Dissertation on

Implementing Basel II:
Impact on emerging economies
(Finance)

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Executive Summary

Over the last 25 years there has been a slow realization that what matters for a successful economy, one that delivers rapidly improving living standards for all, is not only the precise levels of interest rates or budget deficits, tax breaks for particular activities – not only the exact calibration of the instruments of policy, but also the institutions of policy.

This paper is an attempt to analyze the effects of one such policy introduced by the Basel Committee on Banking Supervision. It will focus on the impact of introducing this policy in emerging economies.

Although the proposed new Basel Capital Accord is to be built on 'three mutually reinforcing pillars', it is likely that the changes proposed to the measurement of credit risk (Pillar 1) will have the most far-reaching implications for developing countries. Consequently this aspect will receive more focus in the paper.

The paper is organized according to the three pillars of the Basel II .The first section explores the impact of Pillar I on the Emerging economies.

In terms of IRB and SSA approaches it analyzes: The impact of the accord on quantity & pricing and supply of capital to developing nations and how the accord affects the capital adequacy in emerging economies?

The Second section deals with Pillar II, specifically how its implementation will help the emerging market economies (EMEs) to improve the quality of banking supervision and reduce systemic risks.

The last section of the paper incorporates the impact of appropriate disclosure of bank capital and capital adequacy (Pillar III) on EMEs along with the conclusion.

Introduction:

The role of banks went through a period of neglect in the late 1990s, when storming equity markets provided much of the new money flowing to big business, especially in the developed economies. But, then as now, most entrepreneurs start using bank credit-card loans; most businesses are too small to raise money on the stock market and depend on bank finance. Hence a well-functioning banking system is essential to economic growth. This is even more the case in developing countries with underdeveloped financial markets. Therefore a right regulatory regime for banks is critical to the economic vitality of nations and the international economy. That is where Basel II comes into picture. It is a regulatory approach based on the following three pillars:

1. Minimum capital requirements
2. Strengthened supervision, particularly of internal bank assessments of capital relative to risk
3. More effective use of market discipline as a result of increased disclosure of risk and capital information.

Pillar I:

The **first pillar** establishes a way to quantify the minimum capital requirements. While the new framework retains both existing capital definition and minimal capital ratio of 8%, major changes have been introduced in risk measurement, infact the main objective of Pillar I is to introduce greater risk sensitivity in the design of capital adequacy ratios and, hence, more flexibility in the computation of banks' individual risk.

The main Pillar 1 approaches are

a. Standardized Approach
b. IRB approach.

Standardized Approach (SA):

The Standardized Approach adds the possibility of using private credit *Rating Agencies* as well as *Export Credit Agencies* to establish credit risk assessments that would then feed into capital requirements. As these agencies rate corporates, banks and sovereigns, these assessments can be used to link capital to risk more finely.

Impact of capital – risk linkage:

The Basel Committee proposal on bank Capital Asset Requirements (CARs) specifies CARs on assets vis-à-vis high-rated agents would be much lower than CARs on assets vis-à-vis low-rated and non-rated agents. This would have enhanced bank efficiency in allocating loans had the credit ratings displayed a homogeneous quality across markets and borrowers. Unfortunately, whereas credit rating agencies have a longer record in assessing the health of banks and corporations of developed countries, their experience with sovereign and private sector ratings in NHICs is often limited to the last decade, which is likely to affect the quality of ratings.

Studies have confirmed that linking bank CARs to external ratings would, introduce modest improvements at the cost of substantial distortions in less developed financial systems. Volatility of banks' capital requirements in poorer countries would increase and the cost of capital for the best institutions would be higher than for peer institutions from more developed economies. This would negatively affect the availability and cost of credit in NHICs (Non High Income Countries).

The damage (to NHICs) stems from three effects:

1. As ratings are by far less widespread for banks and corporations in NHICs, bank CARs would not decrease (or increase) in these countries according to the risk exposure of individual corporations, as opposed to what would happen for HICs.
2. The second effect stems from historical experience; NHICs have experienced downgrading of their sovereign ratings which a number of recent studies have labeled as "excessive". Since the sovereign rating is generally the pivot of all the other country's ratings –determining *de facto* a ceiling for the private sector– this entails a generalized negative impact on the country's bank CARs.
3. The third effect depends on the fact that bank and corporate ratings in NHICs are more tightly linked to sovereign rating changes, introducing an element of asymmetry between the treatment of bank CARs in HICs and NHICs.

The Internal Ratings Based Approach:

Under the internal rating approach banks may employ their own opinions regarding borrowers in setting capital requirements. They do this by estimating some basic parameters then feed them into a formula to determine actual risk weights. Two crucial parameters required are the Probability of Default (PD) and the Loss Given Default (LGD).

The approaches proposed are

(1) Foundation

(2) Advanced approach.

Under the **foundation approach** banks determine the probability of default and all other parameters are essentially set by supervisory rules. Under the **advanced approach**, banks may also determine the Loss Given Default (LGD) and Exposure at Default.

Impact of IRB (linking of risk to return) on EMEs

Internal Ratings Based (IRB) approach significantly **overestimates** the risk of international bank lending to developing countries and increases the cost of funding, primarily because it would not appropriately reflect the clear **benefits of international diversification** which such lending has in terms of reducing risk.

The underlying models used for the calibration of the proposals assumed that there is a single systematic risk factor, and that this factor is the same across all loans. Accordingly, all commercial loans were initially assumed to have the same asset correlation coefficient of 0.2 despite the fact that diversified internationally between developed *and* developing country, borrowers would benefit in terms of lower overall portfolio risk relative to one that focused exclusively on lending to developed countries. Diversification benefits could thus play a major role for banks concentrating in below investment grade borrowers – either SMEs (Small & Medium Enterprises) or developing countries by providing incentives – in terms of lower overall capital requirements

Changes in risk weights of selected countries under the new Accord

Country	**Credit Rating**	**Current Risk Weight**	**New Risk Weight**
Bulgaria	BB	100%	110,8%
Croatia	BBB	100%	44,8%
Turkey	B	0%	202,9%

Change in the cost of funding (for borrowers currently receiving 100% risk weight)

Rating	**Probability of Default (%)**	**Risk Weight (%)**	**Change in cost of funding (Basis points)**
BBB	0.20	44.8	- 57
BB	1.40	110.8	11
B	6.60	202.9	107

IRB would also accentuate the pro-cyclicality of bank lending, capital requirements under the proposed Internal Ratings Based (IRB) approach will tend to increase as an economy falls into recession and fall as an economy enters an expansion. To the extent that banks curtail(expand) lending in response, recessions (expansions) will be amplified

which is damaging for all economies, but particularly so for fragile developing ones, which are more vulnerable to strong cyclical fluctuations of bank lending, both nationally and internationally.

The quantity of loans:

Strong forces resulting from the implementation of the new Accord will encourage **reduction in the quantity** of lending to poorer countries. These forces relate to the changed incentives that will face banks. Clearly, banks will **wish to minimize the regulatory capital** they are required to hold. If this were not so, there would be little point in the Basel Committee intentionally endowing the Advanced IRB approach with lower capital requirements than the other possible approaches as an 'incentive' for banks to move towards its adoption. That is, if, as is often suggested, banks are indifferent to changing regulatory capital requirements when making their lending decisions, then the lower capital requirements under the Advanced IRB approach would not provide an incentive towards its adoption. This 'incentive' can only work in practice if banks seek to minimize the regulatory capital they hold. If this is the case, then the reduction in regulatory capital for higher rated borrowers and the increase for lower rated borrowers, must provide a strong incentive over the medium to long-term for banks to refocus their loan portfolios away from lower rated borrowers towards higher rated borrowers – that is, to increase the proportion of developed country borrowers and decrease the proportion of developing country borrowers in the portfolio.

This is particularly the case at present as all capital flows to developing countries – and especially bank lending – have fallen sharply in the **past six years**, posing a constraint on growth.

Other impacts of Pillar I on emerging economies:

1. Project Finance:

A **specific concern** for developing countries is that the current proposals for Basel II assume that project finance is of higher risk than corporate lending, which implies an increase in capital requirements for those loans. This could be particularly problematic for developing countries, that require very large private investment in infrastructure for their development, and project finance is a key mechanism to achieve that. Hence developing countries would experience higher capital burden for project finance lending.

2. Pricing of Loans:

Two features of the new Accord are likely to have a particular bearing on the pricing of loans to EMEs.

1. The new Accord links the capital charge for credit risk to explicit indicators of credit quality, either measured externally or internally (IRB) in contrast to the current Accord, under which capital charges against sovereign and inter-bank loans are based on whether the borrower is domiciled OECD.

Country	Moody's	Standard Poor's	Fitch	OECD Membership
Estonia	A1	A-	A-	non-member
Hungary	A1	A-	A-	member
Latvia	A2	BBB+	BBB+	non-member

2. Secondly Under the current Accord, lending to a non-OECD country *bank* carries a charge of 8% if the maturity of the loan is greater than one year, compared with a charge of 1.6% for shorter-term claims. Although there are good reasons why shorter-term lending would attract a lower capital charge, a smoother transition along the maturity spectrum which the new Accord delivers may help to avoid distortions in lending patterns.

Pillar II:

Pillar 2 starts with key principles and then lists a set of "**other risks**" that banks and supervisors need to consider.

The key principles define the

Responsibility of the bank (Internal processes for assessing capital adequacy including credit, market liquidity and interest rate risk) and supervisors.

Supervisors should "expect" banks to operate with capital above the regulatory minimum and should have the ability to require banks to have more than standard minimum and they should seek to intervene at an early stage in the case of problem

Impact on developing Economies

The reason Pillar 2 is highly relevant is that the "**other risks**" tend to be particularly important in the often-volatile context of developing country banking. In countries with liquid financial markets, such risks can frequently be thought of as price risks and banks can frequently manage such risks with market-traded instruments. Banks may take risks

but those risks can normally be quantified reasonably accurately and they can normally be priced and insured. These risks in developing countries tend to be much more systemic in nature and are more difficult to price and to insure – all due to a lack of deep financial markets- and in the final instance, they tend to manifest themselves as liquidity risks. Hence what might look like a maturity mismatch in domestic currency (considered an interest rate risk) may swiftly turn into a high demand for dollar currency and a liquidity risk and a sharp change in the currency composition of a bank's balance sheet.

The appropriate treatment of such systemic risks – and the degree to which banks should insure against them – is an area where the banks have to work on.

In summary, while Pillar 2 may not much that is really new, it will impact developing countries. Introducing this would represent a significant advance in the quality of banking supervision globally, its implementation is costly and emerging countries' banks and regulators may experience serious difficulties in obtaining resources and skills they would need.

Pillar 3:

"**Market discipline**" focuses largely on the methods of appropriate disclosure of bank capital and capital adequacy. (Across the group and for each significant bank subsidiary), by portfolio and by type of risk

Developing country financial sectors are typically characterized by

1) Closely held banks

2) Opaque information regarding bank and associated economic groups

3) Thin and illiquid markets for non-insured bank debt.

Assuming consolidation rules and materiality are appropriately applied (by effective monitoring and enforcement); enhanced disclosure of bank capital would indeed be useful in such environments. On these grounds and with these qualifications, Pillar 3 may be considered relevant for developing countries.

Conclusion:

While the Basel Committee has emphasized that the three pillars are a package, it is the design of the first pillar that has generated the greatest attention. The innovations that have been made in the approach to calculating regulatory capital will also substantially affect the implementation of the second and third pillars.

But when judged from the perspective of the main market failures that should be addressed by banking regulation, the new regime outlined in the Basle II is not right. It is complex where it should be simple. It is supposed to more accurately align regulatory capital to the risks that banks face, yet in the case of lending to developing countries it ignores the proven benefits of diversification. Consequences of this will be an inappropriately large increase in the costs of such lending to developing countries, as well as a likely reduction in its quantity.

Basel proposal would increase the volatility of capital needs of banks in NHICs versus high-income countries' banks. In fact, bank and corporate ratings in NHICs appear to be strongly related and in an asymmetric way to changes in sovereign ratings. A sovereign downgrading would, for instance, imply larger changes in capital allocations than an upgrading and would call for larger capital requirements at the very time in which access to capital markets is more difficult.

One of the greatest challenges is the paucity of resources, particularly, human resources to cope with the requirements of Basel II. Training of bank supervisors will assume greater importance since Pillar II envisages supervisors having the expertise to assess risk management techniques/processes utilized by banks.

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