Towards new national and international banking regulations

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The Swedish Banking Law Committee has recently put forward a proposal that entails significant changes in financial legislation. The Basel Committee on Banking Supervision has also presented a proposal for far-reaching changes in international regulations governing capital adequacy. This article discusses both proposals and identifies similarities and differences between them.

During the 1990s, the need to renew the regulatory framework governing the banking sector has become ever more apparent. This need has been recently addressed in the form of several significant proposals for reform, both nationally and internationally. In Sweden, the Banking Law Committee has proposed several fundamental changes in the Banking Business Act (SFS 1987:617). Moreover, the Basel Committee on Banking Supervision, a highly significant international body, has recently published a proposal for extensive reform of capital adequacy regulations for banks. There are clear parallels between these two proposals despite different starting points and different approaches. The similarities are most striking with regard to the increased focus on risk-adjusted capital, risk management and transparency (or, in other words, openness regarding the bank's position and actions), and more active supervision with greater focus on risks.

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The work of the Banking Law Committee

Despite extensive and detailed regulation of banks and other financial institutions, Sweden and many other countries were affected by crises in the financial system during the late 1980s and early 1990s. As a result, the Swedish government set up the Banking Law Committee in 1995 with the task of studying the need for changes in the regulatory framework governing primarily the activities of banks and other credit institutions. The assignment of the Banking Law Committee also included reviewing the need for changes in the objectives and direction of the Swedish Financial Supervisory Authority.

A regulatory system that would not need to be amended whenever a new technical solution or product was launched.

The Banking Law Committee stated early on that continued rapid developments in the financial area would entail the risk that applicable legislation would soon become obsolescent. It therefore appeared necessary to propose a regulatory system that would not need to be amended whenever a new technical solution or product was launched. For this reason, the Committee chose to conduct a more fundamental review of regulatory needs. The work of the Banking Law Committee resulted in an extensive interim report, *Reglering och tillsyn av banker och kreditmarknadsföretag* (SOU 1998:60) [Regulation and supervision of banks and credit institutions], published in December 1998. The report includes proposals for a new legal definition of the concept of banking and for amending the Banking Business Act (SFS 1987:617) wherein several broad sections are defined as principally important for the regulation of banking activities.

Starting points

The Banking Law Committee notes a general tendency in the legislation to impose special regulations on financial companies without providing very clear reasons for this. However, special regulations tend to distort competition and produce economically inefficient solutions. An important starting point for the Banking Law Committee has therefore been to reduce the amount of special regulations. By clarifying and refining the reasons for regulation, it is possible to achieve a regulatory framework that does not preserve the existing structure of the financial system. Such a framework would therefore not impede competition, but would contribute to the development of an efficient financial sector.

Instead of focusing the analysis on the need for regulation of existing institutions and institutional forms, the Banking Law Committee chose to base its analysis on the *services* supplied by the financial market. The idea was to analyse the extent to which the social significance of these services and their level of sensitivity to disturbances could give rise to special regulatory requirements. This *functional perspective* was considered to be an important starting point when defining regulatory needs.

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Regulatory incentives

The central government states that its objectives for regulation in the financial area are to promote *stability* and *efficiency* and to provide *effective consumer protection.* The analysis undertaken by the Banking Law Committee led to the conclusion that the need for central government intervention in the financial area is greatest with regard to measures to stabilise the system. This is based on the fact that there are special systemic risks inherent in the financial system, i.e. risks of extensive shocks, which could seriously disable the functioning of the system.

Objectives for regulation in the financial area are to promote stability and efficiency and to provide effective consumer protection.

Concerns for a systemic crisis are considered to be greatest with regard to the payment system. Payments, for example via charge cards, cheques and credit transfers, are today an important step in nearly all financial transactions. If these payments cannot be implemented, there is a risk of major efficiency losses in the economy with potentially long-term damaging effects.

The stability of the payment system is dependent on the stability of the banking system. Although banks do not have a formal monopoly on payment services, in practice they have a dominant position in the payment system through the monopoly on deposits. As the bank sector has become more concentrated, the functioning of the payment system has become more dependent on a decreasing number of institutions. This also increases the risk that problems in an individual bank can have repercussions for the entire system.

The risk of contagion effects also increases due to the difference in liquidity between a bank's assets and its liabilities. A bank's assets are largely

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made up of loans, which are difficult to value and thus also difficult to convert into liquid funds at a reasonable price at short notice, while a large portion of a bank's debts can be settled immediately and are fixed in nominal terms. Since depositors and other financiers are aware of this relationship, there is a risk that fears of financial problems in a bank can lead to a rush of withdrawals, which in turn worsens the financial position of the bank. This means that even an unfounded rumour of insolvency can in principle be self-fulfilling. The difference in liquidity between assets and liabilities thus entails an inherent stability problem in traditional banking activities. Uncertainty regarding the mutual exposure of banks can have contagious effects on the banking system. The conclusion is that the risk of systemic crises in the payment system constitutes an important incentive for regulating banking activities.

The Banking Law Committee also argues that regulation is justified on the grounds that the credit supply function can be affected by disturbances. Although the reasons may appear less obvious than in the case of the payment system, it was considered appropriate to also propose a certain level of regulation of pure credit institutions. However, these proposals are not discussed in detail in this document.

It is the opinion of the Banking Law Committee that society's goals in terms of efficiency and effective consumer protection in the financial area can largely be regarded as general goals that apply to the economy as a whole and not just to the financial sector. The need for specific regulations to achieve these goals is thus less urgent than the need for regulation to preserve the stability of the system. However, a regulatory framework focused on systemic risks also has consequences for efficiency and consumer protection that must be taken into consideration. However, these consequences should be treated as far as possible in general legislation relating to consumer rights and marketing.

New legal definition of banks

The analysis conducted by the Banking Law Committee thus led to more clearly formulated motives to protect the financial system: from a social perspective, it is most important to protect the stability of the financial system, primarily the payment system. Consequently, the Committee decid-

ed to propose a new legal definition of the concept of banks. In current law, bank operations are defined as "operations that include deposits held in accounts if the balance is nominally determined and available to the depositor at short notice". This older definition focuses entirely on the deposit function of banks.

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In the proposed new definition, the link with the payment system is given a more central focus: "Bank operations refer to operations which include payment services via payment systems, intended to reach several end beneficiaries who are independent of each other; they also include the receipt of funds that are available to the creditor at less than 30 days notice." According to the Banking Law Committee, the new definition is more inclusive of those aspects of bank operations that are worth protecting, i.e. both payment services via general payment systems and the receipt of funds that can be withdrawn at short notice. In view of this, the definition is considered to be less narrow and thereby more difficult to circumvent.[2]

New operating regulations for banks

The current operating regulations are characterised by detailed control in many areas, while other areas remain largely unregulated. Due to the extensive special provisions and amendments, it has not been easy to discern the underlying principles of the legislation. The Banking Law Committee has aimed at a transition to operating regulations resembling *framework legislation*, whereby the guiding principles of bank operations are outlined in several introductory general provisions known as "portal paragraphs". In this framework legislation, the currently implicit principle rule that everything that is not explicitly permitted for a bank is forbidden is now replaced by the reverse principle. The portal paragraphs regarding *solvency, risk management* and *transparency* are discussed in more detail below.

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[2] Criticism of the new definition was presented in commentaries to the draft of the Banking Law Committee's report. However, the formulation of operational regulations is not critically dependent upon the definition.

The solvency rule

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One of the most important objectives of any new regulation is to ensure that individual banks are, and remain, solvent. This is stated in the first introductory rule in the proposal for a new Banking Business Act (Chapter 2, Section 1), and is referred to by the Banking Law Committee as the solvency rule. This rule states that a bank shall pursue operations in such a way that the ability of the bank to fulfil its obligations is not jeopardised. According to the Banking Law Committee, this means that the bank must be able to withstand potential losses by maintaining an adequate *capital reserve*, and that the *risk of losses must be limited,* for example by limiting individual participations.

The requirement to maintain a capital reserve aims not only at making the bank resistant to losses; it is also a way of influencing incentives for risk-taking. Normally, the bank's owners and the central government have a common interest in the bank developing favourably, and they therefore do not take excessive risks. However, in situations where the bank is near bankruptcy, the owners of the bank have little to lose by increased risk-taking. Nor are the incentives for increased risk-taking mitigated by the fact that the central government stands as the ultimate guarantor for the stability of the financial system and that government deposit insurance guarantees depositors' funds to a great extent. Thus, there is a risk of opportunistic risk behaviour in some situations that conflict with fundamental social interests. The rules governing capital reserves can, however, influence risk-taking by the bank's owners since this capital acts as a sort of deductible in the case of bankruptcy. Risk and capital are thus closely related. This relationship between risk and capital has been taken into account by the Banking Law Committee in formulating the solvency rule.

According to the Banking Law Committee, the solvency rule gives the Swedish Financial Supervisory Authority increased possibilities to intervene if a bank pursues operations that jeopardise solvency. The rule does not permit the Swedish Financial Supervisory Authority to directly intervene and compel the bank to increase its capital reserves. However, this effect may result indirectly if the bank, in order to avoid restrictions on its activities, chooses of its own accord to increase its capital reserves. Thus, the new portal paragraphs provide new opportunities for the Swedish

Financial Supervisory Authority to control the capital adequacy of banks in a way that exceeds the minimum requirements stipulated in the Capital Adequacy Act.

Consequently, the solvency rule can be regarded as a supplement to the banks' capital adequacy requirements. Capital adequacy regulations are determined to a large extent by international agreements and EU law, and Sweden's possibilities to draw up an independent regulatory framework are very limited. The need to create international standards for banking capital and to compel individual countries and banking institutions to apply them has primarily been reinforced by the globalisation of banking operations and banking establishments. Capital requirements are discussed in more detail in the section on the proposal of the Basel Committee on Banking Supervision for new capital adequacy regulations.

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The risk management rule

A condition of success in measures to limit risk requires that there be a good understanding of the level of risk in banking operations. The first stage in this process is to identify the relevant risks. It is then necessary to estimate the size of the risk, both in the form of individual risks and the bank's total risk. The risk analysis should also be linked to the requirement that the bank should control its own risks in some manner and be able to respond appropriately to limit risk. However, in individual cases the basis of this estimate is far from obvious and, according to the reasoning of the Banking Law Committee, falls back on the basic requirement that the bank's solvency must not be jeopardised. The reasoning of the Banking Law Committee is summarised in the second introductory rule of the proposed Banking Business Act (SFS 1987:617, Chapter 2, Section 2): "A bank shall identify, measure and exercise control over those risks that are associated with its operations."

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The transparency rule

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Rules which make it easier to survey the bank's assets and analyse the value of these assets also facilitate the work of the supervisory authority and provide the Riksbank with better prerequisites for fulfilling its task as lender of last resort.

Supervision

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The proposed new Banking Business Act (SFS 1987:617) will have consequences on the future focus of the supervisory authority and its need for resources and competent personnel. The Committee's proposal entails that the operating regulations shall guide the direction and forms of supervision. Primarily, this means that supervision shall be steered by the introductory rules on solvency, risk management and transparency. Consequently, the rules regarding supervision are also expressed in general terms. In other words, the Swedish Financial Supervisory Authority will assume responsibility for outlining the details of the supervisory work to an even greater extent.

The Banking Law Committee also proposes that the Swedish Financial Supervisory Authority should have a more practical and flexible system for imposing sanctions at its disposal. This would provide the Financial Supervisory Authority with greater power to intervene and greater scope to assess the appropriate course of action for a given situation. Today, the Financial

Supervisory Authority is bound by law to revoke a bank's charter in certain circumstances. This virtually never happens in practice, since such intervention is usually considered too extreme. According to the new proposal, the Financial Supervisory Authority can choose to issue a *warning* if this is considered sufficient, rather than revoking the charter. The Financial Supervisory Authority is also given the opportunity to *refrain from intervention,* if the violation is considered to be minor or if the bank takes corrective action. In some cases, the Financial Supervisory Authority can currently issue an *injunction to take corrective action* or *prohibit the execution of decisions.* As an alternative to both these possibilities of intervention, it is proposed that the Financial Supervisory Authority be given the possibility of issuing *observations.*

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The proposal of the Basel Committee on Banking Supervision for new capital adequacy regulations

There are parallels between the Banking Law Committee's conclusions and proposals for solvency, risk management, transparency and supervision and the recently published proposal by the Basel Committee on Banking Supervision[3] to reform capital regulation, *A New Capital Adequacy Framework* (BIS Publication No. 50). The proposal, which was made public in June 1999, involves a significant expansion of the traditional and quantitative view of capital adequacy. The requirements have now been supplemented with broadened supervision which focuses on, among other things, risk management and how a bank calculates and allocates its capital in relation to its risk exposures. Furthermore, the proposal entails a strengthening of the requirements for greater transparency in terms of a bank's capital and risk

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[3] The Basel Committee on Banking Supervision was established in 1975 by the Central Bank Governors of the Group of Ten Countries. The Committee consists of senior representatives of financial supervisory authorities and central banks from Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States. It usually meets at the Bank for International Settlements (BIS) in Basel, where its permanent Secretariat is located.

exposure. All three of these components are interrelated so that, for example, weaknesses in risk management or transparency can result in increased capital adequacy requirements for an individual bank. The proposal is described in more detail in the following section.

Criticism of the 1988 Basel Accord

The 1988 Basel Accord concerning international capital adequacy regulations was a political compromise between countries with different interests and bank structures. As a consequence, the new capital adequacy regulations did not suit all banks. For example, the risk weights used for calculating capital adequacy were crude estimates, and there were rules of exception which meant that risk weighting was not applied uniformly from country to country. Yet, despite these shortcomings, the regulations governing capital adequacy were uncomplicated and had a logical structure that enabled them to be applied worldwide.

However, as time passed and banking activities continued to undergo change, the shortcomings became more apparent. For example, the exposure of banks to market risks (interest rates, exchange rates and share prices) increased rapidly. To counteract this, the Basel Committee on Banking Supervision extended the 1988 Accord, which had only covered credit risks, to also include capital adequacy requirements with regard to market risks in the trading portfolio. These became applicable at the start of 1997.

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A significant weakness of the capital adequacy requirements with regard to credit risks is the crude estimates used in calculating risk weighting. Claims on corporates and private individuals always have a risk weight of 100 per cent (i.e. a capital requirement of 8 per cent of the sum exposed), irrespective of whether the borrower is financially strong or weak, known or unknown. The lack of precision in this rule acts as an incentive to choose those credits with the highest risk within each risk category. The loan portfolios thus risk being overweighted by claims on corporates and private individuals with a lower average credit value.

A further weakness in the risk-weighting system concerns claims on sovereigns and financial institutions. In the Basel Accord, claims on sovereigns within the OECD and GAB[4] are automatically classed as “low risk”,

[4] General Arrangement to Borrow.

which entails a 0 risk weight and also a 0 per cent capital requirement, while countries outside the OECD and GAB are given a 100 per cent risk weight for credits in currencies other than the domestic currency. Loans to financial institutions also have risk weights that depend on whether or not the financial institution is incorporated in a country that is a member of the OECD/GAB. This "club method" of determining risk weights can be regarded as a simplified way of distinguishing countries with different levels of country risk and/or transfer risk. However, when the OECD group was expanded in the 1990s, it became less homogenous, thus providing a less reliable indicator of risk conditions. The probability of OECD countries also falling into financial difficulties increased. This has been the case in Mexico and South Korea, for example.

The 1990s have also been characterised by the increasing use of different new instruments and methods by banks to reduce their credit risks. In addition to traditional instruments such as guarantees and collateral, banks are also using netting, credit derivatives and asset securitisation. The current capital adequacy requirements do not always fully support these methods. In extreme cases, the original risk and the instrument used to reduce the risk are both subject to capital adequacy requirements, which unfortunately counteracts the bank's underlying incentive for risk mitigation.

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Another shortcoming of the capital adequacy regulations is that they do not prevent banks from changing or transferring their risk exposures to reduce capital adequacy requirements, although the actual risk remains unchanged. This "regulatory arbitrage" can take place, for example, through shifts in the positions in the trading book, i.e. between instruments that are traded in the short term and in the regular credit portfolio, or through asset securitisation of the remaining risks of the bank.

The work on a new Basel Accord

In the beginning of 1998, the Basel Committee resolved to work intensively during a short period to put forward proposals for a new capital adequacy framework. The work was to be unconditional in as much as no solutions were ruled out in advance. On the other hand, the work was to be guided by certain underlying principles:

- Although the regulations shall formally apply only to "internationally active banks", they shall be universal, i.e. they shall be formulated in such a way as to be applicable to banking activities of varying sizes and levels of complexity.
- The applicable minimum level of capital adequacy, 8 per cent, is considered to be reasonable, and the new regulations shall not lead to a general reduction of this level.
- The regulations shall promote sound risk management and sound risk-taking in banks.
- The regulations shall promote fair competition, both among banks and between banks and other financial institutions.

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In June 1999, the Committee presented a proposal for a new capital adequacy framework. The proposal is in the form of a "consultative paper" and has been submitted to authorities, trade associations and other interested parties worldwide. These have been invited to comment on the proposal no later than 31 March 2000.[5] The most important contents of the proposal are outlined in the following sections.

The three pillars

Developments during the 1990s show clearly that effective supervision cannot be based on formal and quantitative regulations alone. It is equally important that the banks have a qualitatively efficient system in order to identify, monitor and control their risks. This places requirements on management functions, information systems and control systems. The creation of a sound bank structure is also facilitated by market discipline. In order for market discipline to function, it is necessary that banks and authorities disclose sufficient information regarding the development of the banking system and financial institutions to allow the general public to make their own assessments (transparency).

[5] The proposal does not contain any clear-cut solutions on many points; instead, it discusses different alternatives. Those who read the consultative paper are requested to state and justify their preferences. One purpose of this open procedure is to secure that the final decision as far as possible reflects the actual working conditions of banks.

Against this background, the proposal for new capital regulations has been broadened to include "three pillars": *quantitative requirements, qualitative requirements* and *transparency.* The three pillars, which contain many parallels to the Banking Law Committee's portal paragraphs, are outlined below.

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Quantitative requirements

The quantitative capital adequacy requirements comprise the sum of the requirements for *credit risks*, *market risks* and *"other risks"* (mainly operational risks). In some cases, capital adequacy requirements may also be applied to interest rate risks in the bank's credit portfolio.

Credit risks

In addition to a standardised method to be used by the majority of banks, opportunities in principle are opening for more sophisticated banks to make use of internal credit grading systems and models as a basis for calculating capital adequacy requirements.

The standard method

In addition to the previous risk weights of 0, 20, 50 and 100 per cent, a category is proposed with a risk weight over 100 per cent, such as 150 per cent for large risks (for example, when the borrower has a low rating). The Committee is also considering the introduction of an even higher risk weight for extremely high levels of risk, such as exposures to corporate bonds with low credit quality (junk bonds) or a concentration of risk in connection with asset securitisation. An important new element is that risk classification can be based on "ratings" from recognised credit rating institutions.

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In order to reduce problems associated with a too detailed classification of risk, it is proposed that similar ratings be combined into larger categories. For example, one category would contain all ratings of AA– and above. For borrowers that are non-financial companies, only two risk categories would apply. This also reflects the fact that only a small share of all companies outside the USA has credit ratings. For countries and banks,

rating occurs more widely and consistently, which has permitted more risk categories. For countries, the OECD/GAB relationship outlined above will thus be replaced by rating gradations. The proposal outlines two alternative methods for applying risk weights to banks. One of these two options will be chosen in the final decision: either all banks within a country will be given the same risk weight, which will be the risk weight immediately above that applicable for the country in which the bank is incorporated, or alternatively, the banks will be assigned individual risk weights based on their credit rating.

The Basel Committee considers that banks should exercise caution with regard to lending to central governments which do not provide adequate information for a credit assessment.

The Basel Committee considers that banks should exercise caution with regard to lending to *central governments* which do not provide adequate information for a credit assessment. In order to obtain a risk weight lower than 100 per cent, countries are therefore required to supply information in accordance with the IMF Special Data Dissemination Standard (SDDS). To minimise the risk in lending to *foreign banks*, it is important that supervision is carried out effectively in the country in which the foreign bank is incorporated. It is therefore required that, in order to receive a risk weight of less than 100 per cent, the country has implemented, or is in the process of implementing, the Basel Committee's Core Principles for Effective Banking Supervision.

The table below shows the risk weights given in the proposal. The risk weights are dependent on the type of borrower and on the rating assessment of the borrower.

Figure 1.

	AAA to AA–	A+ to A–	BBB+ to BBB–	BB+ to B–	Under B–	Unrated
Sovereigns	0%	20%	50%	100%	150%	100%
Banks Option 1[6]	20%	50%	100%	100%	150%	100%
Banks Option 2[7]	20%	50%	50%	100%	150%	50%
Corporates	20%	100%	100%	100%	150%	100%

[6] Risk weighting based on the assessment of the country in which the bank is incorporated.

[7] Risk weighting based on the assessment of the individual bank. Risk exposures in banks with less than a six-month period to maturity are given more favourable risk weightings than stated (a lower level, i.e. 20% instead of 50% and 50% instead of 100%), although never 0 per cent.

For those risks not given above, such as credit to private individuals, a risk weight of 100 per cent is applied.

In asset securitisation, it is common for a credit assessment to be performed on the different tranches of the securities that are issued. Using the same scale that is applied to other credits, the ratings can then be converted to risk weights in accordance with the table above. As stated previously, the Basel Committee is considering introducing even more stringent capital adequacy requirements, which would mean that the entire value of the exposure in tranches with a very high level of risk in asset securitisation would be deducted directly from the bank's capital base. This entails a "risk weight" of 1,250 per cent, i.e. many times higher than for junk bonds. This high risk weight would thus not be an "objective" risk assessment, but rather would be an expression of the Basel Committee's efforts to persuade banks to consider carefully whether they wish to take these risks and, in such a case, to charge a high premium for them.

In order to permit risk-weighting based on external credit ratings, the Basel Committee places certain requirements on credit rating institutions.

In order to permit risk-weighting based on external credit ratings, the Basel Committee places certain requirements on credit rating institutions. Those credit rating institutions that may be used for risk-weighting in capital adequacy calculations must first be approved by the national supervisory authorities. For this purpose, the authorities shall apply a number of criteria that are the same for all countries and credit rating institutions. The criteria specified by the Basel Committee are objectivity and transparency in the rating methods, independence from any external influence or constraints, credibility, international access to rating results and rating methods, and sufficient personnel resources. A further task is to establish how the assessment levels in different credit rating institutions can be compared and how these levels can then be converted into risk weights and capital adequacy requirements. A study is currently underway within the Basel Committee on how to solve these problems.

Internal credit grading systems and credit risk models

The Basel Committee's goal is to achieve capital adequacy requirements that better reflect a bank's particular risk profile. The revised standard approach aims to produce a method for this purpose that can be applied by the majority of banks. However, the Basel Committee considers that

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there can be significant additional advantages in using methods based on the banks' *own* qualitative and quantitative assessments of credit risk. Many banks have developed advanced internal credit risk grading systems in order to summarise the risk of individual credit exposures. These rating systems are increasingly being used as aids for credit decisions, and in risk management and risk analysis. The banks' own systems have the advantage that they can take into account client-specific information, which is more difficult for external credit assessment institutions to access. Naturally, the banks themselves have the best knowledge about their clients.

In its proposal, the Committee therefore opens up a possibility for banks to have their internal systems tested and approved by the national supervisory authority as a basis for calculating risk weights for capital adequacy requirements. By offering an alternative to the standard approach, the Basel Committee hopes to encourage banks to continue to develop and improve their internal systems for measuring and managing credit risk. However, a number of technical and conceptual problems remain to be solved, both for banks and supervisory authorities.

An important issue concerns the validation of these internal systems, i.e. how a bank can continually demonstrate that its credit risk estimates reasonably correspond to the actual credit risks. Another problem concerns the lack of uniformity of grading systems among different bank institutions. Together with the dependency on subjective assessments and subjective risk factors in internal credit ratings, this means that fair comparisons between bank institutions are difficult to achieve.

One crucial issue is how internal risk ratings shall be translated in practice to specific capital adequacy requirements.

One crucial issue is how internal risk ratings shall be translated in practice to specific capital adequacy requirements. One possibility, which is the most viable in the short term, is to map a bank's credit risk ratings onto the standardised risk categories. These can be increased in number for greater precision in an expanded capital adequacy framework. Another possibility is a more direct link between the bank's own credit risk assessments and the capital adequacy requirements. However, a number of methodological difficulties need to be resolved to

achieve this, including estimating the probability distribution for credit losses, which is by no means an easy task.

Portfolio credit risk models are currently being developed as an extension of the most advanced credit risk grading systems. Instead of merely adding individual credit risks together, these models take correlations between different "credit events" into account. Such models aim, among other things, to help banks analyse the global risk-taking within the bank. A well-validated, portfolio-based model should reflect the bank's actual risks better than a non-portfolio-based model, and is therefore desirable both for the bank and the supervisory authority.

It is considerably more difficult to create good models for credit risks than for market risks.

Portfolio credit risk models are equally affected by problems similar to those that affect internal risk grading systems. The Basel Committee has previously accepted the use of advanced models (such as Value-at-Risk) in connection with calculating capital adequacy requirements for market risks. However, it is considerably more difficult to create good models for credit risks than for market risks. The most serious problem is the lack of data. With regard to market risks, price information is available from the financial markets and is published daily or even more often. However, to learn the outcome of an issued credit, it is usually necessary to wait until the loan falls due, which can take several years. Model building and the estimation of important parameters are complicated by the lack of historical time series combined with long time horizons. The estimation of a credit loss process typically requires data spanning over several business cycles.

Even if individual probabilities of bankruptcy may be reasonably assessed, significant difficulties may arise when these are compiled into a portfolio, due to a shortage of data regarding *correlations* among a large number of variables. As a result of this data shortage, model builders are tempted to use simplified assumptions based largely on subjective assessments. Little study has been made of how the accuracy of the models is affected by such subjective assessments. Just as data shortage creates problems for model builders, it also complicates the validation of credit risk models, i.e. the possibility of empirically confirming that the models actually measure what they claim to measure. Time horizons of one year or longer mean that an "impractical" number of years of data is needed to reach a quality corresponding to that required for validating market risk models.

The transition from the simplest internal risk grading systems to the most advanced up to fully-fledged portfolio credit risk models is gradual, and an absolute dividing line cannot be drawn between the methods. Each method should result in a probability measurement in accordance with some definition of loss, which then should be finally translated into specific capital adequacy requirements. However, before any method can be used for formal capital adequacy requirements, the supervisory authorities must be convinced that the models are conceptually sound and empirically validated and that they can produce capital adequacy requirements that are comparable across institutions.

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The Basel Committee finds that, before these requirements can be satisfied, there remains at present many and more serious problems to be solved for portfolio credit risk models than for internal risk grading systems. The Committee therefore believes that new capital adequacy requirements are initially more likely to be based mainly on non-portfolio-based internal risk rating systems. However, the Committee is monitoring developments in this area very closely and hopes to engage the banking industry in a constructive dialogue. The Committee's proposal is based on the distinct hope that improved incentives for refining the internal credit risk management systems will also pave the way for a future transition to more integrated credit risk models. The Committee intends to present a more detailed analysis of its proposal in a consultative paper to be published at a later date.

Risk reduction techniques, including collateral and guarantees

The Basel Committee's principle for calculating capital adequacy: the risk to be covered is the actual risk that remains for the bank after risk mitigation.

The Basel Committee aims at applying an unequivocal principle for calculating capital adequacy when risk reduction methods are used; the risk to be covered is the actual risk that remains for the bank after risk mitigation, irrespective of the instruments or methods used to reduce the risk (netting, derivatives, asset securitisation, collateral, guarantees, etc.). Although the principle may appear obvious, it is not always followed under the current capital adequacy regulations. The Basel Committee and its subcommittees are currently working intensively on converting this principle into operational rules.

Market risks

Market risks account for only a small proportion of a (average) bank's total risks. Nonetheless, the existing capital adequacy regulations governing market risks are far more detailed and in some ways more complicated than the regulations for credit risks. Since the capital adequacy regulations for market risks are relatively new, no changes are proposed in this area apart from any changes that may result from other aspects of the proposal. It should be noted that risk classification based on external rating assessments already occurs in the existing calculations of market risk.

Other risks

In accordance with the new proposal, the capital adequacy requirement for credit risks will reflect the actual risks more precisely.

The prevailing capital adequacy requirement of 8 per cent exceeds the level justified on grounds of credit risks alone. Capital adequacy requirements for other risks are also embedded in the requirement. In accordance with the new proposal, the capital adequacy requirement for credit risks will reflect the actual risks more precisely. This means that capital adequacy requirements, or other forms of management, must be defined for the "other risks". The most significant of these risks is *operational risk*, which has probably grown in importance during the 1990s due to changes in the banking industry. This includes the risk of expenses and losses arising as a result of technical problems, such as computer crashes, but it also covers much more than this. Shortcomings in a bank's control system can also be regarded as operational risks. Nick Leeson was thus an operational risk for Barings Bank. Further examples of "other risks" include *legal risks* and *reputational risks.*

It is difficult to find an objective method for calculating capital adequacy requirements for operational risks and other "other risks", partly because these risks can comprise different factors and are not always easy to quantify. Operational risks differ from credit and market risks in that a measurable correlation does not normally exist between risk and return. The probability of a particular outcome for the majority of operational risks, such as a total computer breakdown, is very low; while the financial consequences for the bank, if the risk becomes reality, can be considerable. An important task of the Basel Committee is to develop measurements that can reflect operational risk and other risks in an acceptable

way. In this context, it is of great importance to find a method that provides incentives for banks to reduce these risks.

The national supervisory authorities should have greater authority to impose capital adequacy requirements on an individual bank if the bank is extremely interest dependent or has shortcomings in its risk management system.

An entirely different type of "other risk" is the interest rate risk in the bank's loan portfolio (in contrast to the trading book). A bank's financial result is more or less related to general developments in interest rates, partly as a result of the bank's dependence on interest-rate related income and expenses. This mainly concerns the maturity mismatch in interest rate terms, i.e. the bank's long-term lending is at a fixed rate of interest, while most borrowing is predominantly short-term and at variable interest rates. The Basel Committee has been working for many years on the development of suitable methods for measuring and managing this risk, for example capital adequacy. However, it has not been considered appropriate to recommend general capital adequacy requirements that include all banks. On the other hand, it is proposed that national supervisory authorities have greater authority to impose capital adequacy requirements on an individual bank if the bank is extremely interest dependent or has shortcomings in its risk management system which render the bank particularly vulnerable to general interest rate developments.

Qualitative requirements – the supervisory review process

Although the quantitative capital requirements may seem satisfactory, a bank's capital can erode very rapidly in a crisis situation, and an 8 per cent capital adequacy soon disappears. Sweden experienced this during the banking crisis of the early 1990s with rising credit losses and falling asset values. Similar experiences in the USA led to the introduction of rules of "prompt corrective action". Prompt corrective action means that the supervisory authority shall require (in most cases the rules are binding to ensure that action is taken rapidly) a bank to take appropriate action as soon as capital adequacy begins to fall, even if it is above 8 per cent, or when other problem signs emerge. The lower the capital adequacy, the more stringent the measures that are imposed. In some countries, such as the UK, the supervisory authority is legally entitled to introduce a capital

adequacy requirement greater than 8 per cent for individual banks. This is done if the authority finds that the bank takes greater risks or applies weaker risk management than is normally the case for other banks.

The Basel document proposes that rules similar to those applied in the UK should be introduced in all countries. The proposal states as an important principle that "supervisors expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum". The direction and intensity of supervision, as well as capital adequacy requirements, shall to a greater extent than previously be related to the individual bank's actual risks, general propensity for risk and risk structure, and to the ability of the individual bank to manage these risks. Each bank must have a system for internal allocation of capital that takes into account the concentration of risk and the volatility of the financial markets in which the bank operates. The supervisory authority shall familiarise itself with how the bank calculates its risk exposure and allocates its capital between different risks. The capital reserve must be subjected to regular "stress tests", whereby the responsible function in the bank calculates how the capital situation would be affected in the case of extremely unfavourable developments in a number of the bank's risk exposures.

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Due to the highly qualitative nature of the supervision process, it is impossible to harmonise in detail the rules for its application in different countries and in different situations. However, it is important that the new Basel regulations contain relatively specific guidelines so that they are not applied too irregularly, thereby undermining the goal of harmonised international supervision. The Basel Committee is currently drafting these guidelines, which are based on a number of indicators for individual banks. The factors proposed so far include: the experience and quality of the bank management, the bank's propensity for risk and its "track record" in managing risk, the adequacy of risk management systems and controls, the nature of the markets in which the banks operate, the volatility of the bank's earnings, the quality of its equity and access to new capital, the degree of support and control provided by shareholders, the degree of risk concentration, the structure of its liquidity and liabilities,

the bank's legal and organisational structure, and the degree of supervision by other authorities.

The Basel Committee is currently working on drawing up guidelines for prompt corrective action in the case of a reduction in the level of capital. However, these guidelines will probably be less extensive than those used in the USA.

Although it is highly desirable for the supervisory authority to be able to take rapid action to prevent further capital erosion in a bank, such initiatives should primarily be taken by the bank's own management. Supervisors should not assume responsibility for the management of the bank. The Basel Committee is currently working on drawing up guidelines for prompt corrective action in the case of a reduction in the level of capital. However, these guidelines will probably be less extensive than those used in the USA.

Transparency

As stated previously, market discipline increases if banks are required to disclose more information about their capital and risk situation.

Work is currently underway in the Basel Committee and its subcommittees to draft specific guidelines for reporting and transparency in connection with capital adequacy requirements. The guidelines will primarily focus on information that is directly related to the assessment of the risk exposure and capital situation of banks and on the distribution of risks among different types of risk and risk categories. Information about the bank's provisioning for losses should also be disclosed. Furthermore, the bank should disclose information on its accounting policies for valuation of assets and liabilities, provisioning and income recognition. Information should also be disclosed regarding the bank's general risk strategy and risk management. Of course, it is necessary to achieve a balance so that the transparency requirements are not extended so far as to include information that the bank management considers "strategic" and thus confidential.

Capital requirements at all levels

The relevant capital adequacy regulations shall be applied at the consolidated level, i.e. for a whole banking group or for a financial group whose parent company is a bank. Many countries, including Sweden, also apply capital adequacy requirements at the "stand-alone level", whereby each

individual banking institution within the group must satisfy the 8 per cent capital adequacy requirement. By supplementing the capital adequacy requirement at the consolidated level with the stand-alone requirement, the authority ensures an equalisation of capital among the different institutions within a group, which increases the level of protection for these institutions.

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The capital adequacy regulations to date have not been clear in terms of what is meant by "consolidated level", for example, how bank holding companies should be included. The Basel proposal also covers holding companies, and the rules for consolidation for capital adequacy purposes are also more clearly defined. Furthermore, it is proposed that the national supervisory authorities should also ensure that banks have adequate capital levels on an individual basis (stand-alone level). The new regulations are expected to lead to greater homogeneity in the capital adequacy requirements between different banking structures and reduce the risk of weaknesses in capital levels within parts of a banking group. However, only *banking institutions* within a financial conglomerate are covered by the Basel requirements.

What happens now?

As noted above, comments on the proposal put forward by the Basel Committee shall be submitted no later than 31 March 2000. Until this date, the Committee will continue to work within several of those areas in which the general views expressed in the proposal need to be transformed into operational guidelines. Development work is also underway within the banking industry, for example with regard to internal credit grading systems and credit risk models. A revised final version of the Basel proposal will be published based on the comments and the outcome of the work currently underway. The Basel Committee aims to approve the final regulations by the end of the year 2000. Thereafter, it will take some time to incorporate the regulations into national legislation. Within EU countries, this must also be preceded by EU legislation. Intensive work on capital adequacy

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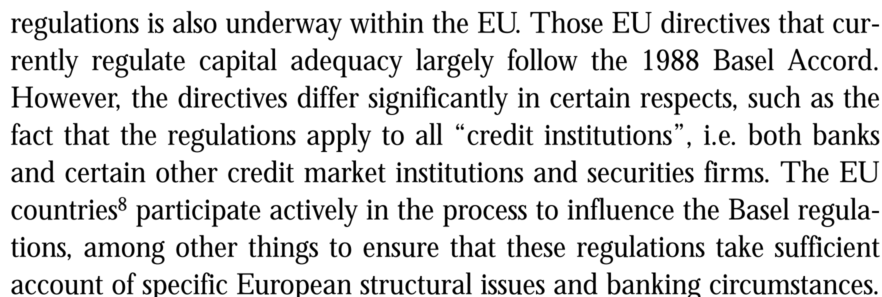


regulations is also underway within the EU. Those EU directives that currently regulate capital adequacy largely follow the 1988 Basel Accord. However, the directives differ significantly in certain respects, such as the fact that the regulations apply to all “credit institutions”, i.e. both banks and certain other credit market institutions and securities firms. The EU countries[8] participate actively in the process to influence the Basel regulations, among other things to ensure that these regulations take sufficient account of specific European structural issues and banking circumstances.

The studies currently underway within the EU cover a large number of areas within capital regulation. The goal is to be able to present well-founded and well-documented comments and reactions (and, if necessary, counter proposals) to the Basel Committee before the end of March 2000. The EU work can also be seen as an important preparation for amendments for the required directives. Despite these preparations, it will probably take several years from the issuance of the final proposal by the Basel Committee until corresponding legislation enters into force in the EU and in member countries.

What do the proposed changes entail?

The anticipated effects of the regulatory changes proposed by the Basel Committee can be summarised in three points:

- A broader supervisory process, quantitative and qualitative requirements, and better transparency.
- Capital adequacy requirements that better reflect actual risks, which will lead to more sound lending and risk management.
- Supervision that is better adapted to the individual bank, depending on its size, structure, propensity for risk and risk management.

The final proposal will be the result of a political compromise between countries with widely differing structures in their financial systems.

Expectations of the new capital regulations should, however, be kept at a realistic level. While the new proposal is a step in the right direction, it is hardly likely to result in perfect risk-adjusted capital adequacy requirements. This is due to two factors: firstly, many of the issues that the Basel Committee must decide upon are highly complex, and, as matters stand today, there are simply no ideal solutions to be found. Sec-

[8] Eight out of a total of 15 EU countries are represented in the Basel Committee on Banking Supervision.

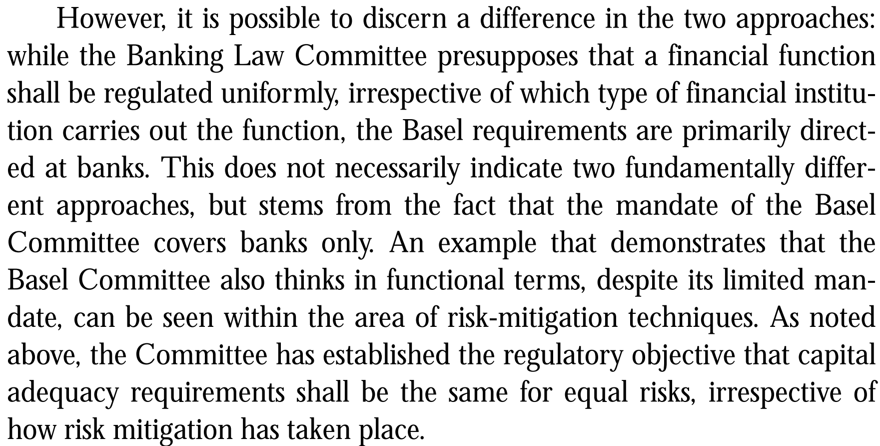
ondly, even the final proposal will be the result of a political compromise between countries with widely differing structures in their financial systems.

Similarities and differences between the Banking Law Committee's proposal and the proposal of the Basel Committee

The Basel proposal is limited to requirements in the capital area while the proposal of the Banking Law Committee covers the entire banking area.

The proposals of both the Banking Law Committee and the Basel Committee are responses to shortcomings in existing banking regulations. In spite of different starting points and different approaches, the two proposals are strikingly similar in many ways, and can be seen to complement each other significantly in many respects. The fundamental principle of the Basel proposal, the three pillars of quantitative capital adequacy regulations, risk-based supervision and requirements in respect of greater transparency, are directly analogous to the Banking Law Committee's three portal paragraphs on solvency, risk management and transparency. Parts of the basic philosophy behind the Basel Committee's proposal to strengthen risk-based supervision can also be seen in the Banking Law Committee's proposal to broaden the responsibility of the Swedish Financial Supervisory Authority. In order to be effective, quantitative rules must be combined with guided supervision and transparency, which allows the market to discipline bank management. The starting points of the two proposals differ in that the Basel proposal is limited to requirements in the capital area while the proposal of the Banking Law Committee covers the entire banking area.

Both the Banking Law Committee and the Basel Committee are fully aware of the systemic risks. In the case of the Basel Committee's proposal, the systemic risks are at the international level, i.e. the risk that problems in a bank will have international effects. The Basel proposal applies primarily to internationally active banks, although the proposal is worded such that it can also be applied to other financial institutions (cf. the Banking Law Committee's aim to limit the number of special rules in the legislation).



However, it is possible to discern a difference in the two approaches: while the Banking Law Committee presupposes that a financial function shall be regulated uniformly, irrespective of which type of financial institution carries out the function, the Basel requirements are primarily directed at banks. This does not necessarily indicate two fundamentally different approaches, but stems from the fact that the mandate of the Basel Committee covers banks only. An example that demonstrates that the Basel Committee also thinks in functional terms, despite its limited mandate, can be seen within the area of risk-mitigation techniques. As noted above, the Committee has established the regulatory objective that capital adequacy requirements shall be the same for equal risks, irrespective of how risk mitigation has taken place.

Detailed legislation serves little purpose since it risks quickly becoming obsolescent.

Both Stockholm and Basel have drawn the same conclusion from the rapid developments within the financial sector. Detailed legislation serves little purpose since it risks quickly becoming obsolescent. Instead, it is necessary to draw up framework legislation that deals with developments in the financial sector, but at the same time serves as sufficient guidance to provide the necessary basis for interpretation, implementation of regulations and similar matters.

In summary, the proposals of the Banking Law Committee and the Basel Committee are both examples of the way forward in respect of regulation and supervision of financial activity. This, in turn, is a product of developments within the financial sector, whereby differences between different types of institutions, transactions and instruments are becoming less distinct.