The Onward March of Basel II: Can the Interests of Developing Countries be Protected?

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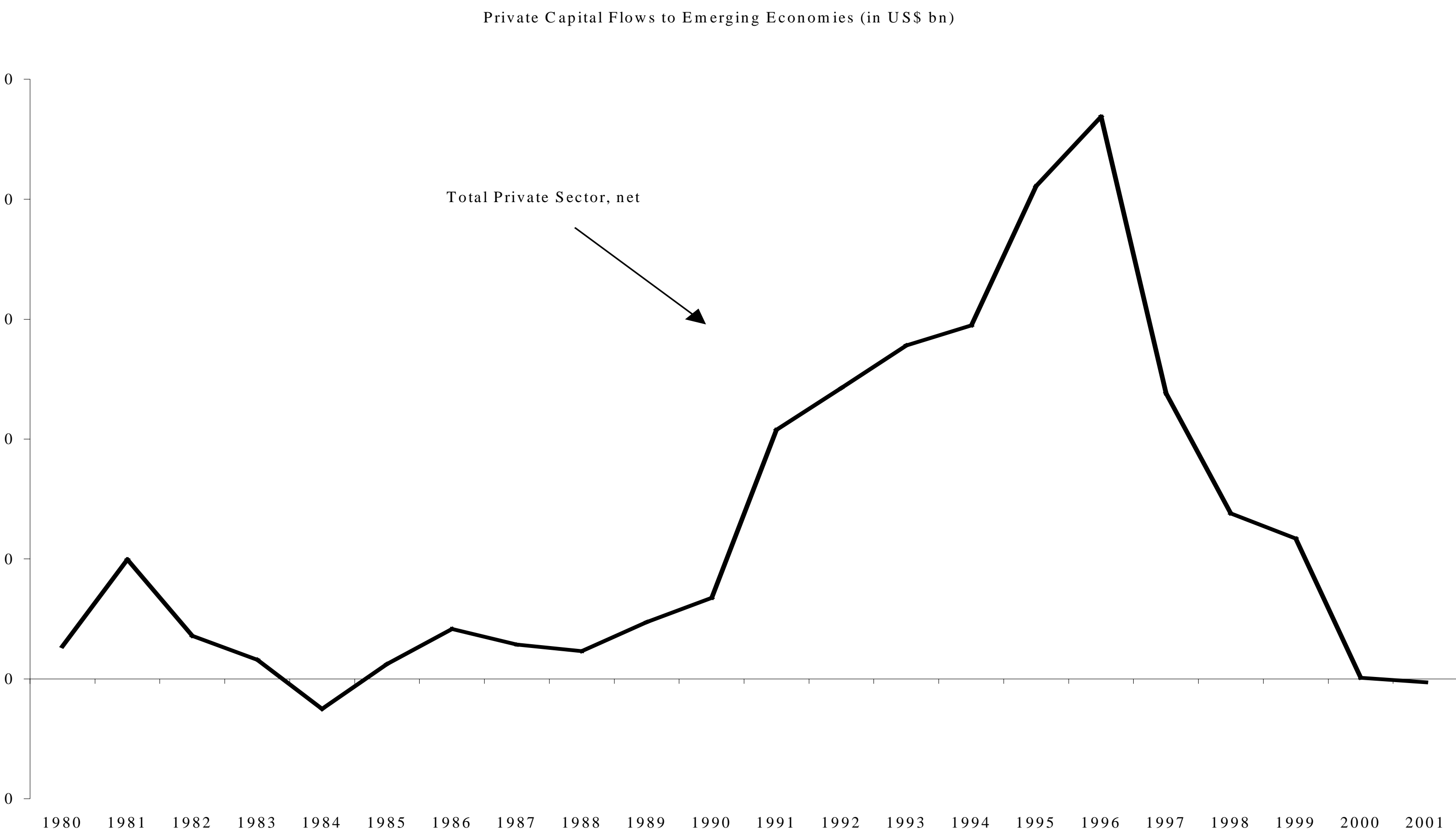
I. Introduction

Before beginning the concrete analysis of Basle 2 and its' likely impact on developing countries, there are two crucial contextual elements we would like to stress.

Firstly, since the Asian crisis, there has been a very sharp decline in total private capital flows to all developing countries, including both emerging markets and low-income ones. For the former, this can be clearly seen in Graph A.



Source: IMF, 2001
Graph A

This decline is particularly sharp in bank lending to developing countries, which actually became significantly negative between 1998 and the end of 2000, as can be seen in Table 1, below. Whilst some of this decline may be cyclical in nature, there also appears to be important structural components to the sharp decline in bank lending. For example, one strong feature – that is partly cyclical but also has a structural component - is banks' greater

perception of the risks of lending to developing countries, which can be seen as a product of the frequency and large-scale of crises in the last seven years. Another, more purely structural factor, is that banks have increasingly crossed the border, bought local subsidiaries and branches, from which they then lend at smaller risk in local currency, and thus do less cross-border lending to developing countries (Lubin 2002, Hawkins, 2002).

Table 1: International banks' involvement with developing countries

	June 1998 (US $ BN)	Dec 2000 (US $ BN)	%change (at annual rate)
All developing countries			
Loans outstanding	924	739	- 8.8
Other assets*	110	155	14.7
Loans by subsidiaries in Local currency	248	435	25.2

*Includes holding of debt securities, some derivative positions and equities.
Source: Hawkins (2001) and BIS data

Whilst it would not be desirable to return to previous periods of large and easily reversible surges of capital – including bank lending – to developing countries, the problem today is the opposite: insufficient capital flows, and negative or too low international bank lending. This state of affairs is very damaging developmentally, as the contribution that foreign savings and foreign exchange - as well as cheaper sources of capital - can make to developing countries' growth is reduced. It is important to stress that this situation contrasts sharply with the stated aims of G-7 governments, and specifically the UK government, which are strongly committed to encouraging private capital flows to all developing countries, so as to sustain growth and poverty reduction. (See for example, UK White Paper on Globalisation)

The second contextual element that has helped to frame our analysis is that fact that banks – and markets in general – are best at evaluating relative risk within a particular period. This is their important strength. However, banks and markets, especially - but not only - in their flows to developing countries, are exhibiting an increasing tendency to pro-cyclicality and short-termism. Consequently, the possibility of contemporary structural changes in the nature of bank lending to developing and emerging economies being exacerbated by greater cyclicality in lending and investment patterns to these economies, is a real one. As outlined above, these trends seem to spread across different market actors, creating an extremely difficult environment for developing and emerging economies wishing to access international bank lending and/or international capital markets.

There is increasing recognition – both theoretically and empirically – that this is perhaps the key market failure, which affects both bank lending and markets in general: they under-estimate risk in booms – and lend too much, whilst over-estimating risk during recessions - and lending too little. The banks' natural tendency to pro-cyclicality has been accentuated by their use of risk management models that are bad at incorporating the cycle in their risk evaluation, instead taking a 'point in time' approach with risk treated as exogenous. (Goodhart, 2001 and Persaud, 2000) A major and complex challenge for regulators in general, is therefore to create counter-vailing forces that will dampen the inherent tendency towards pro-cyclicality of banks and other financial actors. (Griffith-Jones, 2002)

There is a rapidly growing, very valuable literature, which explores how best regulators could create such counter-vailing forces.[1] This subject is also generating research more broadly from concerned academics, and this important field of work is likely to continue to grow as long as the problems it addresses remain with us. In this new literature, there is a discussion of how best regulators could create mechanisms to dampen boom – bust cycles. From a developing country perspective, these issues are particularly crucial, because busts so often lead to financial and currency crises, which are particularly deep, lengthy and costly in terms of loss of output, investment and employment and can therefore both increase poverty and ratchet down future development and poverty reduction.

From these two broad concerns – the sharp, and possibly largely structural fall in bank lending to developing countries and the persistent tendency towards pro-cyclicality in bank lending and other flows – originate some of our key concerns about Basle 2. These concerns were especially acute about the potential impact of the Accord as envisaged in the second consultative paper (CP2) released in January 2001. Our concerns were the following: Firstly, there was a serious risk that Basle 2 would increase the cost and diminish the level of international bank lending to developing countries, as capital requirements for lower rated borrowers – disproportionately represented in poorer countries – rise significantly. (See for example Powell, 2001; Reisen 2001; Griffith-Jones and Spratt 2001) The fear is that the current environment of negative or very low and expensive bank lending to developing countries would be "institutionalised", through the adoption of a regulatory standard that

[1] See, the BIS Annual Report 2001 and, for example, Borio, Furfine and Lowe, 2001. At the Bank of England, see papers by Catarineu-Rabell, Jackson and Tsomocos, 2002, and Haldane, Hoggarth and Saporta, 2001

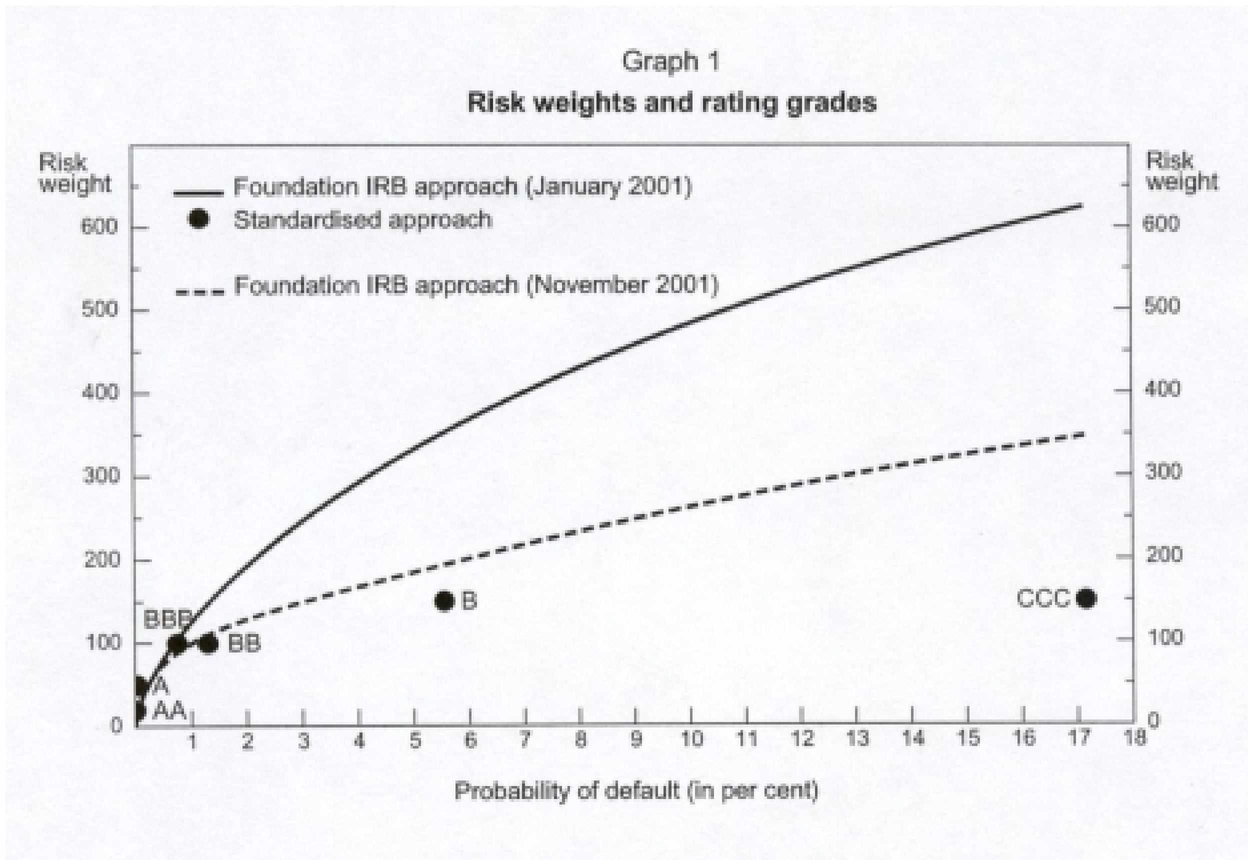
reinforced it, thus reducing the possibility of international bank lending helping to fund future growth in developing countries. Secondly, there was a serious risk that Basle 2 would, by using market sensitive measures of risk to determine capital, exacerbate, rather than counter-act, the natural pro-cyclical tendency of bank lending, and that this could unintentionally increase the amplitude of business cycles[2] and increase risk of crises. This is an inherent feature of market sensitive risk assessment, but would be exacerbated if, as is likely, banks were to choose models that are pro-cyclical, instead of neutral or counter-cyclical ones:[3] such models ignore the fact that risk is endogenous.

Both these potential risks were extremely prominent in the proposals released by the Basle Committee in the January 2001 Consultative Paper. There have been significant modifications since then, some of which have diminished quite significantly these and other problems for developing countries. Firstly, particularly positive has been the substantial flattening of the IRB curve, which relates PD (probability of default) and the risk weights for borrowers. This change implies that the required capital for lower-rated borrowers proposed in November 2001, will be lower than under the January 2001 proposal, even though significantly higher than under the existing Accord. Thus, to the extent that the pricing and availability of bank loans is influenced by capital requirements, the current proposals will see an increase in cost (and/or reduction in quantity) for borrowers below investment grade, as capital requirements for banks operating an IRB approach, and lending to borrowers rated below BB-, exceed their current levels. (See Graph 2 and Annex 1 for an indication of the countries that would be affected by this) According to estimates made in Segoviano and Lowe (2001), had the IRB approach (in its January 2001 version) been in place in Mexico, between late 1994 till end 1996, capital requirements would have at least doubled for some banks, and on average would have increased by at least forty per cent. Under the proposals released in November 2001, the overall increase would still be substantial, but about one third less than under the previous proposals.

Secondly, the flattening of the curve should help to diminish the significant pro-cyclical bias inherent in the new Capital Accord proposal, as 'loan migration' – and the resultant changes

[2] Such a concern has been expressed for example by Danielson et al (2001), the European Central Bank (2001), the Federal Banking Supervisory and the Spanish Banking Association (2001). We had also expressed concern in Griffith-Jones and Spratt (2001) and Segoviano and Lowe (2001).
[3] See, Caterineu-Rabell, Jackson and Tsomocos (2002) op.cit

to capital requirements - will be less sharp. However, while reduced, the problem remains a serious one, as we will detail below.



Source: Segoviano and Lowe, 2001

Thirdly, lending to SMEs is to attract lower capital requirements in the IRB approach than under the January 2001 proposal. Though this would be beneficial for cheaper domestic lending to SMEs in developed countries – where the majority of banks are likely to move to an IRB approach - it would not affect positively international lending to developing countries, unless international banks lend to developing countries' SMEs on a cross-border basis: this is highly unlikely. Indeed, the question could be asked if special treatment is being given to SMEs, mainly because of political pressure from those developed countries where SMEs generate important employment effects, should not also at least some special treatment be given to lending to developing countries, who generate such a high proportion of world employment? That is, if non-technical, broader considerations are to influence the treatment of SMEs in the Accord, should not similar considerations be applied to other, at least equally important cases?

Therefore, despite the improvements made since the release of CP2 in January 2001, several problems remain and it is urgent that further modifications are introduced to maximise positive effects and minimise negative effects. In the rest of this paper we concentrate on these problems and how they can be best overcome, focussing on the international aspects of bank lending to developing countries.

II. Remaining critical issues

a) The new IRB curve still provides an incentive for the international banks to hold a "less risky" loan portfolio than the existing arrangements. As a result, developing country borrowers – most of which are lower rated – or not rated at all, see again Annex 1 - could see either the cost of their credit increased, or could lose access to bank lending altogether, as banks, faced with these incentives, adjust their loan portfolios towards higher quality lending.

b) A specific concern for developing countries is that the current proposals for Basle 2 assume that project finance is of higher risk than corporate lending, and therefore implies an increase in capital requirements for those loans. This could be particularly problematic for developing countries, that require very large private investment in infrastructure for their development, and project finance is a key mechanism to achieve that. The IFC and others have expressed strong reservations, and persuasively argued that the current proposal would result in excessive capital burden for project finance lending. Given that loss given default is very low in relation to default within project finance, and that therefore expected loss is more applicable to the calculation of capital for project finance, this seems an area where modifications could and should be made.[4]

c) A third problem is that the underlying models used for the calibration of the January 2001 proposals assumed that there is a single systematic risk factor, and that this factor is the same across all loans. (See Gordy, 2000) Accordingly, all commercial loans were initially assumed to have the same asset correlation coefficient of 0.2. This seemed a major problem, as diversification benefits were completely ignored despite

[4] See The Banker June 2002. Special supplement on Basel. Also, personal communication with S. Lambert Lazarus

that fact that, domestically and internationally, diversification benefits could play a major role for banks concentrating in below investment grade borrowers - either SMEs or developing countries. Indeed, if diversification benefits were to be sufficiently recognised, there might be incentives – in terms of lower overall capital requirements - for portfolio diversification: for example, between developed and developing countries internationally. This is a hypothesis based on preliminary results (see Segoviano and Lowe op.cit), and we are currently beginning empirical work on this subject.

As mentioned above, the concerns expressed by politicians in certain developed countries, and by one category of borrowers (SMEs in certain developed countries, especially Germany) about the high levels of capital requirements delivered by the IRB risk functions for SMEs, encouraged modifications in this area. The Basle Committee has thus modified the correlation coefficients in the PD curve, with the 0.2 correlation assumption being retained only for loans with the lowest PDs, and the asset correlation assumed to decline (to a minimum of 0.1), as PD grows. In the case of SMEs, the curve will most probably be further flattened by the introduction of a link between PD and size of firms with the assumption that smaller companies present less systematic risk. For the reasons outlined above – and depending on the results of ongoing empirical work - it may also be appropriate to make a similar adjustment to the IRB function for international diversification, to take account of lower correlation, for example between developed and developing countries' risk. This would encourage greater diversification, both across sectors and internationally, including to developing countries.

Some argue that correlation coefficients are difficult to measure and inspect by regulators, or that databases are not available to accurately measure them. However, even if imperfect proxies were used for correlation at the beginning, recognition of the impact of diversification will encourage development of databases and better methodologies. Furthermore, correlation coefficients should not be more difficult to measure than other variables (e.g. PD or LGD) to be measured under the IRB approach.

d) As pointed out above, increased pro-cyclicality remains a serious concern for the IRB approach. The use of market sensitive measures of risk is already inherently pro-cyclical. By determining capital according to banks' risk models, there is a danger that this inherent pro-cyclicality in markets will be magnified by the IRB approach as regulatory capital requirements will be inherently pro-cyclical. As Catarineu-Rabell *et al* clearly point out, this could "cause severe macro economic effects by creating credit crunches in recessions, thereby exacerbating economic downturns." The mechanism operates in the following way. In boom, average PD will fall, and banks will lend more. During a downturn, the same portfolio of loans will imply a higher PD, as loans will significantly migrate (for empirical evidence, see for example, Carling et al, 2001, Segoviano and Lowe, 2001); as a result under the IRB approach, capital requirements will increase significantly in the downturn. If banks' lending is constrained by regulatory capital requirements, and as capital is difficult to raise in recessions, there is a serious risk of credit crunches in recession, which has both very negative effects macro-economically and for banking stability. For developing countries, an increase in pro-cyclicality of lending – both international and domestic – is very likely to contribute to further increase in the number and depth of banking and currency crises, which would be developmentally very negative. The Basel Committee proposes to address the remaining issue of pro-cyclicality with mandatory stress testing. However, it is not clear in our view that this will be sufficient to counteract the process described above.

e) Another concern that we had about the original proposals (CP2) was that international banks that moved to the IRB approach in their main markets would be forced to do the same in their branches or subsidiaries in developing countries. However, we now understand that following lobbying from the banks – who argue that data quality in many emerging and developing countries is not high enough to allow an IRB approach to be followed – this requirement is to be postponed. Therefore, for an unspecified period, banks will be able to employ the IRB *and* Standardised Approaches in different jurisdictions. It is unclear at this stage how long this situation will last, however, while it does it ensures that developing countries' domestic banks – likely to adopt the Standardised Approach – will be competing domestically with subsidiaries of international banks also employing the Standardised Approach. However, this is seen as a temporary measure and this is troubling. In the case of the

Czech Republic, for example, almost 90 percent of the domestic banking system is owned by foreign banks. If these banks move to an IRB approach then, given the fact that the IRB approach still provides an incentive towards higher-quality lending, lower-rated borrowers may have difficulty obtaining bank financing on acceptable terms, thereby reducing the domestic as well as international supply of bank lending to developing economies.

III. Policy Proposals

1. Our first proposal is that regulatory action needs to be taken to compensate not just for the natural tendency of banks towards pro-cyclicality, but also for the accentuation of this trend by the introduction of the IRB approach. It seems important to <u>introduce such measures simultaneously with Basle 2.</u>

Different instruments could be used. One is to introduce a counter-cyclical capital charge. The other is to modify loan to value ratios. However, perhaps the best mechanism is to use dynamic or forward looking provisioning, which would be estimated when loans are disbursed on the basis of expected losses (Ocampo and Chiappe, 2002). To calculate such expected losses, it is crucial to include as long a period as possible - long enough to cover at least one business cycle - so that both bad/volatile periods, are included, as well as good/calmer periods. (Goodhart, 2001, BIS, 2001). Such an approach could build on the Spanish and Portuguese experience of “statistical provisioning” for “latent” risks, which explicitly recognises that risks are incurred when credits are approved and disbursed, not when they come due; this mitigates cyclical behaviour of banks.

For estimating the required level of such dynamic provisions, it seems desirable to have rules to estimate expected losses, relating for example to variations in key variables, such as variations in the expansion of bank credit. Thus, regulators could require raising such provisions when the growth of loans exceeds some long-run average, and lowering them when loan growth falls below this average. The use of the variation of total bank lending seems appropriate, given that most empirical work shows rapid growth in this variable as a good predictor of banking problems or crises. However, it may be desirable to add other variables.

There are a number of practical issues that need to be tackled, to implement dynamic provisioning. These include clarifying accounting rules and possible modification of tax treatment of losses. These issues, however, are primarily logistical and by no means insurmountable.

The key point is that such dynamic provisioning or other counter-cyclical regulatory measures are valuable at all times, but will become essential once Basel 2 is implemented, to compensate for the accentuation of the pro-cyclicality that introducing the IRB approach will imply. It is crucial that these dynamic provisions are part of a releasable buffer, so they can be used in bad times; as a consequence they should be set against expected losses.[5]

Another very important element to counter pro-cyclicality is for the Basle Committee to encourage or require banks to use models, as part of the IRB approach, that will deliver more stability across the cycle. If the Basle Committee does not explicitly do this, there is a risk that banks will choose models that would lead to very large increases on capital requirements during a recession, including against non-defaulted assets (see Caterineu-Rabell, Jackson and Tsomocos op.cit, for a clear demonstration of this).

2. Our second proposal is to develop further and expand the use of variable correlation coefficients, at a point in time. This should particularly take account of the benefits of international diversification, and specifically those that reflect lower correlation between developed and developing countries' risk. In similar ways to the Committee's planned modifications of the IRB curve with regard to SMEs, there could even be some additional modification of the curve for developing countries, to take account of their lower correlation with developed countries, which could be based on average historical correlation over a reasonable period. Further empirical research is required to determine the correct level of such average historical correlation.

[5] I thank Patricia Jackson for this point.

3. It seems very important to allow, on a permanent basis, international banks' subsidiaries in developing countries to continue to use the Standardised Approach, and not be compelled to move to the IRB approach. This would diminish uncertainty about the capital requirements such banks would face, and remove the possibility of a large proportion of the banking system in poorer countries having an incentive to concentrate their lending on higher rated borrowers.

4. It is excellent that the Basle Committee is now inviting developing countries to participate in its final quantitative impact study (QIS 3), scheduled for the autumn 2002. However, it is essential that as many and as varied a group of developing countries participate as possible. This will enable the final consultative document hopefully to reflect as much as possible, the issues and concerns specific to different types of developing countries; it will also enable developing country policy-makers to have a clear insight into likely effects of Basle 2, and comment in more detail on the new Basle proposals in the subsequent consultative stage of the process.

   In this context, we would like to make two suggestions. One is that the Basle Committee invites at least a few developing countries to join it (e.g. one middle-income and one low-income country), for the purposes of the final discussions of Basle 2. This would be a further crucial step to make sure that eventually developing countries' problems and issues are sufficiently considered. It will also increase legitimacy of the Basle Committee and help to facilitate implementation of Basle 2 once approved.

   A more technical suggestion is that in the final quantitative impact study the international as well as the domestic impact of the Accord is assessed. That is, the impact of Basle 2 on major international banks' lending to developing countries is explicitly and carefully examined. The key issue to study is to avoid the current excessively low level of cross border lending to developing countries being institutionalised by the adoption of the IRB approach.

We look forward to the publication of the next consultative paper, and hope that it will ensure that the interests of developing countries are fully taken into account and that potentially damaging effects – for both developed and developing countries – will have been reduced or

eliminated. Some critics of Basle 2 are already talking about Basle 3 or even Basle 4. We would rather support the Basle Committee's work to ensure that Basle 2 will work well for all countries - including developing countries - as well as for international macro-economic and financial stability.

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Annex 1.

Sovereign ratings: Investment and sub-investment grades[6]

*Standard and Poor's sovereign ratings (June 27, 2002)**	
Investment Grade	Sub-investment grade
Barbados (A-)	Belize (BB-)
Botswana (A)	Bolivia (B+)
Chile (A-)	Brazil (BB-)
China (BBB)	Bulgaria (BB-)
Croatia (BBB-)	Colombia (BB)
Czech Republic (A-)	Costa Rica (BB)
Estonia (A-)	Dominican Republic (BB-)
Hungary (A-)	Ecuador (CCC+)
Korea (BBB+)	Egypt (BB+)
Latvia (BBB)	El Salvador (BB+)
Lithuania (BBB)	Grenada (BB-)
Malaysia (BBB)	Guatemala (BB)
Mexico (BBB-)	India (BB)
Poland (BBB+)	Jamaica (B+)
Slovak Republic (BBB-)	Jordan (BB-)
South Africa (BBB-)	Kazakhstan (BB)
Thailand (BBB-)	Lebanon (B-)
Trinidad and Tobago (BBB-)	Mongolia (B)
	Morocco (BB)
	Pakistan (B-)
	Paraguay (B)
	Peru (BB-)
	Philippines (BB+)
	Romania (B+)
	Russia (B+)
	Senegal (B+)
	Suriname (B-)
	Turkey (B-)
	Ukraine (B)
	Uruguay (BB-)
	Venezuela (B)
	Vietnam (BB-)

* Long-term foreign currency rating.

[6] Developing countries not shown are not rated by Standard and Poor's.