# Practical Issues in the Design of Banking Regulation and Supervisionin Developing Countries

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#### Abstract

The strengthening of banking structure through prudential regulation and supervision is one of the essential steps to restore the financial stability in developing economies. There are many different ways to provide prudential banking supervision such as restrictions on asset holdings and activities; separation of the banking and other financial industries like securities, insurance, or real estate; capital requirements; disclosure requirements; bank examination and so on. I take up the two important issues for prudential supervision, capital adequacy requirements and banking activities restrictions, to describe how difficult or feasible to implement these measures in the face of the existing institutional rigidities and political obstacles confronting developing economies.

**Keywords:** Banking Regulation, Banking Supervision, Developing Country **JEL Classification Codes:** G21, G28

## 1. Introduction

The crucial issues related to prudential regulation and supervision of the financial intermediaries are discussed with special focus on the banking sector, since the problems endemic to the banking industry are also almost identical in nature to those observed in other financial sectors. One of many divergent views regarding the fundamental causes of the financial crisis in developing countries is the thesis of crony capitalism. This school of thought advances the argument that the uncontrolled corporate investment spree in developing countries and particularly in some Asian countries such as Korea, Thailand and Indonesia was at the core of the crisis. Excessive corporate investments in fixed assets and particularly in the property markets led to poor profitability as reflected by a low return on equity and on capital employed. Moreover, these corporate investment excesses were permitted by financial excesses, which violated prudential financial practices and eventually led to the banking sector crisis. Deeply entangled in this process of financial distress are bad government policies that intervened extensively in the banking decisions of credit allocation, magnified moral hazard problems with explicit or implicit government guarantees, and neglected prudential banking supervision. If effective machinery for prudential supervision of the financial system had been well put in place, such investment and financial excesses could not have occurred and hence the crisis could have been avoided.

Even in the absence of financial market distortions such as financial repression that are commonly observed in developing countries, financial market instability may still occur in a relatively mature financial environment because of the problems associated with asymmetric information, adverse selection and moral hazard. These problems were already discussed in length earlier. The crux of the matter here is that even a relatively sound banking sector in developed countries may lend itself to financial instability due to the problems of asymmetric information, adverse selection and moral hazard inherent in financial intermediation as amply evidenced in the banking crisis in Japan. In developing countries, the greater difficulty of acquiring information on firms and banks, compounded with financial structure badly weakened by a long history of past bad government policies, distortions and even corruptions, asymmetric information and moral hazard problems will be far more severe and the task of designing and implementing prudential supervision will be a lot more difficult. Moreover, these difficulties are further compounded by the realities of pervasive political interference in the financial market and the intractable problem of enforcing prudential banking regulation in the face of political interventions, even if reasonably sound rules and regulations are put in place.

Today in this highly liberalized global financial and capital markets, few would dispute the catastrophic consequences of a fragile domestic financial system coupled with inadequate financial regulation and supervision. Although the reliable costs of failed financial systems in developing countries are very difficult to estimate, one study by Caprio and Klingebiel (1997) put the total cost of the 59 banking failures in the period of 1976-1996 prior to the 1997 Asian crisis at \$250 billion, averaging over 9 percent of GDP. On the other hand, one recent estimate of the banking crashes in the worst-hit countries (Korea, Thailand, Indonesia and the Philippines) in the 1997 Asian crisis was put at around \$130 billion , costing in the range of 20-55 percent of GDP. (Armstrong and Spencer, 1998). By contrast, in ten baking failures in developed countries, the average cost was estimated to be about 4 percent of GDP over the same period.

#### 2. Capital Adequacy Requirements

Ensuring sufficient capital for the bank's assets is one way to induce the bank to take less risky investments, since the more equity capital, the greater the losses of the bank if the bank fails. The Basel Committee of the Bank for International Settlements (BIS) established in 1988 the minimum capital requirement in relation to its risks as one of the international banking standards, called Basel Accord I. This requirement took the form of a leverage ratio, the amount of capital divided by the bank's risk-weighted total asset and the minimum ratio is set at 8 percent of the bank's risk-weighted assets. Given numerous shortcomings of the current one-size-fits-all approach, a new capital standard for banks, called Basel Accord II, or "Core Principle", was formulated in 1997 to remedy known defects in the existing rules. The new approach represents a far more comprehensive scheme, but still found to be inadequate, and highly unlikely to be implemented before 2006, although originally planned for 2004<sup>1</sup>. The following discussion of capital adequacy ratio (CAR) will be based on Basel I Agreement.

There are many technical and practical difficulties of implementing the capital adequacy requirements. In defining the above capital adequacy ratio, there is serious problem of how to measure capital in the numerator and the risk-weighted assets in the denominator of the ratio. The risk-weighted assets and off-balance sheets<sup>2</sup> of the bank defined by the Basel Accord are classified into four categories, each with a different risk weight attached. The first category carries a zero weight and includes default-free assets such as reserves and government securities (e.g. US treasury bills) in developed countries. The second category receives a 20 percent weight and includes claims on banks in OECD countries. The third category has a 50 percent weight and includes municipal bonds and residential mortgages. The last one is assigned the maximum weight of a 100 percent and personal and

<sup>&</sup>lt;sup>1</sup> For a full description of Basel II Accord, refer to Basel Committee on Banking Supervision (1999). For a critical review of Basel II being proposed, see *The Economist*, 23 February 2002.

<sup>&</sup>lt;sup>2</sup> Off-balance sheet activities of the bank refers to the bank's activities which do not appear on the bank's balance sheet such as trading financial instruments (e.g. loan commitment, letters of credit, interest-rate swaps and trading positions in futures and options) and generating incomes from fees. These off-balance sheet activities nevertheless are believed to expose banks to risk, and hence led to the inclusion of these items as part of the risk-weighted assets in the capital requirements established in 1988.

commercial loans belong to this category. One problem arising from this risk asset classification is socalled "regulatory (capital) arbitrage" in which banks have the incentives to substitute more risky assets for safer assets in their portfolios (Mishikin 2000). This occurs because this scheme does not differentiate the risk between a safe loan to a AAA-rated corporation and a highly risky loan to a CCCrated firm, both receiving the same risk weight of 100 percent. However, a further finer differentiation of credit risks of the corporate loans according to their credit rating would be impracticable in most developing countries where such a credit rating system of corporations is virtually non-existent or at its embryonic stage of development.

The entire problem of estimating capital in the numerator and assets in the denominator of the adequacy ratio is directly linked and poses a number of serious difficulties. First, accounting capital is defined as the residual difference between the bank's assets and liabilities, and hence capital valuation is directly affected by how the bank's assets are valued. A natural yardstick for valuing assets are fair market value , and this approach does not pose serious problems, when the bank's assets are mainly composed of marketable securities. But banks hold a considerable part of their assets in the form of real estates, and the market value of property is very difficult to estimate particularly during the boomand burst cycle, which many Asian economies and Japan have experienced in recent years.

A realistic valuation of the bank's loans that comprise the major portion of the bank assets poses even greater problems. Severe asymmetric information problems run counter to the realistic market valuation of loans. Using its inside information, the bank is likely to retain worthy loans while it attempts to sell in deep discount bad loans with little likelihood of repayment. In this case, bank regulators cannot rely on the market price of loans to assess the loan value. Moreover, this information asymmetry leads to further difficulties for bank regulators. Ideally, bank regulators would like to have their own fair valuation of the bank's assets classified by different types of risk. In practice, bank supervisors do not have access to inside information or resources to dispute the bank's assessment of its loans. The problem is further aggravated by the banks' general tendency to overvalue their loans and underestimate reserve requirements against bad loans. Worse yet, the bank can continue its operation and postpone its closure even in a state of insolvency with its liabilities exceeding its assets (or a negative net worth), as long as the net deposit flows and the interest income from performing assets are sufficient to pay its operating expenses and interests on deposit.

Precisely in time of the insolvency crisis, banks are even more tempted to overvalue their assets simply to delay its demise, and the situation gets worse if bank supervisors are under political pressure not to pursue the investigation of problem loans made to politically powerful persons, their family or other politically motivated loans. The worst situation emerges when the bank officials help themselves its resources through self-lending or outright fraud, and engage in the concealment activities against bank regulators through account riggings or other fraudulent manipulations. This type of fraudulent activities are not actually uncommon in many developing countries and even in developed countries like Japan and the United States as we witnessed in many banking scandals in Japan in the last several years and in the US savings and loans scandals in the 1980s.

More transparent and stricter accounting standards would make it easier for the bank regulators to examine the banks. For instance, in most countries, if the interest payment on a loan remains in arrears longer than 3 months, the loan would be classified as non-performing, and the interest on the loan would not be counted as the accrued income. However, the loan classification based on the length of delayed interest payment varies considerably across developing countries. For instance, interest accrual on non-performing loans was permitted up to one year in Thailand in 1997. However, in times of widespread financial crisis as seen in the Asian crisis in 1997, even the best accounting standards could not prevent a bank from hiding a bad debt, since the bank could engage in " ever-greening", namely refinancing the loan to cover the interest repayment. This is particularly likely when a bank is overexposed to a small number of big enterprises on the verge of bankruptcy, and the failure of these firms would endanger the solvency of the bank itself. The situation becomes more acute when this problem loan involves a large corporation which accounts for a dominant output share of the economy.

Moreover, when it is linked to a political elite group, political pressure will often be exerted both on the bank and regulators to keep alive the weakened enterprise.

Measuring the level of capital is one big problem and measuring the risk of the bank's assets is another matter. Apart from numerous conceptual and practical difficulties involved in measuring the bank capital as discussed above, minimizing the risk of bank failure rather than value maximization would be a primary concern for bank supervision. It is quite natural, therefore, that high-risk situations should call for high capital standards. However, there are many different ways for the bank to thwart higher capital adequacy requirements demanded by highly risky environments. The bank could respond to the higher capital requirements simply by raising the risk of its loan portfolio, using such a technique as "capital arbitrage" as described earlier. The rules governing the risk classification of bank assets are rather arbitrary and subjective, and hence there is ample room for the bank's risk amplification.

The problem is further compounded by the rapid development of new financial instruments and financial derivatives where the potential for the bank to magnify its risky portfolio is greatest, and there is a glaring paucity of technical expertise to deal with this new financial market development in developing countries. More importantly, the risk caused by the transaction of new financial instruments and derivatives spreads much more quickly than annual or even quarterly bank examination. Since the continuous electronic monitoring of the banking operation is not yet feasible, there is no alternative but to rely on the bank's internal risk management system in this new market.

One way to remedy this problem is to employ the expert services of a private credit rating agency to assess the credit risk of different bank assets in developing countries. But there is no domestic technical capacity to develop a private credit rating system. On the other hand, the use of a foreign credit agency could be not only costly, but also the track record of these foreign agencies in assessing both country risks and corporate risks in developing countries has been at most mediocre. Even for a world-class risk-rating firm, the task would be extremely difficult in countries where the financial markets are dominated by a complex network of assets and ownership cemented by political connections, close family ties and personal relations. In such an opaque and secretive environment, the bank can dilute the quality of bank capital in responding to the higher capital standards in many different ways. The shareholders of a bank can borrow from other banks to purchase bank shares, as actually happened in Chile in the early 1980s and in Mexico in 1994 (Caprio and Honohan 2000) or egregiously borrow from their own bank, or a number of banks buy each other's shares in the form of cross-share holding as widely practiced in Japan. Obviously this type of capital quality dilution would provide less incentives for prudent management and would be very difficult for outsiders to detect, not to mention of prevent such a practice.

One important method used in many countries to strengthen the capital adequacy position of the bank is issuance of the subordinated debt. Subordinated debt is the most inferior debt that is paid off, after all other claims are settled in case of bank failure, and counted as part of Tier 2 capital in computing the capital adequacy ratio. Because of high non-payment risks associated with subordinated debt, the holders of this debt are supposed to have strong incentives to monitor the banking operation. Moreover, the issuing banks need to disclose information thoroughly to gain market credibility before they can sell subordinated debts. As a result, the market-determined price and interest rate of a subordinated debt reflects a market assessment of the financial health of the issuing bank, and such information could be useful inputs to prudential bank supervision. In fact, this scheme is widely used in developed countries and initiated even in some developing countries like Argentina in 1997. One major benefit of the subordinated debt requirement like that in Argentina is that it makes it extremely difficult for bank supervisors to ignore the market signal of a given bank's financial health revealed by such requirements and hence bank regulators are compelled to take a proper action to close down the weak bank or rebuild it to the healthy one. Put another way, they will be deprived of any excuse for regulatory forbearance.

However, there are some practical difficulties in implementing this debt scheme. First of all, the holders of subordinated debts should be some entity distanced sufficiently from the interests of a bank

(e.g. shareholders), and preferably foreign investors. More realistically, there are few banks in developing countries that are willing to make a full disclosure of information and raise bank capital at relatively high costs. Moreover, there are many abuses of this scheme such as rigging up the capital ratio. Such an account rigging to raise the capital ratio has actually occurred in the form of crossholding of subordinated debts between banks and major life insurance companies in Japan. To be more specific, according the Nihon Keizai Sinbun (November 15, 2000), as of the end of March, 2000, Japanese major banks purchased a total of 2.2 trillion yen (about \$18 billion) worth of subordinated debts from 14 major domestic insurance companies and in return the insurance companies bought back 777 billion yen worth of bank shares and 670 billion yen worth of the banks' subordinated debts. The transactions were obviously undertaken to raise both the banks' capital ratios and the solvency ratios of insurance companies above the required 200 percent level. Worse yet, there is no guarantee that subordinated debts be disposed as they are originally intended in case of the failure of a financial intermediary, namely, the last claimant for settlement. In the infamous dissolution of the Long Term Credit Bank (Nihon Choki Shinyo Ginko, now Shinsei Bank), the insurance companies' subordinated debts held by the bank were fully protected and in case of Yama Ichi Securities, the out-of-court settlement reached to repay the half of the amount of subordinated debts. This kind of abuses are even more likely in developing countries where the greater concentration of economic and political power is much more common and the interlocking corporate ownerships among family members and elite groups are much more prevalent than in developed countries. As a result, such institutional shortcomings would diminish considerably the usefulness of the potentially very promising role of subordinated debts in subjecting the bank to the discipline of private creditor monitoring and in creating incentives for the private production and disclosure of bank information.

#### 3. Restrictions on Banking Activities

To minimize the risk-taking of the bank, banking activities can be restricted basically in two areas: asset holdings and the types of business allowed. I will first discuss restrictions on asset holdings and then restrictions on banking business types. It is obvious that the bank has the natural incentives to hold risky assets, since the return on the risky assets is higher than the safe one, and the pay-off for the bank is accordingly higher if the project succeeds, and the depositors bear the cost if it fails. In this case, even in the absence of a government safety net such as a deposit insurance, the bank would not engage in risky activities if the depositors would know perfectly the bank's activities, that is, the absence of asymmetrical information problem. In such a case, if the bank holds too much risky assets, the depositors would withdraw their deposits. But the asymmetric problem exists in reality. Unfortunately, with the government safety net to protect the depositors, the bank's incentives for engaging in risky activities increase even more, that is, a moral hazard problem, as discussed earlier. There is, therefore, a compelling case for the government to impose restrictions on the bank's exposure to a small number of borrowers or businesses.

Such banking regulations to limit the range of the bank's asset holdings seem to take on added significance in developing countries plagued by the non-performing property loans, overexposure to a small number of large corporate borrowers, and severe asymmetric information problems. However, the enactment of adequate banking regulations is one thing and the enforcement of such regulations is another matter. Information disclosure stands in the way of the effective enforcement of bank regulation and this disclosure requirement poses especially a serious problem in developing countries. More specifically, bank regulators should require that banks use certain common accounting standards and make public disclosure of a wide range of information regarding the bank's activities so that depositors, creditors, shareholders and the markets in general are capable of assessing and monitoring the risk quality of the bank's asset portfolio and hence restraint the bank not to take too risky activities. Quite notable in this connection is the New Zealand disclosure system that requires the public disclosure of a comprehensive quarterly financial statement of each bank coupled with the requirement

of bank directors validating such a statement and subject to unlimited liabilities in case of the bank failure (Mishikin, 2000). However, such a disclosure requirement would seem to be still a long way off in most developing countries, given the institutional realities characterized by the severe information asymmetry problems which exist between regulators and banks, depositors and banks, often resulting in shady concealments and scandals; a complex network of politically well-connected insiders; and pervasive political interferences in the financial markets as discussed earlier.

Another way to reduce the risk level of banking activities is to restrict the bank from engaging in commercial activities that lie outside the core banking business. One well-known historical example is the Glass-Steagall Act of 1933, which forced the separation of the banking and securities businesses in the United States until it is repealed by the enactment in 1999 of the Gramm-Leach-Bliley Financial Services Modernization Act. It is also well-known that in Japan the commercial banking activities have been strictly separated from other financial industries such as trust and investment banking, insurance, real estates and other financial services in the post-war period until very recently.

The central question here is whether restricting the banks' activities in certain business domain would increase or reduce the safety and stability of the financial system. The proponents of the separation would argue that certain business such as investment banking and real estate tends to be risky and hence the risk of a bank failure may increase when the bank undertakes such activities. Particularly a thorny problem in this context is securities underwriting by the bank. The bank may sell the unsold new issues of securities to trust funds, other non-bank entities they manage or even to the bank itself. Given a complex network of business ownership by a handful of politically powerful families and other elite groups coupled with the non-transparency of a legal framework governing financial transactions in most developing countries, such grave concerns about conflicts of interest leading to underwriting abuses may be justified. Moreover, the extended coverage of the safety net to other non-banking activities would reduce market discipline and encourage risk-taking in these industries. On the other hand, the proponents of removing entry barriers of the bank to other financial industries would claim that bank entry into other industries would promote competition and hence enhance the market efficiency in these industries. Furthermore, the creation of a universal bank offering a wide range of financial services such as securities, insurance and real estate in addition to commercial banking would allow the bank to diversify its products and hence increase the safety of the bank and the financial system.

#### 4. Conclusion

The question of whether the separation of commercial banking from other non-bank businesses would increase or decrease the stability of the financial system must be answered empirically. Although not conclusive, the proponents of restricting commercial banking are not empirically supported by many studies undertaken on this. That is, there exist no reliable statistical relationships between restrictive regulations on the banking activities, and the level of financial development and the stability of the financial system.

More importantly, as part of effective measures to reform and rebuild the weak domestic banking sector, opening the domestic banking market to foreign participation has been considered seriously in many countries. In fact, among developing countries, foreign banks own about 40 percent of the domestic bank assets in Argentina now. Thailand is deregulating the rules governing foreign ownership, and many other developing countries are also moving in this direction (Caprio and Honohan 1999). The apparent advantage of foreign participation is that foreign participation, particularly by globally competitive banks, would enhance the stability of the financial system by making domestic banks safer, better diversified in assets holding, enabling them to learn sound and prudential banking practices, and providing them with the opportunity to expand their banking business beyond their small local and national markets, a matter of crucial importance to small economies constrained by the limited size of domestic market. Of course, there are some disadvantages associated with opening the domestic market to foreign participation, for instance, neglecting small domestic borrowers such as small-and medium-enterprises. Regardless of merits and demerits of foreign participation, regulatory restrictions on domestic banks would thwart the introduction of such a scheme. Since most of big foreign banks active in the global markets are free from such regulatory restrictions, offering multi-faceted banking and other financial services, they would establish an unfair competitive edge against their domestic counterparts, when they are allowed to establish a branch bank. Moreover, such regulatory restrictions on domestic banks would hinder them to form a joint venture or merge with foreign banks.

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