

Banking Crises in East Asia: The Price Tag of Liberalization?

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The Asia Pacific Issues series contributes to the Center's role as a forum for discussion of issues of regional concern. The views expressed are those of the author and not necessarily those of the Center. 1998 set off dramatic recessions in the affected countries and imposed heavy costs on the domestic taxpayers. Fear of further crises prompted searches for causes and early warning signs. It soon became apparent that liberalization of the domestic financial sectors of the countries in crises contributed to the genesis of these crises, but policymakers, regulators, and economists disagree about the reason for this. Initial scrutiny fell on unregulated international capital flows, but a comprehensive study suggests that liberalization can lead to financial instability either because of insufficient regulation of the financial sector or because of erosion of previously granted monopolies of existing banks. These possibilities suggest varying policy implications for the current state of domestic financial systems in East Asia, including the challenges inherent in opening up China's banking system to foreign competition as mandated in the China—World Trade Organization accession agreement.

The banking crises that swept through East Asia in 1997-

A common claim is that recent liberalization of the banking sector increases the chance of a crisis

Introduction

Failures of the banking sector in East Asia during the last decade have been spectacular. *The Economist* magazine estimated the cost of the Indonesian banking crisis to that country's taxpayers at US\$75 billion, and quoted an analyst who called it "the most expensive bail-out in world history."

Recent episodes of banking crises in Asia are listed in Table 1. Apparent is both the prevalence of the problem in the region and its very heavy cost. The fiscal cost to taxpayers of the Thai banking crisis (1997–2002), for example, was estimated to be a staggering 35 percent of gross domestic product (GDP). That amounts to about three-and-a-half years of total government consumption or more than two years of total government revenues from taxes, tariffs, and other income sources. Equally

large are the costs in terms of foregone GDP. These costs are apparently larger, on average, than for similar financial sector crises in other geographical regions.

In recent years, much research comparing crises in a variety of countries has attempted to construct early warning systems or consider the causes of banking crises—countrywide failures in the banking sector—especially in developing countries. This research has empirically identified a set of economy-wide, financial, and microeconomic measures that predict the occurrence of banking crises or enable estimation of their probable costs. One of the most common assertions within this literature is that recent liberalization of the domestic financial sector is found to significantly increase the likelihood of a banking crisis. Yet the precise reason for that conclusion is typically left unspecified.

Country/Economy	Time-frame	Non-performing Loans (% of total loans)	Fiscal Cost of Crisis (% of annual GDP)	Forgone Output (% of annual GDP)	
Bangladesh	1985–1996	20			
China	1990-	50	47		
Indonesia	1997-2002	70	55	39	
Japan	1991-	35	24	48	
Korea	1997-2002	35	28	17	
Malaysia	1997-2001	30	16	33	
Nepal	1988	29		2.2	
Philippines	1983-1987	19	3	26	
Philippines	1998-	20	13	10	
Sri Lanka	1989-1993	35	5	1	
Taiwan	1997-1998	26	12		
Thailand	1983-1987		1	0	
Thailand	1997-2002	33	35	40	
Vietnam	1997–	18		23	
Average for Asia					
(14 episodes)	1980-2002	32	22	22	
Average for rest of world					
(97 episodes)	1980-2002	41	15	12	

Ponking Cricos in East and South Asia (1990, 2002)

Non-performing loans are defined as loans for which no scheduled repayments are being made. Fiscal cost is the cost to the government of paying depositors or other debtors for nationalized debt and recapitalization of banks. The output cost is calculated relative to potential output (according to the International Monetary Fund's definition of this term). Blank spaces indicate data unavailable. Source: Caprio, G. and D. Klingebiel. 1999. *Episodes of Systemic and Borderline Financial Crises*. Manuscript, The World Bank. Update available at: www.econ.worldbank.org.

The two leading hypotheses used in academic circles to explain the relationship between financial liberalization and banking crises in developing countries are herein referred to as the "lax supervision" and the "monopoly power" hypotheses. Understanding the relative importance of these two possible pathways from liberalization to crisis should provide policymakers with insights that may help avert future banking crises in Asia and elsewhere. The discussion that follows attempts to distill general patterns about liberalization and crises in nondeveloped countries. Country-specific details are not included, so any attempt to derive country-specific conclusions should incorporate examination of the relevant case.iv

Financial Liberalization and Crises

A preliberalized banking-financial sector is typically one in which only a small number of domestic banks operate. Foreign banks, and sometimes even new domestic ones, cannot enter the market because of a complicated licensing requirement or outright prohibition on foreign ownership of banks. There is usually also a ceiling on the interest rate that banks are allowed to offer depositors so as to prevent competition among banks operating in a particular geographical region. Sometimes other interest rates, such as for loans and mortgages, are also specified by regulatory authorities and are not determined by markets. Often, there are also restrictions placed on the geographical or functional areas in which banks are allowed to operate. In some cases, these institutions are not allowed to sell insurance, investments, consulting, or other services. Another typical characteristic of preliberalized banking sectors is that government often plays a central role. The banks may operate as oligopolies with implicit government support. In other cases, the government itself may own all or many of the banks and therefore have an explicit stake in the profitability and stability of the sector.

While this is the general state of preliberalized banking sectors, considerable variation is found across the countries of Asia. In some, many small domestic banks operate, while in others only a very limited number of banks are allowed. Other differences in the trajectory of liberalization, in addition to differences in the initial state of the sector, can also be observed.

A complete liberalization of the domestic financial-banking sector will entail the removal of all the restrictions discussed above. In a fully liberalized sector, banks are not restricted in their scope of operations nor are they restricted in their geographical location or ownership. Interest rates are determined by the demand and supply of deposits and loans. In most Asian countries that have liberalized, some forms of restrictions typically remain even after the liberalization, most notably in restrictions on functional areas of operation or in the degree of government involvement in the sector.

'Lax Supervision' and 'Monopoly Power' Pathways

Financial liberalization implies a change in the rules and regulations under which banks operate. It also forces bank managers to manage risk in a new environment—one in which they are not yet familiar with the consequences of their decisions. In a preliberalized financial sector, the government—typically through the central bank—regulates and prevents excessive risk taking. But, following liberalization, these regulatory constraints and their enforcement through supervisory practices may no longer be viable. The changing environment may render insufficient the already limited capacity of regulators to understand the banks' balance sheets.

Under this scenario, financial liberalization will enable risk-taking behavior and a consequent crisis if it is not accompanied by new regulations and capable enforcement. If, on the other hand, an adjusted supervisory framework is put in place, excessive risk-taking will not occur and financial liberalization is unlikely to have adverse effects on the stability of the banking sector.

In spite of the prevalence of discussion of this "lax supervision" pathway in academic and policy literature, there is almost no available evidence supporting its validity as a pathway to crisis. An alternative pathway, one less commonly considered, relates to the

Blaming 'lax supervision' is popular, but there is little evidence supporting the view

The entry of foreign banks presents domestic banks with increased competition

degree of monopoly power that a preliberalized banking sector enjoys.

In a preliberalized sector, existing banks typically experience considerable monopoly power. Competition is limited to a small number of licensed domestic banks and they are not allowed to compete on the interest rates they offer depositors and charge to borrowers. Liberalization of domestic interest rates, therefore, shrinks profit margins as banks start competing by increasing deposit rates and decreasing lending rates. At the same time, the entry of foreign banks presents domestic banks with increased competition for customers. As competition between new foreign banks and profitable domestic banks intensifies, institutions that use their resources less efficiently face large losses and, ultimately, bankruptcy. The resulting decrease in profits also puts banks in a more vulnerable position in the presence of adverse macroeconomic shocks.

Under this scenario, systemic problems in the banking sector are an almost inevitable result of financial liberalization. A crisis might occur even if liberalization is accompanied by proper regulation and its enforcement. The argument that the "monopoly power" pathway is independent from the institutional arrangements that regulate and supervise the financial system enables empirical differentiation between the two channels.

These possible pathways from liberalization to crisis have very different policy implications for countries such as China that are embarking on major restructuring and reforming of their banking sector. Emphasis on the first pathway ("lax supervision") suggests that liberalization should be undertaken only once effective supervision is in place, while the second ("monopoly power") casts doubt on the wisdom of the liberalization program itself.

Assessing Importance of the Pathways

In order to assess the relative importance of lax supervision versus monopoly power in creating banking crises, the author developed an empirical model of the probability of the occurrence of banking crises. The model estimates quantitative probabilities for the contribution of liberalization to the occurrence

of banking crises. By differentiating the two channels through the regulation and supervision component, estimation of the importance of each pathway became feasible.

The model requires measuring both domestic liberalization and the strength of the supervisory regime. The domestic financial liberalization measure used denotes the presence or absence of interest rate control on bank deposits. This is the most commonly used measure for liberalization, as interest rate decontrol is usually one of the most significant steps in the liberalization process.

The strength of the supervisory regime is not directly observable for two reasons: first, it depends on the legal framework in place and its enforcement and second, because governments are typically and understandably reluctant to provide any information that will show weakness in the governing institutions. The author thus resorted to three alternative proxies for the strength of the supervisory regime.

The first proxy is a measure of the degree of corruption taken from Transparency International, as corruption is associated with the extent of enforcement of rules and with the degree of corruptibility of inspectors.vii For the second alternative, an annual assessment of the state of political freedom published by Freedom House was used, as the existence of effective supervision is most likely also dependent on the presence of a free press and freedom of expression.viii A third proxy measures the independence of the central bank from political interference. An independent authority is assumed to be more likely to enforce the governing rules. Banking supervisory bodies often reside within the central bank and even if they do not, the degree of independence of the central bank is correlated with the degree of independence from political interference of the supervisory agency. The data used covered the years 1975-1997 for the 61 nondeveloped countries for which at least 10 years of consecutive GDP, banking crises, and liberalization data were available.

An obvious observation from this data is that almost all banking crises occurred when there was no interest rate control (liberalized markets) and most of these took place within a few years of the liberalization itself. Of the 47 banking crisis episodes studied, only 11 occurred in preliberalized sectors and 27 occurred within the five years immediately following liberalization.

In direct contrast to what is perceived by many academics, policymakers, and regulators, the "monopoly power" pathway appears more important than the "lax supervision" pathway in the short term. For a longer horizon (3–5 years), there is weaker evidence that a combination of domestic liberalization with lax supervision by the authorities may yield a significant increase in the likelihood of financial crises.

These results suggest that the "monopoly power" hypothesis deserves more serious attention. Nevertheless, arguing that "lax supervision" is unimportant, as a source of danger in the immediate aftermath of financial liberalization, is most certainly not warranted. Yet, the author's conclusions cast doubt on the usefulness of this hypothesis in all policy discussions of liberalization.

An interesting possibility is that the narrowing of the bank monopolies' profit margins (the "monopoly power" hypothesis) is an immediate result of liberalization and therefore an immediate threat to the health of the banking industry. In contrast, the increased risk taking that might result from liberalization combined "lax supervision" hypothesis) is dangerous, but only for a longer time-horizon. It can cause banking sector instability that will become evident years later. The conclusions have implications for East Asia and

with insufficient regulation and supervision (the particularly for China.

Prudential Supervision of Banks and Financial Liberalization

Although the onset of financial liberalization seems to be a significant destabilizing force for the financial industry, there appears to be professional consensus that, in the long run, a liberalized financial market will be stabilizing, will channel investment and saving more productively, will enable maintenance of steady consumption levels, and will be conducive to more rapid and sustainable growth.ix In view of these longterm benefits, and however one evaluates the importance of each of the two hypotheses to the relationship between liberalization and crises, it is clear that there is still a distinct role for liberalization and a banking supervisory agency.

A supervisory agency should regulate banks activities and provide insurance to small depositors. This is necessary in order to prevent the instability that inevitably results even in preliberalized financial sectors. Regulatory practices should include: development and maintenance of honest and impartial legal systems; mandating strict information disclosure practices; establishment of limits on the rate at which banks can lend or on the rate of increase in their exposure to riskier sectors (so-called "speed bumps"); requiring diversification of bank portfolios; strict capital and liquidity standards that account for different degrees of risk exposures; strict and transparent accounting of non-performing loans; and rigorous mandatory balance sheet adjustment once a loan is determined to be non-performing.

The East Asian Banking Crisis

Notable case studies are the banking crises that hit East Asia in 1997-1998. All the East Asian countries that suffered a drastic depreciation of their currency (a currency crisis) during that turmoil also experienced systemic banking sector failure. (These cases were detailed in Table 1.) A recent study of the evolution of the overall East Asian crisis, which was accompanied by large-scale banking problems, x supports the suggestion made here that the decrease in monopoly power may play the most important role in the emergence of a financial crisis following liberalization. For example, the study found that during the East Asian crisis, foreign-owned banks were less likely to get into a liquidity crisis and none of the foreign-owned financial institutions were shut down. Furthermore, the institutions that were connected with industrial groups or influential families were more likely to be distressed during the crisis. Additional support comes from a study showing that foreign-owned banks tend to have higher profit margins and, more significantly, that foreign presence is correlated with lower profit margins for domestically owned banks in developing countries.xi

The decrease in monopoly power may play the critical role in the emerging financial crisis following liberalization

Table 2 shows the years in which various liberalizing actions took place in the five East Asian countries that were hit most severely by the crisis: Indonesia, Korea, Malaysia, the Philippines, and Thailand. It appears that the sequence of liberalizations was different in each of these countries and that no single liberalizing act can be clearly associated with the crisis.

Following renewed interest in banking sector issues generated by the crisis, the World Bank initiated in 1999 a biannual survey of banking supervision practices worldwide. Two rounds of this survey are now available enabling preliminary conclusions about developments for the five countries hit hardest by the crisis.

Three observations are noteworthy. First, banking sectors in the East Asian countries are now generally more concentrated, more foreign-owned, and face more restrictions on their areas of operations. Second, the legal powers accorded to auditors have increased. Third, the amount of non-performing loans, as a percent of total assets, has decreased in all these countries. In reporting the results of a recent survey, the International Monetary Fund noted that "[Asian] Banks...have to varying degrees increased provisioning and write-offs to strengthen their balance sheets.... However, significant vulnerabilities persist in the banking systems in a number of countries faced with high levels of distressed assets, underprovisioned bad loans, and significant exposure to interest rate increases."xii Interestingly, Korea appeared to have reformed its banking sector the most. Yet,

even in the case of Korea, there is some doubt about the efficacy of these changes as long as the primary institutional arrangements remain the same, with the supervisory authorities subservient to the policy-making body within the government.xiii

These conclusions underscore the fact that economists are still far from a consensus on the likely mechanism that led to the East Asian financial crisis and particularly the banking sector failures. Much of the theoretical work done to date on the dynamics of the Asian crisis has not dealt with the impact of domestic financial liberalizations. The majority of the empirical work has focused on the financial flows engendered by international (rather than domestic) financial liberalization and the evident globalization of international capital markets throughout the 1990s.xiv

This body of research has generated increasingly vocal retraction of the consensus with respect to international capital account liberalizations. Many leading economists are no longer cheerleaders for the "Washington Consensus" call to liberalize the capital account indiscriminately, while no similar change has occurred with respect to domestic financial liberalization.*

China's Commitment to Financial Liberalization

The stability and health of the Chinese banking sector is one of the biggest concerns regarding future economic policy in the region. A destabilized banking

Today, banking sectors in East
Asia are more concentrated, more foreign-owned, and more restricted

Table 2. Banking Crises and Liberalization Dates in East Asia

Country	Banking Crisis	Decontrol of Interest Rates	Abolishing Direct Credit	Increasing Competition	Allowing Capital Flows	Privatization	Deregu- lation
Indonesia	1997–2002	1983	1983	1988		1996	1992
Korea	1997-2002	1991	1982	1981	1996	1983	1988
Malaysia	1997-2001	1991	1976	1985			1989
Philippines	1998-	1983	1983	1993	1995	1995	
Thailand	1997–2002	1992	1980	1992	1992	1993	1993

Source: Abiad, A. and A. Mody. 2005. "Financial Reform: What Shakes it? What Shapes it?" *American Economic Review* 95(1): 66–88. Blank spaces denote sectors either liberalized before 1980 or not yet liberalized.

A destabilized banking sector in China will likely involve a deep recession, affecting not only China but the country's neighbors and trade partners

sector in China will most likely involve a deep recession and is thus a concern for China, its neighbors, and its trade partners. China has the biggest financial sector in developing East Asia, with a higher domestic credit-to-GDP ratio (a typical measure of the importance of an economy's financial sector) than Korea, Japan, or the United States. Domestic currency deposits in deposit-taking institutions amount to 178 percent of GDP. Four state-owned banks, all of them possibly insolvent by international accounting standards, dominate China's banking sector. Accounting for more than 60 percent of total assets, these institutions are the Agricultural Bank of China, Bank of China, China Construction Bank, and Industrial and Commercial Bank of China (ICBC).

The historical role of the big four was to provide government directed credit to state-owned enterprises (SOEs). Since many of the SOEs are now virtually bankrupt, the banks have large portfolios of non-performing loans, which prevent them from allocating additional credit and improving performance. The four banks have already experienced several publicly funded capital infusions—most recently when US\$15 billion was handed to the ICBC in April 2005. Foreignfunded banks still account for less than 1.5 percent of total assets in the Chinese banking sector, although a number of large foreign financial institutions have bought substantial shares in the big four during the last couple of years.xvi

The Chinese government has embarked upon a process of liberalization and opening up of the banking sector as part of the commitments undertaken in the World Trade Organization (WTO) accession agreement (under the General Agreement on Trade in Services, or GATS). The government has pledged to fully open up the banking sector to international

competition by December 2006. The banking sector went through significant reforms in December 2003 but is still far from liberalized. Most importantly, deposit rates are still set by law, competition on lending rates is still circumscribed, foreign bank participation is heavily curtailed, and foreign ownership of any domestic bank is limited to a total of not more than 25 percent.

Discussion of the two possible pathways that lead from liberalization to crisis raises a number of issues that are highly relevant to the imminent Chinese liberalization process imposed by the WTO-GATS agreement.

Important questions include: (a) whether the institutional arrangements governing the newly founded regulatory agency are adequately robust to withstand liberalization; (b) whether the regulatory agency has the institutional knowledge and political power to successfully regulate a post-liberalized banking sector; and, most significantly, in light of the author's arguments, (c) whether the banking sector's profit margins are sufficiently wide and balance sheets healthy enough to withstand increasing competition from more profitable foreign banks. These are especially pertinent questions considering the previous painful and costly experiences in East Asia in 1997-1998. The answers to these questions will be of vital importance to the health of the Chinese economy and the region in general in years to come.

It is clear that the Chinese banking sector can be successfully liberalized and the danger of a banking crisis averted only if banks' balance sheets are carefully monitored and the monopoly power enjoyed by the leading banks is dismantled slowly. This, of course, implies that the December 2006 deadline to finish the liberalization process is woefully inadequate.

Notes

i 2003. "How Not to Sell Banks." The Economist 369: 73-76.

ii On the fiscal costs of the crisis to the Indonesian and Thai governments, see Rosengard, J. 2004. "Will Bank Bailouts Bust Budgets? Fiscalization of the East Asian Financial Crisis." Faculty Research Working Papers Series, Harvard University John F. Kennedy School of Government.

iii A recent survey of this literature is Demirgüç-Kunt, A. and E. Detragiache. 2005. "Cross-Country Empirical Studies of Systemic Bank Distress: A Survey." International Monetary Fund Working Paper, May 1996. The literature on the costs of banking crises is surveyed in Hutchison, M. and I. Noy. 2005. "How Bad are Twins? Output Costs of Currency and Banking Crises." *Journal of Money, Credit and Banking* 37(4): 725–752.

- iv Case studies of the 1990s liberalizations in East Asia can be found in Lee, Chung H. (ed.). 2004. *Financial Liberalization and the Economic Crisis in Asia*. London and New York: Routledge.
- ^v This paper's discussion of the two hypotheses is based on the author's findings reported in Noy, I. 2004. "Financial Liberalization, Prudential Supervision and the Onset of Banking Crises." *Emerging Markets Review* 5(3): 341–359.
- vi These three proxies for the effectiveness of the supervisory authorities are far from perfect. A discussion of this difficulty and the data limitations that caused Noy (2004) to rely on these measures is found in that paper.
- vii Transparency International is a nongovernmental organization that documents the degree of corruption in most countries through comparable surveys. See www.transparency.org. For findings that justify the use of this measure in our context, see Beck, T., A. Demirgüç-Kunt, and R. Levin. 2005. "Bank Supervision and Corruption in Lending." National Bureau of Economic Research Working Paper No. 11498.
- viii Freedom House publishes an annual assessment of the state of freedom in most countries. See www.freedomhouse.org.
- ix For recent discussion of these views see Bekaert, G., C.R. Harvey, and C. Lundblad. 2004. *Does financial liberalization spur growth?* Manuscript. Abiad, Abdul, Nienke Oomes, and Kenichi Ueda. 2004. "The Quality Effect: Does Financial Liberalization Improve the Allocation of Capital?" International Monetary Fund Working Paper WP/04/11. Levchenko, A.A. 2005. "Financial Liberalization and Consumption Volatility in Developing Countries." International Monetary Fund Staff Papers 52(2).
- x Bongini, P., S. Claessens, and G. Ferri. 2001. "The Political Economy of Distress in East Asian Financial Institutions." *Journal of Financial Services Research* 19(1): 5–25.

- xi Claessens, S., A. Demirgüç-Kunt, and H. Huizinga. 2001. "How Does Foreign Entry Affect Domestic Banking Markets?" *Journal of Banking and Finance* 25: 891–911. More research on these issues is found in a 2004 special issue of the *Journal of Money Credit and Banking* 36(3), which is devoted to a discussion of banking concentration and competition.
- xii International Monetary Fund. 2005. Global Financial Stability Report: Market Developments and Issues, p. 58.
- xiii For such a pessimistic interpretation of the recent reforms in Korea, see Lee, C.H. 2004. *Post-Crisis Financial Reform in Korea: A Critical Appraisal.* Korea Development Institute Manuscript.
- xiv For discussion on the increasing volumes of international financial flows, see Aizenman, J. and I. Noy. 2003. "Endogenous Financial Openness: Efficiency and Political Economy Considerations." National Bureau of Economic Research Working Paper No. 10144. For the impact of international capital flow reversals in the Asian crisis, see Hutchison, M. and I. Noy. 2005. "Sudden Stops and the Mexican Wave." *Journal of Development Economics*. Forthcoming.
- w For an example of this emerging view, see DeLong, J.B. 2004. "Should We Still Support Untrammeled International Capital Mobility? Or are Capital Controls Less Evil than We Once Believed?" *The Economists' Voice* 1(1). For a recent examination of the role of international organizations in capital account liberalization see Joyce, J. and I. Noy. 2005. "The International Monetary Fund and Capital Account Liberalization." Santa Cruz Center for International Economics Working Paper.
- ^{xvi} For a recent detailed and informative International Monetary Fund review of the Chinese banking sector, see Barnett, S. 2004. "Banking Sector Developments," In Prasad, E. (ed.). "China's Growth and Integration into the World Economy: Prospects and Challenges." International Monetary Fund Occasional Paper No. 232. Washington, D.C.: International Monetary Fund Press.

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About the Author

Ilan Noy is Assistant Professor of Economics at the University of Hawai'i, Manoa, and is a 2005 Visiting Fellow at the East-West Center. His research focuses on the costs and determinants of financial crises, on financial reform, and on capital flows to developing countries. His work has been published in the Journal of Money Credit and Banking, Journal of Development Economics, and other journals.

He can be reached at:
Department of Economics
University of Hawai'i, Manoa
2424 Maile Way
Honolulu, Hawai'i 96822
Tel: (808) 956-7749
Email: noy@hawaii.edu