Comments

Patricia Correa: Endless pages have been written on the potential flaws that could prevent Basel II from achieving the ultimate goal of increasing financial stability worldwide by improving bank risk management and making capital requirements more sensitive to risk. Criticisms, which are sometimes contradictory, can be grouped into five categories. First, the new accord offers alternative approaches for measuring capital requirements (two versions of the standardized approach and two of the internal ratings-based, or IRB, approach), but it does not create proper incentives to use the most risk-sensitive approach, thereby opening the door for arbitrage. Second, in countries with little capital market and financial development, reliable external ratings are not available for most of the assets in the banks' credit portfolio; in such cases, the standardized approach will do little to link better capital to risk and would be, at best, a poor substitute to Basel I. Third, Basel II relies heavily on methodologies that lead to capital requirements that tend to accentuate the cycle, which can eventually increase, rather than diminish, financial instability. Whether this flaw can be attributed to the methodologies themselves or to the length of the databases employed to make the respective estimates is a controversial issue, but this topic is certainly an important one in the discussion. Fourth, the new framework will most probably increase the amount of minimum regulatory capital regardless of the measurement methodology chosen, and many banks, particularly in emerging economies, are simply not ready to meet the additional capital requirement. Finally, regulatory and supervisory bodies in most emerging economies are not prepared to meet the challenges posed under the second pillar of the accord, owing to lack of infrastructure, inadequate human capital, and so forth.

Majnoni and Powell's paper represents an important contribution to the understanding of the potential impact of Basel II on emerging economies and sheds light on the validity or relevance of the aforementioned criticisms. The authors' contribution is particularly valuable in two aspects: it

is the first attempt, to my knowledge, to estimate capital requirements in Latin American economies using the same methodology, enabling comparison across countries; and the paper goes beyond simply criticizing the new accord and, within the spirit of Basel II, constructively proposes a new approach to capital requirements (namely, the centralized ratings-based approach). However, issues related to the estimation of recovery ratios, which represent a key component of capital requirement estimation, are left out of both the quantitative and qualitative analyses in the paper. This makes the analysis of the challenges ahead incomplete, and it leads to some erroneous conclusions about the relative advantages and disadvantages of Basel II over Basel I. The authors' recommendations are also somewhat unclear and self-contradictory regarding how far and how fast these countries should move toward implementing better risk management systems and more risk-sensitive capital requirements. Below I present more specific comments on each of the paper's three main components: a quantitative study estimating capital requirements that accomplish the objectives of Basel II in three emerging economies; a qualitative analysis of the practical difficulties of implementing Basel II, with an assessment of a country's readiness to adopt Basel II; and policy recommendations.

With regard to the empirical analysis, the authors use a bootstrap methodology—which they argue is free of the usual problems that plague traditional econometric techniques (namely, parameter estimation and model errors and risks)—to estimate default probabilities for the loan portfolio of Argentina, Brazil, and Mexico. They describe their specific assumptions about the provisioning system and their allegedly representative sample of credit data.[1] They then calculate the capital requirements that would be necessary to cover credit risk under two circumstances: first, using the foundation IRB approach and the default probability risk weight mapping curve proposed by Basel II; and second, using the bootstrapping methodology to calculate the capital requirements needed to cover the value at risk of those portfolios at a 99.9 percent confidence rate.

When comparing the two results, the authors conclude that, except for Brazil, the Basel II formula generates levels of protection inferior to the advertised 99.9 percent. The authors therefore call into question the cali-

1. Their assumptions include a recovery ratio of 50 percent, a level of provisions that covers expected losses; and a definition of default as the event of more than ninety days past due payments. The sample periods are 2000–01 for Argentina and Mexico and 2001–02 for Brazil.

bration of the Basel II IRB curve, stating that it is not clear that it would be appropriate for emerging economies to apply the IRB curve to individual instruments to ensure a good approximation of risk. They suggest that as with Basel I, countries should or may choose to recalibrate the curve or make the requirement more stringent (for example, establishing a 10 percent capital adequacy requirement instead of 8 percent). They also conclude that the foundation IRB approach is, notwithstanding its benevolent risk calibration, likely to set higher capital requirements than the existing 8 percent under Basel I.[2]

While the methodology employed by the authors has its advantages, the data limitations and the short period chosen for the estimations (issues that are acknowledged in the paper) make it premature to categorically conclude that the Basel II models need to be recalibrated. Only after many years of experience and collection of quality data would it be possible to quantify those default rates and value-at-risk levels appropriately and, incidentally, reduce the procyclicality inherent to all approaches based on empirical estimations (even those using bootstrapping). Several related questions come to mind. Has the bootstrapping methodology been contrasted with that of Basel II using G10 data? If so, for what periods? How sensitive are the comparisons of bootstrapping and Basel II to the period chosen? Are Brazil's small credit loans necessarily more risky than large ones, as assumed by the authors?

In any event, these limitations should not serve as an excuse for regulators and banks to not move forward in refining internal risk measurements. Neither should the fact that Basel II implies more capital requirements. To advance Basel II's general goal, the problem of raising additional capital could be solved by phasing in the meeting of the new requirements, rather than halting progress in the implementation of IRB systems.

I turn now to the paper's qualitative analysis. In assessing the difficulties that emerging economies may have in applying the new capital accord, Majnoni and Powell outline the minimum conditions that countries have to meet before they begin implementation, and they summarize documentation that proves that many emerging economies do not yet meet these requirements. I disagree with the authors' approach to tackling these problems, which is basically to strengthen institutions before starting to implement Basel II. It is true that the ideal conditions are not present in many countries (I would dare say any country), and many institutional weaknesses

2. Specifically, 15 percent for Argentina and 10–14 percent in Mexico and Brazil.

prevail in the supervisory agencies and the banking industry. My experience as a banking supervisor in Colombia, however, made me a firm believer that the only way to create such conditions, particularly regarding the second pillar, is precisely by moving forward and setting clear goals and deadlines. In this ever-evolving field, which is more art than science, learning by doing is the only way to succeed, as has long been the process in the developed world. A sure way to delay preparedness is to postpone the definition of policy goals such as the development of good risk assessment within banks and matching regulatory capital. Again, gradually phasing in the objective is preferable to not starting the run.

Finally, the paper's policy recommendations aim to facilitate the transition toward the Basel II IRB regime in emerging economies. The authors propose a centralized ratings-based (CRB) approach to cover credit risks, which is compatible with the IRB model and which has the following characteristics: banks estimate default probabilities according to their own internal models, as in Basel II; the regulator defines the rating scale to be used and the mapping of each rating bucket to a range of default probabilities (in Basel II this is done independently by each bank, not uniformly by the regulator); and loan loss provisions are defined as the expected loss given default for each category of loans, and regulatory capital is defined as the total value at risk minus the expected loss (or, in the case of legal or other problems with changing the capital regime during the transition period, provisions could be defined as the difference between the desired total level of protection and the current capital requirement, and provisions could thus be over the expected loss).

This transition regime has a number of advantages. It coordinates the system for loan loss provisioning and capital requirements, and it would facilitate comparisons across banks and the handling and interpretation of data on credit risk. This proposal is in many ways similar to the system being implemented in Colombia. It is extremely appealing and should receive more attention and backing by international regulators. While it certainly simplifies matters for both regulators and banks, it is perfectly compatible with the spirit and ultimate goal of Basel II.

Philip Brock: In 1988 the Basel Committee on Banking Supervision formulated the first Basel accord for bank capital requirements (Basel I). Its purpose was to raise overall levels of capital adequacy in the thirteen member countries while simultaneously homogenizing standards. Basel I was a great success, with over a hundred countries adopting the framework.

Concerns arose, however, over the side effects of the accord. Among other issues, the capital standards of Basel I are relatively insensitive to the riskiness of bank portfolios, and the accord creates incentives to engage in regulatory arbitrage, whereby banks increase their risk within the parameters of Basel I without raising levels of capital.[1]

These concerns with the somewhat blunt nature of the Basel I capital standards led to the forging of a second accord (Basel II) in June 2004, which seeks to make bank capital more responsive to credit risk. Basel II offers four approaches to calculating bank capital. The first two, the standardized and simplified standardized approaches, map the ratings of credit rating agencies into capital requirements. The second two rely on banks' own internal ratings-based (IRB) models to generate levels of capital adequacy. Although this menu of approaches to capital requirements addresses the concern that Basel I is not sensitive enough to bank risk, Basel II has its own flaws. The two standardized approaches have highlighted concerns about the ability of risk-rating agencies to provide meaningful assessments of bank risk.[2] The two IRB approaches rely heavily on value-at-risk (VaR) models that only provide point estimates of the loss distribution, leaving substantial room for so-called spike-the-firm events involving high losses with low probability.[3] Regulatory arbitrage could also occur across banks adopting different approaches (for example, the standardized versus IRB approaches).[4]

Majnoni and Powell's paper centers on the adaptation of Basel II to Latin American financial systems. Their first concern is the lack of penetration of credit-rating agencies in Latin America, which makes the implementation of Basel II's standardized approach difficult. The second is the accuracy of the VaR approach for calculating capital adequacy levels. A centerpiece of the paper is the use of a bootstrapping methodology to calculate levels of capital adequacy that cover losses in 99 and 99.9 percent of potential outcomes in any given year. The authors apply this bootstrapping methodology to loans from Argentina, Brazil, and Mexico. When they compare the bootstrapping methodology with a VaR model calibrated using Basel II values, they find that that the VaR model underestimates the amount of capital that banks should be holding in each of the three countries. The

1. Dewatripont and Tirole (1994); Saidenberg and Schuermann (2003).
2. Danielsson and others (2001); Goodhart (2004).
3. Danielsson and others (2001).
4. Repullo and Suárez (2004).

authors find, among other factors, that the Basel II risk weights for small and medium-sized business loans are too low for Latin America, in comparison with the empirically derived results from the bootstrapping exercises.

The authors' concerns with the application of the standardized and IRB approaches of Basel II leads them to propose a hybrid approach, which they call the centralized ratings-based (CRB) approach. This approach relies on bank supervisors to develop risk ratings for banks based on the information that banks provide to the supervising authorities. In contrast with Basel II, the CRB imposes uniform (rather than bank-specific) risk weights across categories of loans for all banks, but the risk weights are determined with the active interaction of the banks and the bank supervisor. The CRB approach is similar to approaches currently in use in several Latin American countries.

A primary purpose of the Basel capital accords is to promote the stability of financial systems. As with Basel I and II, there are some worries associated with the CRB approach. Like Basel II, the CRB approach may lead to procyclical capital requirements, since lower measured credit risk will lead to lower capital-asset ratios during extended periods of good banking performance. This is less apt to be the case with Basel I, in which capital requirements respond less to changes in risk. Regulatory capture is another concern with the CRB approach. In particular, the regulator may come under pressure at times to be lenient in the classification of bank loans.

Any capital adequacy framework that a country adopts may destabilize, as well as stabilize, the financial system. Basel I, Basel II, and the CRB approach all strengthen bank supervision, but they may result in unwanted risk taking. Much risk faced by banks is macroeconomic, and this type of risk is underemphasized in Basel II.[5] Other financial sector policies can partially address this macroeconomic risk. For example, evidence indicates that policies geared toward reducing dollarization in Latin America would stabilize financial systems.[6] Policy measures to cushion the impact of sudden stops of foreign capital would also increase the stability of the banking systems.[7] Ultimately, the success of Basel II or the CRB approach in Latin America will depend on the accompanying policy measures taken to stabilize the economies against macroeconomic shocks.

5. Blaschke and others (2001); Carling and others (2002); Sorge (2004).
6. Herrera and Valdes (2004); Levy-Yeyati (2004).
7. Calvo, Izquierdo, and Mejía (2004).

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