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**Basel II and Developing Countries:
Understanding the Implications**

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Introduction

Over the last two decades, international finance has undergone a process of ‘shallow integration’ in which ‘at the border’ impediments to capital movements have been systematically dismantled. This new era of unprecedented capital mobility has, however, also been one of unprecedented financial crisis, the increase in the regularity of such events borne almost entirely by the developing world (Bordo and Eichengreen, 2002). Developed countries remained largely complacent until the Asian Crisis of 1997 when financial meltdown ricocheted from country to country then continent to continent, culminating in the collapse of the hedge fund Long Term Capital Management and necessitating an emergency rescue by the Federal Reserve (Gowan, 1999).

Although some dissident voices blamed the unregulated cross-border capital flows of shallow integration (e.g. Radelet and Sachs, 1998; Wade, 2000), ‘official explanations’ for the Asian Crisis focused on national-level institutional failures, including weak prudential regulation (Walter, 2003). Indeed, regulatory failure came to assume increasingly more of the blame for the wider financial crisis phenomenon. Research by Lindgren, Garcia and Sal (1996) revealed that out of 34 countries experiencing crisis, only five had ‘adequate’ legal and supervisory frameworks, and even in these, enforcement and supervision were weak. Williamson and Mahar (1998) found that of 33 countries (including 24 developing countries) that experienced crises, severity was negatively correlated with an index of regulation and supervisory strength.

The problem came to be perceived not as one of too much integration, but one of too little: integration needed to continue ‘behind the border’ so as to bring developing country

regulatory regimes more into line with those of the developed world. Shallow integration needed to be followed by deep integration. To this end, the G-7 formed the Financial Stability Forum (FSF) in 1999. Membership included selected OECD countries, Hong Kong, Singapore and the Bretton-Woods Institutions (BWIs). Its first task was the definition and dissemination of a number of key financial Standards and Codes (S&C) for adoption across the globe. The BWIs were invested with the role of enforcer, ensuring the implementation of S&C through the Financial Sector Assessment Programme (FSAP) and Reports on the Observance of Standards and Codes (ROSC).

Key among the S&C are the Basel Committee for Banking Supervision's (BCBS) *25 Core Principles*, which specify the 1988 Basel Capital Accord (Basel I) as the international capital adequacy standard. Basel I was originally implemented within the member countries of the BCBS primarily to prevent international banks from seeking competitive advantage by weakening their capital bases (Oatley and Nabors, 1998). BCBS membership is confined to the central banks and supervisory bodies of the G-10 countries¹, but even before 1999, Basel I had spread far beyond this to become the capital adequacy standard of more than 100 regulatory regimes worldwide (BCBS, 1999a).

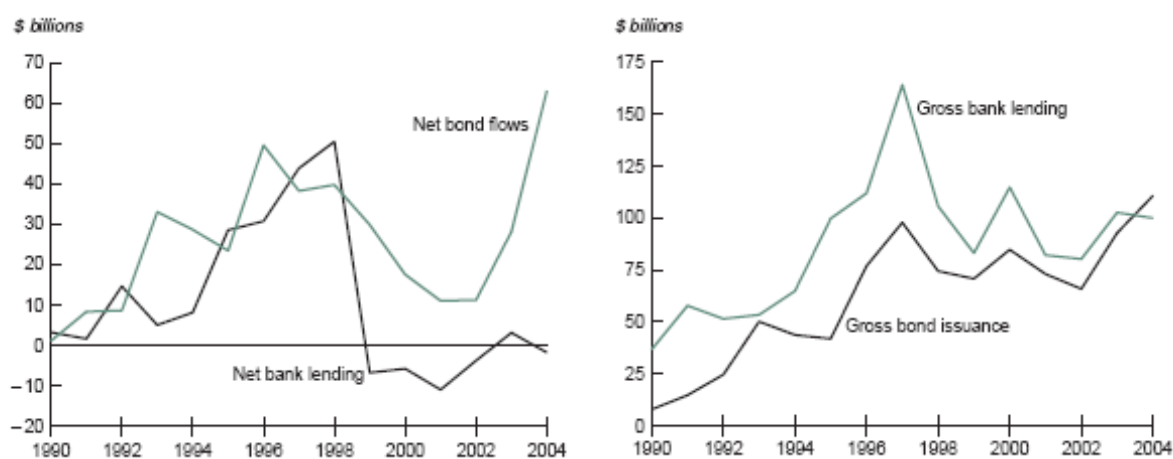
Although soft (the only signatories to the accord are the G-10, and for them it is not legally binding), Basel I, through its inclusion in the deep integration agenda, has become a form of international law nonetheless. Now, following a lengthy period of consultation, it is about to be superseded. Basel II becomes operational within the G-10 as of end-2006, but developed country implementation will immediately extend far beyond this. The new accord represents

¹ The term is somewhat misleading as there are 13 member countries: Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, Netherlands, Spain, Sweden, Switzerland, the UK and US.

a step change in how minimum capital requirements will be calculated, but also in the responsibilities of both banks and regulators within the prudential regime.

This paper is concerned with understanding the implications of Basel II for developing countries. Much of the literature has been concerned with the implications arising from implementation in the developed world, the common view being that Basel II will result in an increase in the cost and volatility of bank lending to developing countries (e.g. Griffith-Jones and Spratt, 2001; Reisen, 2001; Griffith-Jones, Segoviano and Spratt, 2003). This in itself is no small point. The World Bank's most recent *Global Development Finance* report (World Bank, 2005) reveals that bank loans to developing countries represent a critical source of fresh commercial finance, albeit one which has generally been net-negative since the 1997 Asian Crisis (see Figure 1 below).

Figure 1: Private Debt Flows to Developing Countries, 1990 to 2004



Source: World Bank (2005)

Basel II will also have direct implications for developing countries as many intend to implement it themselves in the near to medium term, despite reassurances from the BWIs that

Core Principles compliance does not require it. In what follows I argue that these direct implications are by far the more serious: whilst the impact of Basel II on lending to developing countries is likely to be insignificant, developing countries that choose to implement the accord will do so at considerable cost to their regulators and banking sectors. The returns to this investment are likely to be minimal however: the accord was not designed for, nor is it appropriate for, developing economies. Furthermore, local banks will find themselves increasingly capital constrained, making them vulnerable to acquisition by advanced international banks able to offer the fresh injections of capital and expertise sought by regulators.

Despite this, many developing countries may feel they have little choice but to adopt Basel II as without it, developed country regulators may refuse their banks market access. Basel II therefore represents something of a 'Catch-22' for developing countries: compliance means local banks may become vulnerable to acquisition by their international counterparts; non-compliance will avoid this, but exclude local banks from overseas markets. Given the importance of financial services in the post-industrial economy, this has serious implications for the global distribution of income going forward.

The paper begins with a brief overview of Basel I and Basel II followed by an examination of Basel II's implications for developing country lending. I then discuss the implications of Basel II implementation in developing countries, and finally consider the reasons for its widespread adoption.

Basel I and Basel II: an Overview

Basel I sets minimum capital requirements at 8% of risk-weighted assets. Risk-weights depend upon asset-type. For example, loans to *all* corporates carry a risk-weight of 100%, so risk-weighted assets are equal to the full exposure, and the minimum capital requirement is 8% thereof. The types of capital that may be counted towards meeting minimum requirements are defined as Tier 1 (essentially shareholders' equity) and Tier 2 (essentially subordinated debt).

Basel I became increasingly obsolete due to banks' use of internal economic capital models which estimate portfolio loss distributions and calculate capital to protect against unexpected losses at a particular confidence interval. In this context, the simple 'rule of thumb' capital requirements of Basel I led to perverse incentives by forcing banks to hold more capital than was justified by risk. Banks were incentivised to move high-quality assets off their balance sheets via securitisation. The response of the BCBS was to begin consultations on Basel II in 1999 culminating in the document *International Convergence of Capital Measurement and Capital Standards: a Revised Framework* (BCBS, 2004).

Developing country participation in the consultation process was limited to the right to respond to consultative documents, and peripheral involvement via the Core Principles Liaison Group, consisting of representatives from the BCBS, BWIs and 16 non-G-10 countries. All decision-making responsibility remained within the G-10, and a review of

responses from developing countries² to the third consultative document reveals their input as largely absent from the final document. The input of developed country banks was, however, better received via a consultative process in which the Institute for International Finance (IIF), the industry's largest and most influential lobby group, held the ear of the BCBS (Claessens, Underhill and Zhang, 2004).

The new accord, available from end-2006, consists of three 'mutually enforcing' pillars: the first, *Minimum Capital Requirements*, relates to the new capital calculations and represents the bulk of the document; the second, *Supervisory Review*, sets out requirements for the assessment of an institution's capital adequacy and risk management processes; and the third, *Market Discipline*, is concerned with disclosure. Of these, it is Pillar 1 and its potential impact on capital requirements that has generated the most debate.

The primary objective of Pillar 1 is to align regulatory capital more closely with risk. It does so by linking risk-weights to credit ratings – so a loan to a corporate will attract a risk-weight that reflects the individual creditworthiness of the counterparty, rather than one that simply acknowledges the counterparty as a corporate. Two alternative approaches for the calculation of capital are possible. The *Standardised Approach* (SA) uses the assessments of ratings agencies to assign risk-weights and is intended for those banks without the necessary internal models or data to assign ratings themselves. The *Internal Ratings Based Approach* (IRBA) allows banks to use their own internal models to estimate ratings, and will become operational a year later, at the end of 2007. In addition, Basel II introduces a new capital charge for operational risk. During calibration, this was targeted at 12% of the total capital

² Available on the Bank for International Settlements website.

requirement. The changes to the calculations for credit risk have therefore attracted the most attention.

Basel II and Lending to Developing Countries

Throughout the consultation process there has been concern regarding Basel II's implications for the cost and volatility of external bank lending to developing countries. In this section I consider the arguments underlying these concerns, beginning with the charge that Basel II will increase developing countries' cost of funds.

Basel II and Developing Country Cost of Funds

Critics (e.g. Griffith-Jones and Spratt, 2001; Reisen, 2001) argue that as regulatory capital becomes more closely aligned with risk, there will be a redistribution of capital requirements from higher-quality credits to lower-quality credits. Because developing countries tend to be less creditworthy, there will, generally speaking, be a rise in capital requirements for loans to developing countries. These increases will translate to an increase in borrowing costs as banks seek to cover their higher capital charges. This effect will be most pronounced under IRBA, which most closely aligns regulatory capital with risk, and is the approach being adopted by the large, internationally active banks that lend to developing countries.

Results of attempts to estimate the potential impact have been staggering. Reisen (2001) calculated that under IRBA, BB-rated sovereigns could see a hike in spreads of 1,115 bps, and those rated B, 3,709 bps. To place this in context, of the sixty-seven developing countries currently rated by Standard and Poors (S&P), the median rating was B, and the

mode BB³. Weder and Wedow (2002) estimated potential increases of up to 970 bps for B-rated sovereigns and 2,041 bps for CCC. Claessens, Underhill and Zhang (2004), potential increases of up to 1,837 bps. Results such as these have understandably led Eichengreen (2002) to conclude that “some [borrowers] will see their cost of credit increased, while others will be rationed out of the market.”

These results were all obtained by modelling interest rates as LIBOR⁴ plus a spread that varies according to rating. Returns on regulatory capital are calculated *for each rating category* and it is assumed banks will adjust their spreads under Basel II to hold this return on regulatory capital constant. Because Basel I does not reflect risk, low-quality credits attract the same capital charge as high-quality. The assumed spreads are considerably higher for low-quality credits, as banks charge for risk. The result is that under Basel I, low-quality credits earn stupendous returns on regulatory capital, so huge increases in spreads are necessary to hold returns constant under Basel II.

The estimates differ primarily due to the evolution of the IRBA formulae over the consultation process which has produced steadily lower, and less rapidly increasing risk-weights. None use the finalised equations (see BCBS, 2004), so to varying extents, they all overstate the potential impact. A more important reason why these analyses overstate the impact however is that banks do not price loans in the manner they assume. In what follows I use the latest formulae to calculate changes in required capital for sovereign lending under IRBA, and a more realistic approach to translate this into a funding impact.

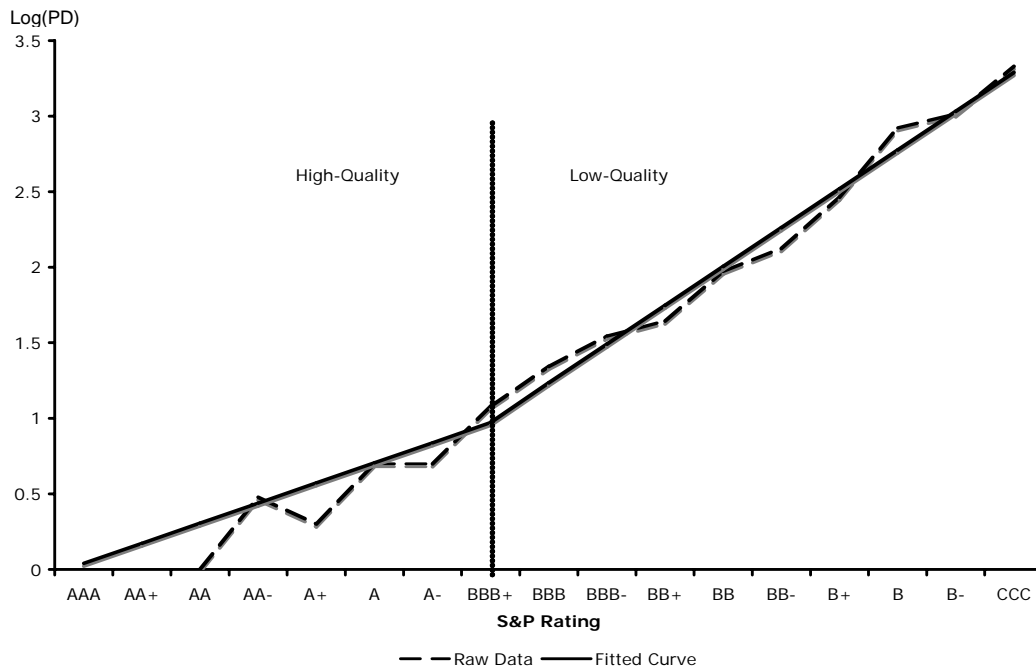
³ Ratings as of July 25 2005, developing countries taken to include Low-income and Middle-income as per World Bank (2005).

⁴ London Inter-Bank Offered Rate.

IRBA uses prescribed formulae to calculate risk-weights using banks' own estimates of certain credit risk parameters, namely the Probability of Default (PD) – the chance that a counterparty will default over the coming year, and Loss Given Default (LGD) – the loan proportion *not* recovered on default. There are two possibilities available to banks under IRBA: Foundation-IRBA, in which banks provide PD, with LGD set by the BCBS, and Advanced-IRBA, where banks also provide estimates of LGD.

The capital charges under IRBA depend on banks' own estimates of PD and LGD, which we cannot know. Instead I use the BCBS's prescriptions for LGD (i.e. Foundation-IRBA) and assume that banks' internal ratings correspond to those of S&P (not a bad assumption as banks often check their internal ratings against those of agencies). The final step is to map these ratings to PDs to feed into the capital formulae. I do so using the same raw default data as Weder and Wedow (2002), but fit exponential default curves to correct for discontinuities due to a lack of defaults⁵ at the high-quality end (see Bluhm, Overbeck and Wagner, 2003). The results are shown in Figure 2. A more intuitive mapping results, with no discontinuities and PDs assigned to all ratings.

⁵ Separate regressions were performed for the high-quality and low-quality ends as recommended in Bluhm, Overbeck and Wagner (2003). The R^2 was 83% and 98% respectively.

Figure 2: Comparison of Raw and Fitted Default Data

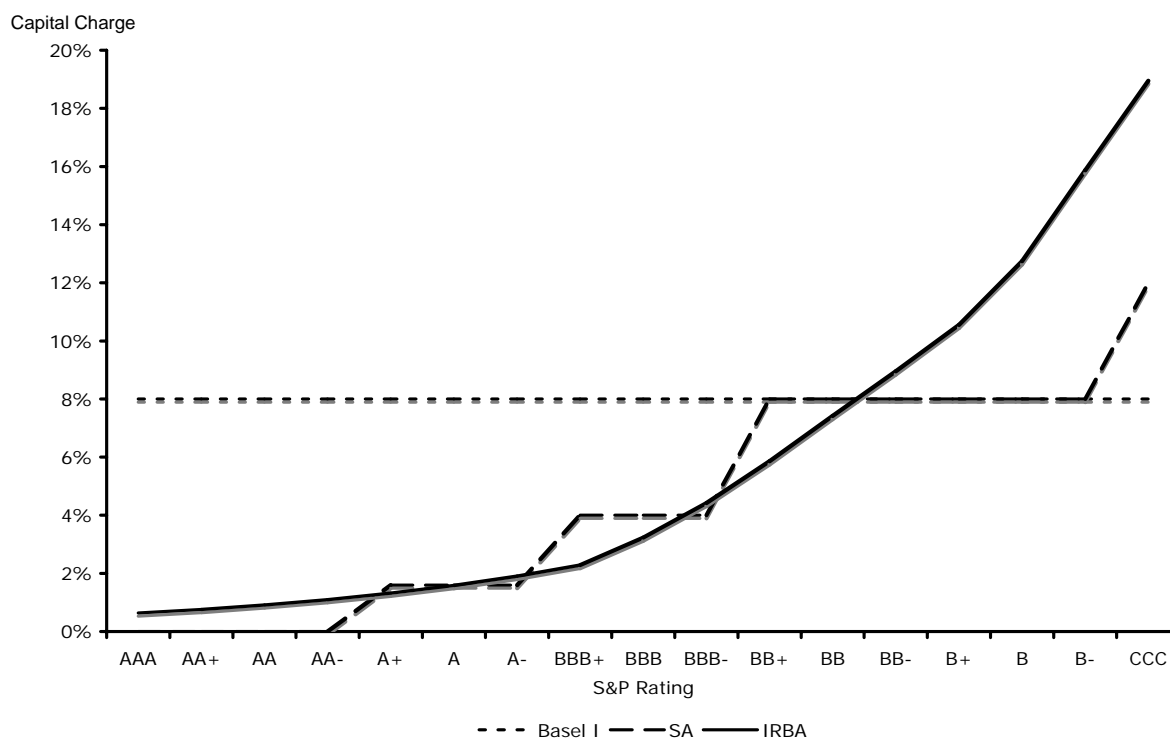
Source: Weder & Wedow (2002), Author's own calculations

Figure 3 shows the capital charges obtained from feeding these PDs into the IRBA formulae.

I have also included capital requirements under SA and Basel I⁶.

The impact of the different approaches is immediately apparent: for non-OECD sovereigns rated below BB, minimum capital requirements increase moving from Basel I to IRBA, significantly for the poorest credits.

⁶ Basel I prescribes risk-weights of 0% for OECD countries and 100% for non-OECD countries. I assume non-membership of the OECD here.

Figure 3: Capital Requirements for Sovereign Lending

Source: BCBS (2004), Weder and Wedow (2002), Author's own calculations

Assuming that loans are priced off regulatory capital, I next translate these capital charges into loan prices. Sophisticated banks price by targeting a Risk-Adjusted Return on Capital (*RAROC*) that meets or exceeds the cost of equity. *RAROC* is defined as the expected profit (*EP*) divided by the allocated capital (*CAP*). *EP* is the bottom line of the lending function's own profit and loss account in which it receives the interest income (*R*), the notional investment income on the allocated capital, calculated at risk-free, (*I*), and pays its share of operating costs (*OC*). Also included is the expected loss (*EL*), calculated as $PD \times LGD \times Exposure$, and the price of funding the loan in the money markets, also calculated at risk-free (*F*). In this framework, banks price to cover their capital costs, funding costs, probabilistic loss on the loan, and operating costs.

$$\begin{aligned}
 RAROC &= \frac{EP}{CAP} \\
 &= \frac{R - F - EL - OC + I}{CAP}
 \end{aligned}$$

I divided by CAP is the risk-free rate, r_f . R less F represents the absolute margin over risk-free, and recognising that EL , OC and the target $RAROC$ will be no different under Basel II, we obtain:

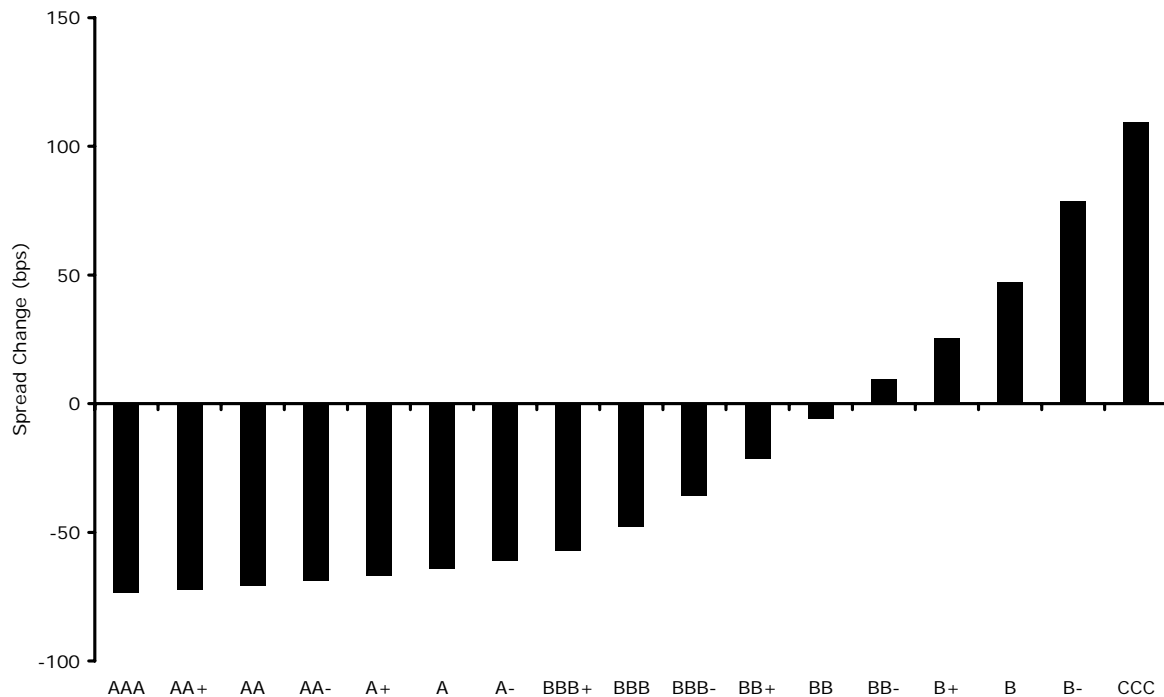
$$RAROC - r_f = \frac{\Delta Margin}{\Delta CAP}$$

Dividing the right-hand side by the amount of the loan:

$$RAROC - r_f = \frac{\Delta Spread}{\Delta \%CAP}$$

So the change in spread can be estimated by multiplying the excess of a suitable cost of equity over the risk-free rate, by the change in the capital (as a percentage of outstandings). This approach is implicit in the analysis of Powell (2002) who obtains appropriately less alarming movements in spreads⁷. Assuming banks allocate regulatory capital (i.e. regulatory capital binds), a target RAROC of 15% and a risk-free rate of 5%, I obtain the impact on spreads shown in Figure 4.

⁷ Powell, using the same early formulae as Reisen obtains a spread increase of just over 300bps for B-rated sovereigns.

Figure 4: Impact of IRBA on Sovereign Spreads Assuming Regulatory Capital Binds

Source: BCBS (2004), Weder and Wedow (2002), Author's own calculations

These spread changes are far more plausible: whilst Reisen estimated an increase for B of 3,709 bps, I estimate 47 bps. This is partly explained by my use of the most recent IRBA formulae. The main factor however is a more realistic methodology for translating capital changes into spread changes.

Lending to developing countries includes loans to banks and corporates as well as governments. Considering all lending as sovereign will understate the aggregate spread impact because banks and corporates are likely to be rated below their sovereigns. Powell (2002), uses consolidated banking statistics from the Bank for International Settlements (BIS)

to model the composition of developing country borrowing. These disaggregate the cross-border claims of BIS reporting banks on individual countries into maturities and sectors. Following this approach, I assume, like Powell, that a country's banks are rated one whole grade below the sovereign. I assume the same for corporates, unlike Powell, who somewhat optimistically assumes corporates carry the sovereign rating. The analysis was performed for all S&P-rated Low-Income and Middle-Income countries for which there were BIS data available (offshore financial centres are excluded). The results are summarised in Table 1.

Table 1: Estimated Economy-Wide Spread Changes for Cross-Border Lending

World Bank Income Category	No. Countries	Mode Sovereign Rating	Average Spread Change (bps)
Low Income	13	B	49
Lower-Middle Income	28	BB-	24
Upper-Middle Income	20	A-	-17

Source: S&P, BIS (2004), BCBS (2004), Author's own calculations

These results *still* overestimate the impact however, because they assume that regulatory capital determines loan prices. As assumptions go, this is a pretty big one. In fact, based on a previous career in financial services, I would say it's simply wrong. Large banks use internal economic capital models to allocate capital, not regulatory requirements: at a recent conference⁸, representatives from three major international banks stated that they use economic capital and RAROC for pricing. A Bank of England report recently argued that "loan pricing reflects the level and the cost of economic capital" (Hayes, Saporta and Lodge, 2002).

⁸ *The Future of Banking Regulation*, 7-8 April 2005, LSE, London, UK.

In response, Griffith-Jones, Segoviano and Spratt (2003) citing research by consultants PriceWaterhouseCoopers argue that “economic capital is only fully integrated into the business practice of less than half” of sophisticated European banks, so it cannot be widely used in pricing. But industry consultants are incentivised to define “fully integrated” at an extraordinarily advanced level to ensure the opportunity of work from clients fearful of being behind the curve. A similar survey by Deloitte (Deloitte, 2004) places the use of economic capital for pricing only half-way along the road to full-integration – so presumably it’s quite possible for economic capital to not be fully-integrated and yet still used for pricing⁹.

In order to test whether economic capital or regulatory capital feeds into lending decisions, Weder and Wedow (2002) took BIS consolidated banking data for lending to 25 emerging markets between 1993 and 2001, and investigated the relationship between lending flows and a proxy for economic capital. Their results suggested that lending was a function of economic capital, not regulatory capital. More detailed analysis is provided in a later paper from the Deutsche Bundesbank that used portfolio-level data from German banks between 1996 and 2002 to model economic capital more accurately (Liebig *et al*, 2004). It found economic capital was binding and a significant determinant of lending to emerging markets.

Although regulatory capital is not a determinant of bank lending to emerging markets, it will become one if Basel II requirements exceed economic capital. There is reason to suppose this may be the case, as Basel II fails to provide fully for diversification (Griffith-Jones

⁹ *Prima facie*, the Deloitte report seems to support Griffith-Jones’ assertion, indicating that only 40% of respondents use economic capital for pricing. Closer inspection reveals however that this corresponds neatly with roughly the same proportion of respondents being from the advanced banking regions of Europe and America.

Segoviano and Spratt, 2003). Defaults in emerging markets are relatively uncorrelated with defaults in advanced countries. Therefore advanced country banks that also lend to emerging markets are able to diversify their risk profiles. These diversification effects are captured by economic capital models, resulting in the marginal contribution of a developing country loan to total economic capital being lessened – Griffith-Jones, Segoviano and Spratt (2003) estimate by as much as 23%. By not allowing for this, Basel II will penalise developing country lending vis-à-vis economic capital.

This is, however, unlikely to result in regulatory capital binding because economic capital is calibrated to protect against unexpected losses up to extremely high confidence levels, typically of around 3 bps (Basel II is anchored to 10 bps). Because credit loss distributions exhibit considerable kurtosis, differences in confidence interval of only a few basis points translate to large differences in capital. This is illustrated clearly by Liebig *et al* (2004) who, for the same foreign portfolio of German banks found that economic capital exceeded IRBA capital by a large margin for the entire period. Hayes, Saporta and Lodge (2002) reached a similar result despite using an earlier incarnation of IRBA that produced higher capital requirements. And this is just for credit risk – economic capital models cover risks in addition to those of Basel II. All in all then, it is hard to see Basel II requirements binding. Indeed a top-three international bank recently found there were *no lending activities* for which Basel II capital requirements were expected to exceed economic capital¹⁰.

Of course, not all banks use economic capital for pricing, but large, internationally active ones do. It is my assumption that these players constitute the vast majority of lending to

¹⁰ Based on remarks by Sir Andrew Crockett, President, JP Morgan Chase. *The Future of Banking Regulation*, 7- 8 April 2005, LSE, London, UK.

developing countries. To prove this conclusively, I would need developing country borrowings by creditor (or banks' overseas lending by country) neither of which is available. But even if smaller players, lacking economic capital models (and pricing off regulatory requirements) were lending significant amounts to developing countries, under Basel II, they would do so using SA. The reason being that to qualify for IRBA, banks must be able to demonstrate that they use internal estimates in day-to-day business practices (i.e. use economic capital). Referring back to Figure 2, SA produces lower capital charges for speculative-grade borrowers than IRBA – so the impact on costs would be even less than my earlier estimates.

In sum, Basel II will not have a significant impact on the cost of cross-border bank lending to developing countries because: a) those banks involved price using economic capital not regulatory capital; b) this will continue under Basel II because Basel II capital will not bind; and c) even if a) and b) are wrong, the potential impact will be far less than previous estimates due to revisions to the IRBA formulae and incorrect approaches for estimating spread changes.

This addresses one concern raised by the critics. There is a second regarding the cyclicity of cross-border lending.

Basel II and Procyclicality

Minimum capital requirements, in theory, are inherently procyclical. Consider Basel I. As a bank moves through the economic cycle into a downturn, its proportion of non-performing loans will increase – it will be forced to raise provisions and make write-offs, eroding its

capital base and dragging its capital adequacy ratio (capital to risk-weighted assets) towards the regulatory minimum of 8%. Capital constrained banks can either raise new capital or reduce lending. During a downturn, the latter is likely to be cheaper, precisely when abundant credit is needed to kick-start the economy. Basel II, the critics argue, compounds this problem because risk-weights increase during the downturn as credit risk increases – the capital adequacy ratio is squeezed in the numerator *and* denominator.

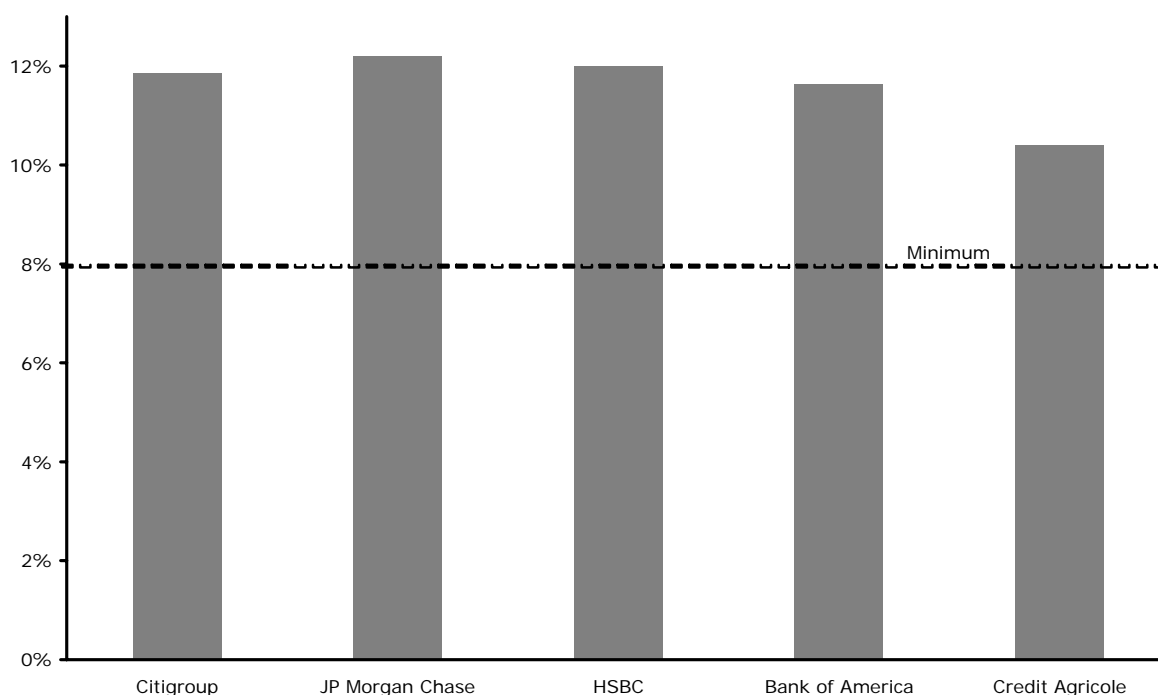
The logic seems compelling, but attempts to simulate the cyclicity of minimum capital requirements under Basel II have produced widely varying results, with required capital in some cases doubling in response to a cyclical downturn, and in others actually decreasing. The variation is attributable primarily to differences in assumptions regarding human behaviours, for example new lending decisions, and how banks will estimate PDs (Gordy and Howells, 2004). A definitive answer will only be available *ex-post*. Then again, perhaps not – despite a huge literature seeking to establish a procyclical impact of Basel I, there remains no clear empirical evidence for such an effect (e.g. Goodhart Hoffman and Segoviano, 2004; Barajas, Chami and Cosimano, 2005).

Nevertheless, the critics (e.g. Griffith-Jones and Spratt, 2001; Reisen, 2001; Ward, 2002; Claessens, Underhill and Zhang 2004) argue that procyclicality has two consequences for developing countries. Firstly capital allocations will become coupled to the economic cycle of the recipient country, exacerbating its booms and busts. Secondly, as banks' core domestic economies decline, threatening capital adequacy, they may choose to cut back on foreign lending, resulting in contagion as a contraction in credit is transferred overseas.

The first can be dealt with swiftly. Under Basel II, economic capital will bind across the entire cycle, because it uses the same cycle-dependent parameters as IRBA and so will rise and fall with IRBA capital. Economic capital and regulatory capital for lending to developing countries will therefore vary with the cycle of the recipient country, but the former will *continue* to determine flows. It is therefore impossible to conclude that the introduction of Basel II will result in lending to developing countries becoming *more* linked to recipient business cycles – there will be no change.

It is however possible to envisage how Basel II may lead to developing country lending becoming more linked to *domestic* business cycles. To understand why, we need to look at regulatory capital's place in the overall capital management process.

Although regulatory capital does not feature in transaction-level decisions, it remains an important consideration at the aggregate level – should overall minimum capital requirements be breached, the bank may be taken-over by the regulator. Banks therefore target a capital ratio in excess of the regulatory minimum – they hold a buffer. The size of this buffer is scrutinised not just by regulators, but in particular by equity and debt analysts who use it as a measure of financial strength. Figure 5 shows capital ratios for the world's five largest banks. The average ratio of total capital to risk-weighted assets is nearly 50% above the BCBS minimum of 8%.

Figure 7: Regulatory Capital Ratios for the World's Five Largest Banks¹¹

Source: 2004 Annual Reports

It is hard to imagine cyclical increases in regulatory capital requirements for an international bank's emerging market portfolio significantly impacting this buffer, but it will be squeezed by a domestic recession, with the potential result of a decline in lending across the board (including developing countries) if banks seek to maintain their buffers.

Understanding how banks manage their buffers through the cycle is complicated by the fact that surplus capital is not just a regulatory buffer: it is also part of economic capital, it may be held in reserve for productive investment opportunities or as a 'war chest' for acquisitions. There is also little empirical research into the question. Ayuso, Pérez and Suarina (2002) in a study of Spanish banks found evidence of a *negative* relationship between buffers and the

¹¹ *The Economist*, July 16-22, 2005, 97.

business cycle – Spanish banks tended to reduce buffers during good times and increase them during bad, indicative of procyclical behaviour. Sheldon (2002) argues that this is far from conclusive however, not least because banks in the sample were seemingly able to breach minimum capital ratios without being disciplined, bringing into question the very concept of a regulatory minimum, and hence buffer, in that particular regime. Sheldon also argues that inappropriate use of dummy variables to control for changes in regulations may invalidate the conclusions. Nor are Ayuso, Pérez and Suarina's results borne out generally. In particular, research by the BIS examining the same question on an international basis finds no "robust relationship" between capital ratios and the business cycle (BIS, 2001).

Whilst there appears to be no clear relationship between buffers and the business cycle under Basel I, there should be one under Basel II because supervisors will be expected to *set* capital buffers as part of the Pillar 2 Supervisory Review process. Buffers will become a matter for dialogue between banks and supervisors, taking into account factors external to the bank such as "business-cycle effects" (BCBS, 2004). As Lowe (2002) argues, "if the supervisory authority thought that the bank was inadequately capitalised for the particular point in the cycle, it would suggest, or even require that the bank raise more capital". Accordingly, buffers should incorporate the results of stress tests to consider "at least the effect of mild recession scenarios" (BCBS, 2004).

So regulators will be expected to set additional capital requirements to constrain the procyclical behaviour of banks. But what of their ability to do so? After all, the business cycle is notoriously difficult to forecast. Developed country regulators are however typically either central banks or close relatives thereof, so are probably as well placed as any. And,

through the supervisory review process, they will have access to the economic forecasts of the entire banking sector.

Things will also be different under Basel II due to Pillar 3 (Market Discipline). Lowe (2002) predicts that, as a result of increased disclosure under Pillar 3, “buffers are likely to increase when economic conditions are strong and fall when they are weak”, so dampening the procyclicality of Pillar 1. He reasons that analysts and in particular ratings agencies, through disclosures on banks’ credit portfolios, will be able to tell whether banks are unwinding buffers in response to (cycle-dependent) improvements in portfolio quality during a period of economic growth, so making themselves more vulnerable to downturns. Banks that reduce buffers in response to cyclical ratings improvements will be penalised accordingly. This argument is lent weight by Flannery and Rangan (2002) who found that such market forces, rather than supervisory demands, were the main determinant of capital ratios in the US over the 1990s.

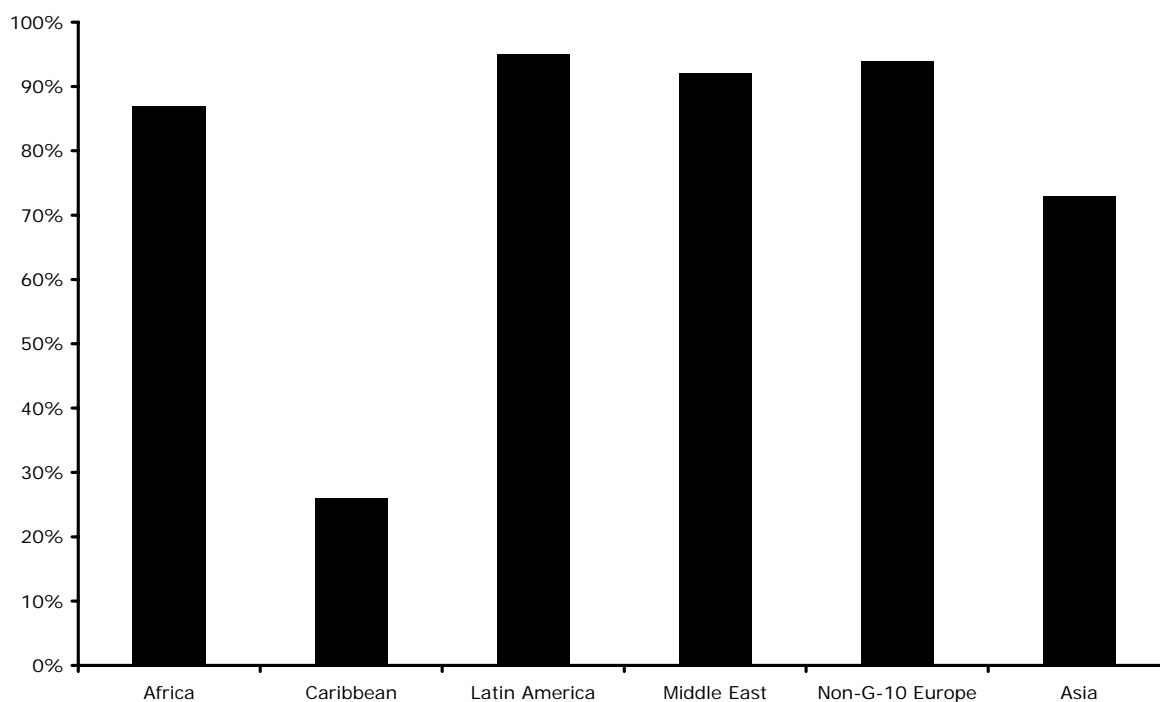
In sum, the procyclical impact of Pillar 1 on lending to developing countries will be less than the critics have suggested. It will not worsen recipient business cycles because lending to developing countries will continue to be determined by economic capital. Furthermore, claims that lending flows will become linked to domestic business cycles ignore the scope Pillars 2 and 3 provide for supervisors and the market to constrain procyclical behaviour on the part of banks, well beyond that of the current accord.

Implementation in Developing Countries

So far, I have argued that the implementation of Basel II in the developed world will not have the profound implications for developing countries that many have claimed. Implementation will not be confined to developed countries however. A recent survey of non-G-10 jurisdictions by the Financial Stability Institute (FSI) found that of 107 respondents, 88 intended to implement Basel II, covering about 87% of banking assets in these jurisdictions (FSI, 2004). A regional breakdown is provided in Figure 6.

The fact that implementation is scheduled so widely suggests that Basel II will have *direct* consequences for the developing world. I consider these next.

Figure 6: Percentage of non-G-10 Banking Assets Expected to be Subject to Basel II by 2015



Source: FSI (2004)

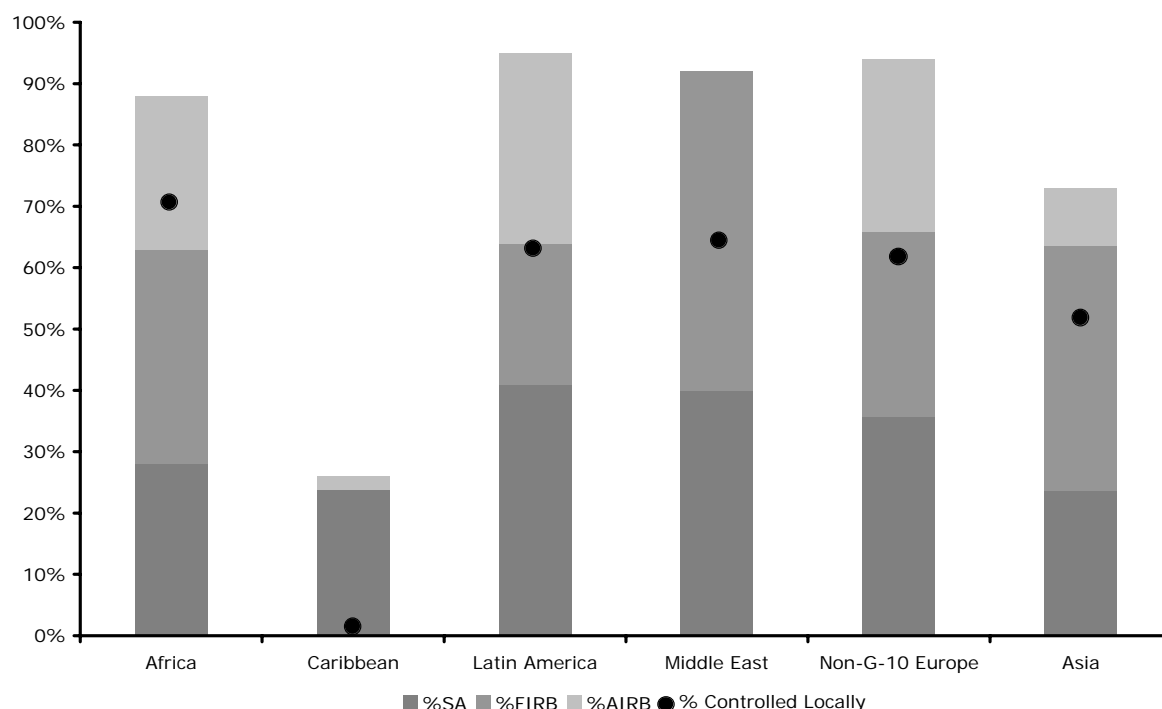
Implementation

Compared to its predecessor, Basel II is horrendously complex. Implementation will be commensurately difficult and expensive. Resti (2002) has estimated that the net present value of implementation costs faced by banks worldwide could exceed \$1,000bn – about one half of worldwide Tier 1 capital! A recent survey of leading international banks indicates typical implementation costs in the region of €50m - €100m (Accenture, Mercer Oliver Wyman and SAP, 2004). Given the size of the banks surveyed, and their typical preference for the more data intensive Advanced-IRBA, these costs will be higher than those of a typical developing country bank. That said, the leading banks will be able to ‘piggy-back’ their implementation on existing systems and processes to a far greater extent.

Figure 7 shows that a large proportion of non-G-10 banking assets will be subject to IRBA by 2015. This is partly due to the adoption of IRBA by foreign banks operating in these jurisdictions, but far from entirely: included for each region is a marker indicating the percentage of assets controlled locally – even if all SA coverage is explained by local banks, this still leaves a significant amount of locally-controlled assets falling under IRBA. Given their relative inability to ‘piggy-back’ on existing systems, the cost (as a percentage of capital) of attaining IRBA-compliance for local banks will be considerable.

Even for those that pursue SA, most will still need to conduct radical overhauls of their internal risk management and governance processes for Pillar 2, which sets standards for internal management and reporting structures equivalent to international ‘best practice’. The business transformation projects undertaken by leading international banks in the past to achieve these standards have taken years to complete and cost millions of dollars.

Figure 7: Percentage of non-G-10 Banking Assets Subject to Different Basel II Approaches by 2015¹²



Source (FSI, 2004)

The challenge faced by developing country banks is matched by that of their regulators. Basel I was rules based: the role of the regulator was to monitor compliance with a set of simple rules and take remedial action if necessary. This is not the case with Basel II, for which considerable discretion and expertise is required, primarily on account of Pillar 2, which demands that “supervisors should review and evaluate banks’ internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with regulatory capital ratios,” (BCBS, 2004). In addition therefore to their responsibilities regarding buffers, regulators will need to sign-off on the economic capital models and risk management processes of banks, as well as Pillar 1 data and calculations.

¹² For some regions, the percentage of assets covered under the three approaches amounts to slightly less than the total, presumably because respondents were unable to predict under which approach certain assets would fall. In these cases, the survey results were scaled on a pro-rata basis.

This represents a giant leap in the responsibilities and required skills of regulators *the world over*. For example, estimates for Germany indicate more than 500 extra supervisors will be needed to implement Basel II (Cornford, 2004b). The problem is compounded by the fact that people with the right skills exist in highly paid jobs in banks and consultancies, making recruitment and retention for regulators extremely difficult. These points were not lost on the respondents to the FSI survey which estimated that 25% of all supervisory staff would require training, rising to 70% for Africa. Few regulators have begun planning for this however – only 41% of respondents had developed implementation plans, with the proportion running as low as 27% for Africa and 20% in Latin America¹³ (FSI, 2004).

Appropriateness

Such an implementation burden might be bearable if it were to bring about significant improvements in financial stability and efficiency, but a number of question marks surround the efficacy of Basel II in a developing context.

Developing countries are susceptible to regulatory forbearance (Walter, 2003). This may be the result of political pressure, perhaps resulting from ties between politicians and banks, or may occur because regulators bear personal liability (Ward, 2002). The results of the first 26 assessments for *Core Principles* compliance revealed that 43% of countries were noncompliant or materially noncompliant with the requirement for adequate resources and independence; 39% with the requirement to have powers to take remedial action and 38% with the requirement for legal protection of supervisors, (IMF, 2000). In such environments,

¹³ Non-G-10 countries are not bound by the 2007 deadline. That said, respondents expected to have about two-thirds of banking assets subject to Basel II by 2009!

the greater the scope for regulatory discretion, the greater the chance of forbearance and corruption. And Basel II represents a paradigmatic shift towards regulatory discretion. Ward (2002) argues this will allow 'captured' regulators to favour certain banks: large over small, domestic over foreign, the prime minister's over the leader of the opposition's. Barth, Caprio and Levine (2001) provide empirical support. Using the newly established World Bank database on banking regulation, they find that (except for countries with high levels of democracy) high supervisory power is associated with high corruption, but not financial sector development or stability.

If discipline cannot come from regulators, can it come from markets? Pillar 3 requires greater disclosure from banks, reasoning that equity, bond and deposit markets as well as ratings agencies can discipline banks via the cost of funds and provide an early warning system for regulators via market signals. Yet, by definition, the capital markets of developing countries are underdeveloped and less likely to provide reliable signals. Depositors may provide better discipline, but not in the many countries in which explicit or implicit deposit insurance distorts incentives (Karacadag and Taylor, 2000). Finally, adequate accounting and auditing standards must underpin any disclosure requirements, and these are often lacking in developing countries (Walter, 2003).

Even Pillar 1 represents something of a dubious improvement. IRBA requires huge volumes of data going back at least five years which developing country banks are unlikely to have. The more immediately accessible SA utilises external ratings, but very few businesses in developing countries are actually rated. Powell (2002) found that of 80,000 companies on the Argentinean central bank's register, only 150 held public ratings. Corporate exposures

without a rating (i.e. the vast majority) will attract a risk-weighting of 100% - exactly the same as under Basel I!

Basel II also fails to account for important characteristics of some developing country banking systems. Consider directed-lending. Having sustained increasing levels of criticism during neo-liberalism's ascendancy in the 1980s and 1990s, this development strategy was implicated in the Asian Crisis of 1997 under the 'crony capitalism' moniker, becoming a target for conditionalities and the wider deep integration agenda. Yet whilst heavily criticised of late, it played a crucial role in the successful late development of East Asia (Wade, 2004a) and, despite the efforts of the deep integration agenda, state-led banking strategies remain significant in many developing countries today (Caprio and Honohan, 2004). Basel II however is fundamentally incompatible with such practices because it does not recognise close ties between the state, banks and industry as a form of risk mitigation. It assumes arm's-length transactions and penalises large exposures with capital add-ons. The result for banks involved in such lending will be increases in capital requirements, possibly triggering a contraction in credit and threatening the stability of the economy, *irrespective* of whether directed-lending is actually good or bad. (Eichengreen, 2002).

Basel II also takes a restrictive view of what may qualify as commercial real estate for collateral-based lending, preferring instead financial collateral such as securities or cash. However, commercial real estate is often a more important source of collateral in developing countries (Gabarretta, 2003). Although Hong Kong and Singapore argued for a more flexible treatment of collateral under Pillar 1, their non-membership of the G-10 meant few concessions were granted.

Capital Requirements

The stated intention of Basel II is not to increase or decrease overall levels of required capital, but to redistribute existing requirements to more accurately reflect risk. And the conservative approach of Pillar 1 means that, on average, SA should produce higher capital requirements, followed by Foundation-IRBA and Advanced-IRBA. One might therefore suppose that developing country banks, lending predominantly to riskier counterparties and more often on SA, will see an increase in capital requirements, whilst larger developed country banks will generally see a decrease. This is borne out by the BCBS's third and most recent quantitative impact study (BCBS, 2003a) which using the (since modified) approaches set out in the third consultative document (BCBS, 2003b), asked banks from around the world to estimate Pillar 1 capital requirements under SA, Foundation-IRBA and Advanced-IRBA. Banks were grouped according to country of origin: G-10, EU or 'Other', the latter being largely developing countries¹⁴. 'Other' banks predicted moderate increases in capital requirements of 12% under SA (which the majority of developing country banks would anticipate using in the near-term) and 4% under Foundation-IRBA (none were able to perform the calculations for Advanced-IRBA). Banks from the EU and G-10 generally saw modest drops in capital requirements (although not under SA).

Whilst this suggests developing country banks will generally see a deterioration in their capital adequacy, it also suggests it probably won't be destabilising. This shouldn't be surprising, as the fact that most counterparties in developing countries are unrated means that

¹⁴ Australia, Brazil, Bulgaria, Czech Republic, Chile, China, Hong Kong, Hungary, India, Indonesia, Korea, Malaysia, Malta, Norway, Philippines, Poland, Russia, Saudi Arabia, Singapore, Slovakia, South Africa, Tanzania, Thailand and Turkey.

they will attract the same capital charge under SA as under Basel I – the increase in capital requirements arises from the new charge for operational risk. There is however considerable variation. The maximum predicted increase in capital requirements for an ‘Other’ bank was 103% under SA and 75% under Foundation-IRBA.

In developing countries such as those of Eastern Europe or China and India, which have been experiencing strong growth over the previous five years or so, banks gathering data for IRBA will systematically underestimate risk due to favourable default experience. So when a downturn comes, those using IRBA may be insufficiently capitalised. Of course, it is the responsibility of the regulator via Pillar 2 to ensure capital levels are sufficient to withstand a downturn, but developing country regulators will be stretched to breaking point by Basel II. Anecdotal evidence from industry consultants suggests that most developing country regulators are yet to concern themselves with Pillar 2, so concerned are they with getting to grips with Pillar 1.

The risk of procyclicality in developing countries is therefore considerably greater than for developed countries, due to rose-tinted model calibration, overstretched regulators, regulatory forbearance or a combination of all three.

Competition

Increases in capital requirements for developing country banks and decreases for large international players has led some to voice concern that the latter will pass their lower capital costs on to customers, gaining market share at the expense of their developing country counterparts (Griffith-Jones and Spratt, 2003).

It is unlikely however that large international banks will significantly reduce the capital they hold. Capital is held for a number of strategic and risk management purposes, not just regulators. A paper produced by the FSA finds that banks that experience reductions in capital requirements only reduce their actual capital by around 20% of what would be allowed (Alfon, Argimon and Bascunana-Ambros, 2004). And anyway, large banks price off economic capital, which will remain unchanged under Basel II.

As QIS3 suggests however, there will be developing country banks which will see large rises in minimum requirements and will become capital constrained. These will become vulnerable to acquisition by international banks able to bring them on to a more advanced approach and free-up capital. As one senior-manager from a top-100 international bank has observed, “opportunities may exist to target standardised banks carrying excess capital for acquisition and leverage the excess capital for immediate benefit,” (Accenture, Mercer Oliver Wyman and SAP, 2004).

The welcoming of acquisitive international banks has become a common strategy for developing country regulators seeking injections of fresh capital, particularly since the crises of the 1990s and subsequent conditionalities requiring the opening-up of financial sectors. Accordingly, Cornford (2004c) finds “a large increase in the presence of banks from developed countries in East Asia, Latin America, and Central and Eastern Europe” of late.

More likely to hamper developing country banks on the international playing field will be their implementation costs. Those that attempt to move onto IRBA approaches, possibly in

hope of lower capital costs, will incur considerable expense – as a percentage of their capital, more than that of advanced banks. The huge governance changes and restructurings necessitated by Pillar 2, already undertaken by international banks, will prove even more expensive. This may make them acquisition targets for international banks, which, with the structures and expertise already in place, will be able to achieve compliance far more cheaply, so recognising considerable synergies.

The entry of such banks will help bring the required risk management skills and expertise to the jurisdiction, an attractive prospect for regulators struggling with the complexities of the new accord. According to Wolf (2004), developing countries should welcome new entrants for precisely such reasons: “Outsiders bring...superior know-how and efficiency [and] the ability to piggy-back on the skills and experience of the home-country regulator of the new entrant.”

So domestic penetration by foreign banks is not necessarily a bad thing. Certainly research suggests that, by increasing competition it improves efficiency and reduces interest margins, bestowing welfare improvements upon the wider economy (Claessens, Demirgüç-Kunt and Huizinga, 1998). However, as Clarke *et al* (2001) point out, this may weaken domestic banks, resulting in more failures. Furthermore, the argument is a static one: whilst considering the efficiencies of today, it neglects the potential benefits of tomorrow’s competitive financial services sector. Arrighi, Silver and Brewer (2003) have shown that developing country efforts to build viable manufacturing sectors and close the income gap with the developed world have failed. One of the reasons the authors cite is the rise to pre-eminence of international finance. The “financialisation of the economy” as Wade (2004b)

calls it, means that financial services is now one of the most important employers of capital and generators of income in the developed world. The goal posts have shifted. Just as, fifty years ago, a critical aim for developing countries was to develop manufacturing, today a critical aim should be to develop financial services, without which, the income gap will remain.

Explaining Basel II Implementation in Developing Countries

Adoption of Basel II by developing countries will present banks and regulators with a huge implementation burden and weaken banks' competitive positioning with respect to foreign entrants, making them more vulnerable to acquisition. Furthermore, huge questions surround the appropriateness of Basel II for developing countries. So why have so many decided to implement it in the near future? The literature is surprisingly silent on this intriguing question. Ward (2002) however provides several suggestions which I consider below.

Official Sector Discipline

Adoption of Basel II may be due to an assumption that non-compliance risks sanctions from the BWIs. Certainly, through conditionalities, the BWIs have forced regulatory reform in many developing countries. Cull (1997) examined World Bank financial sector adjustment loans since 1990 and found that conditions relating to bank supervision and prudential regulation occurred with a probability of 79% and 71% respectively, second and third behind bank re-capitalisation.

Since the publication of the S&C in 1999, the BWIs have been responsible for monitoring compliance through the FSAP (which feeds into the IMF's Article IV process) and the

voluntary ROSCs. The S&C include the BCBS's 25 *Core Principles*, among which the sixth states that supervisors should set minimum capital requirements that "at least for internationally active banks, [should] not be less than those established in the Basel Capital Accord," (BCBS, 1999b). Basel I therefore defines the international capital adequacy standard enforced by the BWIs. One might reasonably expect then, that once Basel I has become superseded, Basel II will become the new benchmark.

The BWIs, however, presumably concerned with issues of cost and appropriateness, have been at pains to point out that things are not about to change. Developing countries should not attempt to implement Basel II until they have reached "a system largely or fully compliant with the Basel *Core Principles*, which incorporates Basel I as the capital adequacy standard," (IMF, 2004). So Basel II is unlikely to arrive on the official deep integration agenda wish list until *Core Principle* compliance is widely achieved, which remains a long way off (IMF, 2004). Therefore unless the message of the BWIs is not getting through, or developing countries don't trust them not to change their minds, this fails to convince as an explanation for Basel II's widespread adoption.

Signalling

Ward suggests that countries may wish to 'signal' that they have adopted Basel II regardless of its efficaciousness, possibly to avoid official sanction as above, or to attract business to their jurisdiction. As I have already argued however, official sanction for non-compliance is unlikely in the foreseeable future, and whilst banks would generally prefer regulatory harmonisation, achieving dual compliance with Basel II and Basel I for home and host regulators should not be difficult.

Signalling for reasons of pride might be more likely. A number of developing countries, for example some of the East Asian economies or South Africa, see themselves as emerging international financial centres and may quite understandably wish to avoid being perceived as ‘behind the curve’ on such matters. However, this still leaves many less advanced (and presumably less proud) financial sectors about to adopt the new accord.

Adverse Selection

Ward suggests that the banks of countries that persist with Basel I will be susceptible to adverse selection. Because Basel I is largely insensitive to risk, domestic banks will hold too much capital against good risks and not enough against bad ones. Foreign banks (presumably lending across borders or via branches, so not subject to local capital requirements) will therefore be able to ‘cherry-pick’ good risks and leave local banks with bad ones, against which they will be undercapitalised. Whilst I disagree that Basel II will bring about this process (it is probably already happening as a result of international banks’ use of economic capital models¹⁵) I do agree that Basel II represents a significant opportunity for developing countries to limit this process by providing domestic banks with a risk-sensitive capital metric. The question is, at what cost? Real gains will only be possible via IRBA, which requires significant investment.

¹⁵ Claessens, Demirgüç-Kunt and Huizinga (1998) found that foreign banks in developing countries are typically more profitable than local banks (the reverse is true in developed countries) because local players’ information advantages do not compensate for their backward business practices.

Efficiency

As Ward says, “it is more efficient to buy off-the-peg than bespoke.” For regulators seeking to upgrade their capabilities and those of their banks (to limit adverse selection for example), Basel II offers an opportunity to do so with assistance from the international community.

Or does it? Assistance will be seriously limited. Some support is available via the FSI, although only in the form of web-based tutorials and a handful of international seminars. Some countries may be able to qualify for assistance via the Financial Sector Reform and Strengthening Initiative (FIRST), a multi-donor programme charged with funding development of financial regulation and supervision, although at \$53m of available funding in total, far from all.

Market Discipline

Might ratings agencies, banks and bond markets penalise non-compliant banking sectors and sovereigns? Ward is somewhat sceptical, citing research by the FSF that found market participants were usually unaware of S&C and ignored them even if they were (FSF, 2000). This was however an early assessment conducted in the year following S&C’s release. Price (2003) subsequently found a strong relationship between sovereign rating upgrades and the publication of favourable ROSC modules on banking regulation, indicating that good compliance with *Core Principles*, including Basel I, is consistent with an improved rating.

Core Principles compliance however does not require Basel II compliance, and according to ratings agencies, Basel II implementation *per se* will not be a factor in assigning sovereign

ratings as there can often be a large gap between rhetoric and reality in such matters (Walter, 2003).

The waters are similarly murky regarding bond markets. Research by Christofides, Mulder and Tiffin (2003) found that spreads on foreign currency-denominated sovereign bonds are negatively correlated to an index of financial regulatory strength, however the conclusion was reversed after controlling for other institutional factors such as transparency, accounting and corruption.

As far as banks are concerned, internal ratings models for inter-bank lending and sovereign lending often use indices of regulatory strength (although typically not a simplistic assessment of Basel compliance) in calculating PDs and prices. Conversations with a former banker from the emerging markets team of a major international bank revealed that, for short-term lending, Basel I compliance was a consideration in lending decisions.

The case is at best unclear, but as long as developing countries *believe* the markets will penalise non-compliance, they have a strong incentive to adopt Basel II, and according to a deputy-director of the IMF, this is indeed the case. Concerns regarding “unfavourable assessments by international market participants” have been a key motivator for Basel II implementation amongst emerging markets (Tran, 2005).

Market Access

Ward argues that host country regulators which have implemented Basel II may choose to make market access to foreign banks conditional on home country compliance, thus leaving developing countries that have banks with overseas operations little choice but to adopt the new accord. Based on historical precedent, there is a strong case here.

The Basel Concordat of 1975 recommended that host supervisors should only allow foreign banks to branch-in if the home regulatory regime was adequate, and otherwise should insist on a subsidiary, locally incorporated and separately capitalised to the host regulator's specifications. 'Adequate' was later effectively defined by Basel I, contributing to its widespread adoption around the world, despite initial confinement to the G-10.

More recently, as the deep integration agenda has taken hold, the link between market access and home country compliance has grown even stronger. During its 1998 summit, the G-7 endorsed proposals to make market access conditional upon the observance of S&C, (Cornford, 2004a), with the result for example that the UK's FSA now bases market access decisions on an assessment of home country *Core Principles* compliance (Ward, 2002). Branches already opened by banks whose home country regulatory regime was deemed inadequate by the FSA have been required to either incorporate locally or exit. Accordingly, the presence of developing county banks in the financial hubs of London and New York has been in decline since 1996 (Cornford, 2004c).

So unless the home country is Basel II compliant, banks may well find they are unable to open branches in developed countries. This leaves them with the option of locally

incorporated subsidiaries, for which competition laws may also demand compliance. For example, the EU requires that standards applied to foreign banks be no more favourable than those applied to member-state banks, and this has been taken to include capital requirements (Ward, 2002). Presumably then, subsidiaries of foreign banks will need to conform to the same regulatory standards as European ones. This will mean Basel II, which as a result of the Capital Adequacy Directive, will immediately pass into EU law.

For developing countries, Basel II compliance is the price that must be paid to protect the international aspirations of their banks. Basel I was the original requirement for market access, since raised to *Core Principles* compliance, and now Basel II looms ominously on the horizon. Some may well maintain that the *Core Principles* will remain the benchmark and that Basel II compliance will be required for developed countries only. But these things tend to have a momentum of their own – less than two decades ago, similar statements would have applied to Basel I.

Conclusions

Implementation of Basel II in the developed world holds no serious implications for developing country lending. Costs will be unaffected because international banks price using economic capital, not regulatory capital, and will continue to do so under Basel II. Even if this were not the case, and regulatory capital the binding constraint, the impact on spreads would be far less than earlier estimates due to incorrect assumptions regarding the manner in which banks price loans, and revisions to the IRBA formulae.

For similar reasons, Basel II will not exacerbate the business cycles of recipient developing countries. Because economic capital will continue to bind, the cyclicity of regulatory requirements will not feed through into pricing, so lending will not become more linked to recipient business cycles. Nor should lending to developing countries become more linked to domestic business cycles, as Pillars 2 and 3 will prevent international banks from behaving procyclically.

The implications for developing countries that implement Basel II themselves are more severe. Pillar 2 will increase the scope for regulatory forbearance and corruption; underdeveloped capital markets mean that Pillar 3 is likely to be ineffective; and Pillar 1 is unable to offer any significant improvements over Basel I due to poor data environments. Basel II may also hamstring banks involved in directed- or collateral based-lending.

Implementation costs will be significant for banks and regulators alike. Regulators may hope for official assistance, however scarce resources suggest that a more likely outcome will be half-baked implementation manned by poorly trained supervisors, with regulatory responsibilities under Pillar 2 unmet. Banks will need to meet the costs out of their own capital, for which minimum requirements will increase, making them capital constrained and vulnerable to acquisition by international banks able to offer the fresh injections of capital and expertise sought by regulators.

The widespread adoption of Basel II by developing countries in the face of such consequences is best explained by two factors. Firstly, a perception that market participants will penalise developing countries for non-compliance. Secondly, that developing countries

feel they have little choice but to adopt Basel II in order to preserve the international aspirations of their domestic banks.

Basel II therefore represents something of a 'Catch-22' for developing countries: compliance means local banks may become vulnerable to acquisition by their international counterparts; non-compliance will avoid this, but exclude local banks from overseas markets. Given the importance of financial services in the post-industrial economy, this predicament has serious implications for the ability of developing countries to close the income gap on the developed world.

Having understood the implications of Basel II for developing countries, understanding why they are as they are is relatively simple: they are simply a reflection of the underlying consultative process.

Basel II was designed by developing country regulators with the close involvement of international banks through their conduit, the IIF (Claessens, Underhill and Zhang, 2004). Both parties were keen to avoid minimum capital requirements greater than those justified by risk (this having resulted in perverse incentives in the past) with the result that economic capital, not regulatory capital is the binding constraint at the transaction level. Therefore there will be no impact on the cost of borrowing for developing countries. Developed countries were also incentivised to minimise procyclicality for their own sakes, so there are specific provisions in Basel II to limit such behaviour on the part of banks. International banks consequently pose minimal threat to the business cycles of developing economies.

Indeed, procyclicality is a threat to developing economies only in so far as their regulators lack the necessary capacity to constrain the procyclical behaviour of domestic banks.

Developing countries and their banks were however largely excluded from the consultative process. The result is an accord that is not simply inappropriate for developing countries but tilts the international playing field further in favour of international banks.

Given this, and the fact that there is no official requirement demanding Basel II compliance, nor any clear evidence that the markets will reward it, many developing countries should re-examine their decisions to implement the new accord. Whilst the lure of a London or New York branch may appeal to many of their banks, the costs of Basel II compliance seem a steep price to pay.

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