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## The New Basel Capital Accord (Basel II) from a Macroeconomic Point of View

The Basel Committee on Banking Supervision and the EU Commission have submitted harmonised proposals for reforming the minimum capital requirements for banks ("Basel II"). The new frame for regulating bank capital is made up of risk-sensitive minimum capital requirements ("first pillar"), a supervisory review process ("second pillar") and enhanced disclosure duties ("third pillar"). The reform aims to improve the stability of the financial market by better matching bank risks (and in particular credit risks) and regulatory capital adequacy requirements to be met by banks. Both proposals have so far mostly ignored the macroeconomic aspects of bank regulation. Stability and efficiency of the banking system have been viewed primarily from the banks' point of view and with regard to microeconomic effects. The possible impact of this neglect on the overall economy and financial system has triggered a lively debate among experts and politicians within the scope of the consultative framework. This article provides an overview of the key macroeconomic implications of the New Accord.

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After the Bretton Woods system broke down in 1973, banks became ever more prone to crisis in the wake of ongoing liberalisation of the financial system and international capital movement. Greater competition and new sources of revenue from innovative financial tools enticed banks, and especially those with international business, to enter into ever more risky operations. The spectacular breakdown of banks in the 1970s and 1980s were due almost exclusively to their excessive risk-taking and capital inadequacy. The banks' inadequate solvency increasingly jeopardised the stability of the international financial system (Figure 1). The call for a reform of bank supervision and comprehensive international co-operation between supervisory bodies with a view to strengthening the international financial structure could no longer be ignored.

The Basel Committee on Banking Supervision was found to be a suitable international device to handle this challenge. It has been the leading international reference body for banking supervision issues ever since 1975. The Committee consists of representatives of central banks and supervisory bodies from 13 industrialised countries<sup>1</sup> (the OeNB has observer status). It usually meets at the Bank for International Settlements (BIS) in Basel, which also runs its permanent secretariat. In contrast to EU directives which need to be translated into laws at member state level, any accord achieved by the Basel Committee constitutes an independent agreement between the banking supervisory bodies involved (Table 1).

The first Capital Accord ("Basel I"), which agreed on binding minimum capital requirements to contain the credit risk for internationally active banks, constitutes a milestone of modern bank regulation. The object of the Accord was to limit and contain excessive risk-taking by banks by mandating a supervised minimum capital requirement regime. Stability of the international financial system was to be

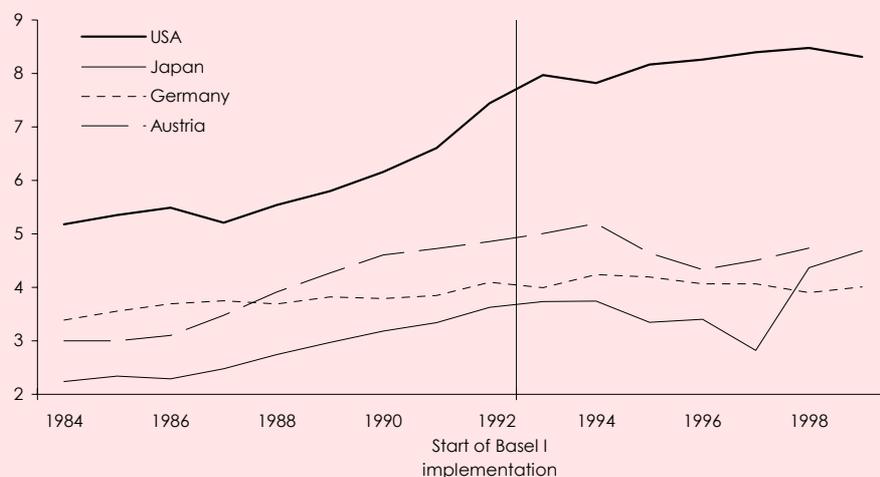
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**Minimum capital requirements to bolster stability of the financial market**

<sup>1</sup> Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, The Netherlands, Spain, Sweden, Switzerland, UK and USA.

strengthened by ensuring that banks would be adequately capitalised and risk-conscious.

Figure 1: Bank capital as a percentage of total assets



Source: OECD.

The currently valid capital requirements set by the EU for banks are widely identical with the 1988 Capital Accord (Basel I, including its later modifications). This high degree of conformity is in the interest of achieving a high level of international harmonisation of supervisory regulations.

Table 1: Chronology for the Basel Accord

1975	Basel Committee on Banking Supervision is formed
July 1988	Current Capital Accord (Basel I) is published
End of 1992	Basel I is implemented
January 1996	Basel market risk paper
June 1999	First consultative paper on the New Accord (Basel II)
January 2001	Second consultative paper on Basel II
May 2003	Third consultative paper
End of 2003	Publication of New Basel Capital Accord
End of 2006	Implementation

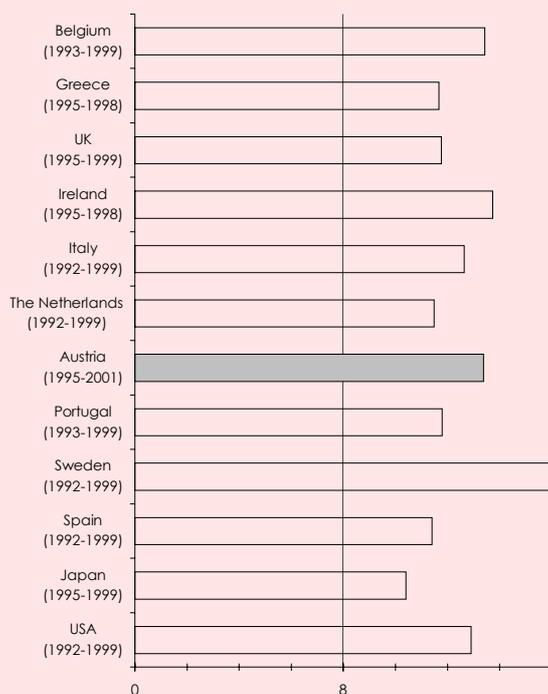
The Basel Capital Accord of 1988, according to which banks must have own capital amounting to at least 8 percent of their risk-weighted assets, quickly became an internationally recognised standard. The EU's current capital requirements are extensively based on the Basel recommendation. Basel I has since become the established foundation for supervision of bank capital in more than 100 countries. In Austria, the principles of Basel I were embedded in the Banking Act and have been applied since 1994. With increasing numbers of countries accepting the requirements of Basel I in the 1990s, banks markedly improved their risk-weighted capital adequacy (Jackson *et al.*, 1999). In international terms, Austrian banks rank in the upper third with their risk-weighted capital (Figure 2).

Basel I has, however, been gradually undermined in its effectiveness by its undifferentiated and coarse measurement of credit risks and the rapid pace of financial innovation. As evidenced by the financial crises in the second half of the 1990s, the simple Accord was not adequate to strengthen the stability of the international banking system. Some comments even pointed at a direct link between the severity of the recent crises (e.g., the Russian crisis and that in South Asia) and Basel I. Thanks to the broad-brush-type risk differentiation, banks can boost their profits in many of their business sectors by accepting higher risks without the need to increase their capital (capital arbitrage). This supervisory leeway is excessively used, in particular for loans to private enterprises: such loans need to be underpinned by capital at a level of 8 percent in all cases, regardless of the actual economic risk which may vary considerably between enterprises. In other words, the risk weight for loans to private

enterprises is 100 percent<sup>2</sup>. The effectiveness of Basel I was further and most seriously reduced by the explosive growth of bank transactions the risks of which are inadequately or not at all covered by the existing regime. Banks which are subject to low credit risks, on the other hand, can lower their capital requirement by securitising their claims, a method that frequently leads to a deterioration in the quality of the portfolio remaining on their balance sheet.

Figure 2: Capital charges according to Basel I

As a percentage of risk-weighted assets



Source: OECD.

The new proposal ("Basel II") is aimed at eliminating such weaknesses of its predecessor and at reducing the gap between the capital required by supervisory regulations and that required by managerial prudence, by providing modern and improved methods of risk measurement. Jointly with more efficient supervision and greater market discipline, the new Accord is to ensure the stability of the financial system and to substantially reduce the danger of systemic risks.

Basel II consists of three mutually reinforcing pillars<sup>3</sup>:

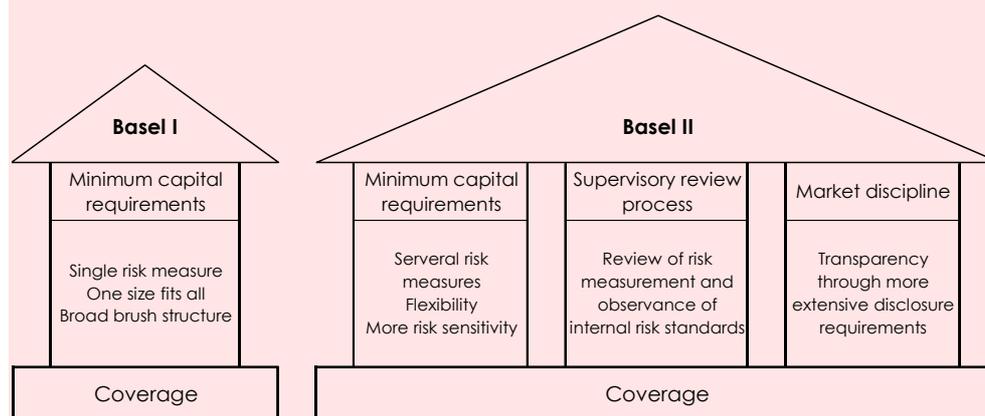
- The first pillar sets out the minimum capital requirements. The current definition of capital and the minimum capital requirement of 8 percent of risk-weighted assets, however, is maintained. The New Accord focuses on improvements in the measurement of risks.
- The second pillar determines the principles of the regulatory and supervisory review processes. Supervisors are to be provided with more qualitative competences in terms of supervision, regulation and intervention, along the Anglo-Saxon model.
- The third pillar stipulates stricter disclosure requirements for banks (Figure 3).

### Basel II – an overview of the three pillars

<sup>2</sup> Example: a loan of € 100 requires € 8 in underlying capital when the risk weight is 100 percent.

<sup>3</sup> The author is grateful to the Oesterreichische Nationalbank Research Department, particularly to Franz Partsch and Konrad Pesendorfer for clarifying technical details.

Figure 3: Old and new accord



The New Accord is expected to be implemented in 2007. In addition, Basel II is likely to be used as the basis for a new directive to regulate capital adequacy of banks in the EU countries<sup>4</sup>.

Basically, two approaches to measure the credit risk (default risk, credit rating risk) are provided: a standardised approach and an internal rating based (IRB) approach. Basel II also contains a menu of approaches to measure operational risk (legal risks, guarantee risks, etc.), while the approach to measure market risk (risk of a change in the interest rate, stock risk, currency risk, option risk) remains unchanged (for an explanation of the terminology see the "Glossary" box below).

The standardised approach is conceptually the same as in the present Accord, except that it is more risk-sensitive. The risk weights are to be refined by reference to a rating provided by external rating agencies which meet strict standards set by the supervisory authorities (Table 2). Borrowers whose risk is evaluated neither internally (within the meaning of the IRB approach) nor externally are treated as in the present Accord (the risk weight for unrated medium- and large-scale enterprises continues to be 100 percent, whereas that of small-scale companies is reduced to 75 percent if the loan does not exceed € 1 million).

### Minimum capital requirement

Table 2: Ratings and risk weights in the standardised approach

Ratings	Sovereigns	Banks Option 1	Banks Option 2	Non-banks	Asset-backed securities
Risk weight in percent					
AAA to AA-	0	20	20	20	20
A+ to A-	20	50	50	50	50
BBB+ to BBB-	50	100	100	100	100
BB+ to BB-	100				150
B+ to B-		100	150	150	150
Below B-	150	150	150	150	1.250
Unrated	100	100	50	100	1.250

Categories as per Standard & Poor's; option 1 . . . rating for the sovereign of incorporation; option 2 . . . external rating.

The IRB approach is founded in the banks' own control and risk assessment methods to calculate the economic capital. In line with a greater focus on best-practice methods, this approach is to steer banks along a path that started with the acceptance by supervisors of market risk models in connection with the company register, with a view to supervisory acceptance of credit risk models (Table 3).

<sup>4</sup> The proposals submitted by the EU Commission to reform the capital regime of banks essentially follow the lines of the New Basel Accord.

Table 3: Approaches to risk measurement

Menu of approaches to measure credit risk	Standardised approach (a modified version of the existing approach) Foundation internal rating based approach (probability of default estimated by the banks, all other inputs supplied by the supervisors) Advanced internal rating based approach (all inputs may be estimated by the banks themselves)
Menu of approaches to measure market risk (unchanged)	Standardised approach Internal models approach
Menu of approaches to measure operational risk	Basic indicator approach Standardised approach Internal measurement approach

Defining minimum supervisory criteria to be met by the banks' internal rating models is a key step on this path. The New Accord allows for both a foundation method as well as an advanced approach. The latter differs from the former in that the bank is permitted to supply almost all the relevant inputs of a loan (with the exception of duration) itself, whereas for the former it estimates the probability of default of a loan and the supervisors will then supply the other inputs (Table 4).

Table 4: Requirements of the IRB approach

*Minimum requirements for foundation approach*

Adequate differentiation between risks and risk evaluation  
Completeness and credibility with regard to meeting all minimum requirements  
Adequate design of rating systems  
Criteria for the use of rating systems  
Adequate understanding of the structure and application of rating systems on the part of the management  
Adequate experience in applying internal rating methods  
Consistent estimation of the probability of default  
Adequate validation of internal estimates  
Compliance with additional minimum requirement for the acceptance of risk-mitigating collateral  
Adequate determination of capital requirements for investment holdings  
Disclosure requirements

*Additional requirements for the advanced approach*

Minimum requirements for own LGD estimates  
Minimum requirements for own EAD estimates  
Minimum requirements for categorising guarantors and credit derivatives

These methods are used for loans to major enterprises, banks and countries; for private customers and, provided that specified conditions are met, small companies and professionals, a simplified approach is envisaged which provides for substantially lower capital requirements. For loans to small companies typically of the private customer sector, the capital requirement for most creditworthiness categories is reduced by some 40 percent as compared to the IRB approach for major companies (Partsch – Wlaschitz, 2003). Basel II also envisages the widespread use of risk mitigation methods through a differentiated consideration of securitisation and the more extensive use of accepted collaterals.

The second pillar introduces a major change over Basel I: Not only is it an integral part of the New Accord, it also highlights the importance accorded (in the future) to the qualitative and continuous supervision by the bank supervisory authorities. In countries that have set up a quantitative and regulatory structure of supervision (such as Germany and Austria), this will impose a major challenge for the supervisory staff and resources.

The supervisory review process is intended to encourage banks to improve their methods of risk management and internal risk-relevant structures (operational risk) in an ongoing process. From a macroeconomic point of view it is important to note that the supervisory review process requires banks to consider external factors (such as the influence of the overall economic situation on the bank's risk exposure) sufficiently in calculating their minimum capital requirements. Furthermore, bank supervi-

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**Supervisory review  
process**

sors are to be enabled to demand and enforce enhanced supervision of the bank or a higher capital charge per risk unit than required by Basel II if they find inadequate risk provision or faulty risk management. Ultimately it will depend on the bank's readiness and will to enter into a dialogue and co-operation whether the supervisors will be able to assess if a bank is able to efficiently handle control and risk exposure in a fair and reliable manner.

The New Accord includes detailed regulations and recommendations on disclosure, in order to give market participants better understanding of the risk profile and capital adequacy of a bank. Transparency is seen as the main prerequisite for improving market discipline. Underlying this is the expectation that well-informed markets will award efficient risk management and punish high-risk behaviour. In terms of their contents, the transparency regulations are limited, i.a., to the bank-specific application of capital regulations, the capital structure, and the scope and structure of risk exposure.

Academic and political discussion of the New Basel Accord focussed primarily on its empirical and theoretical underpinnings. Although those actually involved in banking supervision are quite agreed that the minimum capital requirement of banks needs to be more risk-sensitive in order to furnish an important contribution to stabilising the financial system, the jury is still out on the scientific evidence. Regulations on capital adequacy may well heighten a bank's readiness to take risks, especially when it can improve its capital adequacy solely through profits but not by taking in new capital. Given this specific framework, which may be quite relevant empirically, such a bank will feel an incentive for excessive risk behaviour in order to boost its profit opportunities "today" so that it won't be limited in its loan and profit opportunities due to inadequate capital "tomorrow" (on this point see, i.a., *Blum, 1999*, and *Hahn, 2001B*).

The friction between the static and dynamic views of financial risks characterises the differentiated (and occasionally highly controversial) assessments of Basel II emanating from the fields of economic policy, macroeconomy and empirical economic research (i.a., *European Central Bank, 2001A, 2001B*, and *Hahn, 2001A*). The central objection is that Basel II is too much focused on (mostly) microeconomic static principles of risk assessment and takes too little account of macroeconomic and dynamic factors in the methodological risk evaluation process. This would result in excessive demands on the supervisory review process and the supervisors, who in their capacity of guardians of the stability of the entire financial structure would need to take timely corrective action against wrong trends in risk measurement. With this, the Accord would be in danger of turning against its prime intention and jeopardise rather than strengthen the stability of the financial system.

The most vigorous debate was triggered by the fear that Basel II, with its more risk-sensitive regulations for capital requirements, might have a greater destabilising effect on the business cycle than its predecessor. The credit cycle followed by the banks, already strongly marked by the business cycle, would be enhanced rather than muted by the new internal risk measurement methods (Figure 4). This objection is based on insights bolstered by empirical findings that banks, in their internal ratings and internal estimates of the default risk, are excessively guided by the specific situation of the borrowers (*European Central Bank, 2001B*) whereas they rarely give attention to the cyclic sensitivity of the default risk (Figure 5). Empirical evidence also fuels the suspicion that banks base their risk assessment on short periods (one year or less, i.a., *Hahn, 2001A*). The methods used by banks to minimise risk similarly tend to act procyclically on lending because their assessment of collateral again is highly dependent on the business cycle.

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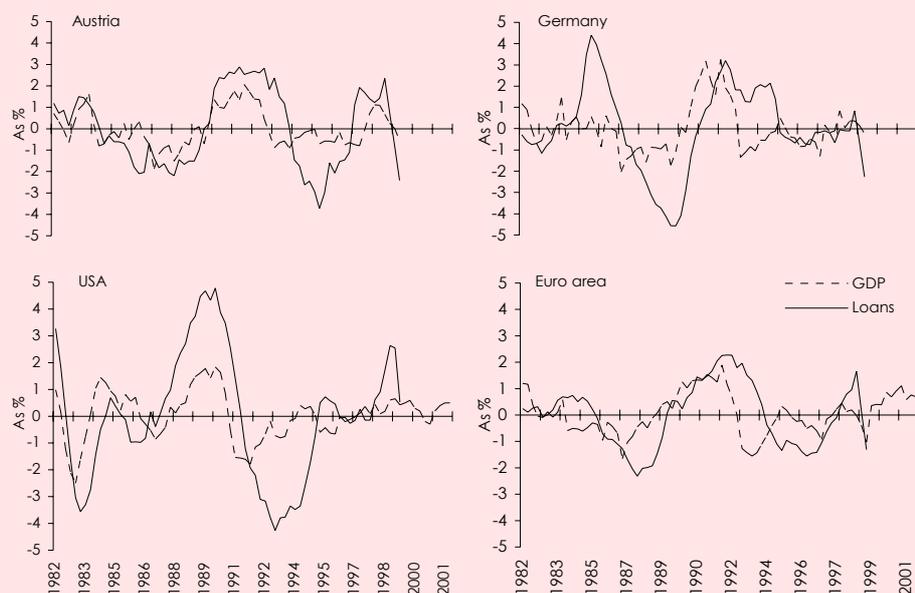
## Market discipline

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## Macroeconomic implications of the New Basel Accord

*Macroeconomically, capital requirements for banks that are staggered by creditworthiness may well be procyclical in their tendency and thus threaten the stability and efficiency of the financial market.*

Figure 4: Trend-adjusted GDP and private sector loans

HP filter,  $\lambda = 1,600$ 

Quarterly data, WIFO-calculations.

On the other hand, studies have furnished empirical evidence that rating agencies leave their risk assessments untouched for longer periods than banks do. Risk measurement based on external ratings therefore should be slightly more resistant to cyclical variations than internal ratings. This could produce a cost advantage with regard to capital backing for banks in countries with a high external rating density, such as the USA.

Banks with a traditional loan portfolio of only a few enterprises which are, furthermore, externally rated, could thus be faced with a disadvantage which may be seriously relevant in competitive terms. Banks in Austria and Germany are highly likely to be more affected than banks in Scandinavia and the UK. Nevertheless, empirical studies have also found that external ratings are more prone to fluctuating in times of financial crises. Banks that defer to external ratings in their risk measurement would thus further aggravate a generally unstable situation by their volatile behaviour.

The discussion of the procyclicality of any sensitive risk measurement is aggravated by the fact that no consensus has been reached in academia and politics on the determinants of cyclical swings. For the Basel Committee, these are the result of a process similar to a random walk which is thus inadequately regular by nature to be amenable to forecasts. According to this view, the given cyclical situation contains all the information on future developments and thus justifies static risk measurement.

Many international institutions (such as the European Central Bank, the Bank for International Settlements, OECD and the International Monetary Fund) as well as empirical research bodies such as, i.a., WIFO, share the scepticism of the Basel Committee on whether cyclical fluctuations can be forecast. Nevertheless, they view such fluctuations as a basically cyclical process which, while frequently highly unsystematic, still proceeds at a sufficiently regular pace since the probability of returning to the long-term trend rises with the degree at which the actual development deviates from the trend (i.a., Lowe, 2002).

This view implies that any static, short-term risk measurement (such as is preferred by the banks) may lead to credit risks being undervaluated during a cyclic upturn (and overvaluated during a downturn), which in turn may lead to an inflation (or short-

*Ways and means to curb the higher procyclicality of loans by risk-sensitive capital regulations are discussed and reviewed from scientific angles within the scope of the current consultative package.*

age) of loans which is undesirable from the overall economic point of view. Such behaviour will strengthen the upswing but may well accelerate the subsequent downswing. Excessive lending during an upswing will increase the likelihood that the share of problem loans in a bank's portfolio will rise correspondingly, which will put an excessive load on the bank's capital during a downswing. When a downturn thus arrives, the banks are restricted in their lending behaviour not just by their static risk measurement and the trend towards risk overvaluation, but also by a narrower capital base (see Figure 5). Such a situation is expected to impact more negatively in countries where enterprises are financed mostly by bank loans (e.g., Germany and Austria).

Figure 5: Examples of capital backing over time



Source: European Central Bank (2001B). The enhanced procyclical behaviour of the capital requirements implied in the New Basel Accord is driven by the volatility of the probability of default. As an example of the measures currently used by the banks, Standard & Poor's actual default rates are applied to two typical portfolios. The "S&P portfolio" is based on the current external rating composition of the S&P database. The "US50 portfolio" is based on the internal ratings of the 50 largest US banks. Because of its identical rating composition for the standardised approach the capital quantity is fixed to 8 percent over time. Volatility in the above typical portfolios stems from the element newly included, i. e. the changing default rates. In this experiment, the lowest capital requirements are at 40 percent of the highest ratio; over time, the portfolios of the example produce similar results.

In the course of the consultative process, the Basel Committee has shown itself open to such criticism, and is expected to recommend that the banks proceed more cautiously in estimating the default probabilities and follow a more future-oriented and macroeconomically founded approach. A major contribution to mitigating the procyclical problems can be expected primarily from the planned flattening of the risk weight curves used in the IRB approach.

The procyclical effect could also be lessened by the formation of a capital cushion, i.e., by a risk-weighted capital ratio that clearly exceeds the minimum requirement. Plenty of banks strove to raise their risk-weighted capital resources far above the prescribed 8 percent level immediately after Basel I was introduced (Figure 2). In Austria, the average capital adequacy of banks was 11.8 percent in 1995 and rose to over 14 percent by 2002. Some international bodies (such as ECB or BIS) consider that the increased use of dynamic risk provisioning tools, with value adjustments not just for actual defaults but also for expected defaults, would be a suitable instrument to minimise the procyclicality of the risk measurement methods proposed by the Basel Committee. Both methods are likely to smoothen the cost of raising equity for banks across the business cycle and thus mitigate incentives for excessive lending during an upswing and extreme reticence in a downswing.

If and when banks have a sufficient capital cushion, binding minimum capital requirements will not affect the efficacy of monetary policy, especially in a downturn. After all, banks that have an insufficient capital cover tend, during a recession, to use the additional liquidity provided by the central banks to improve their risk profile rather than increase their lending portfolio, and thus curtail the effectiveness of the monetary transmission (Baglioni, 2002, Tanaka, 2002).

*In some banks, the higher capital requirement regime set by Basel II may reduce the willingness to lend, which might affect SMEs more than larger companies – an undesirable side-effect from an overall economic point of view which could be mitigated by reducing capital equity backing for loans to SMEs.*

*Glossary*

Regulatory capital charge: ratio of recognised capital items to risk-weighted assets:

$$\frac{\text{Capital}}{\text{Credit risk} + \text{market risk} + \text{operational risk}} = \text{the bank's capital ratio } (\geq 8 \text{ percent})$$

Advanced IRB approach: banks with a sufficiently developed internal risk management system may, in addition to the likely default risk, use other internally estimated risk factors to calculate the capital requirement (such as EAD or LGD).

Asset securitisation: packaging of assets into securities for sale to third parties.

Credit risk mitigation: a range of techniques whereby a bank can partially protect itself against a borrower's default (e.g., by taking guarantees or collateral, or buying a hedging instrument)

Credit risk: risk of loss from a borrower's default (because the borrower fails to service its debts).

EAD (exposure at default): expected amount of claims against a debtor at the time of default.

Economic capital target: capital perceived by the banks as adequate to cover future risk; its amount is obtained from internal quantitative and qualitative risk calculations.

External ratings: credit ratings issued by private or public sector agencies.

Internal rating based foundation approach: estimate of the probability of default for a given borrower by an internal method, other risk factors determined by the supervisor.

Internal ratings: the bank's own calculation of the credit risk associated with given debtors; usually based on quantitative probability of default estimates, qualitative assessments play a role as well.

IRB (internal rating-based) approach: this approach is one of the two main methods for banks to calculate their minimum regulatory capital requirements. The risk weights are based on internal ratings and some other quantitative elements defined by the supervisors in line with the common criteria published by the Basel Committee on Banking Supervision.

LGD (loss given default): measure of the expected average loss of a bank for any claim arising from the default of a given borrower (as a percentage of the outstanding amount of claim).

Market risk: risk of a loss (in trading positions) when market prices move adversely.

Operational risk: risk of a loss resulting from inadequate or failed internal processes, people and systems, or from external events.

Pillar 1: rules of the Basel Accord that define the minimum capital requirements (ratio of capital to risk-weighted assets).

Pillar 2: supervisory review process, which requires supervisors to assess banks' capital allocation techniques and capital adequacy, and compliance with relevant standards.

Pillar 3: Strengthened market discipline via enhanced public disclosure requirements.

Risk weights: process of allocating a weight to each balance-sheet and off-balance-sheet transaction that reflects the estimated credit risk.

Standardised approach: one of the two main methods for banks to establish their minimum regulatory capital requirements; risk weight categories differ from the present Accord, risk weights are based on external ratings which are accepted by the national supervisors in line with the criteria specified by the Basel Committee.

Value-at-risk models: statistical methods to calculate the value loss of an asset within a given period; their application within the scope of internal rating by banks is recommended by the Basel II Accord; value at risk . . . loss  $y$  which is not exceeded within a given period  $z$  (e.g., one year) at a probability  $x$  (e.g., 99 percent); at a probability of  $1-x$  (e.g., 1 percent), the loss equals or exceeds  $y$ .

According to recent empirical studies, the capital requirements of Basel I dampened the growth trend of the lending volume (e.g., *Honda*, 2002, for Japan, *Hahn*, 2002, using a panel-econometric approach for Austria), thus confirming the interchange of liquidity and stability occurring when banks hold equity capital, as demonstrated by *Diamond – Rajan* (2000). Equity capital tends to limit the provision of liquidity by banks, as, in the view of bankers, equity capital weakens the binding budgetary restriction imposed by demand deposits. For bankers, the obligation to hold equity capital opens up opportunities for "rents" which reduce the efficiency and scope of financial intermediation. This might have the effect of a credit crunch on SMEs. Thus, in some states of the USA in the early 1990s, SMEs were impeded in their access to adequate bank financing as a result of the introduction of Basel I (i.a., *Hancock – Wilcox*, 1998); many undercapitalised banks, mostly of a larger size, found the cost of capital backing for SME loans too high.

In connection with Basel II, some EU countries, including Austria, have expressed similar fears. The Basel Committee used their concerns as a starting point to revise the capital requirements for lending to SMEs and to defuse their most serious consequences. Simulations show that due to the substantial reduction of capital requirements for loans to SMEs, banks should incur lower regulatory costs than when lending to larger companies of an equal credit standing (*Partsch – Wlaschitz*, 2003).

Nevertheless such concerns will apply only if and when a majority of the small- and medium-scale banks which provide most of the financing for SMEs change their risk measurement procedures to internal ratings. But most of these banks do not have efficient internal rating systems that could comply with the regulatory criteria. It will depend, i.a., on the cost of introducing and developing advanced IRB approaches whether such smaller banks will venture away from the standardised approach towards the IRB approach. The decision will also depend on the bank's risk profile. Banks that have a low credit risk are more likely to opt for the IRB approach than those that have traditionally accepted higher risks. To banks with a high-risk portfolio, Basel II will offer a considerable incentive to opt for the standardised approach. This may cause structural distortions in the banking sector which not only threaten the stability of the entire financial sector but also increase the rate of concentration. Small- and medium-scale banks, if they fail to accept the IRB approach or delay in adjusting their ratings due to their intensely competitive environment, on average bear a higher risk of carrying a biased loan portfolio than do larger banks. As a consequence, their financial situation could deteriorate to an extent that their merger with larger banks will be necessary, also for regulatory reasons, which in turn prompts a concentration process in the banking sector which, in some countries, could seriously impact on the functioning of the credit market.

It was also for these reasons that the Basel Committee proposed to form a joint database that are to facilitate the development and introduction of sound internal assessment procedures for small- and medium-scale banks and thus limit their investment costs. This, however, could enhance another fundamental problem inherent in advanced rating methods that is directly linked, i.a., to the static understanding of risk prevailing in the Basel Accord and the Committee's recommendation to accelerate the use of value-at-risk models (see "Glossary"): as already noted, the Committee assumes that the risks for banks are of an exogenous nature. This means that the rating for a borrower performed by a given bank has no influence on the assessment by other banks. This assumption is justified neither on empirical nor on theoretical grounds. What's more, banks frequently assess risks similarly, be it for competitive reasons or because they use similar risk measurement methods. Risks thus are endogenous by nature.

Risk volatility is enhanced particularly by the interaction of highly homogeneous market participants. This may have a considerable negative effect on the financing system and overall economy in times of crisis, when the formal prerequisites for applying value-at-risk based measurement methods are no longer met, but banks continue to use such methods and simultaneously downgrade the rating of several borrower categories. With this, they weaken not only their own financial situation but also that of their borrowers, and, by their simultaneous action, add a further turn to

*The capital requirements of Basel II could split the banking sector, leaving institutes with a low-risk portfolio pitted against those with a high-risk portfolio. This might trigger concentration processes that are worrying in terms of competition policy, and have an impact on company financing that is undesirable from an overall economic point of view.*

*The risk approaches promoted by the Basel Committee may substantially increase the homogeneity of risk profiles in the banking sector and thus aggravate financial crises.*

*The new regulations of Basel II impact differently on sectors of the Austrian economy. The procyclicality of the more risk-sensitive measurement may affect those businesses that are more exposed to variations in the business cycle. Easier terms of credit for SMEs, on the other hand, will mitigate the feared negative impact of the new equity rules on financing terms. Within the Austrian banking sector, Basel II could accelerate structural adjustment to a pace that is undesirable from a competitive policy point of view.*

the downward spiral (i.a., Acharya, 2001, and Danielsson et al., 2001). What's more, the risk measurement approaches recommended by the Basel Committee do not permit a sufficient evaluation of events which are rare in occurrence but invested with a high loss potential; such events constitute a very serious threat to the banking sector (i.a., Boss, 2002, and Embrechts, 2000).

The macroeconomic implications of the New Basel Accord discussed in this paper include some highly relevant fault lines that could – but need not – impair its efficacy. All of them are important from an Austrian point of view, albeit not to the same extent. The procyclicality in the internal ratings of banks may produce critical competitive disadvantages for an economy whose businesses are highly dependent on the availability of low-cost bank loans, especially when (as is the case in Austria) key sectors, such as tourism, construction and export manufacturing, are extremely sensitive to variations in the business cycle. Easing up the capital requirements for loans to SMEs should benefit Austrian SMEs. At the same time, Basel II could trigger some deep-reaching restructurisation among Austrian small- and medium-scale banks, whose impact on corporate financing and on the Austrian financial market is difficult to estimate at this point in time.

The Basel Committee has already responded to some macroeconomic concerns voiced against the first pillar of the New Basel Accord. Once the third consultative package is completed in late 2003, it will be seen whether the New Accord will have a sustainable macroeconomic foundation in addition to its sound microeconomic basis. Only then will it be seen whether the remaining two pillars – the supervisory review process as the second pillar and market discipline as the third pillar – can meet the extremely high expectations invested in it. A major feature of the New Basel Accord is the extraordinarily high demands that it will pose on the staff and resources of supervisors: these will be accorded a scope of authority that by far exceeds any present measure of supervisory competence. So far, the Basel Committee has not published any instructions for actual measures to be taken by the supervisors. Nevertheless, the European Central Bank considers that the effective implementation of the second pillar requires eliminating all legal limitations on the margin of discretion given to the supervisors. With this, the supervisors would be endowed with a degree of responsibility and authority that by far exceeds any European – and particularly Austrian – tradition of supervision.

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**Implementation of  
Basel II requires  
competent and  
resolute supervision**

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### *The New Basel Capital Accord (Basel II) from a Macroeconomic Point of View – Summary*

The Basel Committee on Banking Supervision and the EU Commission have submitted – widely harmonised – proposals for reforming the capital requirements for banks and investment firms (Basel II). The object of the reform is to strengthen the stability of the financial market by aligning the regulatory capital requirements of banks more closely with underlying risks, especially credit risks, an objective that is to be achieved chiefly by the greater use of new risk assessment methods to be applied internally by the banks.

Macroeconomic aspects on the regulatory side were, for the time being, almost ignored by both proposals. The reform's implications for the overall economy and financial system have been discussed, however, by academies and politicians, this debate has not yet produced a consensus on the likely macroeconomic effects.

The most vigorous debate has focused on the fear that Basel II, with its more risk-sensitive regulations for capital requirements, might have a greater destabilising effect on the business cycle than Basel I has. The credit cycle followed by the banks, already strongly marked by the business cycle, would be enhanced rather than muted by the new internal risk assessment methods. This objection is based on insights that are well-founded in empirical terms. The cyclical sensitivity of central risk factors in the credit business is rarely given consideration by the banks. Empirical evidence also supports the suspicion that banks base their risk assessment on short periods (one year or less). This implies, i.a., that any static short-term risk assessment, such as is preferred by the banks, may lead to credit risks being undervalued during a cyclic upturn and overvalued during a downswing. Such behaviour will strengthen the upturn but may well accelerate the subsequent downswing.

In the course of the consultation process, the Basel Committee has shown itself open to such objections, and is expected to recommend that the banks proceed more cautiously in estimating the default probabilities and follow a more future-oriented and macroeconomically founded approach.

In connection with Basel II, many EU countries, including Austria, have expressed their fears that the new capital requirements regime for banks might make lending to SMEs more expensive. The Basel Committee used such concerns as a starting point to revise the capital requirements for lending to SMEs and to defuse their most serious consequences. Simulations show that due to the substantial reduction of capital requirements for loans to SMEs, banks should incur much lower regulatory costs than when lending to larger companies of an equal credit standing.

Each of these macroeconomic implications of Basel II is important from the Austrian point of view, albeit not to the same extent. The procyclic trend in the internal ratings of banks may produce critical competitive disadvantages for an economy whose businesses are highly dependent on the availability of low-cost bank loans, especially when (as is the case in Austria) key sectors, such as tourism, construction and export manufacturing, are extremely sensitive to variations in the business cycle. Easing up the capital requirements for loans to SMEs should benefit the Austrian economy which is characterised by a preponderance of SMEs.

Once the third consultative stage is completed in late 2003, it will be seen whether the new accord will feature a strong macroeconomic foundation in addition to a sound microeconomic base. This will be the criterion by which to judge whether Basel II will be able to meet the great expectations it has been raising.