New transparency rules for credit institutions

The new IAS/IFRS accounting rules, which entered into force for publicly traded institutions in 2005, and the new Basel Capital Accord (Basel II), which will be implemented for all institutions with effect from 2007, will probably make credit institutions' activities more transparent to the general public. Risk-oriented reporting will represent the main addition to the standard disclosure requirements. Credit institutions must not only explain their assets, finances and earnings position but also outline their own risk situation and their ability to manage these risks. This shall enable the recipients of the information to make appropriate investment decisions and enable the markets to provide natural incentives for responsible governance. Improved transparency should enable market indicators to reflect a company's outlook more accurately. The analysis presented here discusses various market indicators and their suitability for ensuring market discipline.

Transparency, market discipline and systemic stability

Framework condition for transparency

The Basel Committee on Banking Supervision defines transparency as the disclosure of information that allows market participants to make an informed assessment of a bank's financial position and performance, risk exposure, risk management practices and busi-

ness strategy. However, transparency can be achieved only if the published information is timely, relevant, comprehensive and based on sound measurement principles that are applied consistently by banks.[1]

In the past, a greater insight into credit institutions' circumstances was the domain of a relatively small group of business analysts (besides banking supervisors). Now, the provisions of Pillar 3 of Basel II and the new accounting principles are creating the material framework for greater transparency among all market participants and other interested parties.

Transparency and market discipline

Direct and indirect market discipline

Corporate transparency represents the fundamental condition for the effectiveness of market discipline. Market discipline denotes a cause-and-effect mechanism in which market participants – creditors, shareholders and depositors – have an incentive to monitor banks' risk-taking and, as appropriate, to react through their investment decisions. Market participants are always likely to have such incentives if they have a stake in a bank's business risk and face the prospect of losses if a bank becomes insolvent.[2] In direct market discipline, market participants' actions have a direct impact on firms' decisions, such as through the exercising of contractual rights (one example being a right to have a say at shareholders' meetings) or through setting the terms for the conclusion of financial contracts (through risk premiums or higher amounts of collateral to be posted). In indirect market discipline, the behaviour of market participants influences decisions taken by third parties (eg supervisors, rating agencies) who, in turn, themselves influence the behaviour of banks through increased supervisory measures or potential rating corrections.

Market participants and market discipline

With regard to the exercising of market discipline, the different groups of investors in a bank have varying degrees of relevance. This results from differences in incentive structures (expected returns and tolerance of risk). Another way in which market participants differ from one another is in their influence on banks' business policies.

Market discipline through shareholders

Shareholders, as the bank's owners, can exercise a direct influence on management through the shareholders' meeting and are therefore fundamentally capable of exercising direct market discipline. However, they react to changes in the bank's business risk differently from creditors. Since shareholders may expect, on average, higher yields for more risky investments, they are less sensitive to a bank's higher-risk behaviour than, for instance, creditors, who can expect, at best, to

1 Basel Committee on Banking Supervision (BCBS), Enhancing Bank Transparency, Basel, September 1998, p 8.
2 An additional general condition for market discipline to be effective is that there is no guarantee, or only a limited guarantee, of government assistance to prevent bank failure. If market participants assume that major banks are "too big to fail" (see D Covitz, D Hancock and M Kwast, Market Discipline in Banking Reconsidered: The Roles of Funding Manager Decisions and Deposit Insurance Reform, Federal Reserve Board FEDS series 2004-53), this will be likely to result in moral hazard. Specifically, economic agents will neglect to take measures to reduce their own risk, as they will expect third parties to bail them out of insolvency.

receive the contractually fixed face value plus the interest on their borrowed funds.

Market discipline through subordinated debt holders

Holders of subordinated debt[3] have a particular incentive to monitor a bank's risk-taking because, as opposed to shareholders, they have only a limited stake in increased profits, yet, unlike other creditors, are fully exposed to an institution's risks. In addition, the volume of these funds is quite high relative to banks' liable capital.

Market discipline through other banks

The interbank market, which is used by banks for short-term refinancing, is particularly capable of exercising effective market discipline. Owing to the fact that relatively large amounts are traded on the interbank market, its participants have a considerable incentive for mutual discipline. In addition, by their very nature, banks are well predisposed to obtaining and evaluating information about their peers.

Market discipline through depositors

Depositors are generally unable to exert sufficient market discipline. One reason is that their stake is usually very small relative to the bank's size, which means that their influence on the bank is limited. Another is that, owing to the protective effect of deposit guarantee schemes, depositors are insufficiently motivated to monitor the deposit-taking institution's credit rating.[4] It is only when credit ratings plummet that private depositors react, albeit then by withdrawing massive volumes of funds, which can plunge a bank into liquidity difficulties. In addition, most depositors are non-experts who lack the experience and expertise to assess a bank accurately. This virtually rules out depositors as enforcers of market discipline.

Banking supervision despite market discipline

Despite the fundamental truth that market participants exercise discipline, it stands to reason that this disciplining effect will wane whenever a bank is under the threat of insolvency.[5] Because of their limited liability in such situations, shareholders potentially have an economic interest in tacitly approving or even encouraging risk-taking by the bank. Although subordinated creditors have no particular incentive for increased risk in times of crisis, their interest in minimising risk likewise vanishes, as their position in a bankruptcy comes close to that of the owners. Market discipline can counteract, but not entirely eliminate, incentives for taking inefficiently large business risks. Therefore, all that transparency and market discipline can do is to support banking supervisors. However, they are not a substitute for a governmental supervisory authority that assumes special responsibility for the stability of individual institutions as well as of the financial system at large.

Transparency not just a requirement but also an incentive

The force with which market discipline measures affect banks' behaviour depends on their

3 Subordinated debt includes all debts which, in an insolvency case, are repaid only after all creditors have been satisfied.
4 J Blum (Subordinated Debt Market Discipline and Banks' Risk Taking, Journal of Banking and Finance, Vol 26, No 7, pp 1427-1441) and T Cordella and E Levy-Yeyati (Public Disclosure and Bank Failures, CEPR Discussion Paper No 1886, 1998) show that banks without deposit guarantee schemes can be disciplined, whereas banks with deposit guarantee schemes tend to pursue risky strategies.
5 Board of Governors of the US Federal Reserve System, Improving public disclosure in banking, *Staff Studies 173, 2000.*

internal incentive structure. Credit institutions will only be willing to bear the increased costs of more extensive disclosure requirements if economic incentives exist such as lower costs of equity capital,[6] lower refinancing costs and/or improved competitiveness. Firms with a strong credit rating, in particular, will thus endeavour to disclose comprehensive and complete information in a timely manner. Despite the undeniable danger of market participants punishing a weakened bank more severely than is economically justified, increased transparency may be expected, on the whole, to broadcast positive signals.

Market discipline and the stability of the financial system

Transparency promotes financial stability

The initial effect of tightening disclosure requirements will be to give credit institutions added incentive to constantly improve their risk management and internal control system. As this applies equally to all banks and savings institutions, it will enhance the stability of the financial system at large. Secondly, the effects of market disruptions are generally less extensive if information is regularly disseminated to investors. If market participants are informed early and continuously, they can react by means of smaller, gradual adjustments, making it easier to avoid overreacting. Thirdly, transparency-enhancing information presented in a uniform structure improves the possibilities of making comparative analyses in the financial system (eg peer group analyses and analyses of overall systemic stability). This contributes to minimising the systemic effects of market disruptions because market participants are better able, in a crisis, to tell the difference between troubled banks and stable banks. Fourthly, supervisors also consider it desirable to use the market information yielded by increased transparency in a subsidiary fashion, thereby enhancing the efficiency of supervisory activities.

Limits of positive stability effects

It is questionable whether increased transparency has an exclusively positive effect on financial market stability. During economic slumps, even fundamentally sound institutions see their risk profile deteriorate. If market discipline is exerted by way of tightening lending terms or withdrawing deposits, a bank can suffer further disadvantages. If a bank decides in this situation to reduce its credit exposure, and other affected banks potentially follow suit, this could result in procyclical impacts on the economy.

Effects of transparency: empirical findings

The latest empirical research indicates that greater disclosure can significantly reduce a bank's willingness to take risks. In an international study based on corporate information provided by major private banks,[7] the link between the degree of disclosure of corporate information and banks' capital ratios was examined. Firstly, government guarantees and deposit guarantee schemes were found to have an adverse effect on the capital ratio. Secondly, the proportion of financial products which can exert market discipline proves to be positively correlated with banks' capital ratios. Finally, the study shows that in-

6 U Baumann and E Nier, Disclosure, Volatility, and Transparency: An Empirical Investigation into the Value of Bank Disclosure, *FRBNY Economic Policy Review,* September 2004, pp 31-45.
7 U Baumann and E Nier, Market discipline and financial stability: Some empirical evidence, Bank of England, *Financial Stability Review,* June 2003, p 140.

creased disclosure of information on the risk-return profile leads to a distinct rise in capital ratios and thus to a lower probability of default (PD). It must be taken into account, though, that the results of this study cannot be applied to Germany wholesale because of the strong public sector presence in the German banking industry.

Traditional approaches in the German Commercial Code *(Handelsgesetzbuch)*

Limited information on assets, finances and earnings, …

Since sufficient transparency is the key condition for market discipline to work, this raises the question of how transparency rules for credit institutions were designed in the past and how they have been changed by the new accounting regulations.

… particularly also owing to hidden reserves pursuant to section 340f of the Commercial Code…

The rules contained in the German Commercial Code with regard to preparing annual accounts are based on the principle of prudence and serve mainly to preserve capital and protect a company's creditors. Conservative recognition and measurement rules, in a very general sense, enable a certain amount of "hidden reserves" to be accumulated. This makes it more difficult to present a company's assets, finances and earnings transparently.

Moreover, section 340f of the Commercial Code allows credit institutions to accumulate additional hidden reserves up to a maximum of 4% of certain claims and securities reported at the lower of cost or market (the liquidity reserve) to protect against risks specific to their line of business. This is done "silently" by undervaluing the relevant assets followed by cross-offsetting the resulting write-downs

Transparency rules for credit institutions

Present	Future
Accounting rules	**Accounting rules**
Commercial Code	Commercial Code
GAS 5-10	GAS 5-10
	IAS/IFRS
	Supervisory rules
	Basel II/Pillar 3
	EU Directives 2000/12/EC and 93/6/EEC
	Solvency Regulation

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with other income within the profit and loss (P&L) account. The barrier to transparency that this creates is intentional. Upon conversion to IAS/IFRS to prepare account statements, hidden reserves will no longer be permitted; they will have to be dissolved in IAS/IFRS-based consolidated financial statements. This means that such reserves will be useless in single-entity financial statements as well.

… and inadequate transparency with regard to risk provisioning

The key factors for assessing a credit institution's equity value are asset quality and thus, among other things, the creditworthiness of the loans granted. Any provisions set aside to cover an increase in the probability of default, however, are not visible in the balance sheet, since both specific and general provisions are deducted from the corresponding assets in the balance sheet; in other words, recorded

net of specific provisions. The matching entries in the P&L account, in addition, are reported in a summary item which also includes write-downs on securities in the liquidity reserve and transfers to reserves in (off-balance-sheet) credit business. For banking supervision purposes, therefore, separate data on the quality of the bank loans are collected.

Recourse is taken to these data in an international context, such as for the IMF's consultations. However, the lack of a uniform national or international definition of impaired loans to date has made it difficult to compare such data across countries.

Extended risk reporting pursuant to GAS 5-10

Supplementary rules for credit and financial services institutions

Back in 2000, the German Accounting Standards Committee (GASC) published an industry-specific standard for risk reporting by credit institutions and financial services institutions (GAS 5-10) in consolidated financial statements, thereby taking on a pioneering role in this area in the development of disclosure requirements designed to increase transparency on capital markets.

Concept

GAS 5-10 requires banks to provide comprehensive information about their group's risk as well as its risk management practices. The risk is to be reported separately in the management report, independently of the anticipated developments. Industry-specific risks are to be addressed in special detail. The existing risk management systems as well as monitoring and management measures are to be presented separately by risk category. The information must then be condensed to form an overall picture of the institution's risk exposure. The capital held to cover risk as well as balance-sheet risk provisioning are to be discussed. On the whole, GAS 5-10 has significantly improved the transparency of German financial groups.

Continued existence under IAS/IFRS

Given the forthcoming transition of many financial services companies which issue publicly traded securities to IAS/IFRS this year, it remains to be noted that the provisions of GAS 5-10 will continue to apply to those companies, too.

For institutions listed on exchanges, in particular, capital market provisions give rise to additional national disclosure requirements. An overview of these requirements is provided on page 75.

Transparency rules under IAS/IFRS

Investor-oriented presentation of assets and earnings

The International Financial Reporting Standards (IFRS), which will apply under EU law[8] with binding effect to consolidated financial statements of credit institutions which issue publicly traded securities from 2005/2007, are geared primarily to the information needs of the readers of annual financial statements. They provide a much greater degree of transparency than statements prepared according to the German Commercial Code. Priority is given to capital market investors' need for information, and thus to the timely reporting of

8 Regulation (EC) No 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards (OJ L 243, 11 September 2002).

Disclosure requirements under capital market law

Capital market law lays down a number of disclosure requirements in order to protect both investors and the integrity of the financial markets. The intention is to ensure that all financial market players can make their investment decisions on the basis of the same information. Pursuant to section 15 of the German Securities Trading Act (*Wertpapierhandelsgesetz*), an issuer of securities admitted to trading on a German stock exchange must immediately publish any information which is not publicly known. Persons with management responsibilities at an exchange-listed enterprise or the spouses, registered partners or relations in the first degree of such persons also have to report any own dealings in the securities of this enterprise (section 15a of the Securities Trading Act). Moreover, there is a notification requirement pursuant to section 21 of the Securities Trading Act concerning the purchase or sale of voting rights in a listed company whereby certain threshold values are reached. Regarding offers for the acquisition or takeover of securities, section 10 of the German Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz*) stipulates that the bidder must publish its decision to make an offer for the acquisition of a target company's securities without undue delay. The bidder must then, within four weeks, draw up an offer document containing, in particular, information about the type and amount of the consideration being offered as well as the conditions upon which the effectiveness of the offer depends (section 11 of the Securities Acquisition and Takeover Act). The bidder must subsequently provide regular reports on the securities acquired as part of the takeover offer (section 23 of the Securities Acquisition and Takeover Act). Any person who attains control of a target company (30% of the voting rights) must report this without undue delay and, as a matter of course, submit an offer document unless control was acquired through a takeover offer (section 35 of the Securities Acquisition and Takeover Act). The German Stock Exchange Act (*Börsengesetz*) stipulates that, for a security to be admitted to trading on a stock exchange, the issuer must publish a public prospectus before admission (section 30 (3) number 2) and, as an issuer of shares, must regularly – at least biannually – publish an interim report which gives a true and fair view of the financial position and the general business trend (section 40 (1)). Finally, in the case of securities which are offered to the domestic public for the first time but are not admitted to trading on a German stock exchange, the issuer must, as a matter of course, publish a prospectus pursuant to the Securities Prospectus Act (*Wertpapier-Verkaufsprospektgesetz*). Most of this information can be downloaded from BaFin's (the Federal Financial Supervisory Authority's) website (www.bafin.de).

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the current state of the company. The IFRS presume the complete reporting of all assets and debts – including derivatives – and that they are largely marked-to-market.

Important rules for credit institutions

The important rules for credit institutions in the IAS/IFRS system are, above all, those on the recognition, measurement and disclosure of financial instruments. In the past, along with IAS 39 (Financial instruments: recognition and measurement), these included the industry-specific standard IAS 30 (Disclosures in financial statements of banks and similar financial institutions) and IAS 32 (Financial instruments: disclosure and presentation), which still contain the key disclosure requirements for the accounting treatment of financial instruments.

Limits of marking-to-market

Whereas marking-to-market probably corresponds most closely to the IFRS's fundamental premise (ie fair presentation) in terms of transparency for those balance sheet items for which market prices actually exist, fair-value measurement has its limits in the case of those balance sheet items for which no objective market prices are available. Derived measurements (marking-to-model) run counter to the concept of transparency, particularly in cases where the value measurement approach is no longer objective.

Impaired comparability

The IAS/IFRS suffer from an additional deficit deriving from limited comparability. On the one hand, the historical comparability of the annual accounts suffers from a one-off interruption as a consequence of the change in the accounting system. On the other hand, owing to the large number of options for measurement and the vast discretionary scope, comparability among IAS/IFRS financial statements will, in principle, only be limited.

IFRS 7 risk reporting through…

The IAS 30 and IAS 32 disclosure requirements will, in future, be compiled largely in a single standard, IFRS 7 (Financial Instruments: Disclosures). This new standard applies a principles-based approach and is directed at all enterprises. This means that, in particular, the IAS 30 rules governing the structure of the balance sheet and P&L account will no longer apply. Instead, standard setters are confining themselves to only a very few minimum requirements derived from IAS 1 (Presentation of financial statements), leaving it largely up to companies to choose how to present the information to be disclosed. Under IFRS 7, it can be presented either in the balance sheet and P&L account or in the "Notes".

… doing away with outlining rules, …

… disclosure of fair values, …

IFRS 7 is intended to provide information that enables the reader of a financial statement to independently visualise the significance of financial instruments for the company and the type and extent of the risk taken. To this end it envisages, among other things, that carrying values be given for all financial instruments, grouped according to the IAS 39 measurement categories. The significance of the financial instruments for the company's performance are also to be disclosed according to these categories. In addition, all types of financial instruments are to be disclosed at fair value, even if the relevant instruments are recorded in the balance sheet at initial recognition. In certain cases, the fair value of assets pledged as collateral is also required to be disclosed. If the measurement of own liabilities

at fair value results in fair value gains owing to a reduction in the reporting company's credit rating, these have to be disclosed separately.

... details of credit risk, ...

For a better assessment of credit risk, not only the gross credit volume (by type) is to be given but, among other things, a more detailed analysis of loans that are past due or impaired and a description of the chosen collateral. The evolution of risk provisioning during the reporting period likewise has to be disclosed; it, too, is to be broken down by type of loan.

... details of market and liquidity risk ...

IFRS 7 envisages disclosure not only of credit risk but also of market risk and liquidity risk deriving from financial instruments. Here, market risk is to be described with the help of sensitivity analyses for all relevant types of risk (eg share price, currency, interest rate risk). Recourse may also be taken to a value-at-risk (VaR) approach if it is used in the company for internal risk management purposes. Liquidity risk is to be explained using contractual residual maturities of the firm's liabilities.

... and information on capital

To complete the risk assessment, the introduction of IFRS 7, through amending IAS 1, seeks to require the reporting firm to disclose its capital and capital management.

Assessment

On the whole, there are many similarities and no inconsistencies between the new IASB standard and GAS 5-10 or any of the disclosure requirements under Pillar 3 of Basel II described in the following section; this will probably make it easier for many firms to implement the IFRS. Given the lack of structural rules and the vast scope of companies' discretion in how they report information, it remains to be seen whether IFRS 7 disclosure will lead to major gains in transparency. The minimum information required by IFRS 7, which applies equally to banks and non-banks, will not be enough in systemic terms to assess the risks to a credit institution deriving from financial instruments. However, the standard is supplemented by more detailed application guidance from the IASB that goes above and beyond the minimum requirement and facilitates the establishment of transparency.

Future supervisory transparency rules

Pillar 3 of Basel II: Aim and concept

In June 2004, the Basel Committee on Banking Supervision adopted a Revised Framework for the International Convergence of Capital Measurement and Capital Standards, which superseded the 1988 Basel Capital Accord. The transparency requirements for enhancing market discipline under Pillar 3 include the general semi-annual disclosure of risk information. Certain qualitative information that provides a general overview of the aims and procedures of risk management, internal reporting and definitions can also be published annually. By contrast, the Revised Framework envisages the quarterly disclosure of tier 1 and total capital adequacy ratios as well as information on risk exposures that is prone to rapid change. In certain exceptional cases in which the required disclosures may reveal proprietary and confidential information, this information can remain unpub-

lished. In such cases, however, the institution is required to disclose more general information on the subject matter of the requirement and a reason why the specific items of information have not been disclosed.

Three areas of disclosure:

The specific disclosure requirements – in terms of content – can be subdivided into three areas; a further distinction is made between qualitative and quantitative information. The first area governs the scope of application of the new Framework; in this context, disclosure requirements essentially apply to the top consolidated entity of the banking group. The disclosure of tier 1 and total capital ratios of significant bank subsidiaries (individual or subconsolidated) by the parent entity is an exception. The most important element of the additional information to be disclosed is a list of the entities within the group and the method with which these entities were included in the consolidation.

Scope

Capital

The second area encompasses information on the capital structure and capital adequacy. The focus here is on tier 1 capital and the individual components thereof, as well as the total sum of tier 2 and tier 3 capital, deductions and total eligible capital. The requirements cover, moreover, information on capital requirements for the individual types of risk and the capital ratios of the consolidated group.

Risk exposure

In the third area, institutions have to disclose information on their risk exposure and assessment, separately for credit risk, market risk, operational risk, equity risk and interest rate risk in the banking book. The disclosure of credit risk initially features information on the portfolio structure and the distribution of exposures as well as information on impaired and past due loans. Moreover, institutions are requested to provide further details regarding the use of IRB approaches for managing credit risk. On that vein, for instance, the average loss given default (LGD), risk weights (RW) and exposure at default (EAD) weighted with the outstanding exposures are to be disclosed for each credit portfolio on the basis of an adequate number of probabilities of default (PD). Retail loans may instead be disclosed by meaningfully breaking down the portfolio by expected losses (EL). In order to assess the quality of the applied IRB approach, IRB estimates should be compared with actual outcomes following a transition period.

Finally, in the area of credit risk, information on the securitisation of assets and credit risk mitigation techniques also need to be relayed to market participants.

European implementation (EU Banking Directive)

The new Basel Framework will be transposed into EU legislation by amending the Codified Banking Directive (2000/12/EC) and the Capital Adequacy Directive (93/6/EEC), thereby making the supervisory transparency rules applicable to all credit institutions and investment firms. The European rules of Pillar 3 largely correspond to those of Basel II, although there are still some minor differences in individual areas, such as terminology and disclosure frequency. Whereas Basel II generally envisages semi-annual disclosure, EU legislation envisages annual disclosure.

New transparency rules for credit institutions

In order to illustrate the disclosure requirements, the key features of GAS 5-10, IFRS 7 and Pillar 3 (with a particular focus on credit risk) are presented below.

GAS 5-10: Risk reporting by credit institutions and financial services institutions

- Broken down into the categories credit risk, counterparty risk, country risk and shareholder risk: information on probabilities of default, expected risk exposure and expected returns on securities.
- Description of the procedures used to quantify and manage counterparty risk.
- Description of the methods of risk provisioning used.
- Comparable data on liquidity risk, market risk, operational risk and other risk.

IFRS 7 Financial Instruments: Disclosures

- In the case of liabilities measured at fair value, disclosure of the amounts resulting from changes in an enterprise's creditworthiness.
- Information about the fair values of assets pledged as collateral if the enterprise is permitted to sell or repledge the collateral in the absence of default by the owner of the collateral.
- Description of the evolution of risk provisioning according to groups of financial instruments.
- Information about the total credit volume grouped into types of credit, description of collateral held as security and data on the credit quality of the portfolio.
- Analysis of loans that are past due or impaired, and information about the collateral held as security, including its fair value, unless impracticable.
- Description of the realisation of collateral with information about the types of collateral and their carrying values.
- Further information about and analyses of market risk, interest rate risk and liquidity risk.
- Quantitative and qualitative disclosures about the enterprise's management of capital.

Pillar 3

- Presentation of the scope of application of the disclosure rules.
- Information about capital elements as well as the capital requirements for credit risk, market risk, operational risk and banking book equity holdings.
- Within credit risk: information about the capital requirements for each portfolio in the Standardised Approach, the Foundation IRB Approach and the Advanced IRB Approach as well as the capital requirements for securitisation.
- Description of credit risk management (structure, goals, strategies).
- Separately for each type of credit: information about the credit volume, the geographical breakdown, further breakdown of lines of business, customer groups and maturities (residual maturities).
- According to lines of business or customer groups: information about the amount of impaired or past due loans, specific provisions and general provisions as well as transfers to specific provisions and charge-offs.
- Presentation of changes in the specific provisions and general provisions during the period under review.
- For portfolios in the Standardised Approach: information about the type and use of external ratings, specifying the rating agencies involved; information about the credit volume after credit risk mitigation, broken down according to risk weights.
- If IRB approaches are used: breakdown of the individual credit portfolios according to their probability of default (PD) as well as information about the average loss given default (LGD), risk weights (RW) and exposure at default (EAD) weighted with the outstanding exposures.
- Disclosure of the IRB model estimates in comparison with the actual results (after a two-year transition period).
- Information about the type and use of collateral taken.
- Information about securitisation transactions; volumes and functions of the bank in the securitisation process.
- More detailed description of how market risk, interest rate risk, operational risk and banking book equity holdings are managed.
- Quantitative analyses of and information about market risk, interest rate risk and banking book equity holdings.

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National implementation

The EU rules will be transposed into German law through a Solvency Regulation which is being "midwifed" by an expert panel on disclosure requirements, which has issued comments and presented use cases that can be found on the websites of the Bundesbank and BaFin. The legal framework for transparency is therefore now in place, so that in Germany more meaningful corporate information will be available to the financial markets. This will make market indicators increasingly more valuable as a supplementary source of information. A more effective market discipline can thus be expected to develop in future.

Market indicators as drivers of market discipline and systemic stability

Market indicators and market discipline

The improved level of transparency should result in market indicators being able to represent a company's outlook more accurately. In the following, selected market indicators will be studied to see whether they react to company news in a manner suited to exercising discipline on management behaviour. This would ensure that improved corporate transparency and the risk information to be disclosed in future would also lead to better discipline. As already discussed, only shareholders, banks and subordinated creditors have sufficient incentive and influence to monitor banks' behaviour. For this reason, only those market indicators that can be influenced by these participants' actions will be looked at here.

Shares

The share price is a market indicator that is generally well suited to market discipline. As one of the most liquid types of market, the equity market unites beneficial features such as the timely and adequate presentation of risk,[9] as well as general availability and good usability. However, Germany, of all countries, has a particularly small share of banks listed on exchanges, which renders such an indicator useless for vast segments of the German banking system.

Interbank deposits

Along with share prices, spreads[10] of interbank deposits may be regarded as potentially suitable market indicators. In Germany, this market indicator may be regarded as risk-sensitive as all banks are represented in the interbank market either directly or indirectly. Interbank price information, however, has virtually no external impact on other market participants. In general, the discipline exercised by the interbank market may be expected to be very effective owing to the large volume of transactions and interbank market spreads may be regarded as leading indicators of banks' credit ratings. However, their public availability is insufficient, which means that this market indicator can be used only by banks themselves.

Subordinated debt

It can generally be assumed that a bank's risk exposure is sufficiently reliably reflected by the issue prices of subordinated debt and

9 However, the derivation of probabilities of default from share prices is eclipsed by other effects. The share price therefore serves in many cases as an input for other indicators, as well.
10 A spread is the difference between the interest on a risky investment and that on a risk-free investment with the same residual maturity.

similar participation rights.[11] The post-issue trading volume of these instruments, however, is limited, thereby preventing prices from reflecting the bank's current risk situation at all times. With regard to availability, this market indicator is superior to shares in Germany; according to 2004 financial statements, around 58% of all German institutions, accounting for 94% of German banks' balance sheet total,[12] issued subordinated debt and comparable participation rights. This may be particularly because these instruments are already recognised by supervisors as own funds in Principle I (section 10 (5), (5a) and (7) of the Banking Act). The subordinated debt and participation rights issued by all banks amounted to €132 billion this year, or around 1.8% of the balance sheet total. However, €115 billion of this total is recognised as supervisory own funds. This corresponds to 30.7% of regulatory capital, underscoring the significance of these instruments as a source of capital and their suitability as a market indicator.

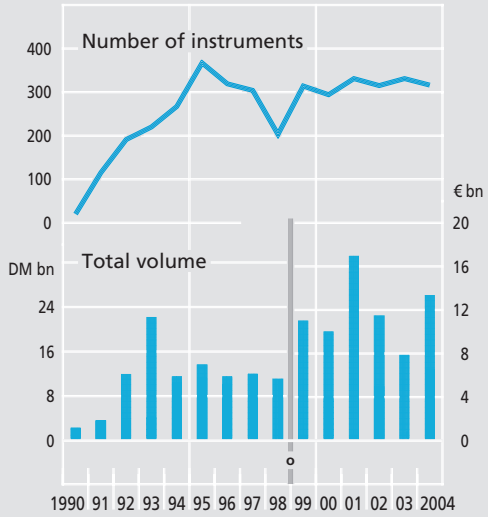
Looking at the "big four" German banks, the total volume of subordinated debt[13] and participation rights for 2004, at €30 billion, makes up some 43% of these institutions' total regulatory capital. The average share in eligible capital was around 21% for savings banks, at €15 billion. Only for cooperative banks does subordinated debt in the broader sense seem to have a lesser importance for obtaining capital. At €3.8 billion, it made up an average share of merely 9%.

The chart on page 82 shows clearly that both the annual number of issues and the volume of subordinated debt[14] issued tended to rise in the 1990-2004 period.

On the whole, it may be stated that subordinated debt in the broader sense can play an important role as an indicator for market discipline purposes, especially where large German banks are involved. In terms of transparency, an even higher frequency of issue might be desirable for this market indicator; for supervisory purposes, however, it is also of great importance to preserve the high quality of the capital structure. Furthermore, standardising subordinated instruments could make a key contribution to increasing the liquidity of the secondary market. Increasing the liquidity of trading would reinforce the market discipline imposed by the holders of subordinated debt instruments. This has elicited occasional proposals to achieve this aim by making it mandatory for all banks to regularly issue subordinated debt.[15]

11 This characteristic is also reflected in the parallel movement of the spreads of subordinated debt and other market indicators. See D Hancock and M Kwast, Using Subordinated Debt to Monitor Bank Holding Companies: Is it Feasible?, *Journal of Financial Services Research,* Vol 19, No 2/3, December 2001.
12 Between 1997 and 2001, Germany was in first place throughout Europe regarding the number of issues of subordinated debt within the meaning of section 10 (5a) of the German Banking Act *(Kreditwesengesetz)* (see R Gropp and J Vesala: Markets for Bank Subordinated Debt and Equity in Basel Committee Member Countries, Basel, August 2003, BIS Working Paper No 12, p 12).
13 This refers to the total volume irrespective of the fact that long-term subordinated debt is assigned to liable capital and short-term subordinated debt, as tier 3 funds, is used to calculate own funds.
14 This includes subordinated bonds as well as participation certificates and rights.
15 See D Evanoff and L Wall, Sub-Debt Yield Spreads as Bank Risk Measures, 2001, Working Paper 2001-11, Federal Reserve Bank of Atlanta.

Subordinated debt* issued by German banks



Source: WERTPAPIER-MITTEILUNGEN (in German); www.wmdaten.com. — * Includes subordinated bonds, participation certificates, subordinated floating-rate medium-term notes and subordinated medium-term notes. — o From 1999, data in euro.

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Credit default swaps

The spreads of credit default swaps (CDS)[16] are an additional market indicator. CDS spreads can be regarded as the market's view of banks' creditworthiness and thus as a transparent benchmark of a bank's risk exposure.[17] They are, however, available only for four large German banks. It is possible, though, with the aid of rating information, to draw conclusions about the risk exposure of other similarly rated banks. For market discipline purposes, it would be desirable if the indicator were available for many more institutions. The chart on page 83 shows the development of the CDS spreads of four large German banks between January 2003 and June 2005.

Ratings and KMV-EDF

The advantage of ratings is that they are based on company information not yet available to other market participants. They are only indirectly based on quantitative market data. For the future, however, it can be assumed that rating agencies' information advantage will tend to decline owing to increasingly stringent transparency requirements.

Among the purely quantitative creditworthiness indicators, KMV-EDF[18] may be considered as a significant market indicator.[19] KMV-EDF generally reflects banks' risk adequately and in real time.[20] Since the KMV-EDF methodology is based on share prices and balance sheet data, with KMV-EDF, as with the other market indicators, it may be assumed that risk sensitivity will increase with enhanced transparency. The disadvantage, however, is that the calculation method in KMV-EDF is not completely disclosed. In addition, the market indicator is available for only some 30 listed German banks. Although it would be desirable for KMV-EDF to be available for all institutions, the currently available indicators can already help in assessing the

16 A CDS is a credit derivative for trading in default risk. Five-year CDSs will be used in our analysis.
17 CDS spreads represent insurance premiums against the default risk of a bond issuer. They express the bond's default risk relative to a risk-free investment. The CDS spread of a no-default-risk bond is zero.
18 KMV-EDF stands for KMV-Expected Default Frequency, and is a measure of a company's probability of default. The KMV company, named after its founders, was established in 1990 and has been a part of the Moody's rating agency since 2003.
19 Unlike purely statistical models (eg logit models, discriminant analysis), "Moody's KMV model" is an economic model based on option pricing theory. In the KMV model, capital is regarded as a call option on goodwill. According to option pricing theory, it is then possible to derive a probability that the option will be exercised, from which a company's probability of default can then be estimated. Additionally, in KMV-EDF the probability of default extracted in this manner is calibrated using empirical data.
20 The use of balance sheet data can occasionally lead to faulty signals in the KMV methodology.

stability of the banking system, since they still reflect the credit rating of systemically relevant institutions.

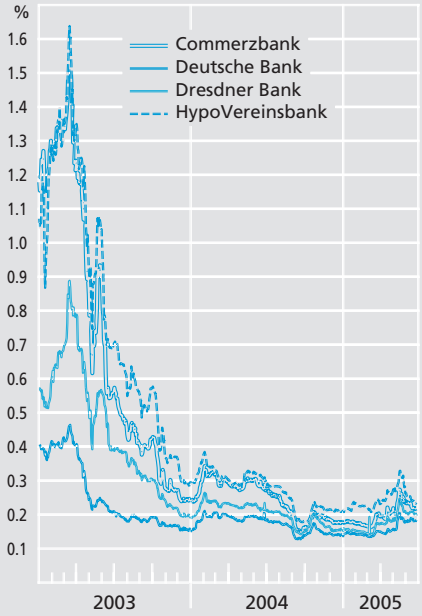
Conclusion

In principle, any indicator is better able to measure a bank's risk exposure if there is greater transparency. In an ideal case, indicators look at all the information available on the market. Their quality can therefore only continue to increase if either the disadvantages of each market indicator are eliminated and/or the amount of available meaningful information increases. The latter is what the new transparency rules are aimed at.

At present, a definitive positive correlation between increased transparency and the meaningfulness of a market indicator cannot yet be empirically demonstrated because the proposed improvements in the area of information provisioning have not yet been implemented, even though several major credit institutions have already begun to voluntarily disclose much of the information that will later be subject to mandatory disclosure requirements.

Large German banks' credit default swap premiums

Daily data



Source: Bloomberg.

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Irrespective of empirical provability, there is no question that market participants are able to assess financial institutions' risk exposure. In Germany, too, the fundamental effectiveness of market discipline that this ensures can contribute to the stability of the financial markets as a complement to banking supervision.