Implications of Basel II for Stability and Growth in Developing Countries; Proposals for Further Research and Action

Stephany Griffith-Jones
Professorial Fellow
Institute of Development Studies
University of Sussex

s.griffith-jones@ids.ac.uk
www.stephanygj.com

Paper prepared for Ibase Rio Meeting on Financial Liberalisation and Global Governance: The Role of International Entities, 19-20 March, 2007

I.   Introduction

As is well known both Basel I and Basel II were designed by regulators from developed economies to meet the main perceived regulatory challenges they and their largest banks faced. Though there has been quite a large critique of the effectiveness of Basel II in developed economies (on aspects such as pro-cyclicality), the main criticisms have been in its application to, and impacts on, developing economies. This seems **intrinsically linked** to the fact that developing countries are not at all represented in the Basel Committee for Bank Supervision (BCBS). There are various consultation mechanisms and consultative groups with developing countries. Though it may be useful to be consulted, this is clearly **no substitute for having a seat at the decision-making table***;* it is only there where final bargains are struck and decisions are ultimately made (Griffith-Jones and Persaud, 2004). In fact, it can be argued that the BCBS is possibly the worst organisation of financial governance in this respect as it is practically the only one where there are **no** developing countries represented.

Whilst we have a number of very significant critiques and concerns about the impact of Basel II on growth and on financial stability, we believe it has a number of positive features, particularly in the standardised approach. From the perspective of developing countries, for example, the removal of the OECD/non-OECD distinction and the reduction of the excessive incentive towards short-term lending are positive. More generally, trying to better align regulatory capital to risk – if well done – is a desirable objective.

The critiques of Basel II can be done at different levels:
1. The first is at a very broad level, looking at whether regulating capital is the best way to ensure systematic banking stability; also whether key sources of banking vulnerability is developing countries (such as currency mismatches) are appropriately addressed in Basel II.
2. The second is whether Basel II will reduce bank credit levels to developing economies both internationally and nationally; this effect could be worse for poorer countries and those with low perceived creditworthiness. There is evidence that this could reduce investment, demand and future growth.
3. A third concern is whether Basel II would increase pro-cyclicality of bank lending, both domestically and from international banks. This would increase volatility of growth and investment, as well as increase systemic risk in the banking system.

4. The fourth area of concern is whether the introduction of Basel II could discourage particularly lending to SMEs and to other sectors or modalities crucial for growth, employment and investment.

5. A fifth concern is whether the introduction of Basel II could give important competitive advantages to foreign banks. This could not just have negative consequences for lending to SMEs, especially since there is growing evidence (see, for example, last Jacques Pollak IMF Research Conference papers) that foreign banks "cherry pick" and lend more to creditworthy large firms. It could also mean that greater concentration of the banking system due to a larger role for foreign banks weakens the ability and power of national regulators to properly regulate them, which could again pose serious problems for banking stability.

We will examine, in some detail, these five concerns (Section III). We will also draw out some preliminary policy suggestions on how such concerns could be addressed by regulators and policy-makers, mainly in developing economies. Where specific additional research seems required, we will mention it.

Section IV will develop ideas for more extended research, both for obtaining and using newly available data to examine actual empirical impacts of Basle II on these potentially problematic areas, as it begins to be introduced; it would then explore policy options for regulators, nationally and internationally. More ambitiously, it could provide elements for a proposal of Basel III that could give priority to development and broad banking stability concerns. This could give an even more solid base for a civil society campaign. Related research could examine the political economy of achieving change in Basel regulations, comparing positive experiences (developed country-led issues) and negative experiences (developing country-led issues) and drawing implications for governance, both for the BCBS and more broadly.

Before doing all this, Section II will provide relevant background information briefly describing Basel II, provide elements of recent debates on Basel II – especially in developed countries – and report on what developing countries intend to do in terms of Basel II implementation. The very informed observer of Basel II may wish to jump or skim Section II (especially II, 1) though it may offer some valuable recent information. One important point that emerges in Section II is that though the United States is still

delaying implementing Basel II, and will do so partially, many developing countries' regulators seem to be rushing too quickly into implementing it.

II. Basel II, Overview of Current Debate and Developing Countries Implantation Plans

II.1. Background information: What is Basel II?

The main purpose of the New Basel Capital Accord (or Basel II) approved by the Basel Committee on Banking Supervision in June 2004 is to further strengthen the soundness and stability of the international banking system through encouraging banks to improve their risk management practices. This is a very positive objective, as are incorporating new risks into allocation of capital.

But the main novelty and challenges for banks and regulators world-wide concern the new rules under Pillar I for capital requirements. The minimum capital adequacy level at 8 per cent recommended by Basel I is maintained, but there is an increased differentiation of risk through the recommendation of three alternative approaches for determining risk for different types of assets: the standardised approach, the foundation internal risk based (F-IRB) approach and the advanced IRB (A-IRB) approach. Under the standardised approach, different risk levels can be assigned to different categories of assets, and the approach allows for external rating agencies to determine risk levels. The basic and advanced IRB approaches differ from the standardised approach in that they require the use of internal modelling techniques to measure risk. The difference between the latter two approaches is that under the foundation IRB approach banks can use their own models to determine default risk, but the parameters for loss, given default, is furnished by the regulatory authorities. In the case of the advanced IRB approach, banks are allowed to determine, through their modelling techniques and data base, both default risk and loss given default.

Furthermore, the new accord requires the allocation of capital for operational risk (in addition to credit and market risks, international exposure and other risks), and proposes three methods for measuring this type of risk: the basic indicator method (BIM), the standard indicator method (SIM) and the advanced measurement method (AMM).

> **Box 1. The Three Pillars of Basel II**
> The new framework has three mutually reinforcing pillars: 1. The minimum capital requirement, 2. The supervisory review and 3. Market discipline. Pillar 1 is about setting the minimum capital requirement for credit, market and operational risks. Pillars 2 and 3 relate closely to the Basel Committee's Core Principles for Effective Banking Supervision (BCP), but in this new context in which new risk management systems are encouraged for adoption, emphasis is put on supervising the quality of banks' new systems for risk assessment (Pillar 2), and on disclosure of information on risk management practices and on different types of risk exposures, along with disclosure of other types of information, such as banks' financial performance and financial position (Pillar 3; Basel, 2004).

The new framework has been designed primarily for adoption by the G-10, and the Basel Committee originally expected this group of countries to be ready to implement the framework by the beginning of 2007. At the same time, the Basel Committee recognises that many non-G-10 countries world-wide may wish to adapt the new framework to their own national realities and circumstances, and to have their own timetable for adopting the new rules. The Basel Committee goes further to say that national regulators should aim to ensure the regulatory systems in their countries meet certain pre-conditions before attempting to implement the new framework in its entirety. The Basel Committee specifically recommend a sequencing approach, in which national regulators should aim for strengthening the country's regulatory infrastructure through the implementation of Pillars 2 and 3, which deal with supervisory systems and market discipline (see Box 1); only when these Pillars are firmly in place, should they focus on Pillar 1. This suggested approach reflects a major concern that many countries face limited resource capacity (human, financial) to implement Basel II, and that efforts to adopt the Pillar 1 may have the undesirable effect of diverting resources needed to ensure a satisfactory level of compliance with the Basel Core Principles (BCP), many elements of which are embodied in the Pillars 2 and 3. Furthermore, bodies like the IMF – which provides technical assistance to countries in banking regulation, as well as evaluating their financial systems through FSAPs, etc – insist that it will not press countries to adopt Basel II or the more advanced approaches within Basel II.

II.2. Current developments and where the debate stands

As the January 2007 deadline approached, developments on the ground are somewhat different from what the Basel Committee has recommended. Countries from the European Union (EU) are set to comply with the new Basel rules from January 2007, as

they are legally bounded to that after the EU passed a Capital Requirements Directive in September 2005. The same deadline applies to advanced countries in Asia.

However, banking regulators in the US decided to delay adoption at least until January 2008. At the same time, they are proposing adoption of different approaches for the US banks. In September 2006, the four American regulators proposed that the IRB approach should apply to the largest and internationally active banks only (26 in total). For the remaining banks, the US regulators are proposing a revised version of the existing capital rules known as Basel IA.

Moreover, whichever option proposed by the US regulators is adopted, banks will have to observe a 3 per cent 'tier 1 leverage ratio' (core capital as a percentage of non-risk weighted assets) as a supplementary safety measure, a leverage ratio that has been in place since 1992 following the housing-loan crisis in 1991. The purpose is to establish a floor for capital requirements to avoid the possibility that in some cases the internal risk models may result in too low capital allocation by banks. This move has, to an important extent, been a response to the fourth quantitative impact study (QIS-4) conducted in 2005, which showed a significant drop in the amount of minimum regulatory capital by banks and a wide variation in impact on individual banks. This raised fears of banks' under-capitalisation and potential risks to banks' stability of implementing the IRB approach. Furthermore, there had been pressure from the smaller US banks for a more even playing-level field, given they would not adopt the IRB approach and would therefore not have these major savings of capital, finding it difficult to compete with the large banks.

The largest US banks have reacted strongly to the maintenance of the leverage ratio, by threatening to abandon Basel II altogether. This is because they have incurred high costs in their preparations for Basel II, and in their view the leverage ratio works as an impediment for capital relief when they reduce risk in their portfolios, which was their aim in supporting the development of Basel II (Bank Risk Regulator, 2006). Even in Europe Basel II as currently proposed by the EU is being contested. The European Shadow Financial Regulatory Committee (ESFRC), which is formed by finance professors, strongly supports some sort of US-style leverage ratio to avoid that capital falls below a minimum level which could compromise financial stability. Also, European central bankers and regulators are raising related issues of concern. Economists from the Swiss National Bank affirm that

'*risk-measurement and information-asymmetry issues, which are inherent to banking activities, prevent the implementation of first-best capital adequacy rules, ie capital requirement that fully and exactly reflects banks' risks*' (Global Risk Regulator, 2006, p. 21).

and Alastair Clark, adviser to the governor of the Bank of England, alerts to the fact that at least in principle Basel II might increase pro-cyclicality of credit provision due to the fact that not only banks' capital tend to fluctuate over the business cycle but also the measures of risk-weighted assets (Global Risk Regulator, 2006, p. 15). This concern is similar to that expressed by well known academics in the UK, such as Charles Goodhart, concern which was supported by empirical evidence in some of our previous work on Basel II (**see below section** on pro-cyclicality for more details).

The lack of consensus in the developed world and especially in the US, and the resulting different paths countries within the G-10 are adopting, are in turn creating tensions amongst the banks themselves, partly because the existence of different rules across jurisdictions raises competitive issues, partly because their subsidiaries in other jurisdictions will have to comply with different rules, thus creating challenges in reconciling numbers to be provided to the foreign jurisdiction (The Economist, 4th November, 2006). More specifically, for example, home-host relations in concrete technical matters, such as validation of models, differ amongst different European countries. All this suggests that Basel II comprises a complex set of rules on which consensus is far from being reached, particularly due to their possible implications for competitiveness and financial stability.

In light of the current level of discord, there is no reason why countries outside the G-10 and particularly LICs should be pressured to implement Basel II. Notwithstanding this and the fact that the Basel Committee itself recommends a measured, sequenced approach to many non-G-10 countries, as does the IMF, it will be seen below that a vast majority of countries world-wide intend to implement Basel II at some point soon partly because they may feel explicit or implicit pressure to do so coming from international consultants, rating agencies and large international banks when these are active in their countries. Some action-oriented research may be desirable to provide elements to developing country regulators that could assist them in evaluating when – and through what modalities – they should implement Basel II. This evaluation should include

technical aspects, like data availability, but focus very much also on achievement of broad aims of financial stability and financing investment.

However, it should be mentioned that even though many countries say they will implement Basel II quite soon (see section immediately below), ***in practice they often postpone several times actual implementation (interview material)***.

II.3   What do Countries intend to do in terms of Basel II implementation?

A. Global versus Regional Pictures

The Financial Stability Institute (FSI) has conducted a survey in 2004 and a follow-up survey in 2006 on implementation of Basel II in non-Basel Committee member countries (see Financial Stability Institute, 2006). The survey shows that 84 percent of all respondents worldwide intend to adopt Basel II between 2007 and 2015 – see Table 1. As discussed above, these intentions seem somewhat overoptimistic as countries often postpone Basel II implementation beyond their initial timetable due to technical obstacles and other considerations.

Table 1: Number of Countries intending to adopt Basel II

Regions	Number of Respondents	Respondents intending to adopt Basel II	Percent % in total
Africa	***17***	***12***	***71***
Asia[1]	16	16	100
Caribbean	7	4	57
Latin America	14	12	86
Middle East	8	8	100
Non-BCBS Europe	36	30	83
Total	**98**	**82**	**84**

[1] Excludes Japan as BCBS member-countries were not included in the survey.

As can be seen from Table 1, the results are aggregated on a regional basis and do not distinguish among countries with different levels of development.

Under Pillar 1, the standardised approach is expected to be the most widely used option of the three credit risk methodologies available for calculating capital ratios – 85 per cent of respondents planning to adopt Basel II intend to use this approach, while 67 and 55 per cent of all respondents intend to adopt the FIRB and AIRB approaches respectively.

As regards operational risk, the basic indicator method is expected to be the generally adopted framework. Moreover, many countries are expected to implement Pillar 2 and 3 before the end of 2015 (Financial Stability Institute, 2006).

B. Basel II by regions

In Asia, 100 per cent of respondents intend to implement Basel II at some point over 2007-2015. This is quite striking given that a fairly large numbers of low-income countries are located in Asia. But more detailed information from the FSI survey shows that intention of adopting Basel II does not necessarily mean doing it now. According to the survey, only 7 out of a total of 16 respondents intend to adopt the standardised approach by 2007, while 3 intend to adopt the FIRB approach and 1 the AIRB approach in that year. This means that 11 countries at the maximum (but probably less than that) out of 16 intend to implement Basel II in 2007 through adopting one of the three options offered under Pillar 1. However, a big jump in numbers can be observed for the year 2008, when 14 respondents expressed the intention of adopting the standardised approach, 7 the FIRB approach, and 5 the AIRB approach.

In Latin America, 86 per cent of respondents intend to implement Basel II between 2007 and 2015. The lowest adherence rate is observed in the Caribbean, where only 57 per cent of respondents expressed plans to implement Basel II until 2015. This considerably lower rate is probably due to the small size of Caribbean countries and therefore their lack of human resources to deal with Basel II, even though they are either middle- or high-income countries.

In Africa, 71 per cent of respondents intend to implement Basel II. This figure is lower than the other regions (except the Caribbean), but still fairly high.

However, looking more carefully at the results from the FSI survey, we can see that implementation of Basel II in Africa will be very gradual. In 2007, only two countries intend to move to Pillar 1, and both countries plan to do so through adopting the standardised approach. The two countries account for just 12 per cent of the total number of respondents in the continent. This implies that the 10 other countries that intend to adopt Basel II will either start later than 2007 or will start that year through implementing Pillars 2 and 3 first. The number of countries adopting the standardised approach then increases gradually to nine – or 53 per cent of the total – in the period

2010-2015. Adoption of the FIRB and AIRB approaches are intended to start in 2008, with a total of respectively 6 and 4 countries adopting them until 2015.

III   Developing Country Concerns on Basel II

1. Perhaps the broadest level of concern is the question whether regulating capital is the best way to ensure bank stability (Kregel, 2006). Another broad area where it seems insufficient research has been done is whether, even within a capital adequacy framework, Basel II has appropriately addressed sources of vulnerability most characteristic of developing economies banking systems, such as maturity and especially currency mismatches. Are, for example, direct and indirect net foreign exchange exposure of banks – a source of so many developing countries' banking crises in the past – appropriately addressed in Basel II? If not, how should they best be incorporated? Additional research seems required in these areas with important policy implications for national regulators.

Such issues could perhaps be best tackled in an exercise to design a Basel III. Though this sounds ambitious, a number of academics and observers concerned about the serious problems of Basel II have started to talk about Basel III. So a possible outcome of our research programme, building on some of the other research projects, could be elements for designing a development friendly Basel III.

2. A second area of concern is whether the implementation of Basel II could lead to a reduction of total credit to developing economies, both domestically and internationally – and therefore a reduction in financing of investment, as well as a growth in developing economies. There are different estimates in the literature of what the impact on levels and cost of credit to developing countries would be of introducing Basel II.

Simulations carried out by Barrell and Gottschalk, S (2005) – using the National institute General Equilibrium model – estimated that GDP could fall by 3.5% in Brazil and 2.2% in Mexico as a result of a moderate credit crunch by both domestic, and especially by international banks, due to the introduction of Basel II.

We have argued in several papers (for example, Griffith-Jones, Segoviano and Spratt, 2004a) that part of the reduced lending and increased cost of international bank lending

is due to a bad design of Basel II even in its own terms, as the clear benefits of international diversification are not included, which leads to an incorrect estimation of risk and capital requirements of lending to developing economies.

a) The case for diversification benefits

The results of empirical work show that the degree of correlation between the real and financial sectors of developed economies is greater than that which exists between developed and developing economies. We tested this hypothesis of differential correlations, first with specific regard to international bank lending and profitability and, secondly, in a more general but supportive sense. All of our results offer significant support for the validity of this position.

Table 2

Variable	Time-Period	Frequency	Developed/ Developed Mean Correlation Coefficient	Developed/ Developing Mean Correlation Coefficient	Test Statistic (H0:Mx=My) Critical Value of 0.05% one-tailed test in parentheses
Syndicated	1993-2002	Monthly	0.37	0.14	3.33 (3.29)
ROA	1988-2001	Annual	0.10	-0.08	4.40 (3.29)
ROC	1988-2001	Annual	0.14	-0.11	6.92 (3.29)
GDP	1985-2000	Six-monthly	0.44	0.02	9.08 (3.29)
GDP HP	1950-1998	Annual	0.35	0.02	9.41 (3.29)
STIR	1985-2000	Six-monthly	0.72	0.23	11.09 (3.29)
STIRR	1985-2000	Six-monthly	0.66	0.22	10.93 (3.29)
GBI-EMBI	1991-2002	Daily	0.78	0.53	5.45 (3.29)
GBI-EMBI	1991-1997	Daily	0.90	0.74	4.64 (3.29)
GBI-EMBI	1998-2002	Daily	0.42	0.09	5.87 (3.29)
IFCI-COMP	1990-2000	Daily	0.58	-0.15	7.83 (3.29)
IFCG-COMP	1990-2000	Daily	0.58	-0.17	8.06 (3.29)

As can be seen from Table 2, all the results were tested to ensure statistical significance. In each case, the results were significant at the 99.5% confidence level and the null hypothesis that the average mean correlations of the two series were equal (H0: Mx=My) was clearly rejected. As is also clear from Table 2, a wide variety of financial, market and macro variables were employed in these tests. Whilst it might be suggested that each of the variables we have used could be criticized as imperfect in some way, we would argue strongly that the possibility of distortions in the data are likely to be cancelled out, as they are unlikely to be the result of common causes. Consequently, the fact that every

statistical test performed, regardless of variable, time-period or frequency, has pointed in the same direction - and all are clearly statistically significant on a variety of tests - offers robust and unequivocal support for the benefits of diversification.

b) How would these diversification effects be manifested in a bank's portfolio?

On the basis on this evidence, we suggested that a case could be made that an internationally diversified loan portfolio, with a range of developed and developing country borrowers, would have a lower level of risk – in terms of the overall portfolio – than one which focused primarily on developed country lending. In order to test this hypothesis in the specific context of a bank's loan portfolio, a simulation exercise in Griffith-Jones et al (2002), was undertaken to assess the potential unexpected loss resulting from a portfolio diversified within developed countries, and one diversified across developed and developing regions.

Table 3 Comparison of non-industrially diversified portfolios

1. Diversified developed/developing			2. Diversified developed			
Total Exposure = 117,625,333.00			Total Exposure = 117,625,333.00			
Percentile	Loss value	Unexpected loss (%)	Percentile	Loss value	Unexpected loss (%)	**Percentage Difference**
99.8	22,595,312	19.21	99.8	27,869,349	23.69	**+23.34**
99.9	26,390,246	22.44	99.9	32,187,075	27.36	**+21.96**

As can be seen from Table 3, the unexpected losses simulated for the portfolio focused on developed country borrowers are, on average, almost twenty-three percent higher than for the portfolio diversified across developed and developing countries. The simulated loan portfolios constructed offers more direct evidence that the benefits of international diversification produce a more efficient risk/return trade-off for banks at the portfolio level. Given that capital requirements are intended to deal with unexpected loss, the fact that the level of unexpected loss in our simulation is lower for a diversified than for an undiversified portfolio, suggests that – in order to accurately reflect the actual risks that banks may face – Basel 2 should take account of this effect. Unfortunately, this has not yet been done, even though the case has been accepted even by the former Head of the BCBS, Mr Carvana, and won support from a number of developing countries, for example, in their submissions to the BCBS, as well as by the World Bank and others.

As will be detailed below, there is now emerging the possibility of doing research, based on actual data of bank lending, as parallel calculations are already being made for the introduction of Basel II advanced approaches. This could confirm previous work based on estimates and simulations and could give an even more solid basis for proposing changes to Basel II internationally and nationally, for advocacy by civil society and for developing country policy-makers to consider compensatory actions for problematic effects of Basel II in other areas. An interesting complementary area of research could be a political economy analysis of the reasons why benefits of international diversification were not introduced into Basel II, whilst a similar amendment was made for SMEs (even though the technical case was at least as strong) and what lessons can be drawn from this on necessary changes of the governance of the Basel Committee, as well as for bargaining tactics for developing economies.

3. A third area of concern relates to the risk that the Basel II Capital Accord may increase procyclicality and volatility of credit, both nationally and internationally. Even some of the regulators participating in the Basel Committee have acknowledged the concern that risk-sensitive regulation requires banks to increase capital during economic downswings, reflecting the increased potential credit losses of their portfolios, particularly because it is difficult to raise capital in slowdowns, this would lead to increased cost and reduced lending during slowdowns. This could accentuate the risk of a credit crunch and a deepening of the economic downturn – via lower investment and demand – and increasing risks to banking stability. Paradoxically therefore, Basel II could not only accentuate volatility of investment and output (so damaging for future growth, especially in developing economies); it could also increase the risk of systemic bank failures, that higher macro-volatility combined with risk sensitive models used simultaneously by all banks is likely to generate.

There has been a large literature in this area, both for the standardized (for example in Segoviano and Lowe, 2002) and especially for the more advanced IRB approach, where both probability of default and proportion of loans defaulted seem to move in a pro-cyclical way (Allen and Saunders, 2004).

One piece of empirical research (Griffith-Jones, Segoviano and Spratt, 2004) shows that introducing benefits of international diversification would not only imply more accurate measurement of risk, thus appropriately reducing the excessive increase in cost and

reduction of lending, caused by the current lack of precision in measuring risk; it would also diminish pro-cyclicality in capital requirements which – as discussed – would diminish lending volatility and systemic risk.   The empirical research data is from Moody's, available for the U.S.A. from 1982 to 2003. This was supplemented with data for Mexico from 1995 to 2000, which enables us to compare two very different types of market. In this exercise, we compared the implied capital requirements for our `typical' bank under three regulatory regimes; first the standardised approach in Basel II; second, the Foundations IRB approach, (i.e. assuming a constant Loss Given Default, since we do not have good time series for average LGD); and third, a Full Credit Risk Method (ICRM) which incorporates the benefits of international diversification.

Our findings appear to confirm these fears of increased pro-cyclicality and its reduction by introducing benefits of diversification. When the variance of annual capital requirements is considered, it is not surprising to note that the variance of the IRB Approach represents an enormous increase compared to the standardised approach: the aim of the IRB approach is for capital requirements to reflect changes in risk in a way that the more rigid standardised approach cannot. This is the case for both the USA and Mexican data.

However, another similarity between the two countries is that the variance of the IRB approach is also significantly higher than that for the full credit risk model approach. These differences can be seen pictorially in charts 1 and 2 below.

As can be seen, capital requirements in both countries are considerably more variable using the IRB approach than the ICRM approach. ***Again, this is reflective of the latter taking into account the benefits of international diversification.*** Clearly, the operation of the normal business cycle will cause actual risks to change over time. However, it is also clear that these moves are not perfectly correlated in different market sectors or in different parts of individual countries: a US bank whose loan portfolio was entirely comprised of hi-tech companies before the collapse of the dotcom bubble would have been in a far riskier position than one with a diversified loan base across industrial sectors.
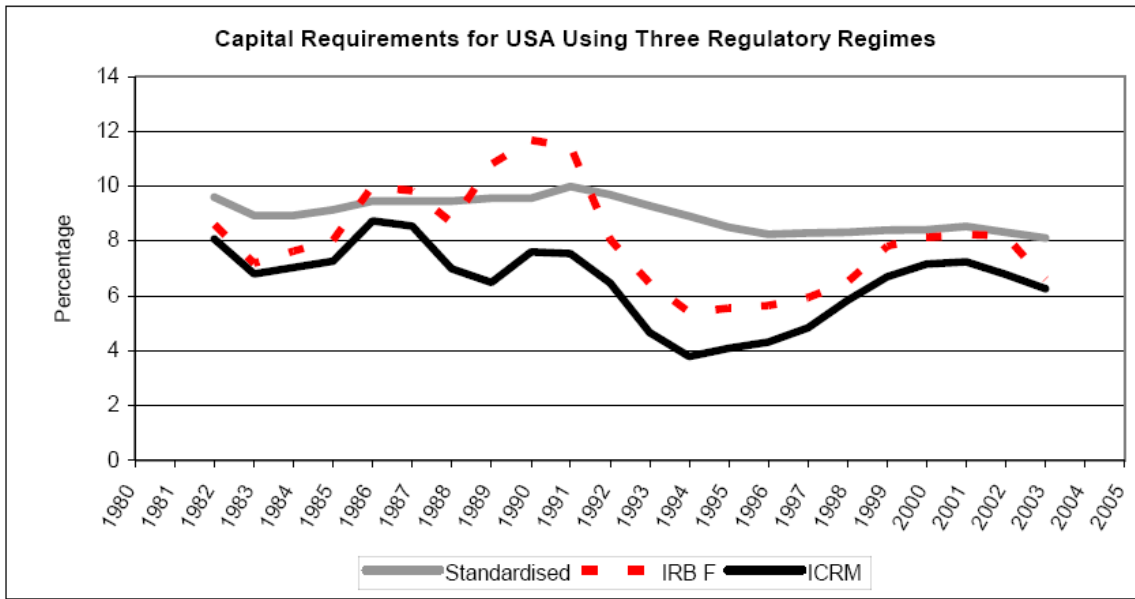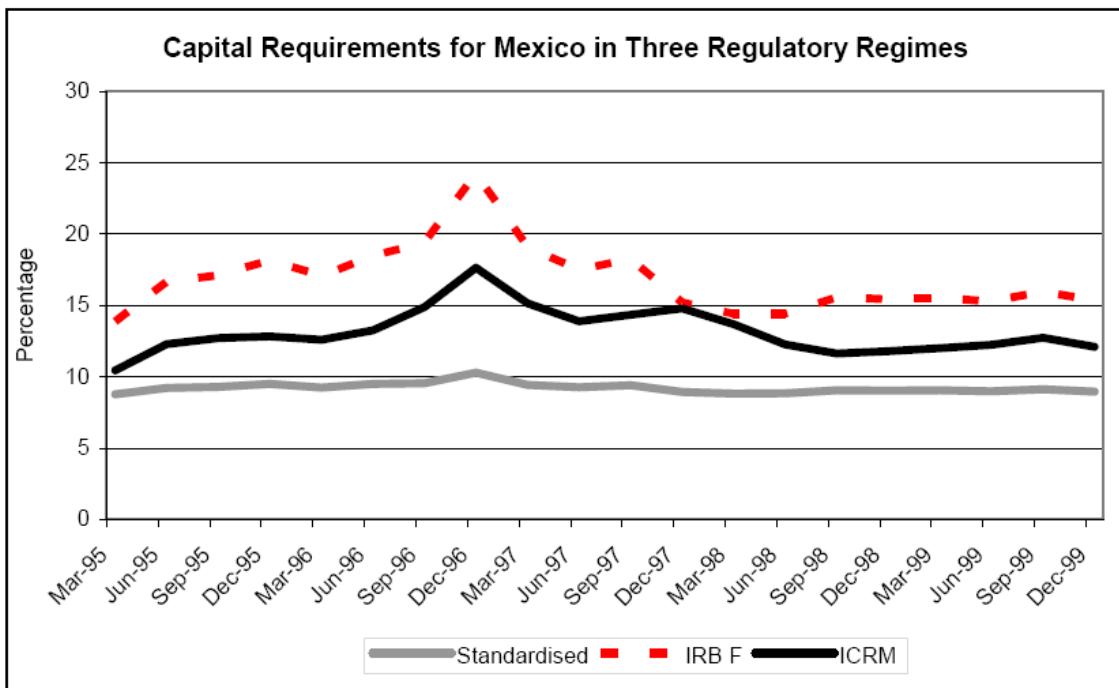
Chart 1.

Capital Requirements for USA Using Three Regulatory Regimes

Chart 2.

Capital Requirements for Mexico in Three Regulatory Regimes

Just as this is the case within a country, it is even more so between countries, where the drivers of the economy are not the same and business cycles are thus not synchronised. For example, if the U.S. economy slows downs, the Chinese may not do so or may slow down much less.

15

This is clearly shown in the lower volatility of the ICRM approach when compared with the IRB approach. In effect, the incorporation of the effects of international diversification smoothes the fluctuations seen with the IRB approach. While this does not eliminate the problem of procyclicality, it does mitigate it significantly. This is particularly so in times of high risk, when capital requirements are high. As can be seen in the two charts above, in these circumstances the incorporation of diversification effects prevents capital requirements increasing to the same degree as under the IRB approach. In the case of Mexico, the highpoint of the series comes in December 1996: under the IRB approach capital requirements would then be 24%, whereas the ICRM derived requirements would be just 17%. Differences of this magnitude, ***whilst not preventing difficulties, may well be significant enough to prevent a 'credit crunch'***.

Therefore introducing benefits of international diversification will not only lead to a more accurate measurement of risk. It will also reduce the pro-cyclicality of capital requirements through time, which will both allow smoothing of bank lending –and therefore some smoothing of economic cycles in both developed and developing countries. It will also strengthen the stability of the banks, especially the large international ones, which is clearly a key economic objective, and an absolutely central one for G-10 bank regulators.

It is interesting that Taylor and Goodhart (2006) as well as Segoviano and Lowe (2002) raise the question whether movements in ***actual*** levels of capital will exhibit the same cyclical pattern as the ***required*** minimum level of capital, though they see this as likely. Again the availability of new data on capital requirements due to the parallel calculations required by the BCBS in 2006 and 2007 for banks adopting the IRB approach could provide a more valuable solid empirical basis of evidence on additional pro-cyclicality of bank lending of introducing Basel II. This could then examine the impact of real economic activity. This, and existing analysis, could provide a basis for policy-makers and regulators, either to modify Basel II domestically, as well as for lobbying for international changes; as these actions may be insufficient in the short term or not possible, complementary actions to try to compensate for additional procyclicality – such as forward looking provisions (Ocampo and Chiappe, 2003) need to be implemented.

4. A fourth area of concern relates to whether Basel II would particularly discourage lending to SMEs, especially by international and national banks. ***The use of risk***

based IRB models by foreign and large domestic banks to determine the amount of capital to be allocated for different types of borrowers is likely to result in both more expensive and rationed credit to borrowers perceived as of higher risk, and more and cheaper credit to borrowers perceived as of lower risk. For reasons such as information asymmetry (and the fact that Basel II explicitly heavily penalises lack of or limited information), SMEs are likely to be judged as of higher risk than the larger ones, such as large companies. This can cause a concentration in banks' credit portfolio away from small borrowers and towards the larger companies. Furthermore, portfolio concentration implies that risk is being concentrated thereby making financial institutions more vulnerable to shocks and unexpected changing circumstances. This goes against the intended objective of regulatory measures, which is to reduce risks and vulnerabilities to which banks are normally exposed (Gottschalk, R and Sodre, C, 2006).

Foreign banks using the IRB approach would have the incentive to further concentrate their portfolio in the upper end of the market as this would save them capital and thereby would have a competitive advantage to lend to "good" companies over local banks using the standardised approach. The latter group of banks would, in turn, be pushed towards lending to the riskier segments of the markets, making them potentially riskier. This trend could be further strengthened by the fact that, according to some developing country regulators and IMF officials, the Basel standardised approach may actually somewhat underestimate the risk of lending to SMEs. This would create a division of labour between foreign and local banks that would not bode well for the stability of the entire financial system. It is true that such division of labour may already exist where foreign banks co-exist with local banks, (and recent empirical research at the IMF clearly seems to indicate that foreign banks seem to lend less to SMEs than other banks), but in introducing a dual regime Basel II would reinforce this pattern. Furthermore, in countries where **foreign banks are very dominant** (e.g. Mexico, Eastern Europe and low-income countries like Uganda and Tanzania; World Bank, 2006), access to credit by SMEs may be particularly discouraged once IRB approaches are introduced. This could require complementary action by governments or development banks to increase public lending to SMEs. Further empirical research seems very important on this issue.

5. A fifth area of concern relates to the impact of Basel II on host developing countries' regulator's ability to properly regulate these banks. Though this concern is

particularly dramatic for small and low-income countries, similar concerns have also been expressed by fairly large middle-income regulators (interview material).

It may be the case that a host of developing country regulators would prefer for international banks, as well as domestic banks, to stay on the standardised Basel II approach. This, for example, would make it easier for him/her to regulate (as validating complex models is a very difficult task and as much of the validation will be done anyway by host country supervisors); it would also imply a more level playing field between domestic and foreign banks, as the IRB approach is very likely to result in less capital requirements. Thus the Fifth Quantitative Impact Study (QIS5) conducted by the BIS shows that the AIRB would bring large reductions of capital requirements for several banks of almost 30%; the standardised approach would imply for some banks a substantial increase of nearly 40% (Basel, 2006; see also Charts 1 and 2 above). Such huge differences could give foreign banks a huge competitive advantage if they adopt advanced approached and local banks stay on the standardised approach. Furthermore, the sharp reductions in capital could be problematic for banking stability in developing countries.

Would it be *feasible* for developing country regulators to *require* foreign banks to stay on the standardised approach? This could be difficult if the foreign bank does not wish to do so, given their high bargaining power in relation to developing country regulators.

Compliance with the standardised approach to meet the regulatory requirements in the host country implies that foreign banks may not only have higher capital requirements but also would have to have a double reporting system – one for the home regulators, the other for the host regulators. European banks are already unhappy with the lack of regulatory homogeneity between the US and Europe, as it implies higher challenges, and will certainly oppose to it happening again between their home countries and developing countries where they have subsidiaries. Undoubtedly, this is an area of potential conflict between foreign banks and host regulators (Griffith-Jones and Gottschalk, 2006).

The tension could be mitigated by the home regulators, depending on how they set the rules for global versus country allocation of capital. For example, it might be the case that if capital requirements are higher in a specific developing country due to the

imposition of the standardised approach, the bank might be able to accommodate this higher requirement without an impact on the bank's global capital allocation. But this will depend on how the global allocation rules are set by the home regulator, and also on the banks' portfolios. Presumably, banks with their credit portfolios concentrated in developed countries will have more room to absorb higher capital requirements in developing countries without an impact on its global capital requirement levels than banks with stronger presence in the developing world.

Although *formally* developing country regulators have the right to tell foreign bank subsidiaries which approach (e.g. standardised) they should follow, *foreign banks then have the option of pulling out of the country*. This may be particularly relevant for large foreign banks, mainly active in developed economies, for whom the scale of operations in an individual developing country is very small in relation to their total operations. Reportedly, this would be less the case for international banks more concentrated in operations in developing countries.

The threat of possible withdrawal, especially if the foreign bank holds an important part of the developing country's banking system's assets and liabilities, may be highly problematic and put pressure on host regulators to comply with banks' regulatory preferences (e.g. bias towards IRB). Therefore, *developing country regulators may not need just technical assistance but also more "political" support for their negotiations on regulations with international banks to ensure that their regulatory regime is consistent with national aims for both financial stability and sufficient credit, especially to SMEs*. Further research seems required. Also, institutions, like the IMF and the World Bank (as well as civil society and academics) could potentially play a useful role in this context, both at the developing country level, but also possibly with the Basel Committee.

Furthermore, this issue again dramatically illustrates the need for an urgent reform of the BCBS governance. It is important to mention that reportedly several of the largest international banks active in very many countries – such as Citibank, HSBC, ABN-AMRO – have arranged to be basically regulated in all their operations for Basel II purposes by a College of Regulators. This College of Regulators will be composed basically of around five regulators chosen from their home country and largest host countries (e.g. US, UK). Countries systematically less important (including of course most or all

developing countries) will be basically excluded. This will imply practically total loss of regulatory power for developing country regulators. If this is not modified, developing country economic authorities will probably – in times of banking crises – be forced to act as lenders of last resort for banks which they have not been regulators – a **very negative situation**.

It would probably help if home and developing country host regulators could at least try to address the issue of divergent regulatory regimes together. However, a worrying finding of the Griffith-Jones and Gottschalk study, op cit, is that, among low income (LIC) regulators interviewed, **no communication or any sort of collaboration is reportedly even taking place between them and their counterparts in the home countries to discuss this and other Basel II related issues**. Collaboration is crucial even if the country decides not to adopt Basel II at all.

Table 4

Potential Problems from Basel II	Policy Responses in Basel	Policy Responses Outside Basel
Less total bank credit	Slower implementation IRB Introduce benefits of in diversification	Looser monetary/fiscal policy
More pro-cyclical credit a) domestic	Slower introduction of Basel II	Compensatory measures, such as forward-looking provisions
b) international	Introduce benefits of international diversification	Developing countries borrow less and have higher reserves
Less credit to SMEs	Adapt weights	More development bank lending; but will Basel II affect this?
More competition from foreign banks as well as more difficult to regulate	***Difficult as regulators weak*** Dialogue with BCBS and home regulators. Political support from IFIs and civil society	Possibly discourage or limit entry of foreign banks

Source: author's analysis

Table 4 above summarises the main potential problems for economic growth and financial stability of introducing Basel II, and outlines possible policy responses to reduce these negative effects. It should be stressed that **developing country regulators are often focussed – and sometimes overwhelmed – by technical details of implementing such a complex Basel II.** Therefore, it is essential that researchers, civil society and international institutions – like the BWIs and the UN – focus on the broader

and more problematic effects on developing countries and how best to overcome them, both domestically and internationally. The discussions for a better Basel need to be inextricably linked to better governance for the Basel Committee.

IV   Ideas for one or more research projects

The potential impact of Basel II on capital requirements, costs and levels of lending, pro-cyclicality and lending to SMEs has been *estimated* by different techniques. Because they are estimations (based for example on simulations) the figures are disputed, however rigorous the methodology.

For 2006 and 2007, there opened a window of opportunity for obtaining data, required by the BCBS, for banks adopting the foundation or advanced approaches. The requirement is that these banks are required to make parallel calculations of capital requirements of both Basel II and the IRB approach (for the foundation IRB for 2006 and for advanced IRB for 2006 and 2007 – for the latter there also will be impact studies (see BCBS, 2006, para. 263)).

It therefore seems an ideal time to gather empirical data and start assessing the real impact of introducing Basel II on developing economies; this would, for example, give elements to evaluate whether (or which) of the problems listed above, or more broadly in the literature, are emerging as really important. This would then provide a strong base to make policy proposals for both modifying Basel II, its implementation in developing economies, and – where this is not feasible – calibrate the need for compensatory policy actions (for preliminary ideas, see again, Table 4 above). This may provide even an empirical basis for elements of a proposal for Basel III. With this new empirical evidence, researchers, civil society and developing country regulators could more forcefully demand international changes, as well as take more targeted policy actions.

To limit the scope of the analysis, it could focus on two or three developing economies with different characteristics (e.g. relating to scale of presence of foreign banks, economic size, others). Data could be obtained from a variety of sources – the BCBS itself, national Central Banks or bank regulators, IMF, or in some cases even the banks themselves. Institutions like the Association of Latin American Bank Regulators and the IMF have offered to provide data.

Related research could examine the political economy of trying to achieve change in Basel II. This research could compare successful attempts of changes (like the improvement treatment for SMEs achieved after lobbying by certain developed country governments) with attempts that have not yet yielded sufficient fruit (such as trying to introduce benefits of international diversification, supported by academics and several developing countries or measures to smooth pro-cyclicality). The study would be carried out jointly by an economist(s) involved both in the analysis of the issue and in the lobbying and a political economist who could carry out the analysis of bargaining power, political context etc. It could draw on personal experience of the researchers in the dialogue with BCBS, country regulators and banks, review available written material and in-depth interviews with key actors in the negotiations, several of which are known to the researcher. The results of the study would not just be of academic interest, but, by linking quality of outcome within Basel II to representation on the BCBS, could provide a powerful analytical and lobbying tool for modifying the governance of the Basel Committee Banking Supervision. More ambitiously, it could help provide a model for analysing the link between quality of decision-making in international financial institutions or committees with the bargaining process and especially with the underlying governance structure of those institutions.