from which banks can choose. Advanced and large banks are expected, by the market and by supervisors, to apply the advanced risk management methods. A bank with non-complex operations may use a simple and less expensive system.

Basel II is drafted flexibly to allow for future changes.

A general challenge in rule-making is to produce something that does not rapidly become obsolete on account of rapid developments in the financial field. Basel II is drafted flexibly so that future changes, such as new financial instruments, new activities and so on, can be incorporated without having to change the basic structure. Basel II aims to give banks a high degree of freedom in the way they operate or may operate in the future, but has some built-in restraints to ensure at least a basic level of capital, such as minimum "floors" on the capital requirements even

when a bank's temporary situation could be seen to justify an even lower level of capital.

In all three examples above, the solution included providing more flexibility in the rules and for the banks. Note, however, that this approach does have side-effects. For instance, a flexible application of rules may distort preconditions for fair competition on a level playing field. Rule flexibility may also lead to "supervisory arbitrage", whereby banks seek to identify instruments, operations or jurisdictions where the rules are less strict. Such arbitrage towards less regulated areas may increase banks' vulnerability to destabilising incidents.

Controversial issues

In the public debate, various parties have criticised aspects of Basel II. These criticisms differ in kinds. Some focus on the macroeconomic side effects, others on the structural effects, and others again on issues of competition and fairness. A number of the most hotly debated issues are summarised below.

- **Procyclicality**: Larger risk weights and higher capital requirements may restrict bank lending when it is most needed in cyclical downturns and lead to excessive lending at cyclical peaks. That could exacerbate cyclical swings. When constructing Basel II there was a need to balance this cyclical effect with the need to create rules that are truly risk-sensitive. A mix of partial solutions was adopted, such as requiring banks to assess the creditworthiness of borrowers over a period that includes good times as well as cyclical downturns. Banks would then hold a cushion of extra capital in good times. It may also be that the fears of large swings in lending are exaggerated since it is in the interest of banks to extend loans to creditworthy borrowers even in macroeconomic downturns. That being said, the structure of Basel II itself – which aims for a closer link between capital requirements and actual risks in lending – will indeed tend to lead to more procyclicality in lending than the present Basel Capital Accord. That is one of the issues on which a balance must be struck between financial system stability and other macroeconomic aims.
- **Loans to small and medium-sized companies (SMEs)**: Such loans may in many cases look more risky, for instance due to the limited size of such enterprises' capital. However, in many countries, the development of SMEs is important for overall economic growth. SMEs and politicians have expressed concern that high capital

requirements in Basel II might reduce lending to SMEs and also make it more expensive. The Basel Committee considered the issue further and noted that the risk from lending to SMEs was lower in practice than indicated by share capital and tangible assets. For instance, the owners, who in many cases are also the managers, of SMEs usually assume an added financial responsibility for their firms and are often prepared to supply other funds when needed to prevent a payment failure. Another aspect is that lending to a large number of fairly small SMEs implies a high degree of diversification in a bank's portfolio and this reduces the risk of major total losses to the bank. These and other considerations induced the Basel Committee to reduce the risk weights and thus the capital requirements on loans to SMEs under certain conditions. As in the case of procyclicality, in its treatment of the SMEs, Basel II had to strike a balance between a more technically-oriented risk weight assessment and the overarching macroeconomic aspects.

- **Large banks**: Some have argued that Basel II will favour large banks[8] because they are more likely to adopt the advanced risk management methods and thus benefit from lower capital requirements. It is probably correct that more large than smaller banks will adopt the advanced methods. Huge fixed costs are involved in setting up advanced risk management systems, while the operational costs are limited. Hence, once a bank has invested in a sophisticated system, it can make substantial savings in costs for capital requirements and these savings might be used to buy small banks. But that need not necessarily happen. Small banks compete with much more than the price for their services, for instance with their local presence and knowledge about customers. It is also evident in practice that owners of many small banks, such as savings banks and cooperative banks, require a lower yield on their capital than the owners of listed banks.
- **Non-banks**: "Basel II favours non-banks". The notion here is that institutions which avoid capital requirements will be in a favourable position to compete with the banks. My view is that Basel II will rather improve the competitive situation of banks in certain operations since capital requirements will be more closely related to risk. For instance, banks may be able to regain some lending to highly creditworthy companies, which earlier went to the securities markets because the capital requirements were too high in relation to the

[8] To be more precise, this discussion is about complex versus non-complex banks, rather than large versus small banks. A large bank conducting few and uncomplicated operations may introduce an advanced risk measurement and management approach fairly easily and at limited cost.

actual risk. In fact, Basel II will alter the current incentives for lending – for instance, some borrowers will become more welcome and others less so in certain banks, depending on their risk profiles. Basel II will also strengthen the incentives for more risk-aligned pricing. Competition among banks and between them and other financial institutions will be altered – e.g. for operations that are favoured or disfavoured by introducing Basel II. All this is generally welcome because a better allocation of risks and capital will promote financial stability and economic efficiency. However, some negative side-effects are unavoidable, for instance during the transitional phase.

- **Emerging market**: "Too expensive for emerging markets". The argument is that less rich countries cannot adopt Basel II because of the high costs for introducing risk management systems in banks and more efficient but resource-consuming supervision. But this argument ignores some important aspects. Firstly, the simpler measurement methods of Basel II are far less expensive and better adapted to countries with less complex banking activities. Secondly, good risk management in banks and effective supervision will pay for themselves by reducing the incidence of bank failures. Dealing with a major banking crisis is many times more expensive than the cost of almost any risk management system. Hence, before implementing Basel II, countries should focus on introducing a framework of sound practices for the "basics" of regulation, supervision and bank management. Having done that, a country should adopt the Basel II alternative that suits the situation of its banking system (small or large; simple or sophisticated; national or cross-border) and risk structures.

- **Advantages for large banks**: "Large banks from developed countries will have competitive advantages in emerging markets and developing countries". For instance, external ratings from major international rating agencies are much more frequent in developed countries. Hence, goes the argument, a bank from a developed country will get lower capital requirements. However, there is a fallacy in this line of reasoning. The fact that there are more ratings in a bank's home country will not benefit it in the host country. If a borrower has no rating, the standardised risk weight will be the same for the international bank as for the local bank.

  A conceivable situation is that the national authorities only allow their banks to apply the simpler measurement methods of Basel II, while an international bank from another country might be allowed in its home country to apply the advanced methods on a consolidated basis for all its entities. The host authorities in the less developed

country then have a choice – accept that the bank may use the advanced methods also in the host country or demand that it applies the simpler methods to its local subsidiary. This is a matter for negotiation between the two countries. Requiring all banks, local or international, to apply the same simple Basel II approach in a country would create a level playing field in a regulatory sense. However, it would also stifle the beneficial influence on the local banks from the introduction of better risk management methods.

- **Risk of herding behaviour**: This risk relates to Basel II's implementation rather than to its structure. The concern is that too much supervisory harmonisation in the implementation of Basel II, or "voluntary harmonisation" by the banks themselves, might lead to excessively similar risk management systems, which will reinforce cyclical swings and increase the risk of systemic disturbances. However, studies on banks[9] which are already operating similar systems indicate that banks in fact assume different risk attitudes to the same companies, for sound economic reasons. Hence the impact in the event of any herding might not be as large as feared. Nonetheless, it would be unfortunate if there was a far-reaching standardisation of, for instance, risk measurement systems. It might happen under certain circumstances that all these systems would produce misleading risk estimates and thereby threaten the banks.

- **Supervisory capture**: Under Basel II, supervisors will have the task of endorsing a bank's methods and processes, e.g. for managing risk and capital. The supervisors will also monitor the planned functioning of these methods and systems. Some have expressed worries that once a supervisory authority has endorsed a specific process or method, the authority will be less inclined to express criticism of the process or method since this would implicitly criticise its earlier approval.

  Of course, this worry can be neither confirmed nor rejected until Basel II has been up and running for some time. Still, the implementation of Basel II clearly will (and is intended to) increase the demands on supervisors' skills and integrity and it is crucial that the supervisory agencies are provided with the resources and other means to meet these demands. "Supervisory capture" is not a new issue and present rules for supervisors deal with it. For instance, some countries apply

[9] Jacobson, T,. Roszbach, K. & Lindé, J., (2003), Internal Rating Systems, Implied Credit Risk and the Consistency of Banks' Risk Classification Policies, Sveriges Riksbank, Working Paper No. 155, December, (www.riksbank.com/research/roszbach).

rules that make the supervisory authority legally liable for taking adequate and timely action to deal with weaknesses in banks.

Hence, there seem, at least in my view, to be reassuring answers and partial solutions to the controversial issues mentioned above. Nonetheless, the whole process of shaping and implementing Basel II has benefited and will continue to benefit from such critical and legitimate scrutiny. If Basel II is to receive broad acceptance and also to function better, all potential weaknesses and side-effects of the framework, be they on the banks or on other parts of the economy, must be identified, analysed and discussed. Partial solutions may be found for some of these weaknesses and side-effects, e.g. by adapting Basel II. In other cases, however, the contradictions between Basel II and other objectives, such as macroeconomic developments, may not be fully solvable but at least a discussion will clarify the nature of the conflict.

Operational risk issues[10]

Basel II has three levels for measurement of operational risks, designed to match the sophistication of a bank's operations.

The present capital requirements are calculated solely for credit and market risks, although the credit risk component implicitly includes operational risk. Basel II also has explicit capital requirements for operational risk. Many, including the managers of most large international banks, see these risks as significant and thus important to manage. However, many kinds of operational risk are very difficult to measure with a view to providing a basis for capital requirements. Operational risks include frequent events that have little impact on a bank, such as the daily miscounting – intentional or otherwise – by the bank's numerous cashiers. But they also include highly infrequent events that can have a major impact, such as an earthquake or an act of terrorism. How are such disparate risk categories to be reconciled in a measurement system? Basel II has three levels for the measurement of operational risks, designed to match the sophistication of a bank's operations:

- **Basic Indicator Approach**: The magnitude of a bank's operational risk and thus its capital requirement is calculated as a fixed proportion of the bank's net interest income and non-interest income, measured as the average over the last three years.
- **Standardised Approach**: All of a bank's operations are categorised and given fixed risk weights in proportion to the amount allocated to

[10] In Basel II, operational risk encompasses events caused by individuals, systems and "nature". This covers a wide range of events, from miscalculations to fraud or IT-system breakdowns. It also includes fires, natural disasters and terrorist actions. Also legal risks are included.

each category. The overall capital requirement is the sum of the requirements for all the categories.

- **Advanced Measurement Approaches, AMA**: In keeping with the advanced methods for the calculation of credit and market risks, the capital requirement is based on the bank's internal system for the measurement and management of operational risk.

Depending on the choice of measurement method, the above will provide a crude, or a more advanced, estimate of a bank's operational risks. What matters much more than the actual amount prescribed by the capital requirement, however, is that the bank management will be forced to develop a system to identify, measure, manage and, not least, mitigate the operational risks of the bank. In fact, now that bank managements are focusing more on operational risk issues as a result of Basel II, they increasingly acknowledge that these risks need to be dealt with in a structured manner.

Conclusion – the role of Basel II in the regulatory framework

- Some degree of regulation and supervision of banks is beneficial to society as a whole because banks on their own may not take external considerations fully into account. On the other hand, excessive regulation is not desirable because it stifles development and diversity in the banks. Moreover, all regulation should ideally be constructed so that it steers banks towards a behaviour that is beneficial for society, while not restricting development.
- Basel II tries to achieve these goals by closely linking capital and risks; by strengthening corporate governance in banks; by giving supervisors more instruments to address weaknesses in banks; and by increasing market discipline. To a much greater extent than hitherto, Basel II will enable banks to be flexible in using their own methods and systems, when adequate, to fulfil the regulatory requirements.
- The implementation of Basel II will increase the financial stability of banks as well as of financial systems. This is beneficial for macroeconomic growth in general.

The implementation of Basel II

As already noted, Basel II will come into effect on 1 January 2007. It must be implemented by the internationally active banks in all G10 countries and by all banks, credit institutions and also securities firms in every EU member state. For all other countries it is a voluntary undertaking but

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many countries around the world have already declared an intention to apply the new rules. A country may decide to limit the choice of alternatives in Basel II for its own jurisdiction. For instance, the USA have stated that only the most advanced approaches for risk measurement and capital requirements will be accepted for their banks, and thus only the country's ten to twenty largest international banks[11] will be allowed to use Basel II. Some countries will allow their banks only to use the simple approaches of Basel II, since they acknowledge that their banks and other circumstances will not (yet) be ready for the advanced alternatives.

Implementing Basel II in all countries which have decided to adopt it is a huge process. It involves, among other things, new legislation, new working processes and additional staff skills in the supervisory authorities and central banks, bilateral negotiations between countries which have common cross-border banking groups and, not least, setting up and running complex systems and procedures in banks.

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As in many other countries, an intensive process has now been set in motion in Sweden to prepare for implementation on the planned date. Banks are compiling the information they need to estimate different risk factors, and are building and testing the systems needed to run the risk management. They are also preparing applications to the supervisors for using various measurement and management systems for risk and capital. The supervisors are bracing themselves to process these applications, for instance by formulating manuals and check-lists. An added layer of complexity in the process comes from banks that have a cross-border presence. A bank's home country supervisors must coordinate the application process with the supervisors of the bank's host country/countries. Ideally, a bank should only have to apply to one country's authority and get a coordinated response from it. However, particularly if the bank's subsidiary or branch is large in the host country, the supervisors of that country may wish to make their own scrutiny of the bank's applications and this may complicate the coordination.

At the time of writing, the legislative process is still underway in Brussels. Even if an EU Directive is agreed on as planned in the near future, a rapid process in the individual member states will be needed in order to transform the new EU directive into national legislation so that implementation may start on 1 January 2007.

[11] Between them, these banks cover close to 100 per cent of all US banks' operations abroad. All other US banks will be subject to other forms of regulation and supervision.