

The Pro-Cyclical Effect of the New Basel Accord

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Introduction

The 1988 Basel Capital Adequacy Accord was a milestone in the approach to bank regulation. Agreement was reached between the member countries of the Basel Committee that a minimum capital requirement of 8% would be required of internationally active banks. The impetus behind this move was widespread concern about declining levels of capital held generally. Since that time the Accord has been adopted by more than 100 countries.

In recent years criticisms from many quarters have been levelled at the functioning of the Accord, with critics arguing that the regulatory requirements are crude and do not correspond to actual levels of risk. The consequences of this, have been distortions and biases in the practices of the banking industry.

From a developing country perspective, the OECD/non-OECD distinction in risk-weights is crude, unfair and provides a distorting incentive for developing countries to seek OECD membership. Most importantly, the lower (20%) risk-weights attached to short-term loans for emerging markets created a bias in their favour whilst credit to non-OECD banks with over one year maturity was discouraged by a far higher (100%) risk weight. This contributed towards the 1997/8 Asian crisis wherein the devastating impact of rapidly reversible short-term lending was demonstrated.¹

From the perspective of the international banks (who, throughout the 1990s have devoted much effort to devising their own risk management systems) current regulations have created a disincentive to the holding of prime-quality loans. The Bank of England Quarterly Bulletin of Spring 2001 points out that for loans to all borrowers down to BBB the minimum requirements of 8% are higher than the equity capital that a bank would choose to hold. Consequently, banks have an incentive to hold a disproportionate quantity of poorer quality loans. Also of concern to the international banks has been the limited recognition of credit mitigation instruments in the calculation of capital requirements.

Although the criticisms of the 1988 Accord have come from more than one source, it seems that it is the pressure applied by the internationally active banks that have led to the proposals in the New Accord. As Moody's point out the, the New Accord is very much geared towards the small number of large internationally active banks.² Hence, the major thrust of the proposals aim to increase the risk-sensitivity of capital requirements and thereby more closely align these requirements with actual risks. To this end, a major proposal is to move towards ever-greater use of banks' own internal risk management systems.

However, although the focus of the proposals are aimed towards the needs of major banks from the G-10, it is likely that the New Accord, when implemented, will have significant, and broadly negative, repercussions for the developing world, both internationally and domestically.

Internationally, developing sovereigns, corporates and banks wishing to borrow in international markets will find the lending environment greatly worsened, as the major banks' lending patterns are significantly changed by the adoption of internal ratings based approaches. As we discuss below, the outcome of these changes is likely to be a significant reduction of bank lending to the developing world, and/or a sharp increase in the cost of international borrowing for much of the developing world. Greater use of banks' internal risk management systems seems likely to be inherently pro-cyclical and therefore likely to amplify the economic cycle, thus increasing frequency and scale of crises. As developing countries suffer disproportionately from financial crises - given the relatively small size of their economies *vis-à-vis* international capital flows, and the thinness of their markets - this is a cause for great concern.

Domestically, developing country banks will feel a direct effect on their competitive positions. Greater competition from internationally active banks could see banks from the developing world being taken over by foreign banks, at a pace even quicker than has occurred in recent years. This greater competition would be linked to the fact that the less sophisticated developing and transition country banks would tend to use

¹ See Griffith-Jones, S. and Cailloux, J. (1998).

² See "The New Basel Capital Accord: Towards a Safer Banking Landscape, but Smaller Banks Could be at a Disadvantage", Moody's Investor Service, Global Credit Research, Jan. 2001.

for a significant period, the standardised approach described below, which requires more capital, whilst the large international banks would be able to use the more advanced approach, which requires less capital. If developing and emerging banks attempt to switch to the more sophisticated approach (so as to avoid a higher capital requirement, that increases their costs), they will find it extremely complicated and demanding to do so, if not impossible in the medium term.³ As one of the most senior financial authorities in Europe recently said, "the jump to the more sophisticated approach, is too big and too rapid; will regulators and banks especially in emerging markets have the resources to be able to implement it?"⁴

Consequently, if greater competition produces 'consolidation' in the banking industry (with the dominance of the major internationally active banks increasing), and levels of lending to the developing world from these banks is reduced, then developing countries may suffer through less access to international capital. This negative impact would then be compounded if an amplified business cycle did indeed lead to larger scale crises.

It is ironic and particularly problematic that these proposals (which would imply less and more costly as well as more pro-cyclical lending to developing countries), have emerged at the same time as developing countries are being urged to make greater use of private capital flows to replace aid flows, which are in historical decline. It is essential, in this context, for further research to assess the likely impact of the New Accord prior to its agreement and implementation in 2004. To this end, this paper offers an early assessment of some of the most significant potential impacts. Section 1 will give a brief overview of the structure of the Accord; section 2 will examine the proposals under the standardised approach and assess the implications for developing countries; section 3 will look in some detail at the proposals to use external credit ratings; section 4 will examine the details and implications of the proposed use of banks' internal risk management systems and section 5 will conclude with an assessment of the potential overall impact of the proposals from the perspective of developing countries, and with some alternative proposals, from a developing country perspective.

1. The New Basel Accord

The proposed New Basle Capital Accord is to be built on three mutually reinforcing pillars:

1. Minimum capital requirements
2. Supervisory review process
3. Effective use of market discipline

1.1 Minimum capital requirements.

The new framework retains both the existing definition of capital and the minimum requirement of 8% of capital to risk-weighted assets. The major changes proposed are in the measurement of risk itself. Under the existing Accord, uniform risk-weights are assigned according to the type, and perceived riskiness, of the borrower. Therefore, corporates, sovereigns and banks each represent a category of borrower with distinct risk profiles. Also, within each category the risk-weights assigned vary according to membership or not of the OECD and the definition of the loan's maturity (i.e. short or long-term). Under the new proposals, the measurement of credit risk is more complex, with a spectrum of increasing sophistication available. The New Accord leaves the measurement of market risk unchanged and proposes a new framework for the measurement of operational risk.

The changes proposed to the measurement of credit risk have, arguably, the most far-reaching implications for both developed and developing countries alike. Consequently, it is this aspect of the New Accord that shall be focused on.⁵

³ Interviews in several emerging markets

⁴ Personal communication

⁵ Other interpretations have been drawn as to the relative significance of the three pillars. Deutsche Bank's Global Markets Research Division argue that, "In many ways, we believe that the most interesting and, in the long-run, potentially most significant proposals are contained in Pillars 2 and 3, concerning the supervisory process and market

1.2 Measurement of credit risk in the New Accord

The proposals in the New Accord envisage three possible approaches to the measurement of credit risk:

1. The Standardised Approach (this represents a modified version of the existing approach)
2. The Foundation Internal Ratings Based Approach.
3. The Advanced Internal Ratings Based Approach.

The Basle Committee assumes that, at least initially, the great majority of banks will operate under the standardised approach with only the most sophisticated of international banks employing the internal ratings based approach (IRB). However, it is also assumed that, over time, increasing numbers of banks will move to the IRB approach and, to advance this process, explicit and implicit incentives are embedded in the New Accord to the adoption of IRB approaches. Also, although a greater number of banks are expected to use the standardised approach, the major internationally active banks are more likely to be in position to adopt the IRB approach. Indeed, following recent consultations, the Basel Committee has concluded that a greater number of major banks will be in a position to adopt the IRB approach when the Accord is implemented.⁶

Developing country banks are liable to face increased competitive pressure from internationally active banks who have adopted the IRB approach and have further enhanced their existing competitive advantages through the use of more finely-tuned, and therefore lower, capital requirements. Indeed, in their comments on the New Accord, both Deutsche Bank's Global Markets Research Division and Moody's Global Credit Research Department argue that this impact is likely to lead to smaller banks being at a disadvantage, with further industry-wide consolidation being the ultimate result. 'Consolidation' in this sense means smaller banks being bought up, or put out of business, by major internationally active banks. In developing and transition countries, this may imply an accentuation of current trends towards a strong increase in the proportion of foreign banks' control of the banking industry. This is not only a problem for developing world banks. In the US for example, it is estimated that only 20 of the country's 9000 banks are likely to be in a position to adopt an IRB approach⁷ - thus consolidation may be seen both in the developed and developing worlds. Furthermore, institutions from the developing world wishing to borrow internationally are likely to face an environment where a significant and growing proportion of banks are operating an IRB approach.

This paper will first examine the impact of the changes proposed under the standardised approach, to assess the likely short-term impact upon developing countries, before examining the implications of the adoption of IRB Approaches by increasing numbers of banks.

2. The Standardised Approach to Credit Risk

Risk-weighted assets will continue to be calculated as the product of the amount of exposures and supervisory determined risk-weights. Weights will still be determined by category of borrower: sovereign, bank or corporate.

2.1 Major changes from 1998 Accord.

- The OECD/non-OECD distinction to be abandoned.
- Creditworthiness to be determined by external credit assessment institutions (ECAIs).
- 'Sovereign floor' to be abandoned. That is, banks and corporates may be assigned a higher rating than their sovereign.

discipline. In particular, we see the recommendations for better disclosure of credit exposure as a very positive step." *New Basle Capital Accord: Ambitious, complex, but few real surprises*, 17 Jan, 2001.

⁶ Deutsche Bank, op.cit takes a similar approach.

⁷ See Laurence H. Meyer (2001)

- The Committee no longer proposes adherence to the IMF's SDDS, the Basle Committee's Core Principles for Effective Banking Supervision or the IOSCO's 30 Objectives and Principles of Securities Regulation as *preconditions* for preferential risk-weights.⁸
- The range of 'risk-buckets' to be increased to reflect the greater differentiation of risk in corporate claims. Thus a 50% weight is added for single A rated assets and single B rated assets now attract a 150% weight.

2.2 Details of risk-weights

2.2.1 - Sovereign weights.

Table 1.

Sovereign creditworthiness	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Under B-
Risk-Weights	0%	20%	50%	100%	150%

Unrated sovereigns to be assigned a 100% risk-weight.

To contrast with the 1988 Accord, previously the only distinction relevant to sovereign risk-weights was membership, or not, of the OECD. Under this system OECD countries received a 0% weight whereas non-members received a 100% weight. It was widely felt that this crude distinction failed to differentiate between the very real differences in sovereign risk between both members and non-members of the OECD. Indeed, some have argued that this distinction contributed to make membership of the OECD an overriding goal of some middle-income countries encouraging them to implement the reforms needed for membership in an over-hasty fashion. A noted example is South Korea, which removed many controls on capital inflows in the mid-1990s partly to satisfy OECD entry requirements. (Griffith-Jones and Cirera, 2001)

2.2.2 - Bank weights.

Supervisors will be able to choose between two options in assigning risk-weights to banks in their jurisdiction:

1. Under the first option, all banks in a given country will assigned a weight one category less favourable than the sovereign's. A cap of 100% will be imposed except for banks in countries rated less than B- (in this instance a cap of 150% will operate)
2. Under the second option, the risk weights assigned to banks will be based on the assessment of ECAIs of the bank in question.

The proposed categories are:

Table 2.

External credit assessment of banks	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to B-	Below B-	Unrated
Risk Weights	20%	50%	50%	100%	150%	50%
Risk Weights for Short-term claims	20%	20%	20%	50%	150%	20%

As well as the greater differentiation between 'risk buckets', the New Accord differs from the 1988 Accord in its treatment of short-term claims. Under the existing system all claims on banks incorporated in the

⁸ Following the 1999 consultative paper published by the Basle Committee, many developing countries raised strong objections to this proposed requirement. The decision to abandon it, therefore, represents a positive development from their perspective.

OECD are assigned a 20% risk-weight. For banks in countries outside the OECD, the risk-weight is also 20% for claims of less than one year, but 100% for claims of greater duration. For many observers, this long/short-term distinction for non-OECD borrowers provided an incentive for banks to make short-term loans - this is supported by some evidence that the maturity of loans increases for new OECD entrants.⁹ Clearly short-term external debt was a major factor in the East Asian and other crises, indeed, Rodrik and Velasco (1999) establish econometrically that short-term debt to foreign exchange reserves was the single most important factor explaining currency crises.

The Committee decided, after consultation, to lower the threshold for the preferential treatment of short-term debt from six months (as proposed in the 1999 consultative paper) to three months. This decision reflects the fact that the upper maturity bound in the short-term inter bank market is 3 months. Table 2 highlights the fact that incentives towards short-term lending remain for banks rated between A+ and B-. However the incentive towards short-term lending is less than in the existing Accord, and is therefore a step in the right direction. Unfortunately, the incentive has certainly not been totally removed. As has been pointed out by Deutsche Bank, for example, the jump in risk weights from 20% to 50% between double-A and single-A bands may significantly overstate the increased probability of default, thereby creating a bias against long-term lending to banks rated below double-A. One possible solution to this problem would be to increase the number of 'risk buckets' so as to avoid providing significant regulatory biases towards particular types of lending.

2.2.3 - Corporate Weights

The proposed categorisation of corporate weights is as described in table 3.

Table 3.

Credit Assessment	AAA to AA-	A+ to A-	BBB+ to BB-	Below BB-	Unrated
Risk Weights	20%	50%	100%	150%	100%

Under the existing (1988) Accord claims on the private sector are assigned an 100% risk weight. The new proposals, therefore, allow a more accurate reflection of the actual risk associated with claims on the very different corporates in both the developed and the developing world.

- The Committee recognises the risk of adverse selection inherent in an environment where unrated corporates (and banks) are assigned a more favourable risk weight than low rated organisations. It is accepted that this might provide an incentive for banks and corporates to give up their rating, thus lowering the quality of the unrated sector. However, it was concluded that, as many banks and most corporations are able to raise funds without official rating, this does not necessarily imply poor quality. Therefore, the 100% risk weight for unrated organisations, is designed to avoid an unwarranted increase in costs of funding for small/medium businesses.

2.3 Implications of new risk weightings under the standardised approach

The removal of the OECD/non-OECD distinction is likely to have negative consequences for low rated OECD countries, such as Mexico, who will find that the conditions attached to loans more closely reflect their actual rating rather than the fact of their OECD membership. Conversely, highly rated non-OECD countries (such as Chile) should benefit from more favourable terms. The alterations to the current treatment of maturity should remove some, but not all, of the incentives towards short-term lending to banks rated below AA-, and thereby raise the aggregate maturity of such lending. Also, the removal of the sovereign floor will benefit highly rated banks and corporates in less highly rated countries. Overall, therefore, the proposals should, as envisaged, more closely align capital requirements with actual risk. This should be to the benefit of highly rated sovereigns, banks and corporates regardless of OECD membership - thus clearer incentives will exist towards the adoption of measures likely to improve the ratings of one's country or organisation, rather than a simple overriding incentive towards gaining OECD membership.

⁹ See Reisen (2000) and others.

In their commentary on the New Accord, Deutsche Bank's Global Market Research Division report contains attempts to model the likely impact of the proposed reforms on credit spreads. Specifically, they see the proposals as being positive for spreads on corporates rated single-A or higher, neutral for senior bank paper in the double-A category and slightly negative for single-A and triple-B senior bank paper. Their model predicts that spreads on investment grade corporates could tighten by 7bp and that spreads on single-A banks could widen by 5bp.

To conclude, it would seem that many of the criticisms made by developing countries of the existing Accord have been addressed in the standardised approach. The removal of the OECD distinction should be widely welcomed, as should the reduction of the incentives towards short-term lending. In general terms the moves to make capital requirements more closely aligned to actual risk is a positive move, although, as we shall see in section 4, criticisms have also been made in this area.

One aspect of the proposals that may prove crucial in determining the real-world consequences of the New Accord is the introduction of external credit assessment institutions in determining creditworthiness. The Basle Committee proposes that the ratings of private sector agencies could be supplemented with those produced by national export credit agencies. This is a reflection of comments on the earlier consultative paper. Many commentators have highlighted the fact the private-sector ratings agencies' performance in financial crises is often rather poor. For example, in the period immediately before the Asian crisis, the ratings assigned to those countries that would be the most severely affected by the crisis remained very high - reflecting a failure to take account of the observable problems that had developed in the various national economies, and a susceptibility by ratings agencies to 'euphoric feelings' similar to that displayed by the financial markets. Also, the decision to dramatically downgrade many East and Southeast Asian countries in the middle of the crisis had the effect of prompting further sell-offs and exacerbating the impact of the crisis. Recent research¹⁰ has supported the view that private sovereign ratings are inherently pro-cyclical. As ratings agencies have difficulty acquiring an information advantage in relation to sovereigns, they tend to lag rather than lead the markets, thus reinforcing the boom-bust cycle (this is less of a problem with corporate ratings where the agencies may have access to private information). Finally, ratings for low-rated borrowers have been shown to have a low degree of durability, suggesting that either a) the economic circumstances of low-rated borrowers change frequently, or b) the ratings agencies do not always employ rigorous and consistent criteria to their assessments of such borrowers. Taking account of such views, the Basel Committee proposes to supplement the use of private agencies for sovereign ratings with national ECAs. Section 3 will therefore examine these proposals and assess the likely implications for developing countries.

3. Proposals for the use of Export Credit Agencies' (ECAs) ratings for sovereign borrowers.

Within the Standardised Approach risk-weights can be assigned by export credit assessment institutions (ECAIs). ECAIs must be recognised by national supervisors based on the following eligibility criteria:

1. Objectivity - "The methodology for assigning credit assessments must be rigorous, systematic, and subject to some form of validation based on historical experience." Also, before recognition, an assessment methodology must have been established for one year, and preferably for three.
2. Independence - ECAIs not to be subject to political or economic pressure.
3. International Access/Transparency - assessments should be freely available as should the methodology used.
4. Disclosure - ECAIs to disclose qualitative and quantitative information. The aim is to establish broad comparability of assessments and prevent banks from 'cherry picking' the most favourable rating.
5. Resources - ECAIs should have sufficient resources to carry out high-quality credit assessments.
6. Credibility - Will, in part, be derived from 1-5, above.¹¹

¹⁰ Reisen (2000)

¹¹ Interestingly, "In order to be eligible for recognition, an ECAI does not have to assess firms in more than one country." (p.16)

The Basel Committee, in seeking to address the concern over the use of private credit rating agencies, has suggested the possibility of allowing the use of sovereign ratings produced by the various national ECAs to supplement those of private agencies. One major advantage of this proposal, in the view of the Committee, is that ECA scores are available for a larger number of sovereigns than are private assessments. This could favour developing countries not rated by private rating agencies, but rated by ECAs, provided the latter rate them accurately; unfortunately, there are some concerns about the quality and independence of the ratings of several ECAs (see Annexes 1 and 2 for some of the problems of ECA ratings).

It is envisaged that the seven categories used by ECAs will correspond to risk-weights as detailed in table 4, below.

Table 4.

ECA Risk Scores	1	2	3	4 to 6	7
Risk Weights	0%	20%	50%	100%	150%

One of the primary functions of ECAs is to insure the country risk attached to the provision of export credit to foreign buyers. In 1999 the OECD produced a methodology for the guidance of national ECAs. This methodology set out the method for setting benchmarks for minimum export insurance premiums for country risk and is based on an econometric model of three groups of quantitative indicators: payment experience of a country; financial indicators such as debt-GDP and reserves-imports ratios; and indicators such as inflation and economic growth. The New Accord proposes that supervisors may recognise the country risk scores assigned to sovereigns by ECAs that subscribe to the OECD's methodology. This methodology is examined in Annex 1. As an example, the UK's ECA (the ECGD) is examined in Annex 2.

The proposed use of ECA ratings to supplement private agencies' assessments of sovereign risk is an attempt to address concerns over the use of private ratings agencies. However, this concern, at least in part, resulted from the inability of private rating agencies to spot the warning signs of looming crisis and adjust their ratings accordingly. However, as highlighted in Annex 2, the ECGD has been criticised for exactly the same problem. Thus, it may be that the 'pro-cyclical' criticism levelled at the private ratings agencies can also be levelled at ECAs - this is likely to be increasingly the case if greater numbers of ECAs move towards best commercial practice.

In their report on the ECGD, KPMG recommended that it should move further in the direction of best private sector practice.¹² This recommendation has been enthusiastically accepted by the DTI.¹³

Also, if the proposals in the New Accord to use ECA country risk scores are implemented, the proviso that ECAs must subscribe to the OECD methodology seems likely to further increase the number of ECAs that do. As one of the more sophisticated ECAs, the UK's ECGD may represent something of a vanguard in its enthusiasm to move towards a more 'cutting-edge' private sector approach. Indeed, the Department's explicit aim is to encourage other ECAs to follow its lead: "ECGD should continue to press multilaterally for ECAs to adopt risk management systems and policies based on best commercial practice". (p.8)

Thus, it would seem likely that, over time, the use of such risk management models is likely to become more widespread. This is true on two fronts. First, the proposals to use the country risk weights assigned by national ECAs, wherein the trend seems to be towards adoption of best private sector practice. Second, and perhaps more importantly in the medium to long-term, the move towards using the internal ratings models of private banks. To assess the likely impact of these developments, the Basel Committee's proposals *vis-à-vis* IRB approaches will first be outlined and then evaluated in the light of recent research and historical experience.

¹² See 'ECDG Risk Management Review' KPMG (1999)

¹³ See 'Review of ECGD's Mission and Status, July 2000

4. Proposals for the use of IRB approaches in the assessment of Credit Risk.

4.1 Background

The Committee's aim in the formulation of its proposals is to:

....develop an approach to regulatory capital that more accurately reflects a bank's individual risk profile...The Committee envisions an expanded role for the IRB approach in the New Accord... The Committee expects internationally active banks involved in complex risk transfers and those with an above-average risk profile to take steps to be in a position to use the IRB approach.¹⁴

Therefore, given the efficiency savings available to banks who adopt an IRB approach, and the incentives contained within the proposals for banks to move towards such an approach, it is important to assess the likely impact of these developments.

4.2 Outline of the IRB approach proposed in the New Accord

The IRB approach proposed has a similar framework for the treatment of corporate, bank and sovereign exposures, with a separate framework envisaged for retail, project finance and equity exposure. Within each category there are three main elements:

1. Risk Component - where a bank may use either its own or standardised supervisory estimates.
2. Risk-weight function - wherein risk components are converted into risk-weights to be used by banks in the calculation of risk-weighted assets.
3. Minimum requirements - that must be met for a bank to be eligible for IRB

The minimum requirements are as follows:

- Meaningful differentiation of credit risk
- Completeness and integrity of rating assignment
- Oversight of the rating system and processes
- Criteria of rating system
- Estimation of PD (probability of default)
- Data collection and IT systems
- Use of internal ratings
- Internal validation
- Disclosure (requirements set out in paper under Pillar 3)

From the perspective of the Basel Committee, these minimum requirements are essential to enable a bank's internal estimates to be relied upon. Banks, therefore, should view adherence to these standards as an investment that is needed to allow them to avail themselves of the greater risk sensitivity of the IRB approach. Adherence to these standards will require some banks to upgrade their risk management systems; the New Accord proposes that they begin this process now.¹⁵ Several developing and transition countries' banks and regulators find the changes proposed "dramatic" and implementation by them "very complicated and demanding, if not impossible in the medium term."¹⁶

¹⁴ 'Overview of The New Basel Capital Accord', p.17.

¹⁵ By urging banks to begin upgrading their in-house systems at this stage the Basel Committee are, to some extent, calling into question the 'consultative' nature of the proposed New Accord - i.e. if it was likely that major changes would be made in the light of comments received, there would be little point in banks altering their risk management systems now. Consequently, it seems reasonable to assume that the general and specific proposals to move towards an IRB approach to risk management are unlikely to change significantly in the light of comments made. See 'Overview of the New Basel Capital Accord', P17, para. 97.

¹⁶ Interview material

4.3 Proposed IRB treatment for the six exposure classes:

4.3.1 *Corporate, Sovereign and Bank Exposures.* Banks' internal measurement of credit risk rests on assessments of borrower and transaction risk. The majority of banks assign a borrower to a particular rating grade based on the likelihood of default. The bank then estimates the probability of default (PD) for borrowers in each grade - i.e. the PD estimates for each grade can be seen as the long-run average for borrowers in that particular grade.

As well as the PD, banks also calculate the amount they would stand to lose if default occurred. This calculation has two components. First, the loss given the default (LGD) represents the expected loss as a percentage of the exposure (what proportion of the exposure will be recovered). Second, the exposure at default (EAD) is determined by the banks' exposure to the borrower at the time of default.

Research prior to the publication of the New Accord has suggested that many banks are able to produce robust measures of PD. However, it was observed that fewer banks were able to produce reliable LGD estimates. Consequently, the New Accord proposes two stages to IRB: In the first 'foundation' approach, LGD values are to be set by supervisory rules; in the advanced approach, however, banks will be able to set their own LGD estimates for each exposure. Under the foundation approach, collateral, guarantees and credit derivatives (credit risk mitigation factors) will be treated broadly as under the standardised approach to credit risk. Under the advanced IRB approach a wider range of eligible collateral instruments are available and, for guarantees and credit derivatives, the internal grade assigned to the guarantor, and the consequent PD, is adjusted by the bank to take the guarantee into account.

Risk-weighting under the IRB approach is expressed as a continuous function of the PD, LGD, and - tentatively - the maturity of the exposure (see Annex 3 for the tentative proposals concerning maturity). These components are then translated into regulatory risk-weights, however, unlike the existing Accord and proposed new Standardised Approach, there is no reliance on supervisory determined risk weight buckets. Instead, allowance is made for greater differentiation of risk that utilises the ratings structures of banks.

4.3.2 *Retail exposures.* A distinct approach to retail exposures is proposed that attempts to capture the specific risks associated with portfolios that contain a large number of low value loans with either a business or consumer focus and where the risk on any single exposure is low. The IRB approach proposed for retail exposures builds on the industry practice of differentiating risk in a different way for corporate and retail exposures; in the latter the use of borrower ratings in a fixed rating scale is less common.

4.3.3 *Project Finance Exposures.* Again, a separate treatment of project finance is deemed warranted as, specifically, the relationship between expected and unexpected losses differ from standard corporate exposure. The Committee therefore intends to continue work in this area before bringing forward detailed proposals.

4.3.4 *Equity Exposures*

"The Committee wishes to develop more risk sensitive approaches for equity positions held in the banking book and to remove the possibility that banks could incur a lower capital charge as a consequence of holding the equity of an obligor rather than its debt." (p. 22)

The Committee believes that, due to the complexity of the issues, it may be necessary to develop more than one approach to equity capital requirements. Two general approaches have been identified at this stage:

- First, a PD/LGD approach similar to that used for corporate debt.
- Second, a methodology based on market risk or stress testing.

Further work is to be done in this area. Again inputs from the industry are requested.

4.4 Implications for developing countries of increased use of IRB approaches

We have seen how some of the most significant changes proposed under the New Accord relate to the greater use of banks' internal risk management systems. The rationale behind these moves is that greater sensitivity to the measurement of actual risk will enable banks to more accurately price and provision for risk. This would enable the banking system to function more efficiently and reduce perverse incentives created by the crude distinctions contained in the existing Accord. The result, it is hoped, is for a sounder, more efficient banking system that functions better for the benefit of all concerned. However, this is not the only way of viewing the proposed changes. Moves to greater risk sensitivity could have problematic systemic consequences, especially via their impact on the stability of the financial system and its consequent propensity towards crisis. Given that incentives are built into the New Accord to encourage banks to move towards IRB approaches, as well as the competitive advantage that banks employing these approaches will enjoy, it would seem highly likely that IRB approaches will come to dominate in the banking sector.

For developing and transition economies, there are major sources of concern, given that implementing IRB could significantly decrease bank lending to them, and/or increase its cost, and accentuate pro-cyclicality. It seems probable that one impact of the New Accord will be an increase in the quantity of loans to borrowers rated above BBB and a fall in loans to borrowers rated below BBB. Given that the majority of such borrowers are likely to be in the developed world, one major impact on the developing world will be a reduction in overall levels of lending from internationally active banks. What lending does occur is therefore likely to be concentrated in highly rated sovereigns, corporates and banks. Patricia Jackson of the Bank of England's Financial Industry and Regulation Division puts it thus:

For any bank, the effect of the internal ratings approach on required capital will depend on the risk profile of its particular book - high risk books will demand more capital than currently and low risk books less¹⁷

The table below compares the capital requirements under the current Accord, the standardised approach and the IRB foundation approach for unsecured corporate exposures. From the table it can be clearly seen that adoption of the IRB foundation approach would reduce the capital requirements for loans to borrowers rated BBB or above. Conversely, for borrowers rated below this, capital requirements will be significantly higher; the capital required under the IRB approach increases sharply as ratings fall. The consequence of this, therefore, is likely to be a greater concentration of lending to high-quality, low-risk borrowers. This effect is this extreme because the Basle Committee proposes a strongly exponential, rather than a linear, rise of risk weightings along the spectrum of probability of default.¹⁸ Thus, once ratings fall below BBB the capital requirements increase sharply, implying that for the lowest rated borrowers the cost of loans from banks operating an IRB approach is likely to be prohibitively high.

Corporate Borrowers

Table 5.

	Probability of Default (PD)	Current Capital	Standard Approach	IRB Foundation
AAA	0.03	8	1.6	1.13
AA	0.03	8	1.6	1.13
A	0.03	8	4.0	1.13
BBB	0.20	8	8.0	3.61
BB	1.40	8	8.0	12.35
B	6.60	8	12.0	30.96
CCC	15.00	8	12.0	47.04

Source: Bank of England's Spring Quarterly Bulletin, 2001.

¹⁷ See the Bank of England's Quarterly Bulletin, Spring 2001.

¹⁸ Reisen (2001)

Recent research by Helmut Reisen¹⁹, which uses a methodology developed by Deutsche Bank, indicates that adoption of the IRB approach as currently proposed could result in speculative grade borrowers (BBB- or lower) being effectively excluded from international bank lending. (the median sovereign rating for non-OECD countries in 2001 was BB, with 31 of the 53 rated non-OECD countries being rated below BBB-). Table 6 below gives some estimates of the likely impact of the New Accord on sovereigns. We can see that the proposed changes will be neutral or broadly positive for sovereigns rated triple-B or higher. However, for sovereigns rated below that, the situation is very problematic. For example, for sovereigns such as Brazil and India, rated double-B, under the current Accord, each \$100 lent requires \$8 capital requirement. Under the new standardised approach this would be unchanged, however, under the IRB approach it can be seen that the capital required for the same \$100 would rise to \$30.3 and spreads would have to increase by more than a thousand bp. Even more dramatically, for countries such as Argentina and Pakistan, rated at single-B, spreads would have to increase by 3709 bp. under the IRB approach to produce an equivalent level of risk adjusted return as under the existing Accord..

Sovereign Borrowers

Table 6.

Table 6.				
Double-A (OECD)				
	Risk Weight	Capital required per \$100	Breakeven Spread Change bp.*	Examples of Countries in Category
Current	0	0	-	Belgium Canada Italy
Standardised	0	0	-	
IRB approach	7	0.6	+3	
Triple-B (non-OECD)				
Current	100	8.0	-	China Korea Egypt
Standardised	50	4.0	-50	
IRB approach	40	3.2	-60	
Double-B (non-OECD)				
Current	100	8.0	-	Brazil Colombia India
Standardised	100	8.0	-	
IRB approach	379	30.3	+1115	
Single-B (non-OECD)				
Current	100	8.0	-	Argentina Jamaica Pakistan
Standardised	100	8.0	-	
IRB approach	630	50.4	+3709	

Source: Reisen (2001) and Standard and Poor's Sovereign ratings 18 May 2001.

- Indicates the spread movement required to produce the risk adjusted return achieved under the current Accord.

The implications of this are clear: large parts of the developing world will no longer be able to access international bank lending on terms likely to be acceptable. The impact of this is likely to be felt most severely in the lowest rated, countries - the very countries in most need of such access.

In reality it is likely that the actual impact upon spreads will be lower than that predicted above. The main reason is that non-bank investors form a significant part of investor base and they are indifferent to risk-weights. However, even if these predictions overestimate the likely impact, they still point towards a significant deterioration in the terms under which sovereigns rated below triple-B are able to access international bank lending. The consequence is therefore likely to be a reduction in bank lending to the developing world.

Another possible, related consequence is the development of two distinct types of banking, each with a different approach to risk. A paper produced by the Banque Nationale Suisse²⁰ argues that the coexistence

¹⁹ Reisen, Op. Cit.

²⁰ Rime, B. (2000)

of the standardised and IRB approaches will encourage sophisticated banks to decrease risk taking (as the incentive towards holding poor quality loans will be removed), but provide incentives for less sophisticated banks (operating under the standardised approach) to increase risk-taking. The author voices concern, from a prudential perspective, about the impact of banks with the lowest credit risk expertise being disproportionately involved in making loans to high-risk borrowers. These findings would imply that as the major international banks reduce their exposure to the developing world (or at least the riskier parts), they may be replaced by less sophisticated banks who, still operating under the standardised approach, retain an incentive - albeit reduced - towards holding lower quality loans. Historical experience, however, would suggest that it is primarily the larger banks who engage in international lending, with smaller banks sometimes following their lead. Consequently, it is in no way clear that as the major banks reduce their lending to developing countries, smaller banks will step in to 'fill the gap'. The alternative, worrying, scenario is that the gap is not filled, private capital flows to the developing world decline significantly and developmental prospects are therefore damaged.

4.5 General criticisms of increased risk sensitivity in risk management.

One of the most significant charges levelled at the new proposals is that they will exacerbate pro-cyclical tendencies within the banking system. As Ed Crooks, the Economic Editor of the Financial Times, puts it:

*...the effect of the capital requirements could be to encourage banks to lend more in the good times and discourage them from lending in hard times. That in turn could mean that economic cycles are more severe: the peaks of the booms will be higher, because credit is easy, and the troughs of the busts lower, because no one can borrow.*²¹

It is accepted that the existing Accord contains pro-cyclical elements and the fear is that greater risk sensitivity will increase this tendency. The drive for risk-weights to more accurately reflect PD is inherently pro-cyclical in that, during an upturn, average PD will fall - and thus incentives to lend will increase. Conversely, during a downturn, average PD will increase (due to more difficult economic circumstances) and, in consequence, a credit crunch may develop with all but the most highly rated borrowers having difficulty attracting funds.

The Basel Committee has recognised this concern, but argues as follows:

*The Committee has also considered the argument that a more risk-sensitive framework has the potential to amplify business cycles. The Committee believes that the benefits of a risk-sensitive capital framework outweigh this concern.*²²

The view that greater risk sensitivity may have pro-cyclical results is not, therefore, disputed by the Basel Committee. Rather, it is argued that the benefits will outweigh the costs. The Governor of the Federal Reserve Bank of Chicago explained the nature of the trade-off as follows, in 1999:

*The problem with market discipline and risk-based capital is that they work. If and as they do work, we may well observe what the critics note (i.e. increased pro-cyclicality). But that short-run effect has to be evaluated against the long run, and a judgement reached about the terms of the tradeoff. For in the long run, both market discipline and risk-based capital charges affect ex ante risk appetites because lenders can calculate the likely impact of their actions. The resultant change in behavior should reduce the amplitude of cycles, and any resultant pro-cyclicality has to be evaluated against that backdrop.*²³

However, as is the case with much of the New Accord, the trade-offs in terms of costs and benefits are viewed in terms of their impact on the major banks. For the developing world, it is likely that they will feel

²¹ See 'Basle makes life tougher on regulators of credit risk', FT, 17/01/01, p. 10.

²² Overview of the New Basel Capital Accord, p.8, para. 40.

²³ Remarks before the International Finance Conference, Federal Reserve Bank of Chicago, Illinois, October 1st 1999.

the costs disproportionately (reduced lending coupled with increased scale of crises) while simultaneously attracting none of the benefits.

4.5.1 Pro-Cyclicality

Opinions on the seriousness of an amplified business cycle are likely to be coloured by views as to the causes of financial crises.

Early theorists, such as Irving Fisher, emphasised crises as integral parts of the business cycle, often operating as a 'trigger' whereby an upswing becomes a downturn. Fisher (1933) saw the crucial factor as the level of debt in the economy. Fisher argued that upswings in the economy, instigated by some exogenous event, encouraged increasing levels of indebtedness as greater investment opportunities emerged. Higher levels of investment are financed through higher levels of debt which also funds the growth of speculation in asset markets. The increase in borrowing raises the money supply and therefore the rate of inflation. At a crucial point a crisis is provoked when the level of debt becomes 'overindebtedness' and borrowers are no longer able to meet their liabilities. To overcome this problem 'distress selling' occurs where borrowers liquidate their assets in an attempt to meet the demands of creditors. If selling of this kind is widespread enough the previous inflation becomes deflation and the cycle reverses itself. Falling prices cause the level of outstanding debt to increase and, as the value of collateral falls with the price level, creditors call in loans; fears of bank insolvencies trigger off bank runs. This process continues, economic activity declines and unemployment rises. Ultimately, bankruptcies rectify the excessive levels of debt and recovery can begin.

Since Fisher's work, others have developed his views. A notable school to emerge from this strand of the literature is the 'Financial Fragility School' of Minsky, Kindleberger *et al.* Like Fisher, these economists viewed financial crises as inherent in the normal cyclical functioning of the financial system and not anomalous events.

Recent work has criticised the pro-cyclical nature of the existing Basel Accord and argued for reforms to introduce anti-cyclical elements into the regulatory framework.²⁴ The pro-cyclical aspects of regulation contribute towards fuelling the 'boom' that often precedes a crisis and, consequently, the introduction of anti-cyclical components would serve to smooth the business cycle rather than accentuate it. From this perspective, therefore, it would seem reasonable to assume that an amplified business cycle will result in amplified financial crises, the consequences of which could be severe.

It is therefore a source of serious concern that the IRB approach is likely to increase further pro-cyclicalities of lending, especially to speculative-grade developing countries, and therefore their vulnerability to developmentally costly currency crises. (There is always a small but non-trivial risk that currency crises in emerging markets could spill over to broader crises that could affect the developed world, and even the global economy). The concern with pro-cyclicalities - and therefore volatility - especially for the IRB approach relates to the rigidity of the 8% minimum capital ratio throughout the cycle, the cyclical nature of the PD (probability of default), which determines capital requirements in the IRB approach and the continued (though reduced) incentives for short-term inter-bank lending.²⁵ We now examine more specifically the characteristics of bank risk management systems, as seen by a well respected expert from the banking industry, Avinash Persaud.

4.6 Specific critique of the increased use of banks' internal risk management systems

Persaud (2000) argues that, whilst many believe that more market sensitive risk management and stronger prudential standards, are insufficient as a response to the increase in scale and frequency of crises in recent decades, few doubt the validity of these measures on their own terms. He suggests that reasons exist to doubt the wisdom of this widely accepted view. For Persaud, the rationale behind these measures is that they will better equip markets to reward 'good' behaviour and punish 'bad' behaviour. However, he argues,

²⁴ See Ocampo (2000) and Griffith-Jones and Ocampo (2000)

²⁵ See also Reisen (2001)

evidence exists to suggest that, whilst in the long run markets are discerning in this sense, in the short-run they seem unable to distinguish between good and bad; i.e. market participants herd and contagion is a common occurrence.

Persaud goes further, arguing that, in a herding environment, tighter market-sensitive risk management systems may serve to increase instability, rather than to reduce it as assumed in the New Accord; thus this measure might result in an increase, and not a reduction, in the incidence of crisis. The trend among market participants, reflected in the New Basel proposals, is to move away from discretionary judgements about risk towards a more quantitative, market-sensitive approach. Increasingly banks manage market risk by setting a daily earnings at risk limit (DEAR). This mechanism addresses the question, 'how much can I lose with a 1% probability over the next day?' The answer is arrived at by taking the bank's portfolio of positions and estimating the future distribution of daily returns based on past measures of market correlation and volatility. Therefore, increasing volatility and/or correlation will cause the potential loss to rise, and *vice versa*. When DEAR exceeds the limit set, the bank moves to reduce exposure, often by switching into less volatile and less correlated assets.

A not unlikely scenario is then envisaged: *Imagine that over time a herd of banks has acquired stocks in two risky assets that have few fundamental connections, say, Korean property and U.K. technology stocks. Imagine too that some bad news causes volatility in U.K. technology stocks and the banks most heavily invested there find that their DEAR limits are hit. As these banks try to reduce their DEAR by selling the same stocks (Korean property and U.K. technology) at the same time, there are dramatic declines in prices, rises in volatility in both markets, and rises in the correlation between Korean and U.K. markets. Rising volatility and correlation trigger the DEAR limits of banks less heavily invested in other markets. As they join the selling milieu, volatility, correlation and contagion rise.*(p.5)

He concludes that: *The paradox is that if one or two banks followed a DEAR limit and others did not, those banks would have an effective risk management system that at the margin would support the financial system. But if every bank were to follow the same approach, given that these banks follow each other into and out of markets, the DEAR limit would contribute to systemic risk. It is ironic, therefore, that the Basel Committee on Banking Supervision is supporting the rapid adoption of these systems across all banks and encouraging investors to follow suit.* (p.10)

5. Concluding remarks

This paper has attempted to evaluate those aspects of the New Basel Capital Accord that are likely to have the most impact upon developing countries. In conclusion, the main points to have emerged are as follows:

5.1 The Standardised Approach

Within this framework a number of proposals are contained that will alter the environment in which less sophisticated banks lend to developing countries. These proposals will also impact upon the practices of banks from developing countries, as they are less likely to be in a position to adopt the IRB approach in the first instance.

Major points:

- Changes in the Standardised Approach to credit risk should reduce some, but not all, of the incentives towards short-term lending.
- The removal of the crude OECD/non-OECD distinction is to the benefit of most developing countries - particularly to highly rated banks and corporates within those countries.
- Highly rated non-OECD sovereigns should benefit through access to lending on more favourable terms. Conversely, low-rated OECD sovereigns will feel a negative impact.
- Highly rated banks and corporates in lower rated countries should benefit from the removal of the sovereign floor, allowing them to attract funds on terms that more closely reflect their creditworthiness.

- The use of external assessment of creditworthiness will most probably introduce a pro-cyclical element into the ratings. This is particularly likely to be the case with the private ratings agencies.
- The issue of the proposal to use ECA scores of sovereign risk weights, as a supplement to private ratings agencies, is complex. It would appear that these agencies suffer from a similar pro-cyclical bias as do the private agencies. Also, differences between the approach of the ECAs and the private sector agencies may well diminish in the future as increasing use is made of the same 'cutting edge' risk management systems. However, whilst there may be a process of convergence happening in this area, it is by no means clear that, as things stand, ECAs from different countries will employ a uniform approach - there may be non-economic factors influencing national ECA ratings, which are not relevant for this purpose.

In total, the proposals contained in the standardised approach address many of the concerns expressed by developing countries about the existing Accord and should be cautiously welcomed as a step in the right direction. However, the overall impact of the New Accord on the developing world cannot be assessed without consideration of the adoption of IRB approaches.

5.2 The Internal Ratings Based Approach

From a developing country perspective it may well be that the proposals to move towards an IRB approach prove to have the greatest lasting impact. The fact that banks who are in a position to adopt this approach will be at a competitive advantage, and that these banks are likely to be the ones in the strongest competitive position anyway, implies two possible scenarios. First, that the large banks who are able to adopt an IRB approach early reinforce and strengthen their market positions and either drive competitors out of business or are able to take them over. The second scenario is that large numbers of banks are able to move to an IRB framework early enough to prevent the first scenario occurring. Either way, the result will be a banking industry dominated by banks employing IRB approaches. This is likely to lead to a reduction in lending to developing countries from the major international banks, as the incentive to hold poor quality loans will be sharply reduced. The consequences of a reduction in lending to those poorer countries most in need of funds could be severe. An additional potential impact comes from the systemic impact of widespread adoption of IRB approaches, which could increase pro-cyclicality of lending to developing countries, and thus increase likelihood of crises.

Major points:

- Banks from developing countries are likely to be put at a further competitive disadvantage vis-à-vis large, internationally active banks from the industrialised world. Thus, in time the impact of changes to the practices of smaller banks, as contained in the standardised approach, may be overtaken by events as these banks are replaced in both international and domestic markets by the more competitive banks employing an IRB approach. Thus the current situation in the Czech Republic, where 90% of the banking industry is foreign owned, might become the norm in the developing world. Therefore, this industry-wide consolidation is likely to result in a small number of large banks from the industrialised world dominating the industry
- Banks employing an IRB approach will alter their lending behaviour as they will no longer have an incentive to hold poor quality loans. This would serve to reduce the lending to developing countries by major international banks. The two potential outcomes of this are a) less sophisticated banks make up the shortfall (thus increasing the impact of the standardised approach), or b) most likely the 'gap' is not filled and developing countries experience a drop in overall lending.
- Future widespread adoption of IRB approaches may serve to amplify the business cycle. This effect may well increase the frequency and scale of crises.
- Widespread use of similar risk-management systems may further increase systemic instability and the likelihood of crises.

5.3 Recommendations

The proposals contained in the New Basel Accord are exhaustive and highly detailed. This paper does not presume to offer an alternative framework, merely to point out some possible consequences for developing countries of adoption of the New Accord. We also make some specific suggestions that would reduce the likely negative effects on developing countries.

Whilst the proposals contained in the standardised approach are *broadly* to be welcomed, in that they address many (though not all) of the concerns expressed in developing countries about the existing Accord, the introduction of IRB approaches has very problematic effects. It is likely that the widespread adoption of IRB approaches by the major international banks will ensure that the impact of the standardised approach cannot be assessed independently. If, as it seems highly likely, the negative impacts of the IRB approaches outweigh the positive impacts of the standardised approach, from a developing country perspective, then the New Accord will merely serve to give with one hand only to take (more) with the other. However, the systemic implications of greater risk sensitivity in lending patterns are likely to impact upon developed and developing countries alike - although more so on the latter given the smaller size of their economies *vis-à-vis* international capital flows.

The proposals in the New Accord - particularly those related to the IRB approach - would seem to be driven largely by the wishes of the major international banks. However, it is not clear that what is good for these banks is necessarily good for the stability of the international financial system in general nor the developing world in particular. It seems clear that successful implementation of the IRB approach would require significant improvements in risk management systems. Early adoption is likely to have significant consequences and further research is clearly required prior to implementation.

As an alternative the improvements contained within the standardised approach could be developed to further reduce, if not eliminate, incentives towards short-term lending, and the number of risk buckets expanded to reduce regulatory biases towards lending to certain categories of borrower. One aspect of the standardised approach that has attracted much attention is the proposal to use external credit rating institutions to assign ratings. Objections have been raised to the use of private agencies because of the potentially pro-cyclical implications and, as we saw, the same criticism can be levelled at national export credit agencies. However, the principle of objective, external credit ratings is surely a sensible one. Given that international financial stability can be viewed as a public good, there is a strong argument for having a public element involved in credit rating. Of the major international financial institutions, the BIS has the best track record in terms of spotting potential crises as well as having financial stability as its' main objective, and would be well placed to fulfil this role.

Our recommendations can be summarised as follows.

- Particularly from the perspective of developing countries - but also due to systemic concerns - there may be a case for postponing introduction of the IRB approach, till its impact is even more thoroughly researched and discussed. If that is not possible, there may be a strong case for at least slowing the pace of introduction of the new Accord (e.g. to 2008).
- One particular area of concern is the proposal to adopt an exponential rise in risk weightings along the spectrum of higher probability of default, rather than a linear rise. The impact of this proposal, as described in section 4.4, would be to increase the costs of borrowing for low rated sovereigns, banks and corporates to the extent that they are effectively cut off from international bank lending. We therefore propose that, if the IRB is to be implemented the probability of default should grow on a linear and not exponential scale so as to mitigate this impact.
- We propose a further development of the standardised approach to address remaining issues of concern:
 - a) reduce further or eliminate remaining incentives towards short-term lending;
 - b) expand number of risk buckets so as to avoid the regulatory distortions associated with jumps between buckets;

- c) introduce public element into external ratings to avoid the pro-cyclical problems associated with private sector ratings agencies and ECAs. It is proposed that the BIS is best placed to fulfil this role.

The complexity of modern financial markets has led some (including perhaps the Basel Committee) to conclude that effective external regulation is neither feasible nor desirable. This is one of the factors behind the moves towards an IRB approach, with greater emphasis on market discipline. However, it could also be argued that this very complexity increases the need for external regulation, which could provide points of reference in an otherwise ever changing environment.

To conclude, it is probable that, given the complexity of the proposed changes their full impact will not be known until after implementation. However, the probability that the effects could be negative - particularly for developing countries - is high, and further research is clearly required prior to the scheduled implementation in 2004

Annex 1

OECD Methodology for Export Credit Agencies.

Entitled "*The Knaepen Package: Guiding Principles for Setting Premium Fees under the Arrangement on Guidelines for Officially Supported Export Credits*", the OECD paper's stated aim is to:

...seek convergence on the pricing of officially supported medium and long term export credits by means of Guiding Principles for setting premium fees. The Premium Guiding Principles have been established with the perspective of the exporter in mind. This means that the Guiding Principles are designed to provide a level playing field with regard to the cost of official support for exporters from OECD member countries
...²⁶

One aspect of this attempt to 'establish a level playing field' is the development of a standardised system for assessing country credit risk with countries classified into one of seven categories. The country risk classification method has the following components:

- Measurement of the country credit risk, i.e. the likelihood that a country will service its external debt.
- The use of an econometric model based on quantitative indicators such as the financial and economic situation and the payment record of the country.
- The use of qualitative elements, such as political and less directly measurable financial factors, that fall outside the scope of the econometric model.
- The quantitative and qualitative factors considered are then combined to produce an overall risk score which results in the country being classified into one of seven risk categories.

The Knaepen Package lists five elements to be taken into account in the assessment of credit risk:

1. General moratorium of repayments decreed by the buyer's/borrower's/guarantor's government or by that agency or a country through which repayment is effected;
2. Political events and/or economic difficulties arising outside the country of the notifying Participant which prevent or delay the transfer of funds paid over in respect of the credit;
3. Legal provisions adopted in the buyer's/borrower's country declaring repayments made in local currency to be a valid discharge of the debt, notwithstanding that, as a result of fluctuations in exchange rates, such repayments, when converted into the currency of the credit, no longer cover the amount of the debt at the date of the transfer of funds;
4. Any other measure or decision of the government of a foreign country which prevents repayment under a credit;
5. Cases of force majeure occurring outside the country of the notifying participant, i.e. war, expropriation, revolution, riot, civil disturbances, cyclones, floods, earthquakes, eruptions, tidal waves and nuclear accidents (p.3)

The insistence in the New Accord that, in order to be recognised, ECAs must subscribe to the OECD methodology introduces an element of consistency into the system. However, as the risk scores that result will be a combination of standardised quantitative systems and inherently subjective qualitative judgements, there is still a high probability of the risk score produced for a particular country being different depending on which national ECA is used. Some commentators have also expressed concern about moves to give greater weight to a country's environmental or human rights record in assigning ratings. There are currently US proposals being debated in the OECD wherein the US is attempting to require all national ECAs to adopt uniform environmental standards into their ratings. It is argued that these developments may adversely impact upon the ratings of developing countries - indeed, some would say that is one of the main reasons for their use. Whatever is the case, it is clear that different countries have different agendas on these matters, and this may be reflected in the use to which the subjective component of a country's rating is put.

²⁶ See <http://www.oecd.org/ech/act/xcred/knaepen-package-en.htm> (p.2)

Annex 2.

The U.K. Export Credit Guarantee Department (ECGD)

Background

The ECGD is the world's oldest export credit insurer, having been established in 1919. Its functions have changed much since then as global trading conditions have altered. After the 1997 election the new Labour government established a wide-ranging review of the ECGD's role to examine the economic rationale for the ECGD, the need for changes in the modern economic environment and the adequacy of the ECGD's processes and systems. The aspect of this review that is most pertinent to the current discussion was the review of risk management systems contracted to KPMG. This review should be seen in the context of a decline in the ECGD's financial position in late 1988/early 1999, which was primarily due to the impact of the Asian crisis and its aftermath. It was against this backdrop that ministers decided to review ECGD's risk management practices

The review was generally complimentary concerning the activities of the ECGD, comparing the Department's practices favourably with those of ECAs from other countries. KPMG notes that ECGD's primary function is to facilitate exports of goods and services and highlights attempts made by the department to pursue international agreements providing for a level playing field of export credit support. The aim of these efforts is to avoid UK exporters from being disadvantaged by support being offered on preferential terms by other ECAs. KPMG suggests that other ECAs appear to adopt a greater focus upon trade promotion than that suggested by ECGD's Financial Objective²⁷. The report argues that the ECGD is, in effect, in competition with other ECAs and that this environment:

....creates tensions between the risk/reward balance as defined by ECGD's Financial Objective and the desire to adopt a similar risk/reward balance to other ECAs in order to provide comparable support to UK exporters. (p.2)

This competitive environment may therefore produce incentives for a sovereign's rating to be influenced by the needs of exporters rather than an entirely objective assessment of the risk attached to that sovereign. KPMG highlight the fact that prior to the publication, and widespread adoption, of the OECD's methodology, many ECAs relied entirely on qualitative risk assessments. Indeed, one criticism made of ECGD practices is the overuse of subjective qualitative judgements to alter the risk score produced by its quantitative Portfolio Management System (PMS II). It would seem likely that the Basel Committee's insistence that for an ECA to be recognised it must subscribe to the OECD methodology is an attempt to prevent damaging 'competition' between agencies, possibly enabling banks to 'cherry-pick' the rating that best serves their interests.

The KPMG report also notes that:

The ECGD risk assessment procedure is more sophisticated than the majority of ECAs in that it is based upon the systemic application of a sovereign default model....The OECD process itself is not as technically sophisticated as ECGD's risk assessment process.

In its praise for the ECGD's risk management practices, the KPMG report stresses the close links to best private sector practice:

ECGD's approach is closely aligned to good private sector practices. There is a good understanding of the key issues relating to the identification and measurement of political and country risk, based on Expected Loss. ECGD generally achieves good results in its attempts to identify and measure risks. (p.6)

²⁷ The Financial Objective set for ECGD is of building up and maintaining sufficient reserves to give assurance of breakeven. To give practical affect to this ministers have set the measurable objective of maintaining reserves to an estimate of expected loss at a ratio of at least 1.5 (Op Cit, p.2)

However, the report goes on to criticise the ECGD's approach as very much transaction based and demand driven (this is to some extent inescapable given the nature of ECGD's role), whereas trends in the private sector are towards more proactive, portfolio-based approaches. Consequently, a major recommendation of the KPMG report is that the ECGD should move away from 'traditional' risk management practices based on the size of exposure and a loss-avoidance-type culture, towards a more 'cutting-edge' approach driven by risk-return considerations. KPMG see ECGD as far better placed than most ECAs to make this change in that the key concepts are well understood within the organisation.

In their analysis of the record of ECDG's internal PMS model, KPMG state the model's main objective as being to predict if a country is going to default or not (i.e. probability of default: PD). An examination of the last ten years operation of the model found that, in general, the models estimates of PD were broadly in line with the incidence of actual defaults. A number of notable aberrations are highlighted, however. For example, three countries which have suffered financial crises in recent years (Indonesia, Pakistan and Russia) had low PD ratings prior to the onset of their respective crisis. KPMG point out, however, that the major external ratings agencies also suffered from this failing. Thus, it seems likely that, at least as far as the UK ECGD is concerned, official ECA sovereign risk scores have been unable to predict financial crises in the same way as private ratings agencies.²⁸

²⁸ Op Cit, pp. 40-43.

Annex 3.

Treatment of maturity under the IRB approach

The New Accord states that:

Maturity is also shown to be a material driver of credit risk and, as such, the Committee has considered incorporating maturity as an explicit risk driver under the IRB approach. Such an approach would aim to be consistent with the objective of increased risk sensitivity....Notwithstanding these potential benefits, however, the Committee is concerned that an explicit treatment of maturity could impose additional costs on banking systems, or lead to distortions in banking markets. In developing a balanced IRB approach to maturity adjustments, therefore, there is an inherent trade-off between potential accuracy, complexity, the banking and supervisory resources needed to measure and validate the requisite inputs and the potential for unintended consequences on lending markets. (Op Cit, pp. 18-19)

This approach implies a number of things about the views of the Basel Committee:

- Short term lending is inherently less risky than longer-term lending and the risk management framework, to be consistent, must reflect this fact.
- However, the costs, to banks of incorporating this into their risk management practices is likely to be high.
- The danger of short-term lending carrying a significantly lower risk-weighting than longer-term lending is that incentives exist that skew the market excessively towards short-term lending - a major criticism of the existing accord is that its crude distinction between short and long-term lending has resulted in the former being disproportionately attractive for both borrowers and lenders. One consequence of this, in the example of the Asian crisis, was the high proportion of short-term loans that could be, and therefore were, swiftly reversed (i.e. a rolling process of short-term loans is not the same as a long-term loan as the former can simply not be rolled-over at any point).

Therefore, the proposals seek to chart a path through these issues:

*With respect to the advanced IRB approach, the Committee is proposing inclusion of an explicit maturity adjustment. As such, a credit's risk weight would depend on its PD, LGD and "effective maturity" (M), which emphasises the contractual rather than the economic maturity of exposures. **The Committee is seeking specific comments on the approach for calibrating the maturity adjustments using this concept of effective maturity.** (p. 19)*

The Committee has developed two possible approaches to this calibration and is seeking comments on which is the most appropriate; is one approach suitable for all markets; the details of implementation and, crucially, the impact of implementation on the trade-offs outlined above. The two conceptual approaches are:

1. Based on evaluating the changes in the underlying economic value of the loan; i.e. a 'marked to market approach'.
2. Focuses more exclusively on events of default.

The Committee is also considering the possibility of allowing banks to use their own internal estimates of effective maturity or their own internal estimates of the effects of maturity on portfolio credit risk and hopes to receive comments on the feasibility of this approach.

Under the foundation approach, one option is to have all exposures treated as having the same conservative assessment of average maturity; the suggested maturity is three years. In this case, the risk-weight of an asset would be determined by its PD and its LGD as set by a supervisor. Again, comments are hoped for on this option.

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