Pacific Basin Working Paper Series

THE POLITICAL ECONOMY OF FOREIGN BANK ENTRY AND ITS IMPACT: THEORY AND A CASE STUDY

Gabriella Montinola
Department of Political Science
University of California, Davis

and

Ramon Moreno
Research Department
Federal Reserve Bank of San Francisco

Working Paper No. PB01-11

Center for Pacific Basin Monetary and Economic Studies
Economic Research Department
Federal Reserve Bank of San Francisco

WORKING PAPER PB01-11

THE POLITICAL ECONOMY OF FOREIGN BANK ENTRY AND ITS IMPACT: THEORY AND A CASE STUDY

Gabriella Montinola
Department of Political Science
University of California, Davis

and

Ramon Moreno
Senior Economist
Research Department
Federal Reserve Bank of San Francisco

October 2001

Center for Pacific Basin Monetary and Economic Studies
Economic Research Department
Federal Reserve Bank of San Francisco
101 Market Street
San Francisco, CA 94105-1579
Tel: (415) 974-3184
Fax: (415) 974-2168
http://www.frbsf.org

The Political Economy of Foreign Bank Entry and its Impact: Theory and a Case Study

Gabriella Montinola
University of California, Davis
Department of Political Science
grmontinola@ucdavis.edu

Ramon Moreno
Economic Research Department
Federal Reserve Bank of San Francisco
Ramon.Moreno@sf.frb.org

This version: October 23, 2001

ABSTRACT

We apply Becker's (1983) model of lobbying to show that liberalization of foreign bank entry may result from political changes and a fall in domestic bank efficiency caused by lack of competition, which raises the costs to domestic banks of restricting foreign bank entry. We also show that in equilibrium, reform may be too limited to improve efficiency. We use this model and Data Envelopment Analysis techniques to interpret the liberalization of foreign bank entry in the Philippines in 1994. Declines in banking efficiency reduced resistance to foreign bank entry, but the effects of liberalization on efficiency were modest.

The views expressed in this paper are those of the authors and do not necessarily reflect the position of the Board of Governors of the Federal Reserve System, the Federal Reserve Bank of San Francisco, or the University of California, Davis**.** The authors would like to thank, without implicating, Barry Eichengreen and Rusell Green for helpful comments. The research assistance of Chir-Jen Huang is gratefully acknowledged.

JEL Classifications: D72, D78, G21, L13**,** N25
Keywords: Foreign Bank Entry, Financial Liberalization**,** DEA**,** Philippines**,** Lobbying**,** Political Economy

Please address correspondence to:

Ramon Moreno
Economic Research Department
Federal Reserve Bank of San Francisco
101 Market St., San Francisco, CA. 94105
e-mail: Ramon.Moreno@sf.frb.org

1. Introduction

The financial crises of the 1990s have generated considerable interest in the implications of financial liberalization, particularly for financial stability (Kaminsky and Reinhart, 1999, Glick and Hutchison, 2001). However, the fundamental questions of when and in what form financial liberalization is likely to occur remain unresolved.[1] Moreover, while liberalization is often motivated by the desire to enhance economic efficiency, it is not clear from theory whether financial liberalization will consistently achieve such a goal. Indeed, as discussed briefly below, the evidence that financial liberalization enhances efficiency is at best mixed.

To address these questions, we apply a model of pressure groups pioneered by Becker (1983, 1985).[2] We show that in the political equilibrium, the extent of foreign bank entry depends on the productivity as well as the marginal costs of efforts to restrict such entry. Drawing on work by Sjostrom and Weitzman (1996) we extend the analysis to discuss why entry restrictions imply that banking efficiency will tend to deteriorate over time, and how the liberalization of foreign bank entry can prevent the deterioration in banking efficiency, but only if entry is sufficiently large. We then use this analytical framework to interpret political and economic developments around the time foreign bank entry was liberalized in the Philippines in1994.

To anticipate our discussion and results, we argue that opposition to liberalization was weakened, but not completely eliminated, by the assumption in power of a reformist government as well as economic distortions and a marked decline in banking efficiency prior to the law liberalizing the entry of foreign banks. As a result, a partial liberalization was implemented, in which a limited number of foreign bank licenses was awarded by the government, and restrictions on the number of foreign bank branches continued to shield domestic banks from foreign bank competition. These restrictions limited the impact of liberalization of the foreign bank sector on the competitiveness and efficiency of the domestic banking sector.

We draw on the interest group theory of regulation (Stigler 1975, Mitnick 1980, Becker 1983, 1985, Hammond and Knott 1988, Peltzman 1989) to explain the timing and scope of financial liberalization. In this framework, deregulation occurs because changes in economic, technological, or political conditions reduce the appeal of an existing regime to its beneficiaries, or the relative influence of the beneficiaries of the existing regulations. Among the conditions cited are advances in communications and data processing technology in financial markets as well as high rates of inflation (Hammond and Knott 1988, Kroszner and Strahan 2000); greater integration of domestic and international financial markets (Frieden 1991, Kurzer 1993, Goodman and Pauly 1993, Andrews 1994, Cohen 1996); changes in political institutions (Haggard, Lee and Maxfield 1995,

---

[1] Haggard and Webb (1993) and Rodrik (1996) survey the political economy of reform (financial or otherwise) and remaining puzzles. Kroszner (1999) focuses on financial deregulation.

[2] A survey by David Austen-Smith (1997) puts Becker's contribution in perspective.

Lukauskas 1997, Armijo 1999); and crises (Tommasi and Velasco 1996, Haggard and Maxfield 1996, Tornell, 1998, Aizenman, 1999).

Other recent theoretical studies focus on why reforms may be delayed or partial. In Alesina and Drazen's (1991) war of attrition model, potential beneficiaries delay reforms because they count on other groups possibly assuming the burden of liberalization. Fernandez and Rodrik (1991) show that uncertainty about the ultimate beneficiaries of liberalization produces "status quo bias." Wei (1997) shows that a gradual reform may succeed by dividing the opposition to reforms, while sudden "big bang" reform might not. Dewatripont and Roland (1992) show that if reform requires unanimity, budgetary constraints may limit the scope of reform by limiting compensation to losers from reform.

We offer a new explanation for the adoption of reforms, namely market imperfections. In our framework, lack of competition reduces efficiency and banks' incentive (and equilibrium effort) to oppose greater foreign bank entry. We also go beyond existing studies of the determinants of liberalization to discuss why liberalization may be so limited in scope that it does not lead to large gains in efficiency. Our analysis suggests a plausible interpretation for the recent experience of the Philippines, which without the impetus of an economic crisis, but in a fragile economic environment, passed a law liberalizing foreign bank entry in 1994, with apparently limited effects on efficiency.

This paper is organized as follows. Section 2 presents a model of political influence and foreign bank entry, highlighting how economic efficiency may interact with political pressures to ease pressure against financial liberalization. Section 3 discusses financial liberalization in the Philippines, and the political and economic conditions that influenced the character of the liberalization of foreign bank entry in 1994-1995. Section 4 examines the evolution of the efficiency of the Philippine banking sector before and after the liberalization of foreign bank entry. Section 5 concludes.

2. A model of political influence and foreign bank entry

Applying Becker's (1983, 1985) framework, consider an economy with two homogeneous groups, banks (B) and their customers (C) which are not banks. The government (in response to political pressures) sets limits on the number of foreign banks, in order to transfer resources from customers to banks. To focus the discussion, we rule out any entry by domestic banks, which in any case may not possess the technology to contribute to improved efficiency along the lines discussed below. The redistributed income is R_B, R_C for banks and their customers respectively.

We assume that the total cost of transferring resources to domestic banks via entry restrictions is given by

$$G(R_B) = R_B^a, \; a > 1 \tag{1}$$

where, without loss of generality, we rely on a specific functional form for the sake of clarity and to obtain closed-form solutions. Transferring resources to banks by giving them market power (through restrictions on foreign bank entry) involves deadweight costs. These are reflected in the assumption $\gamma > 1$, which implies that the resources used to subsidize banks are higher than the subsidy they actually receive (R_B).

The resources transferred to banks from their customers satisfy the following condition:

$$n_B R_B^a = S = n_C R_C^b \tag{2}$$

Where the last right hand side term is the amount raised from each bank customer as a result of entry restrictions, $\beta > 1$, n_C is the number of bank customers and R_C is the resources diverted away from each customer. The assumption $\beta < 1$captures deadweight losses, so that the net revenue raised from bank customers is lower than the resources taken from them.

A level of resource transfers is secured by regulating the extent to which foreign banks are allowed to enter the market. The extent of foreign bank entry F (which may be the share of foreign banks in the assets of the domestic banking system, or in the total number of banks) can be found from the equilibrium amount of resource transfers that maximize bank revenue, i.e.:

$$F^* = \alpha\left(n_B R_B^a\right)^* = \alpha\left(n_C R_C^b\right)^* \tag{3}$$

Where $\Phi(.)$ is the inverse function of $S = \sigma(F)$ and the equilibrium * is the outcome of the amount of political pressure (derived below) that maximizes domestic bank revenue by restricting foreign bank entry.

2.1 Political Influence and Pressure Functions

The extent to which foreign bank entry will be restricted depends on an influence function that reflects the pressure exerted by banks and bank customers (other variables, such as cyclical conditions, may play a role as well, but we ignore them for the sake of clarity of exposition). We focus on the political behavior of the domestic banking group, specifying its influence function as a linear function of pressure from the two groups:

$$n_B R_B^a = \omega_1 p_B + \omega_2 p_C \tag{4}$$

To simplify the discussion, we ignore p_c in what follows. Equation (4) says that resources transferred (or foreign bank entry restrictions) are rising in the pressure exerted by banks.[3] One way of interpreting ω_1 is to think of the government as maximizing a weighted average of aggregate welfare and the interests of the lobby.

[3] Equation (2) implies that increased influence by one group reduces influence by the other (zero-sum influence). The net influence function for customers can be obtained as the negative of the net influence function for the banks (Becker, 1983).

If a government assigns more weight to aggregate welfare, the value of the coefficient δ_1 may fall. The value of the coefficient δ_1 may also reflect the outcome of legislative bargaining or agenda-setting.[4]
We model political pressure by banks as follows:

$$p_B = a_B^k n_B^{1-l},\ k < 1,\ l \geq 0 \tag{5}$$

where a_B is the effort or spending (per domestic bank) on lobbying or other measures to restrict foreign bank entry, θ measures the productivity of lobbying (for example, the success of political contributions in getting candidates sympathetic to restricting foreign bank entry elected), ϕ is a free rider effect affecting the lobbying group, reflecting the fact that any individual bank would like to pass on the effort of lobbying to other banks (Olson, 1965). Free rider problems impose a cost ϕ on producing pressure (in terms of policing, etc.), the direct effects of which are apparent in equation (5).

2.2 Equilibrium effort to restrict entry

Banks exert effort a_B in order to maximize their income. The income of each member of the banking sector B net of expenditures on political activities is defined by:

$$Y_B = Y_B^0 + R_B - a_B \tag{6}$$

To find out how much spending or effort will be expended on political pressure, we take the derivative of income with respect to a_B in equation (6) and equate the resulting expression to zero. Using equations (4) and (5), the equilibrium effort by the banking group to restrict entry is then given by:

$$a_B^* = \left(\frac{k}{\alpha R_B^{\alpha-1}} \frac{r_1}{n_B^l} \right)^{\frac{1}{1-k}} \tag{7}$$

Equation (7) reveals two key (and highly intuitive) features of the equilibrium amount of effort or resources invested in applying political pressure. First, more political effort is invested to curb foreign bank entry if such effort is more effective or productive. Thus, a_B^* rises with the response of the subsidy intensity function to pressure, δ_1 (see equation 4), and with the productivity of increased effort or spending θ (see equation 5). As noted earlier, we interpret the parameter δ_1 as reflecting exogenously given institutional arrangements or characteristics of the policymaker (for example, a reformist chief executive, or the distribution of power between the legislature and the chief executive) that influence how effort affects the ability to implement an agenda that restricts foreign bank entry.

---

[4] For a discussion of how institutional factors may influence political outcomes see the legislative bargaining model of Baron and Ferejohn (1989) and the survey of agenda-setting by Rosenthal (1990).

Second, less political effort may be invested to curb bank entry when such effort is more costly. Equation (7) reveals that equilibrium effort is falling as free rider effects in lobbying efforts (given by the parameter θ) and the number of domestic banks increase. We also see that effort a_B^* depends on the marginal increase in deadweight losses $\alpha R_B^{\alpha-1}$ at a given subsidy level. In particular, an increase in the deadweight loss parameter γ has two offsetting effects. The impact effect reduces effort (by directly increasing the denominator in equation (7), but the equilibrium subsidy R then falls, so the net effect on effort is ambiguous. To illustrate more precisely what happens to the equilibrium amount of effort to lobby against foreign bank entry as deadweight costs rise, assume $D_2 = 0$ in equation (4). Then given our assumptions, it can be shown that:

$$a_B^* = \left(\frac{k}{a}\right)^{\frac{a}{a-k}} \left(\frac{r_1}{n_B^l}\right)^{\frac{1}{a-k}} \tag{8}$$

In this case the response of equilibrium effort to a rise in γ is:

$$\frac{da_B^*}{d\gamma} = -\frac{a_B^*}{(a-k)^2}\left[a - k(1 + \ln a - \ln k) + (\ln r_1 - l \ln n_B)\right] \tag{9}$$

Equation (9) highlights that equilibrium effort by banks to restrict entry responds to deadweight losses that affect the economy at large, not just to terms in the banks profit function (6). Equilibrium effort will fall with a rise in deadweight loss if the deadweight loss parameter γ as well as the pressure parameter D_1 are sufficiently "large" relative to other parameters (the productivity of lobbying effort θ and the free rider effects that weaken lobbying) and the number of banks is "small."

Using equations (5) and (7), it can be shown that the variables that influence equilibrium effort influence equilibrium pressure in the same direction, so our discussion will focus on effort. Solving for the equilibrium amount of pressure by banks (and for banks' customers, which we do not focus on here), using (4) we can derive the equilibrium amount of resources transferred to the domestic banking sector $n_B R_B^a$. Equation (3) then yields the number of foreign banks that will be allowed in, consistent with this equilibrium amount of resource transfer.

2.3 Lower efficiency and Political Pressure

The coefficient $\gamma > 1$ may capture a variety of deadweight losses related to the market power acquired by domestic banks. Apart from such deadweight losses, entry restrictions may increase the costs of banking by lowering the efficiency of protected banks (or more generally, firms). To illustrate, suppose managerial monitoring is imperfect, so some workers do not exert full effort, "free riding" on good workers. Observing that a poor worker next to him is shirking, a good worker may reduce his own effort. However, the reverse is

not true, so over time average effort falls to that of the poorest worker. From time to time, good workers may be hired, but their effort will eventually drop down to the preexisting level. At other times, workers who are lazier than existing employees may be hired, dragging down the performance of current workers. Since only hires that cause workers to shirk more have an impact, the equilibrium (and worst outcome) is for efficiency to fall over time. This is a "prisoner's dilemma" outcome, formalized by Sjostrom and Weitzman (1996). They develop a model in which "*x* efficiency" is at less than 100% due to imperfect monitoring, where P is a measure (relative to the industry leaders) of the extent to which employees work harder or smarter, take initiatives, and so on. They then show how in the absence of competition, labor markets may exhibit free rider problems that lower efficiency over time. The decline in efficiency is formally described by introducing shocks to their model (or "mutations" that follow a Poisson process).

Efficiency declines may be countered by liberalizing entry, which introduces competitive pressures and better management. In particular, suppose that the gradually deteriorating domestic banking sector is opened to competition with foreign banks that possess superior managerial technology not subject to these free rider problems. This can raise the average level of efficiency in the banking sector by inducing domestic banks to increase their own efficiency. In Sjostrom and Weitzman's framework, the impact of competition on efficiency depends on the "challenge rate," or whether the foreign banking presence is large enough. If competition effects are sufficiently strong (say foreign bank entry $F > \overline{F}$, where the latter is a threshold level of foreign banks) the equilibrium in this model may be of permanently higher efficiency. However if the free rider effects are stronger than the effects of competition, then efficiency will tend to decline again.

One way of modeling these effects is by modifying the bank revenue function, (6) so that inefficiency reduces the net revenue from transfers as follows:

$$Y_B = Y_B^0 + (1 - \delta(d, X))R_B - a_B \tag{10}$$

where $0 \le \delta \le 1$ reflects the proportional loss in revenue transfers to banks that results from inefficiencies caused by restrictions on competition and entry, X is the improvement in efficiency that may result from foreign bank entry, discussed further below, and d is the deterioration in bank efficiency associated with free rider effects in labor markets or other managerial incentive problems (Sjostrom and Weitzman, 1996), with $\delta_d > 0$, while X is the impact on efficiency of foreign bank entry, discussed below.

Equilibrium effort is now:

$$a_B^* = \left((1-\delta)\frac{k}{\alpha} \right)^{\frac{\alpha}{\alpha - k}} \left(\frac{r_1}{n_B^l} \right)^{\frac{1}{\alpha - k}} \tag{11}$$

It follows that free rider effects in labor markets caused by an uncompetitive environment, by reducing efficiency, always reduce equilibrium effort to restrict entry:

$$\frac{da_B^{'*}}{dd} = -\frac{a}{a-k}\frac{1}{1-d}a_B^{'*}d_d < 0 \tag{12}$$

A decline in equilibrium effort to restrict entry will result in a new equilibrium with a larger number of foreign banks. However, such entry will only improve efficiency if the new equilibrium level of foreign banks F^* exceeds the threshold $\overline{F}$. The interaction of efficiency gains, free rider problems and foreign bank entry may be described by the following conditions:

$$dX = 0, d_X dX + d_d dd \le 0 \text{ if } F^* < \overline{F} \tag{13}$$

$$dX > 0, d_X dX + d_d dd < 0 \text{ if } F^* \ge \overline{F} \tag{14}$$

that is, revenue losses will increase notwithstanding foreign bank entry if entry is below the threshold level (equation 13), and fall otherwise (equation 14).

While equation (10) is fairly intuitive, it can be argued that inefficiencies caused by lack of competition may affect not just the domestic banks' bottom line, but the economy as a whole. For example, poor bank management or worker quality may adversely effect other sectors, or reduce investment financing. Under that interpretation we could assume the deadweight cost parameter θ in equation (2) now depends on two elements:

$$a = a(d, X) \tag{15}$$

where $\theta_d > 0$ and the conditions under which $\theta_X < 0$ are similar to those in equations (13) and (14).

Equilibrium effort to restrict foreign bank entry will then fall as deadweight costs rise due to declining efficiency, as long as the deadweight costs are sufficiently large in the initial equilibrium (see discussion of equation (9)).

To sum up, our discussion provides a simple framework for analyzing the political conditions under which the liberalization of foreign bank entry may occur. The analysis suggests that

1. Political pressure to restrict foreign bank entry is rising in the productivity and effectiveness of resources invested in the production of political pressure, and under certain conditions, falling in the marginal deadweight costs associated with imposing such restrictions, as well as in the number of members in the bank group (due to free rider effects in lobbying effort).
2. Due to adverse incentive effects on worker or managerial performance, lack of competition may produce a decline in efficiency in the banking sector over time which, by lowering the profitability of efforts to restrict foreign bank entry, reduces political pressure to limit such entry. It is also possible that a decline in efficiency will raise deadweight costs.

3. Foreign bank entry is likely to improve efficiency only if it exceeds a threshold that offsets the adverse incentive effects. Otherwise, improvements in efficiency may be nil. In the short run, there is no guarantee that the decline in pressure to curb foreign bank entry as a result of the rising costs of lack of competition will lead to enough entry to achieve a permanent improvement in efficiency.

3. Liberalization of Foreign Bank Entry in the Philippines

In 1994, the Philippine government amended Republic Act No. 337, the General Banking Law that had governed the financial sector since 1948. The amended law liberalized the entry and scope of foreign bank operations in the Philippines.[5] Under the new law,[6] the Monetary Board could authorize foreign banks to operate in the Philippines through one of three modes of entry: (i) acquisition, purchase or ownership of up to 60% of the voting stock of an existing domestic bank; (ii) investment in up to 60% of the voting stock of a new banking subsidiary incorporated under the laws of the Philippines; or (iii) establishment of branches with full banking authority. The law also stipulates that a foreign bank or Philippine corporation may own up to 60% of the voting stock of only one domestic bank or new banking subsidiary.

Foreign bank participation was still restricted, as the act limited the number of branches that foreign banks could establish depending on the amount of capital supplied, as well as aggregate foreign bank market shares. Foreign banks were required to remit inwardly, as permanently assigned capital, US$ equivalent of $210 million pesos at the exchange rate prevailing on 5 June 1994 (26.979 pesos/US$). This entitled them to establish 3 branches in locations of their choice. Foreign banks were also allowed to open 3 additional branches in locations designated by the Monetary Board by remitting additional permanently assigned capital in US dollars, the equivalent of 35 million pesos at the same rate of 26.979 pesos/US$. In addition, a foreign bank branch was allowed to operate under expanded commercial banking authority if inter alia it had a minimum capital of Pesos 2.5 billion, consisting of permanently assigned capital plus "net due to head office, branches and subsidiaries and offices outside the Philippines" not to exceed 3 times the amount of permanently assigned capital. Moreover, the act stipulated that the Monetary Board "ensure that at all times the control of 70% of the resources or assets of the entire banking system is held by domestic banks which are at least majority-owned by Filipinos."[7]

---

[5] For recent discussions of financial liberalization in the Philippines, see Paderanga (1996) and Intal and Llanto (1998). Tan (1998) discusses broader trends in economic liberalization in the Philippines.

[6] "The General Banking Act" (Republic Act No. 337 as amended) and "Addendum" (Republic Act No. 7721).

[7] Republic Act No. 7721, Sec. 3.

The guidelines for selection of foreign banks were outlined in a central bank circular.[8] A foreign bank had to rank among the top 150 banks in the world or the top 5 in its country of origin. Representation from different parts of the world was also a consideration.

Foreign banks reacted quickly to the opportunities presented them by the new General Banking Act. In September 1994, 26 banks expressed their interest in entering the Philippine financial market.Ultimately, the Monetary Board granted licenses to 10 foreign banks and seven new locally incorporated foreign bank subsidiaries.

Two questions are of particular interest in examining this episode of liberalization. First, what determined its timing and scope? Second, was liberalization sufficiently broad to enhance economic efficiency? Equation (11) of our analytical framework suggests that we look at factors that may have influenced the intensity of political pressures and the productivity of efforts at generating such pressure, on the one hand, and the costs associated with restricting foreign bank entry on the other. In the remainder of this section, we informally describe developments that may have affected the political feasibility of liberalization. We argue that the effectiveness of political pressures to curb financial liberalization fell, while the costs of restricting foreign bank entry rose.

3.1 The timing and scope of foreign bank entry liberalization

In the Philippine context, the effectiveness of political pressures to curb financial liberalization reflects the ability to influence the executive branch and the legislature, and the interaction between these two bodies. The effectiveness of lobbying to restrict foreign bank entry was weakened by the 1992 election of Fidel Ramos as president. In an environment of increasing political stability, Ramos was in a position to accelerate reforms that had been initiated by his predecessor, Corazon Aquino and chose as the major goal of his administration bringing the country up to the rank of "Asian tiger". Because the Philippine constitution limits presidents to a single six-year term, Ramos' legacy depended on his success in reaching this goal.

Ramos' pro-reform platform was motivated by a variety of distortions that had adverse effects on economic activity, including lack of competition in banking.[9] The economy Ramos inherited was growing below potential, partly because a debt crisis in the early 1980s had saddled the economy with a large external debt service burden. In this context, foreign bank entry liberalization could boost growth by attracting foreign capital, or investments by foreign multinational clients of foreign banks that might otherwise not occur. Ramos also saw financial reform as a means to "bring down the old economic order," a view reflected in an ADB

---

[8] Bangko Sentral Circular No. 21 "Rules and Regulations Implementing Republic Act No. 7721."

[9] Fidel V. Ramos "Philippines 2000," (speech before the First Multisectoral Forum on Science and Technology, Manila, Philippines, January 21, 1993) in Ramos (1998).

report that concluded that "Banking cartels in the Philippines [had to] be dismantled if economic growth [was] to be sustained." Then central bank governor Gabriel Singson further clarified the rationale for liberalization: "...the main purpose of this law [is] first the promotion of investment and trade, secondly the development of new innovative banking products and the expertise that may be provided by foreign banks, and thirdly to promote healthy competition among the banks." (*Euromoney*, 1994.)

Financial liberalization was also advocated by international organizations like the World Bank, the International Monetary Fund (IMF) and the Asian Development Bank (ADB). The IMF made financial liberalization a condition for access to a US$ 650 million credit facility. Passage of the new banking bill would also signal that the Philippine government was committed to structural reforms advocated by a joint IMF-World Bank mission as early as 1979 (World Bank/IMF, 1979). Access to the IMF facility was also expected to encourage the "Paris Club" of aid donor countries to reschedule loans which were falling due. The debt service savings from this rescheduling was estimated to be US$ 1 billion per year (Tiglao, 1994b).

While Ramos' accession to power led to further financial liberalization, he was not able to fully implement his agenda. The new banking bill was subject to significant restrictions because congressional approval was required, and the domestic banking sector, which favored the maintenance of some entry restrictions, was well represented in the Philippine Congress.

As the proposed bills moved through the Congress, the upper house, the Senate, appeared to hold views more closely in line with the domestic banking sector. The House version allowed foreign bankers to open full-service branches *and/or* wholly-owned locally incorporated subsidiaries. It did not place limits on the number of foreign banks to be licensed, nor required foreign banks to inwardly remit their permanently assigned capital and convert it into pesos. The Senate version was more conservative. It allowed foreign banks to enter the domestic financial market in *only one* of the two modes, and it limited foreign equity in locally incorporated subsidiaries to 60%. The Senate version specifically limited the number of licenses to be granted to foreign bank branches to eight. It also stipulated that Philippine companies be allowed to own up to 60% of any domestic bank. The previous law limited any single Philippine company's equity in a domestic bank to 30%. Finally, the Senate version required that foreign banks convert their permanently assigned capital into pesos. As the head of the Bankers Association of the Philippines argued: "[the Senate bill] strikes a balance between the need for opening up the industry to competition on the one hand, and on the other, the need for ensuring that banking will not be dominated by foreigners." (Tiglao, 1994a).

Ultimately, the General Banking Act of 1994 resembled more closely the Senate version rather than that of the House. It was a "grand compromise" of two positions: that of an executive committed to an economic liberalization program that included increasing the presence foreign banks, and that of the domestic bank industry, well represented in the Senate, which accepted more foreign bank entry, albeit more limited in scope.

Why did Senate proposals allow for any liberalization at all? Apart from political factors, our theoretical analysis suggests that lack of competition in the domestic banking sector would lower efficiency and opposition to foreign bank entry. This explanation is supported by our analysis of the efficiency of the Philippine banking sector, reported in the next section. As will be shown efficiency *declined* in the period before foreign bank entry was liberalized.

4. Foreign Bank Entry in the Philippines: Competitiveness and Efficiency

In this section, we examine indicators of efficiency in the Philippines by drawing on data from Fitch Bankscope, which consists of balance sheets and income statements culled from the annual reports of financial institutions over the period 1992-1999. The Bankscope commercial bank dataset for the Philippines covers only domestic commercial banks ("expanded" or universal banks, and "non-expanded" or traditional commercial banks) and four foreign bank subsidiaries (Chinatrust Philippines, Dao Heng Bank, DBS Bank Philippines, and United Overseas Bank Philippines).[10] The number of banks covered ranges from 17 to 33, depending on the year.

4.1 Bank competitiveness, efficiency and DEA

Recent work on the impact of foreign bank entry on the Philippine financial system suggests that the effects on competitiveness have been limited, in spite of apparent increases in the share of foreign banks in total assets. Manzano and Neri (2000) report that the share of foreign banks in total assets increased from 11 percent in 1995 to about 15 percent in 1999, with the share of new foreign banks rising from nearly 2 percent to over 5 percent over the same period. However, there is little evidence that domestic banks were subject to more intense competitive pressures. The annual average spread between lending and deposit rates in the pre-liberalization period from 1991-94 was 4.7 per cent, not much higher than an annual average of 4.4 per cent during the post-liberalization period 1995-97. Neither is greater competitive pressure apparent from measures of market concentration (Milo, 2000).

Apart from affecting loan spreads or market concentration, foreign bank entry—if truly effective in intensifying competition—should spur domestic banks to increase their efficiency in order to improve their position vis-à-vis foreign banks. To address this question, we apply an analytical tool known as Data

[10] Data on four pre-existing foreign bank branches (Bank of America, Citibank, N.A., Hong Kong Shanghai Banking Corporation and Standard Chartered Bank) and nine new full service branches established as a result of the liberalization of foreign bank entry (ANZ Banking Group, Ltd., Bangkok Bank Public, Co., Bank of Tokyo-Mitsubisihi, Ltd., Chase Manhattan Bank, Deutsche Bank, Fuji Bank, ING Bank, International Commercial Bank of China, Korea Exchange Bank), are not included in the Bankscope dataset.

Envelopment Analysis (DEA). DEA is a non-parametric programming method that allows the identification of the production frontier of the banking sector, and where individual banks stand in relation to the frontier.

The DEA method finds, for any given bank, the weights that maximize the following ratio of weighted average outputs to weighted average inputs:

$$\max q = \frac{\sum_{t=1}^{s} u_t y_t}{\sum_{i=1}^{m} n_i x_i} = \frac{virtual\ output}{virtual\ input} \tag{16}$$

subject to

$$\frac{\sum_{t=1}^{s} u_{t\,j} y_{t\,j}}{\sum_{i=1}^{m} n_{ij} x_{ij}} \le 1,\ (j = 1,...,n) \tag{17}$$

$$u_t, v_i \ge 0,\ t = 1,..,m;\ i = 1,..,s \tag{18}$$

where y_t is the amount of output t, x_i is the amount of input i, and the u_t, $?_i$ are weights for the corresponding outputs and inputs determined optimally by the data for each individual bank.

The maximization is subject to the constraints that the ratio of "virtual outputs" to "virtual inputs" for each bank should not exceed 1 (any bank whose ratio is 1 is on the efficient production possibility frontier), and that the weights be non-negative. This specification, known as CCR (after Charnes, Cooper and Rhodes, 1978) assumes constant returns to scale. For technical reasons, DEA does not solve the fractional programming problem (12)-(14). Instead, an equivalent two-step linear programming problem is solved (Cooper, Seiford and Tone, 2000, Chapters 2 and 3).

To apply DEA we need to specify outputs and inputs for the Philippine banking sector. We focus on two aspects of bank efficiency, deposit production, and intermediation, or the transformation of these deposits into loans and investments . In the production stage we define as outputs deposits and other operating income (which may capture income from activities not related to bank intermediation) and as inputs equity capital, personnel expenses and interest paid. In the intermediation stage we define as outputs loans and bank income (the sum of interest income and other operating income) and as inputs deposits and operating expenses excluding personnel. The approach followed here is similar to Denizer, Dinc and Tarimcilar (2000).

Figure 1 illustrates the average efficiency of banks relative to the frontier in the production (first) stage, over the period 1992-1999. The average efficiency of the banking sector relative to the frontier declined from 95 (percent) in 1992 to 87 in 1995, and more gradually to 83 in 1999. In contrast, there is a particularly sharp decline in foreign bank efficiency (from 98 in 1994 to 49 in 1999) over this last period.

Figure 2 illustrates the average efficiency of banks relative to the frontier in the intermediation (second) stage. Between 1992 and 1995 average efficiency declines around 10 points to 84 for the full set of banks, then rises and falls to settle at 86 in 1999. This largely reflects trends in efficiency among domestic banks. In the case of foreign banks, efficiency rises from nearly 78 in 1995 to nearly 100 in 1999 (as noted earlier, this set of banks is small, and accounts for no more than 2 percent of total assets in our sample).

Our DEA analysis thus yields two interesting results: First, banking efficiency in the production of deposits or the intermediation of loans *declined* prior to the liberalization of foreign bank entry in 1994. Second, no strong improvement in domestic bank efficiency in deposit nor loan production occurred after entry was liberalized. The decline in efficiency prior to foreign bank entry liberalization is consistent with the predictions of models that indicate that lack of competition will have incentive effects that adversely affect firm performance. Our theoretical framework suggests that declining efficiency may have contributed to lessened political pressure against liberalization in the first half of the 1990s. Finally, the modest improvements in banking efficiency in 1995 suggests that liberalization of entry was too restrictive to generate a competitive enough environment to offset these adverse incentive effects.

A number of caveats to this interpretation are warranted. First, due to lack of data, we cannot compare our results with the behavior of efficiency prior to the early 1990s. Such a comparison would shed further light on the plausibility of the interpretation offered in this paper.

Second, efficiency measures may be affected by temporary or cyclical factors, such as the East Asian financial crisis. However, average production or intermediation efficiency in domestic banks was higher in 1998, at the peak of the crisis, than in 1999, when the economy was recovering, so it is not clear that this factor was dominant.

Third, the trends in efficiency may reflect the fact that domestic banks are shifting to fee-based businesses that rely less on deposits. To shed further light on this, we break down the efficiency scores according to whether banks are "expanded" (universal banks, which rely less on deposits) or non-expanded (traditional commercial banks). The results are shown in Figures 3 and 4. There is no clear pattern for the production stage, but in recent years the average efficiency scores for non-expanded banks appear to fall below those for expanded banks. The trends in efficiency in the expanded banks broadly conform to the results for the full sample of banks—declines in efficiency up to the mid-1990s, and modest or no improvements subsequently.

This is not what we would expect if the declining efficiency reflects the fact that banks are shifting away from traditional commercial banking.

Another perspective on efficiency is provided by examining the share of banks in the production frontier. Figure 5 illustrates the shares for the deposit production and intermediation stages respectively. For the production stage the share of banks on the frontier fell from 43 percent in 1994 to 21 percent in 1999. Over the same period, the share of banks on the frontier in the intermediation stage increased from 17 percent to 21 percent, but 2 of the 5 banks on the frontier are actually foreign, compared to 1 out of 4 in 1994. Overall, the entry of foreign banks has not encouraged more domestic banks to move to the frontier.

The DEA analysis is based on the estimation of the production frontier for a given year, and the relative efficiency of banks relative to that frontier. It therefore does not explicitly compare bank efficiency in one year to bank efficiency in another year. To shed light on this question, we pooled the banks in 1994 (before the liberalization of foreign bank entry became effective) and 1999. We then identify the number of banks in the frontier and the year they belong to, as well as the average efficiency score for each year (1994 and 1999 respectively). To test the robustness of the results we also pooled 1998 with 1994. The results are reported in Table 1.

Table 1. Banks on Frontier and Average Efficiency
Pooled Sample 1994-1999

	Pooled 1994-1999		Pooled 1994-1998	
	1994	1999	1994	1998
Stage 1				
Frontier (No. bks)	7	4	10	4
Average	85	80	91	81
Stage 2				
Frontier (No. bks)	2	3	1	4
Average	79	84	72	87

The results for 1994-1999 show that for the production stage, fewer banks were on the frontier in 1999. Average efficiency for banks in that year is also lower, 80 compared to 85 in 1994. In contrast, there is some improvement in the intermediation stage. More banks were on the frontier in 1999 (3 banks, of which 2 are foreign) than in 1994 (2 banks) and average efficiency of the 1999 group (84) is higher than the 1994 group (79). In this case, the evidence is mixed that the liberalization of foreign bank entry encouraged greater efficiency among domestic banks, in terms of placement on the frontier, or average position relative to the frontier.

4.2 Related findings

Our finding of modest or mixed efficiency gains from foreign bank entry is consistent with the mixed results obtained in other studies. For example, in a cross-country study Claaesens, Demirgüç-Kunt and Huizinga (1998) find that foreign bank entry leads to a decrease in domestic bank profitability, banks' non-interest income, and bank overall expenses, but only when entry is measured by the share of foreign banks in the total number of banks rather than their share in the assets of the banking system. (See also Claassens and Glaesner, 1998.) Using DEA methods, Denizer, Dinc and Tarimcilar (2000) find that financial liberalization in Turkey (including foreign bank entry) led to a slight improvement in efficiency of domestic banks in intermediation, but no improvement in deposit production. Leightner and Knox Lovell (1998) find that financial liberalization in Thailand in the early 1990s led to phenomenal (but declining) growth in commercial bank profits. Moreover, they find total factor productivity of Thai banks declined, while that of foreign banks increased. They infer that the large profits and decreasing productivity reflected Thai banks' increasingly risky behavior as they anticipated lower profits in the near future due to liberalization. In a study of Thai finance and securities companies during the same period, Leightner (1999) obtains similar results. Thus existing research suggests that financial liberalization is not always followed by improvements in domestic bank efficiency.

5. Conclusions

We have discussed how changes in political and economic factors may influence the timing and scope of financial liberalization by affecting a political equilibrium of competing interests. In particular, losses in efficiency or economic distortions associated with a non-competitive banking environment may impose such a high cost that they weaken the pressure against liberalization. We have also shown that while the new political equilibrium may lead to the adoption of economic reforms, there is no guarantee that these will be sufficiently wide-ranging to enhance competitiveness or improve efficiency.

All these features are illustrated by the Philippine experience. Up to the early 1990s, the political equilibrium had prevented the entry of new foreign banks. The election of a president who aggressively pursued economic reforms and a distinct decline in banking efficiency prior to the adoption of reforms appeared to produce a consensus favoring the liberalization of foreign bank entry. However, the scope of liberalization of the Philippine banking sector was limited, and its effects on competitiveness or efficiency were modest.

These results illustrate the impact of political economy factors on the pace of liberalization and amount of efficiency gains in the short run. They suggest that the mixed results yielded by studies of the efficiency effects of financial liberalization may be due to limited liberalization. However, our theoretical discussion also suggests that if lack of competition produces continued deterioration in efficiency, there will be a tendency for the scope of liberalization to increase over time.

Figure 1: Average Efficiency of Commercial Banks Relative to Frontier (Production Stage)

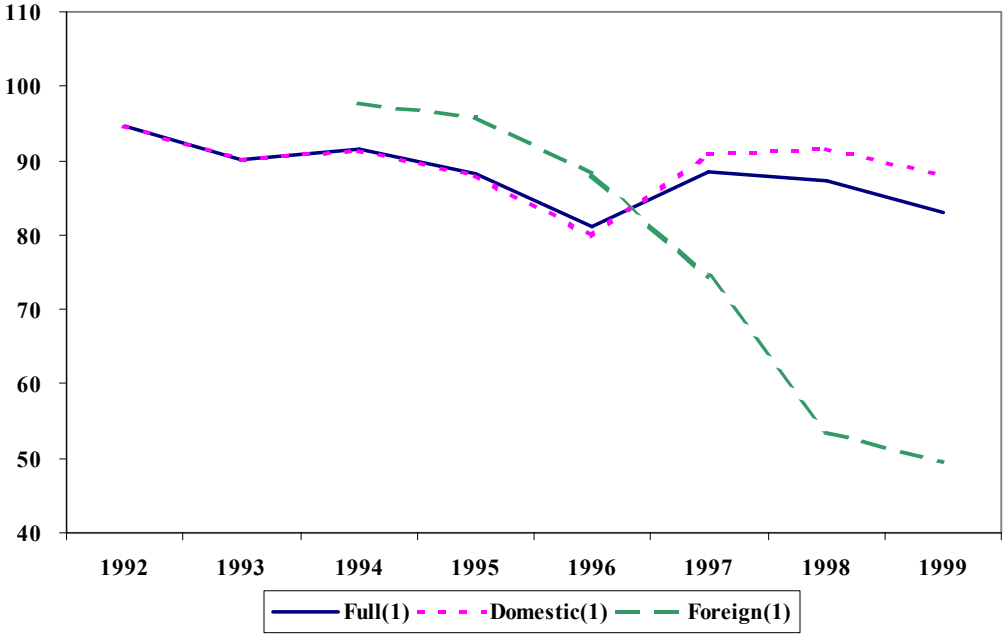


Figure 2: Average Efficiency of Commercial Banks Relative to Frontier (Intermediation Stage)

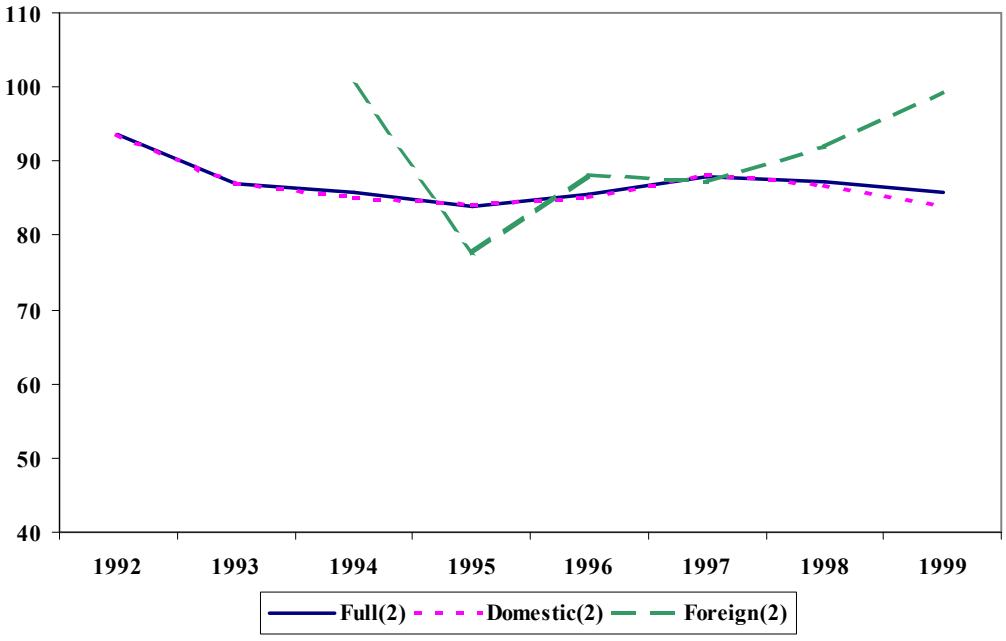


Figure 3: Average of Expanded and Non-Expanded Commercial Banks (Production Stage)

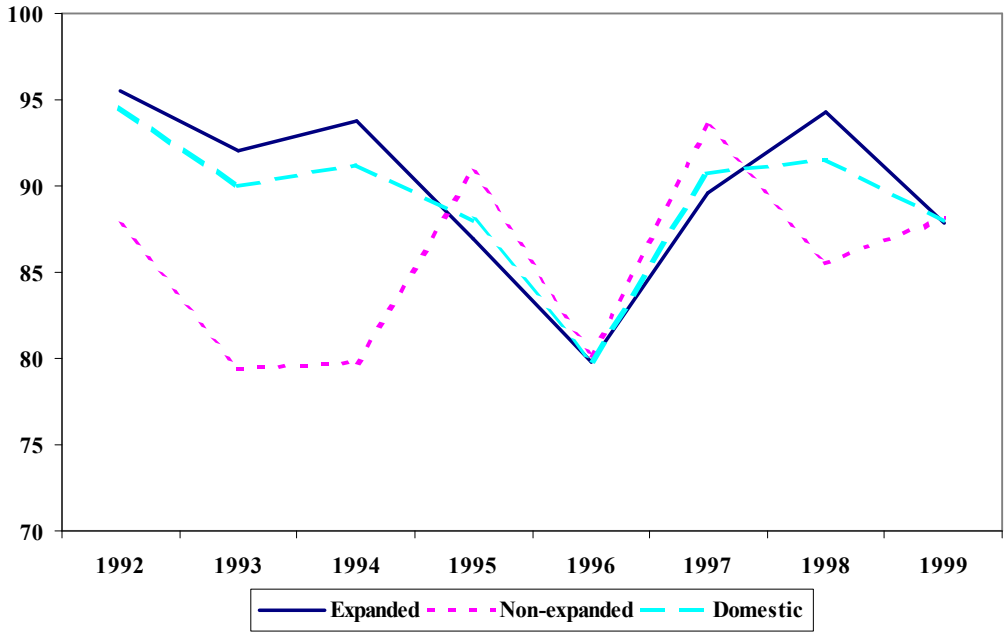


Figure 4: Average of Expanded and Non-Expanded Commercial Banks (Intermediation Stage)

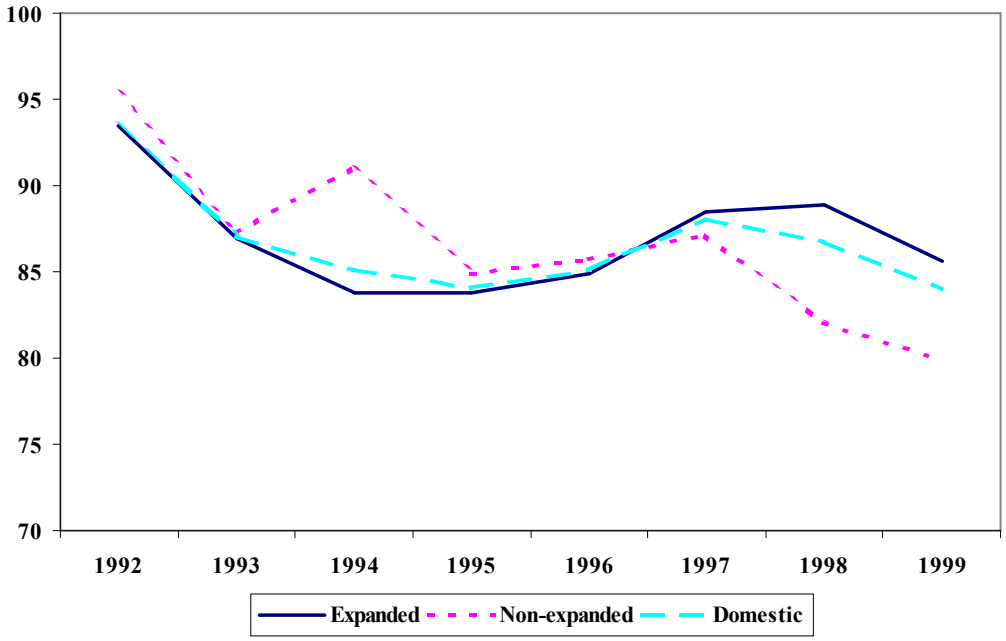
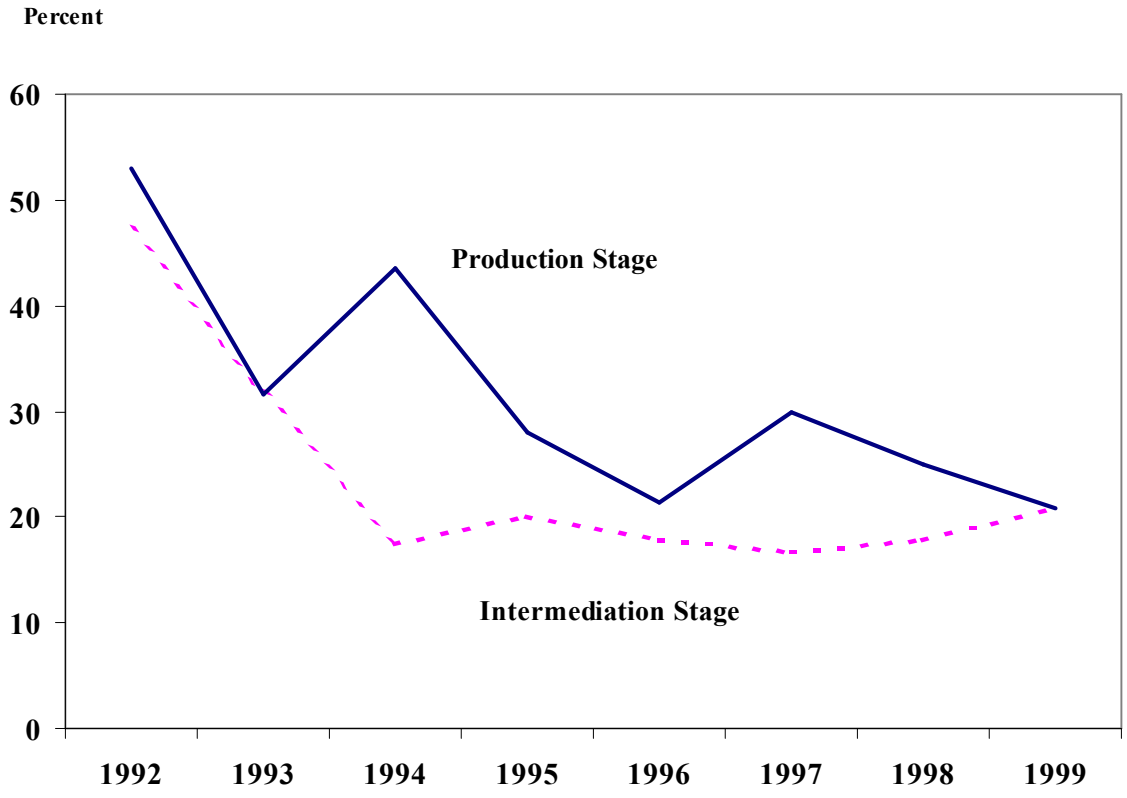


Figure 5. Share of Banks on Frontier



References

Aizenman, Joshua. 1999. "Capital Controls and Financial Crises." NBER Working Paper No. W7398**.**

Alesina, Alberto and Alan Drazen. 1991. "Why are Stabilizations Delayed?" *American Economic Review* 81(5):1170-88.

Andrews, D. 1994. "Capital mobility and state autonomy: Toward a structural theory of international monetary relations." *International Studies Quarterly* 38:193-218.

Armijo, L.E. 1999. *Financial globalization and democracy in emerging markets.* New York: St. Martin's Press.

Austen-Smith, David. 1997. "Interest Groups: Money, Information and Influence." In Mueller, Dennis C. *Perspectives on Public Choice.* Cambridge: Cambridge University Press.

Baron, David P. and John A. Ferejohn. 1989. "Bargaining in Legislatures." *The American Political Science Review*. 83(4):1181-1206.

Becker, Gary S. 1983. "Competition Among Pressure Groups for Political Influence*." Quarterly Journal of Economics.* XCVIII(3):371-399.

_____. 1985. "Public Policies, Pressure Groups and Deadweight Costs." *Journal of Public Economics*. 28:329-347.

Charnes, A., W.W. Cooper, and E. Rhodes. 1978. "Measuring the Efficiency of Decision-Making Units." *European Journal of Operational Research,* 2:429-44.

Claessens, Stijn and Tom Glaessner. 1998. "Internationalization of Financial Services in Asia." Paper presented at the conference: "Investment Liberalization and Financial Reform in the Asia-Pacific Region," August 29-31, Sydney, Australia.

Claessens, Stijn, Asli Demirgüç-Kunt, and Harry Huizinga. 1998. "How does foreign entry affect the domestic banking market?" World Bank Policy Research Working Paper No. 1918.

Cohen, B. 1996. "Phoenix risen: The resurrection of global finance." *World Politics* 48:268-96.

Cooper, William W., Lawrence M. Seifford, and Kaoru Tone. 2000. *Data Envelopment Analysis - A Comprehensive Text with Models, Applications, References*. Kluwer Academic Publishers.

Denizer, Cevdet A., Mustafa Dinc, and Murat Tarimcilar. 2000. "Measuring banking efficiency in the pre- and post-liberalization environment: Evidence from the Turkish banking system." Manuscript. World Bank.

Dewatripont, Mathias and Gerald Roland. 1992. "Economic Reform and Dynamic Political Constraints." *Review of Economic Studies*. 59(4):703-30.

Euromoney, 1994. "Foreign competition casts shadow over local banks" September, (305):204-6.

Fernandez, Raquel and Dani Rodrik. 1991. "Resistance to Reform: Status Quo Bias in the Presence of Individual-Specific Uncertainty." *The American Economic Review*. 81(5):1146-1155.

Frieden, J. 1991. Invested interests: The politics of national economic policies in a world of global finance. *International Organization* 45:425-51.

Glick, Reuven and Michael Hutchison. 2001. "Banking and currency crises: How common are twins?" In Reuven Glick, Ramon Moreno, and Mark Spiegel (eds.), *Financial Crises in Emerging Markets*. Cambridge: Cambridge University Press, 35-72.

Goodman, J. and L. Pauly. 1993. The obsolescence of capital controls? Economic management in an age of global markets. *World Politics* 46:50-82.

Haggard, Stephan, Chung H. Lee, and Sylvia Maxfield (eds) 1995. *The Politics of Finance in Developing Countries*. Ithaca: Cornell University Press.

Haggard, Stephan and Sylvia Maxfield. 1996. "The Political Economy of Financial Internationalization in the Developing World." *International Organization* 50(1):35-68.

Haggard, Stephan and Steven B. Webb. 1993. "What Do We Know about the Political Economy of Reform? *The World Bank Research Observer* 8(2):143-68.

Hammond, T.H. and J.H. Knott. 1988. The deregulatory snowball: Explaining deregulation in the financial industry. *Journal of Politics* 50:3-30.

Intal, Ponciano and Gilberto Llanto (1998). "Financial Reform and Development in the Philippines, 1980-1997: Imperatives, Performance and Challenges." *Journal of Philippine Development*, XXV(1):1-79.

Kaminsky, Graciela and Carmen Reinhart. 1999. "The Twin Crises: The Causes of Banking and Balance-of-Payments Problems." *American Economic Review*, 89(3):473-500.

Kroszner, Randall S. 1999. "Is the Financial System Politically Independent? Perspectives on the Political Economy of Banking and Financial Regulation." Paper prepared for the Swedish Government Inquiry on the Competitiveness of the Swedish Financial Sector.

Kroszner, Randall S. and Philip E. Strahan. 2000. "Obstacles to Optimal Policy: The Interplay of Politics and Economics in Shaping Bank Supervision and Regulation Reforms." NBER Working Paper No. W7582.

Kurzer, P. 1993. *Business and banking: Political change and economic integration in Western Europe.* Ithaca: Cornell University Press.

Leightner, Jonathan E. 1999. "The Achilles Heel of Thailand's Financial Market." pp. 287-308 in Tsu-Tan Fu, Cliff J. Huang and C.A. Knox Lovell (eds), *Economic Efficiency and Productivity Growth in the Asia-Pacific Region*. Northampton, MA: Edward Elgar.

Leightner, Jonathan E. and C.A. Knox Lovell. 1998. "The impact of financial liberalization on the performance of Thai banks." *Journal of Economics and Business* 50:115-131.

Lukauskas, Arvid John. 1997. *Regulating finance: The political economy of Spanish Financial Policy from Franco to Democracy*. Ann Arbor: University of Michigan Press.

Manzano, George N. and Emilio S. Neri, Jr. 2000. “Foreign bank entry, bank spreads and the macroeconomic policy stance.” Unpublished manuscript. Philippine APEC Study Center Network/University of Asia and the Pacific (December).

Milo, Ma. Melanie. 2000. “Analysis of the state of competition and market structure of the banking and insurance sectors.” Unpublished manuscript. Philippine APEC Study Center Network (October).

Mitnick, B.M. 1980. *The political economy of regulation: Creating, designing, and removing regulatory reforms*. New York: Columbia University Press.

Olson, M. 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge: Harvard University Press.

Paderanga, Cayetano Jr. (1996). "Philippine Financial Development: 1980-95," in Fabella, R. and K. Ito, *Financial Sector Issues in the Philippines*. Tokyo: Institute of Developing Economies.

Peltzman, S. 1989. The economic theory of regulation after a decade of deregulation. In *Brookings Papers on Economic Activity: Microeconomics*.

Ramos, Fidel V. 1998. “Philippines 2000," (speech before the First Multisectoral Forum on Science and Technology, Manila, Philippines, January 21, 1993). In *Developing as a Democracy: Reform and Recovery in the Philippines, 1992-98*. London: MacMillan Publishers Ltd.

Rodrik, Dani. 1996. “Understanding Economic Policy Reform.” *Journal of Economic Literature* 34(1):9-41.

Rosenthal, H. 1990. “The setter model.” In J. Enelow and M.J. Hinch, eds., Advances in the Spatial Theory of Voting. Cambridge: Cambridge University Press, 199-234.

Sjostrom, T. and M. Weitzman. 1996. “Competition and the Evolution of Efficiency.” *Journal of Economic Behavior and Organization*. 30(1):24-44.

Stigler, G.J. 1975. The economic theory of regulation. In G.J. Stigler (ed). *The citizen and the state: Essays on regulation*. Chicago: University of Chicago Press.

Tan, Jose Antonio III. 1998. “Policy Gaps and Economic Reform: Prescriptions for Sustained Growth.” http://www.policy.com.ph/doc/03macroeconomic/Policy_Gaps/. Accessed May 2, 2001.

Tiglao, Rigoberto. 1994a. “High interest” *Far Eastern Economic Review*, Apr 21, 157(16):73-74.

_____. 1994b. “Rewards of liberalization” *Far Eastern Economic Review*, Jun 16, 157(24):48-51.

Tommassi, M. and Andres Velasco. 1996. “Where are We in the Political Economy of Reform.” *Journal of Policy Reform* 1:187-238.

Tornell, Aaron. 1998. “Reform from Within.” NBER Working Paper No. 6497.

Wei, Shang-jin. 1997. “Gradualism versus Big Bang: Speed and Sustainability of Reforms.” *Canadian Journal of Economics*. 30(4):1234-47.

World Bank/IMF. 1979. *The Philippines: Aspects of the Financial Sector*. Washington, DC: World Bank.