The Asian Crisis after Ten Years[1]

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There is no shortage of conferences, commentaries and even keynote addresses celebrating the tenth anniversary of the Asian crisis. Admittedly, "celebrating" is an odd word to use in this context, recollections of a crisis not typically being taken as an occasion for popping champagne corks. Yet I use it consciously: ten years after the crisis there are in fact important achievements. For one thing, Asia has not experienced further financial crises. For another, the region rebounded quickly and is now once again the fastest growing part of the world. Some observers worry that investment rates in Emerging East Asia ex China have never recovered fully to pre-crisis levels, making for slower growth than in the first half of the 1990s.[2] But less investment may, in this case, mean more efficient investment. And, even if growth rates have slowed, they are still impressive by the standards of the rest of the world.

Anyone commenting on this experience faces two challenges. First, to draw inferences about the future from the past. The fact that Asia has not experienced another crisis in the intervening years is no guarantee against such problems in the future, just as the fact that it is now the world's fastest growing region does not ensure that it will continue to outperform economically. Forecasting is risky business, it is said, especially

[1] Keynote address to the Claremont-Bologna-Singapore Center for Applied and Policy Economics International Economic Policy Forum on "Capital Flows, Financial Markets and Economic Integration in Asia," 31 July 2007.

[2] Readers seeking more detail on the decline in investment, its causes, and its implications for growth can find an extensive analysis in Asian Development Bank (2007).

when it involves the future.[3] The second challenge is to approach these questions with a modicum of originality. I attempt both tasks in what follows.

1. The Near-Term Past

The main change from the pre-crisis period is that Asian economies are being run more conservatively, under less pressure of demand. Current accounts were not uniformly in deficit prior to the crisis, but they have strengthened significantly. In Figure 1, countries are arrayed by the size of the current surplus surplus, scaled by GDP, in 1997. Countries with substantial surpluses around the time of the crisis have maintained them, while a number of other countries have either shrunk their deficits (Laos, Cambodia) or moved from deficit to surplus (Philippines, Indonesia, Korea). Countries have used these surpluses to build their international reserves, keeping their currencies down and sterilizing some of the associated capital inflows. Less widely appreciated is that while reserves are up dramatically as a share of short-term debt, they are up less dramatically relative to exports (Figure 2), where they have risen from 40 to 60 per cent (most sharply in three countries that already had high reserves by this measure – Japan, India and China – as well as in Korea), and they have risen not at all relative to the scale of the financial system as measured by M2 (Figure 3). Putting reserves up has been part and parcel with keeping currencies down. Mechanically applying the Reinhart-Rogoff criteria, it would

[3] To paraphrase a comment traditionally attributed to Niels Bohr, the Danish physicist. An interesting letter to The Economist (21 June 2007) suggests that Bohr did not originate this quote but appropriated it to illustrate the difference between Danish and Swedish humor. (Mark Twain may have been the originator, but even this is uncertain.) Other quotes for which Bohr has clear patrimony are equally relevant to economics, however. "An expert is a man who has made all the mistakes, which can be made, in a very narrow field." "Never express yourself more clearly than you think." And "We all agree that your theory is crazy. The question that divides us is whether it is crazy enough."

appear that there is relatively little change in de facto exchange rate regimes; significant increases in flexibility are indicated only in Indonesia and Korea (Figure 4).

Just why current account surpluses have risen is not entirely clear. Arithmetically, the answer is that investment rates have fallen, while savings rates have been essentially flat. (See Figure 5.) But this observation just pushes back the mystery another step. Keeping the exchange rate low should boost not just exports but also profitability; the positive comovement of exports and investment is one of the foundation stones of the Asian model. Some authors (e.g. Charles Kramer 2006) point to increased uncertainty since the Asian crisis. Countering this is the observation, due to Augustin Villar (2006), that the volatility of output and inflation has in fact been lower in 2001-4 than in 1995-1999.[4] Others suggest that East Asian industry is being "hollowed out" by the rise of China, depressing new investment. Countering this is the fact that the impact of China's rise on the neighbors is mixed: it has a positive impact on the exports and investment of producers of capital goods, components, and technology but a negative impact on countries that compete with it in assembly operations and the production of consumer goods.[5] Yet, with the exceptions of Cambodia, Vietnam, India and of course China itself, investment rates have fallen across the board.

The one explanation still standing is that budget constraints have hardened as financial systems have been reformed, governments have removed explicit investment subsidies and implicit guarantees, and corporate governance has been strengthened, discouraging empire building by managers and founding families. If so, one would think

[4] This contrast is presumably influenced by the fact that the first subperiod spans the Asian crisis. But my own calculations for the 1990-1995 period further support the point that volatility has declined in recent years.
[5] For evidence see Eichengreen and Tong (2006).

that Asian investment, while reduced in volume, has become more efficient.[6] But this has not shown up in a declining ICOR or accelerating TFP growth. Rather, the decline in investment rates has been accompanied by a downward shift in growth rates (as emphasized by the Asian Development Bank in its 2007 *Asian Development Outlook*). It could be that more time will have to pass before more efficient investment translates into faster growth. We shall see.

The other big change is in the composition of foreign finance (Figure 6). Malaysia, Indonesia, and the Philippines are prototypical cases: dependence on borrowing from foreign commercial banks and other private creditors has been reduced, on net, while inward foreign direct and/or equity investment has increased. This is the more stable and reliable pattern of borrowing on which many observers have commented. Interestingly, Korea and Thailand do not fit the pattern in that net inflows remain large.[7] In the case of Korea it is also notable that net borrowing from foreign banks remains substantial, as local branches of foreign banks have taken advantage of low funding costs to invest heavily in higher-yielding Korean securities. I will have more to say about this below.

What about the region's much vaunted institutional reforms? There has been no discernible improvement in rule of law (Figure 7) or government effectiveness (Figure 8), with the exception, in the case of the latter, of Korea, Malaysia and Hong Kong.[8] Measures of regulatory quality show they same disappointing pattern: they are up only in Korea, Japan, Singapore, Taiwan and Hong Kong and down for the region as a whole (Figure 9). A less pessimistic perspective would emphasize that, adjusted for levels of

[6] As alluded to in the introduction
[7] Or at least they did, in the case of Thailand, prior to the coup last November.
[8] And, if countries with very low values are nonetheless accepted, Cambodia as well.

economic development, Asia compared favorably with other regions in terms of these measures even before the crisis and that the absence of faster progress has not fundamentally transformed this picture. Figures 10-12 array countries according to their per capita incomes in U.S. dollars in 2006. Singapore, Malaysia, and to a lesser extent Hong Kong and Korea do visibly better than would be predicted on the basis of their development and incomes, while Japan does visibly worse.

Not surprisingly, then, Asia has made faster progress in changing policies than in changing institutions. The question raised by the contrast is whether policy reform not accompanied by commensurate institutional reform should be regarded as permanent.

2. The Near-Term Future

These changes in the economic and financial situation significantly complicate efforts to think about future financial prospects. At risk of oversimplification, I would argue that commentators fall into two broad camps. The first camp is made up of those who argue that Asia has effectively bullet-proofed itself from financial crises. That short-term foreign-currency debt is less than in the 1990s and that it is now only a fraction of foreign reserves mean that, in the short run, crises will not resemble that in Korea in 1997, when foreign creditors' reluctance to renew maturing obligations pushed the banks and their implicit guarantor, the government, to the brink of default. Debt ratios have fallen, maturities have lengthened, and a growing share of debt to foreigners is denominated in local currencies. Even if a sudden reluctance on the part of foreign investors to renew their maturing claims creates problems for banks and firms, the national authorities can provide the resources needed for repayment, using their international reserves to pay off foreign currency-denominated obligations and printing money to supply the liquidity needed by banks and firms to meet their domestic currency-denominated obligations. To the extent that emerging markets have adopted more flexible currency regimes, the authorities are not prevented from engaging in lender-of-last-resort intervention by a commitment to defend a currency peg, and any associated weakening of the exchange rate will not be fatal to confidence. Because currency mismatches have been reduced, the fall in the exchange rate will not have such damaging balance-sheet effects. And if an isolated economy still requires emergency financial assistance, it can now obtain it from its regional neighbors, courtesy of the Chiang Mai Initiative.

Members of the second camp argue that less has in fact changed than meets the eye and that Asia could again experience financial instability not unlike that in 1997-8.[9] They observe that exchange rates are more flexible in theory than in practice, not least in the case of China. In a number of important countries, South Korea for example, short-term foreign indebtedness is rising again (as noted in Section 1 above). While there has been considerable progress in developing regional bond markets, the vast majority of bonds sold to foreign investors are still denominated in dollars, creating scope for currency mismatches.[10] There still exist weaknesses in Asian banking systems. While this is most obviously true of China, there are reasons to worry more generally that increased competition from foreign banks and nonbank financial intermediaries has led to dangerous relaxation of lending standards and excessive compression of lending spreads.[11] Accounting transparency and shareholder rights may have been strengthened,

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[9] See for example Roubini (2007).

[10] A cautious discussion is McCauley and Park (2006).

[11] In addition, commentators worry that by extending interest-rate risk to their customers, including now households, in the form of variable-rate loans, the locus of maturity mismatches may have been changed

yet by these and other measures the quality of corporate governance in Asia continues to lag behind that in the advanced industrial countries.[12] Past is prologue, in this view. It is impossible to rule out another crisis similar to that of ten years ago.

I am inclined to split the difference. I would argue that Asia is still at significant risk but that any crisis is likely to take a different form than in 1997-8. The trigger this time would not be currency devaluation by a country facing difficulty in financing a large current account deficit but rather a sharp drop in asset valuations, something that could be precipitated by any number of economic, financial and political events. The obvious place for the problem to originate is China, given the rapid run-up in equity prices there and the highly imperfect nature of the information environment. If asset valuations do crash, leveraged investors may then be forced to sell into falling markets in order to meet margin calls and raise liquidity. Volatility having risen, banks and funds will be forced to liquidate positions to satisfy the prudential guidelines embedded in their value-at-risk models. Because they use positions in more liquid markets to hedge stakes in less liquid markets, if an adverse shock to the relatively illiquid markets materializes they then have the option of selling holdings of more liquid instruments to reduce the net loss from the portfolio. This creates a tendency for volatility to spill across countries, as we saw when tiny Iceland had problems in 2006.

Two immediate consequences will be rising liquidity preference and higher borrowing costs. Since much of their borrowing has been at variable rates, households

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without reducing the underlying risks. Contributors to Turner (2006) emphasize that much remains to be done in terms of changing the culture in supervisory agencies and the audit departments of banks in many countries in the region, and that many such agencies and banks suffer from shortages of adequately trained staff.

[12] As shown in the analyses of de Nicolo, Leuven and Ueda (2005) and Ananchotikul and Eichengreen (2007).

may then find it difficult to keep current on their debts. Property prices will plummet as they hold off on purchases and even walk away from existing mortgages. The value of collateral will fall. Firms will find it hard to make interest payments, much less to issue bonds and roll over maturing obligations.[13] Depositors will grow uneasy, and banks will hesitate to lend. The interbank market may seize up as banks grow uncertain about the financial condition of their potential counterparts. As a result of these events, the operation of the credit chain may be disrupted. The liquidity premium will skyrocket. This is what we mean by a financial crisis.

Two questions then are critical. First, would this sequence of events have major recessionary effects? Financial markets go up and down, and the declines can be abrupt and dramatic, but major recessionary effects need not follow. Second, speaking of Asia as a whole, as I have done to this point, conceals as much as it reveals. The second critical question is how the situation and associated risks will differ across countries.

Where they will most obviously differ is China. Unlike much of Emerging East Asia, China suffers from no shortage of investment. Investment rates have risen further since the late 1990s, to upwards of 45 per cent of GDP if the official statistics are to be believed. The country is attracting massive amounts of FDI. It is in the throes of a stock-market boom. But there are reasons to ask whether such a large increase in the capital stock, mobilized in short order, can be deployed efficiently. One can imagine a variety of economic, financial and political shocks that could transform investors' positive views of this question. Asset valuations then would fall sharply. Investment would fall sharply.

[13] Here it is worth recalling that the average maturity of corporate bonds is still much shorter in Emerging Asia than in the advanced countries.

China's growth could fall sharply. These events would compound, and in turn be compounded by, problems in the banking and financial system.

There are obvious parallels with the situation in East Asia prior to 1997, which saw countries running high investment rates funded, directly or indirectly, by state-supported banks. Stock markets were furiously bid up in the first half of the 1990s.[14] Property prices rose strongly in Hong Kong, Singapore, Malaysia and Thailand. This speculative activity was fueled by a sharp bank lending boom. These observations are more than enough to create a sense of déjà vu.

But I find more thought provoking a different parallel, namely that with my own country, the United States, before 1913. (Here, you will see, I am developing some ideas suggested by Larry Summers, albeit in a different context.) The U.S. then, like China now, was undergoing a period of rapid growth. Previously a minor player, it was becoming a major force in the global economy. I think of this phase as extensive growth, where the availability of key resources to the modern sector was effectively unlimited. In the American case this meant unlimited land, which attracted capital and labor from abroad. In the Chinese case it means unlimited labor, which attracts capital.

The result in both cases was an investment-led boom. There is no question that these booms were grounded in fundamentals, abundant land and resources in America, abundant labor in China, and a supportive policy framework in both places, not the least consequential aspect of which was policy makers' embrace of globalization. Both booms were fed by technological and organization revolutions: in the United States the process of railroadization, the advent of the multidivisional corporate form, and modern mass

[14] By some 65 per cent between 1991 and the peak (typically in mid-1997) according to the data in Collyns and Senhadji (2003), p.104.

production; in China the commercialization of enterprise, export orientation, and cheap and abundant labor.

And – this being Summers' point – in neither case was a government budget deficit or a consumption binge at the root of events, as was the case in many episodes of rapid growth that culminated as in crises in the final decades of the 20th century, especially in Latin America. Rather these were investment-driven cycles.

While it is understandable that asset markets should have reacted favorably to such developments, it is also argued that they reacted excessively. The literature refers not just to the commercialization of rail transport but to the railway mania. (The term "railway mania" actually comes from the railway-building boom in Britain in the 1840s – Lewis Carroll referred to it in *The Hunting of the Snark* – but it is applied to U.S. experience as well.) New technology and ample funding, against a backdrop of excessive growth, combined to encourage surging investment and rapidly rising asset valuations. But in this environment of imperfect information and crony capitalism, what went up also could come down, often with serious losses to investors. Scholars continue to debate whether the game was worth the candle. Realized returns on the bonds and stocks issued by early railways were often disappointing. But some argue that there were positive externalities associated with investment in the railways, in the new generation of chemical technologies in the 1890s, and in electrification and the internal combustion engine at the turn of the century, above and beyond the returns captured by the initial investors. Carlota Perez, for example, argues that overinvestment and losses at what she calls the installation stage made possible high returns at the deployment stage, subsequently.[15] (She makes the same argument about the "Nasdaq bubble" in the second half of the 1990s.) Karl Marx, writing about the British case, saw the losses consequent on the railway mania as integral to the process of primitive accumulation.[16] Members of this audience will be reminded of the recent work of Romain Ranciere, Aaron Tornell and Frank Westermann emphasizing the positive impact of bubbles and crises on growth.[17]

This brings me to the crisis part of the story. These investment-led booms in the United States were also associated with financial crises, in 1853, 1873, 1884, 1890, 1893 and 1907. Here I am adapting the chronology of Otto Sprague in his classic book, *History of Financial Crises*, written for the commission that recommended creating the Federal Reserve System.[18] Accounts of these episodes make for colorful reading. Authors like Charles Kindleberger have earned generous royalties building on this fact.[19]

Why this particular environment should have been crisis prone is not hard to see. Despite the development of various forms of market intelligence (rating agencies, investment banks, railway gazettes), information about the new investment opportunities was highly imperfect. Foreign investors were unfamiliar with the physical geography. (In China's case, one might similarly argue that they are unfamiliar with the economic and political geography.) In 19th century America, accounting and corporate governance standards were lax. Mandatory disclosure of corporate information was successfully opposed by insiders until the 1930s. Most railroads did not even publish annual reports

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15 See Perez (2002).
16 Marx refers to the railway mania in volume 3 of *Capital*.
17 See Ranciere, Tornell and Westermann (2004), where they argue that crises may ultimately have a positive impact on growth.
18 See Sprague (1910). An extension of Sprague's chronology is Bordo (2003).
19 With particular success in Kindleberger (1978).

until the 1890s, and those that did so were unaudited. Eventually, modern accounting practices were imported from Britain in the form of chartered accountants who traveled across the Atlantic, but this took time. Stock markets were lightly regulated, both by governments and their own members. The New York Stock Exchange made disclosure a requirement for listing, but there were many different ways and places to trade stocks in the United States, and when a company threatened to list elsewhere the NYSE bent its rules. The U.S. banking system in this period was notoriously fragile.

Critically, a pegged exchange rate, which the U.S. again had after 1873, gave the authorities limited ability to lean against the wind. Interest rates were linked to those in the rest of the world. During the investment-led boom, price increases accelerated, making for lower real interest rates and encouraging yet additional investment. This was the familiar dilemma of the high-growth country enjoying lower real interest rates, in turn feeding its boom, that we saw more recently in the context of the European Monetary System in the early 1990s and in the context of EMU at the beginning of the current decade.[20]

One can argue that these crises had an upside. They were part of the larger process that led to the deployment of new technologies. That larger process facilitated the integration of previously underutilized resources into the national and global economies. Temporary interruptions at times of crisis did not prevent the U.S. from experiencing rapid economic growth. Among the consequences were the expansion of exports, the development of financial markets, and – above all – higher living standards. These very same disruptions prompted improvements in the institutional and policy

[20] As emphasized by people like Alan Walters. On the so-called “Walters critique,” see Miller and Sutherland (1990).

environment, such as the founding of the Federal Reserve in 1914 and blue-sky laws requiring common carriers, utilities and other public service corporations to disclose financial information, starting in Kansas in 1911.

Still, it took the Depression of the 1930s to bring about real reform: the Fed's recognition of its responsibility to act as a lender of last resort, rationalization of the exchange rate regime, and the 1935 Federal Reserve Act, which consolidated decision-making authority at the Board. And that crisis, which had a number of elements in common with its pre-1913 predecessors, disrupted not just the U.S. economy but also the Western Hemisphere and the world. One worries that major problems in China could have equally dramatic effects. A sharp slowdown in China, in which growth falls by, say, half from its current levels, could trigger economic and financial problems elsewhere in the region.[21]

But would growth in fact fall so dramatically? This brings me to the other question, namely whether asset market busts in fact have recessionary effects. Here again it may be revealing to consider U.S. experience in the 19th century, since weaknesses in financial markets were in some sense rather similar to those afflicting China and its neighbors today. Of the seven peacetime asset market busts in the United States in the century from 1815 to 1914, major recessions occurred in a bare majority of

[21] To be sure, there are important differences between the two cases. Where pre-1913 U.S. booms were fed by procyclical monetary and credit conditions resulting from the maintenance of a gold-standard peg, the Chinese authorities can ostensibly lean against the wind because the country has a flexible exchange rate. The problem, as I noted earlier, is that the currency is not very flexible in practice. China also has capital controls, which provide at least limited monetary autonomy. But those controls are increasingly porous, and absent exchange rate changes they afford the authorities only limited monetary control – witness their current difficulties in cooling off the economy. The problem in the banking system is of a different sort, although it is not clear whether, in comparison with late-19th century America, problems in China today should be regarded as more or less severe. China also has extraordinarily high savings rates, which means that it is running current account surpluses rather than deficits even in the midst of an enormous investment boom. Those surpluses have allowed it to accumulate massive foreign reserves, whose existence limits the danger, compared to the U.S. a century ago, of China being pushed off its implicit peg by a run on the currency. So I don't want to exaggerate the similarities. OK, maybe I do.

them – that is, four.[22] The average fall in output in these four episodes was 7 per cent from peak to trough, a significant contraction by the standards of the Asian crisis. In contrast, in the 1873-5 and 1881-4 crises and the so-called Rich Man's Panic of 1902-4, equity markets fell by some 23 per cent in real terms from peak to trough, but economic growth was barely disrupted.[23]

What was different about these episodes? In 1902-04 there was no adverse impact on the banking system. In 1884 the banking and financial system in New York City was disrupted, but problems there were resolved quickly before they could spread to the rest of the country.[24] 1873 is a more difficult case. The New York banks and their country correspondents had essentially been engaging in a carry trade: country banks with low funding costs placed their deposits with New York banks, which paid them higher interest rates, and in turn "these deposits were to a great extent loaned upon stocks and bonds in Wall Street, payable 'on call,' with the confident belief that they were there earning more than the interest paid for securing them, and were available as promised."[25] Much of this money had been invested in railways, including a large stake in Canada

[22] The seven asset market busts commence in 1835, 1853, 1875, 1881, 1892, 1902 and 1906. I put aside wartime busts (during the War of 1812, the American Civil War, and World War I), since war tends to be highly disruptive to output, and including these episodes would bias the conclusions toward finding recessionary effects.

[23] According to the conventional historical statistics on GDP, activity fell by a bit less than ½ of 1 per cent between 1873 and 1874 before recovering. There was no interruption of growth in the first half of the 1880s. Between 1903 and 1904 growth fell by 1 per cent before recovering strongly. In a number of the other cases, it can be argued that drop in output caused the banking crisis rather than the other way around (or at least that the banking crisis was not entirely responsible for the drop in output). This is another reason for caution in ascribing effects.

[24] First, the other New York banks formed a committee to inspect the books of main problem bank, the Metropolitan Bank, and finding its accounts in reasonable order provided it with financial support. The Comptroller of the Currency immediately sent in examiners who oversaw the rehabilitation of the Metropolitan bank and the financial system generally.

[25] From the November 11, 1873 report of the New York Clearinghouse, quoted in Sprague (1910), p.93.

Southern Railroad by Kenyon, Cox & Co., bad news about which set off the panic.[26] Once the panic spread to Jay Cooke & Co., which had a major position in the Northern Pacific Railroad, the entire country was engulfed.

If there is an explanation for why the real effects were not more disruptive, it is that the banks' difficulties were quickly resolved by the issuance of clearinghouse certificates by the more conservative banks in support of the larger system.[27] In addition, the fact that the U.S. was not yet back on the gold standard, which had been suspended in the Civil War, was important for removing a constraint on freedom of action. It is clearly better to avoid experiencing a banking panic in the first place. But the lesson of this history would appear to be that if you are going to have crisis, it is important to resolve it quickly.

This brings us to the key questions. How weak or strong are banking systems in China and the rest of Asia? And how much confidence should we have that, if a major financial bust implicates the banking system, resulting problems will be quickly resolved. It is not a controversial judgment that the condition of the Chinese banking system is poor. According to the official statistics, nonperforming loans came to 6.3 per cent of total loans as of the middle of 2006. This ratio is down to barely a quarter of its level at the end of 2000, reflecting recapitalization and the rapid growth of the Chinese economy (high tides lift all boats).[28] But it is well known that loan-classification standards are lax. The cautious regulator's rule of thumb is to double to official statistics on NPLs. If one

[26] In addition, 1873 in the United States had an element of international contagion: financial crises had broken out earlier in the year in Austria and Germany, and German investors in particular had invested heavily in American railroads; when crisis broke out in Berlin, they had to raise liquidity, causing them to liquidate their positions in the United States, precipitating volatility there.
[27] This is the common explanation of Sprague (1910) and Friedman and Schwartz (1963).
[28] On the previous recapitalization initiatives see Dobson and Kashyap (2006).

does this, then current problems in the Chinese banking system are comparable to those in Japan in 1998, Korea in 1999 and Taiwan in 2001.[29] In other words, they are worrisome.

Traditionally, problems in the China's banking system have been associated with loans to loss-making state enterprises. The question for the current discussion is whether a growing and worrisome share of loans and investments is now being devoted to real estate and is ending up in stock market speculation. Published statistics are incomplete, but we know that, for the big four banks, loans to households are the most rapidly growing component of bank portfolios, and that mortgage loans are in turn the most rapidly growing (and single largest) component of loans to households.[30] Wang (2007) points out that the longer the stock market boom continues, the greater is the likelihood that loans will have been diverted to the stock market, either directly or indirectly. Allen, Qian and Qian (2007) point to the collapse of property prices in Shanghai and other major cities as the likely trigger of a Chinese banking and financial crisis. Nouriel Roubini (2007) places more weight on a stock market collapse, fed by the panicked reaction of 100 million inexperienced Chinese day-traders. Either way, if a growth slowdown follows, the performance of the banks' outstanding loans to state-owned enterprises will be placed at risk.

How common are these problems to other Asian countries? And if distress develops in the Chinese financial system, would there be powerful spillovers to other Asian economies? Since Asian stock markets are highly correlated, major asset price drops in China would all but certainly be accompanied by major drops elsewhere in the

[29] See Allen, Qian and Qian (2007), Table 3-A.
[30] Allen, Qian and Qian (2007), p.16.

region. Less certain is whether banking systems in other Asian countries would be engulfed. Tarazi, Rous and Bustista (2007) look at co-movements in bank share prices across Southeast Asian countries: they find that proxies for bank fundamentals (the quality of bank assets, the structure of bank incomes) better explain cross-country bank contagion than within-country contagion.[31] In turn, this directs attention to the strength of fundamentals in other Asian countries to which China's difficulties might spread.

Here the only general statement that is that circumstances differ. While nonperforming loans have fallen throughout the region, they remain in the double digits in the Philippines, Thailand and Vietnam. The rebalancing of loan portfolios from corporate to consumer credit is no guarantee against problems, as the experiences of Korea, Hong Kong and Taiwan all reveal. Internal controls, loan classification practices and supervisory standards have been raised, but in many cases practice lags principle.[32] Fitch's indicator of the health of national banking systems as of March 2007 gives ratings of "low" (D on an A-E scale) to Indonesia, the Philippines, Taiwan and Thailand and only "adequate" (that is, C) to South Korea and Malaysia.[33] In the first quarter of this year, the prices of the shares of emerging Asian banks were up slightly, presumably reflecting revisions of investor expectations regarding the condition of the banks. Within

[31] Within countries, proxies for liquidity and opacity better explain the spread of difficulties, as if illiquidity is the major concern within national banking systems but fundamental solvency problems drive spillovers from one national system to another.

[32] Moody's (2007) describes the case of Indonesia, where owing to lax corporate governance of financial firms banks continue to lag their regional peers in terms of implementation of international standards, although the relevant standards are not obviously inferior to those of neighboring countries.

[33] See Fitch Ratings (2007). Other sources flesh out this picture by analyzing national cases in detail. Thus, Nakornthab (2007) describes vulnerabilities in the Thai banking system associated with exposures to consumer credit and the property market. Pineda (2007) provides a detailed analysis of current weaknesses of the Korean banking system, citing its lending to other investors speculating in short term securities its excessive extension of credit to the household sector – this time (in contrast to 2002, when it took the form of revolving credit) in the form of housing loans. Moody's (2007) describes how pre-election legislation may be discouraging timely debt repayment by consumers and extend consumer debt charge-offs from the banks' credit card books to their mortgage books.

the region, share prices were up in Thailand, Malaysia, the Philippines, Korea and (pause) China, but down in Indonesia, Hong Kong and Taiwan.

If a crisis erupted, would the authorities be able to intervene quickly and forcefully to prevent it from spreading and the credit channel from being disrupted? In China's case, the authorities have upwards \$1.2 trillion in foreign currency reserves to draw on to recapitalize the banking system, as they have done in the past.[34] Compared to \$1.2 trillion of reserves, \$160 billion of nonperforming loans (the mid-2006 official figure) or even twice that level is not overwhelming.[35] And insofar as the foreign-currency-denominated liabilities of the banks are limited, the value of foreign exchange reserves is not the relevant metric; what are relevant are the central bank's ability to print money and the government's capacity to tax and borrow. In this sense, their scope for intervention is virtually unlimited.[36] The question is whether the authorities would be prepared to utilize that capacity freely, now that foreign financial institutions have taken stakes in the big banks. A public sector bailout of the banks would be a bailout or a subsidy to these foreign institutions, and the government might hesitate to use the hard-earned tax dollars of Chinese residents in this way. To be sure, the best course would be to provide the liquidity now and defer questions of burden sharing to later. But there is an issue of whether the Chinese authorities will in fact respond in this fashion.

[34] The government also has debt that should be subtracted from its assets, but explicit public debt is on the order of "only" 16 per cent of GDP.
[35] It is not overwhelming from the perspective of capacity to maintain financial stability, that is. On the other hand, previous recapitalizations have cost the Chinese taxpayer on the order of 10 per cent of GDP (Ma 2006, as interpreted by Dobson and Kashyap 2006).
[36] It can be argued that a large-scale injection of liquidity could destabilize the exchange rate and unleash flight from currency and the banks, feeding back on the banking system in destabilizing ways. Here the foreign exchange reserves of the authorities become relevant and provide reassurance against the development of this scenario.

3. Conclusion

Let me sum up. Much has changed in Asia since the crisis. Still, those who fail to learn the lessons of history are doomed to repeat it (just like keynote speakers are doomed to quote George Santayana). In the present instance those lessons lie not just in the Asian financial crisis but in the earlier history of my own country. They show that extensive growth like that which China is undergoing today can transform both the lives of the country's residents and also the global economic and political landscape. But booms can turn to busts, especially when they reflect the combined effects of investor exuberance, ample funding, and limited monetary policy autonomy. Given the escalation of asset valuations, most dramatically in China but more generally across the region, it is not unreasonable to imagine a sharp drop in asset markets. Major recessionary implications would follow if the stability of the financial system, and particularly banks, is undermined. To be sure, recessionary impacts can be warded off by early, concerted intervention to support the financial system – though it is clearly better to avoid such problems rather than having to rely on an adept response. These are lessons worth remembering, since when China sneezes, the rest of Asian can catch pneumonia.

References

Allen, Franklin, Jun Qian and Meijun Qian (2007), "China's Financial System: Past, Present and Future," unpublished manuscript, University of Pennsylvania (March).

Ananchotikul, Sudarat and Barry Eichengreen (2997), "Corporate Governance Reform in Emerging Markets: How Much, Why and with What Effects?" unpublished manuscript, University of California, Berkeley (May).

Asian Development Bank (2007), *Asian Development Outlook 2007*, Manila: Asian Development Bank.

Bordo, Michael (2003), "A Historical Perspective on Booms, Busts, and Recessions," *World Economic Outlook* (April), Washington, D.C.: International Monetary Fund, pp.64-66.

Carroll, Lewis (1876), *The Hunting of the Snark*, London: Macmillan.

Collyns, Charles and Abdelhak Senhadji (2003), "Lending Booms, Real Estate Bubbles, and the Asian Crisis," in William Hunter, George Kaufman and Michael Pomerleano eds., *Asset Price Bubbles: The Implications for Monetary, Regulatory and International Policies*, Cambridge, Mass.: MIT Press, pp.101-125.

de Nicolo, Gianni, Luc Laeven and Kenichi Ueda (2005), "Corporate Governance Quality: Trends and Real Effects," IMF Working Paper no. WP/06/293 (December).

Dobson, Wendy and Anil Kashyap (2007), "The Contradiction in China's Gradualist Banking Reforms," Working Paper no.4, Institute on Global Financial Markets, University of Chicago.

Eichengreen, Barry and Raul Razo-Garcia (2005), "The International Monetary System in the Last and Next 20 Years," *Economic Policy* 47, pp.393-442.

Eichengreen, Barry and Hui Tong (2006), "How China is Reorganizing the World Economy," *Asian Economic Policy Review* 1, pp.73-101.

Fitch Ratings (2007), "Bank Systemic Risk Report," New York: Fitch Ratings (March).

Friedman, Milton and Anna Schwartz (1963), *A Monetary History of the United States, 1867-1960*, Princeton: Princeton University Press.

Kindleberger, Charles (1978), *Mania, Panics and Crashes*, New York: Basic Books.

Kramer, Charles (2006), "Asia's Investment Puzzle," *Finance and Development* 43, www.imf.org (June).

Ma, Guonan (2006), "Sharing China's Bank Restructuring Bill," *China and the World Economy* 14, pp.19-37.

McCauley, Robert and Yung Chul Park (2006), "Developing the Bond Market(s) of East Asia: Global Regional or National?" BIS Paper no. 30 (November).

Miller, Marcus and Alan Sutherland (1990), "The 'Walters' Critique of the EMS: A Case of Inconsistent Expectations," CEPR Discussion Paper no.480 (November).

Moody's (2007), "Asia's Banks – 10 Years Since the Crisis," Moody's Banking Special Comment, Hong Kong: Moody's Investors Service (July).

Nakornthab, Don (2007), "Thai Commercial Banks One Decade After the Crisis: Assessment of Risk to Financial Stability," unpublished manuscript, Bank of Thailand (July).

Pineda, Mikka (2007), "East Asian Bank Sector Reform Since 1997," unpublished manuscript, RGE Monitor (June).

Perez, Carlota (2002), *Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden Ages*, Cheltenham and Northampton: Edward Elgar.

Ranciere, Romain, Aaron Tornell and Frank Westermann (2004), "Crises and Growth: A Reevaluation," CESifo Working Paper no.1160.

Reinhart, Carmen and Kenneth Rogoff (2004), "The Modern History of Exchange Rate Arrangements: A Reinterpretation," *Quarterly Journal of Economics* 119, pp.1-48.

Roubini, Nouriel (2007), "Asia is Learning the Wrong Lessons from its 1997-98 Financial Crisis," unpublished manuscript, Roubini Global Economics (May).

Sprague, Otto (1910), *History of Financial Crises under the National Banking System*, Washington, D.C.: National Monetary Commission.

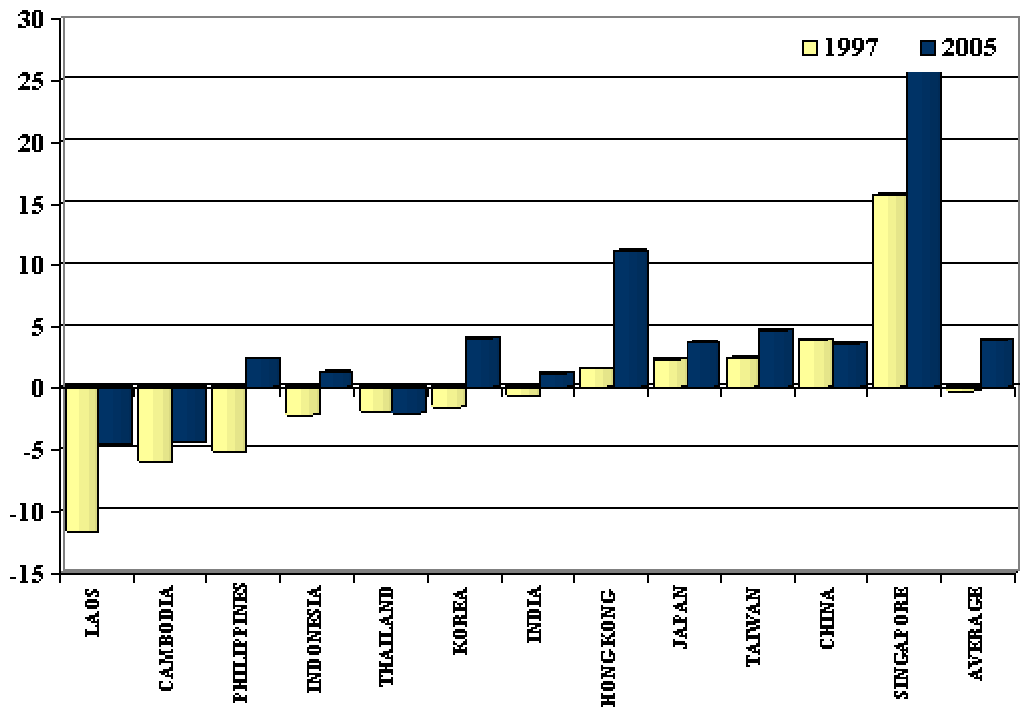
Tarazi, Armine, Philippe Rous and Carlos Baustista (2007), "The Determinants of Domestic and Cross Border Bank Contagion in South-East Asia," unpublished manuscript, University of the Philippines (February).

Turner, Philip, ed. (2006), *The Banking System in Emerging Markets: How Much Progress?* BIS Paper no.28 (August).

Villar, Augustin (2006), "Is Financial Stability Policy Now Better Placed to Prevent Systemic Banking Crises?" in Philip Turner, ed., *The Banking System in Emerging Markets: How Much Progress?* BIS Paper no.28 (August), pp.106-122.

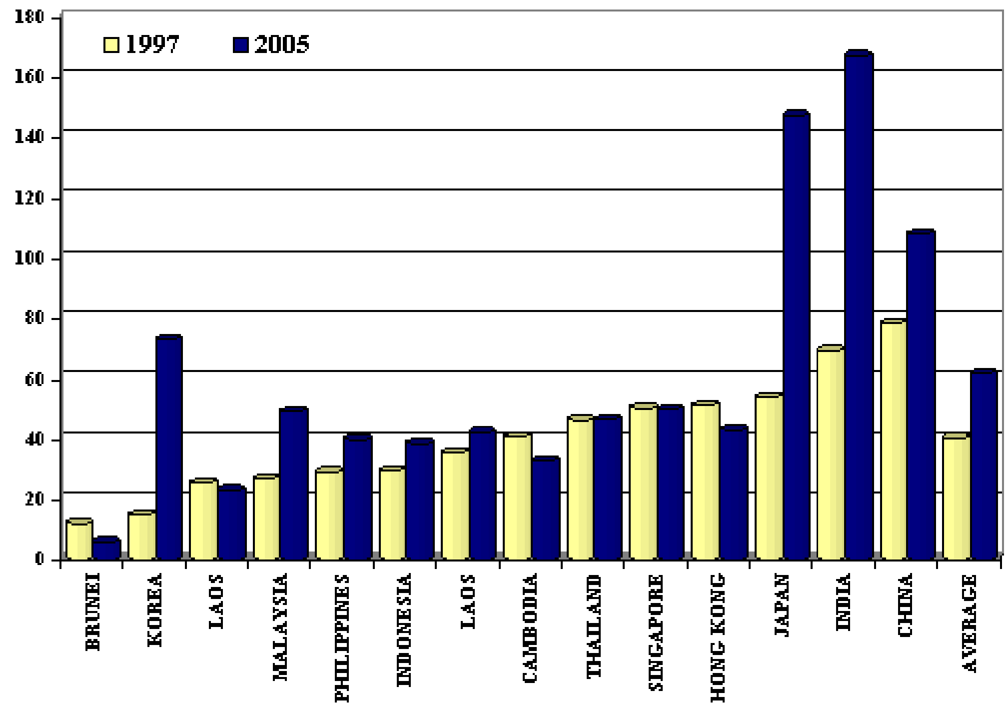
Wang, Qing (2007), "An 'Untimely' Question: What Could Go Wrong with the Economy?" Morgan Stanley Global Economic Forum, www.morganstanley.com (23 July).

Figure 1: Current Account Balance to GDP



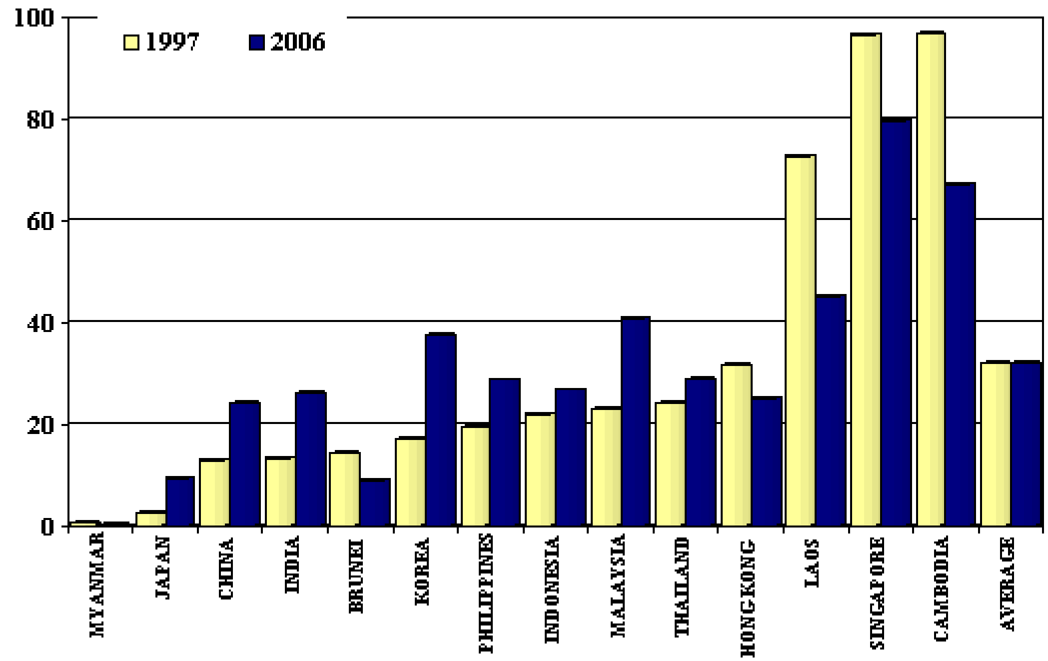
Source: World Bank World Development Indicators.

Figure 2: Ratio of Reserves to Exports



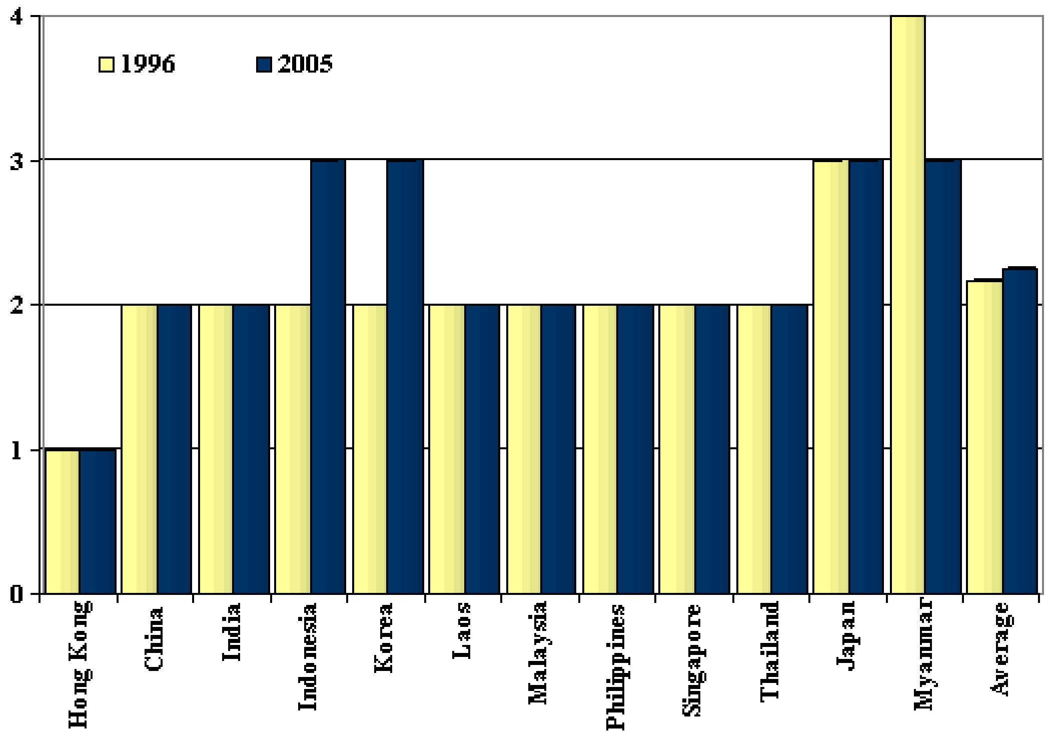
Source: IMF International Financial Statistics. Total reserves minus gold over goods exports (f.o.b.).

Figure 3: Ratio of Reserves to M2



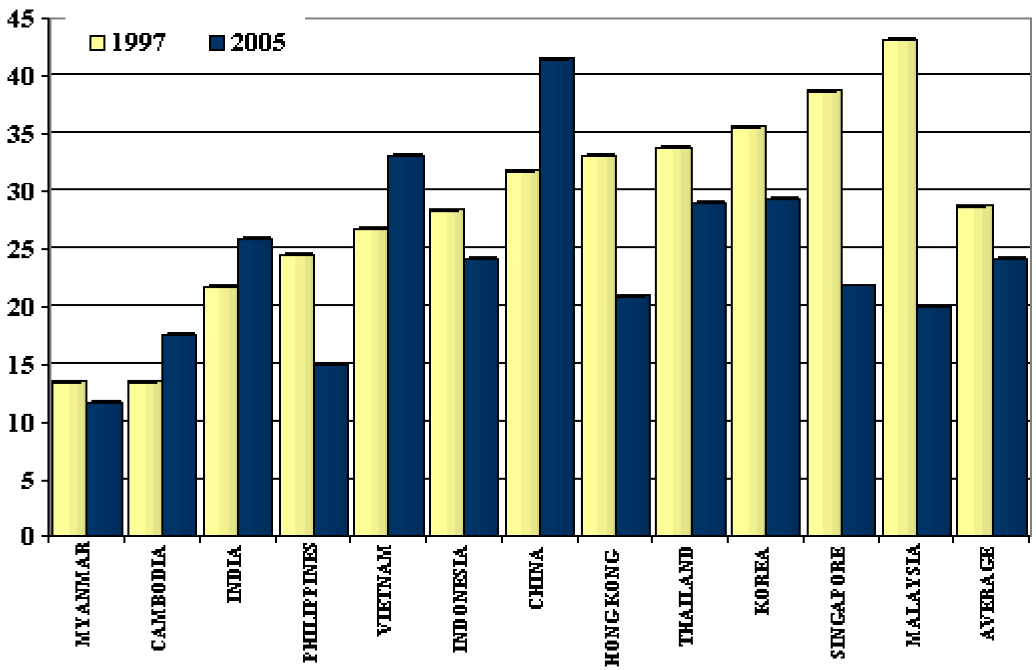
Source: IMF International Financial Statistics. Total reserves minus gold over money plus quasi money.

Figure 4: Exchange Rate Regime (Reinhart and Rogoff)



Source: Reinhart and Rogoff natural classification (1996-2002) updated by Eichengreen and Razo-Garcia (2003-2005). The exchange rate regime discrete variable takes the value of 1 if the exchange rate arrangement is a hard peg, 2 for intermediate regimes, 3 for freely floating and 4 for freely falling.

Figure 5: Investment to GDP



Source: IMF International Financial Statistics. Gross fixed capital formation over GDP.

Figure 6: External Financing—Malaysia, Indonesia, Philippines, Korea and Thailand

External Financing: Malaysia (billions of U.S. dollars)

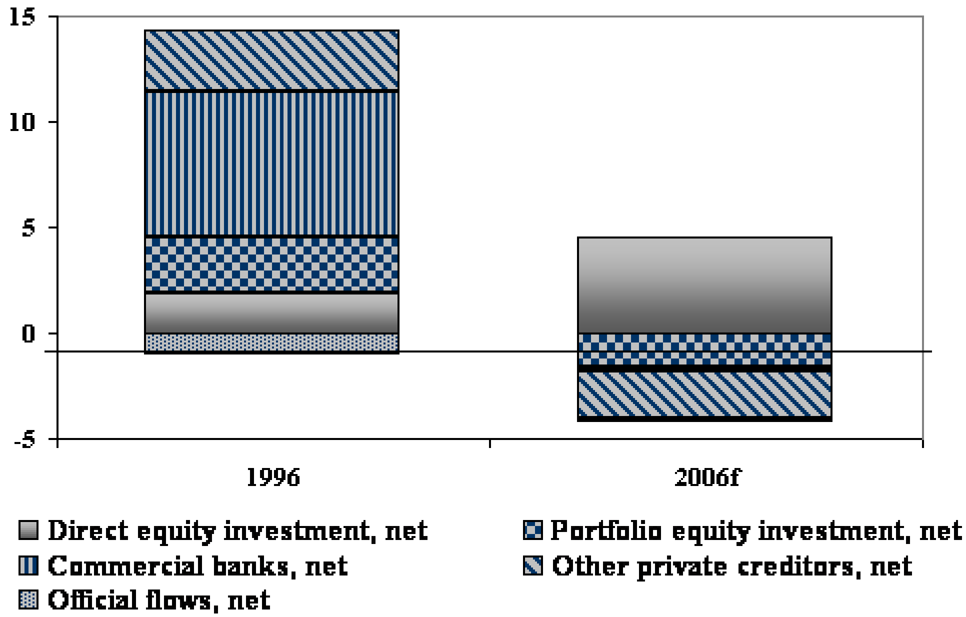


Figure 6: External Financing—Malaysia, Indonesia, Philippines, Korea and Thailand *(continued)*

External Financing: Indonesia (billions of U.S. dollars)

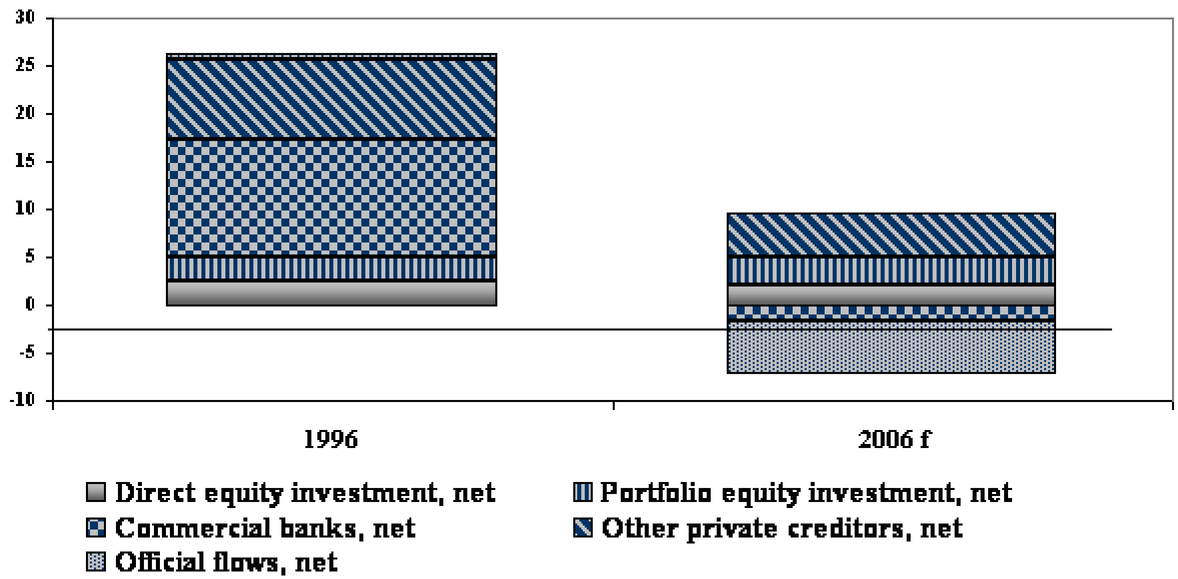


Figure 6: External Financing—Malaysia, Indonesia, Philippines, Korea and Thailand *(continued)*

External Financing: Philippines (billions of U.S. dollars)

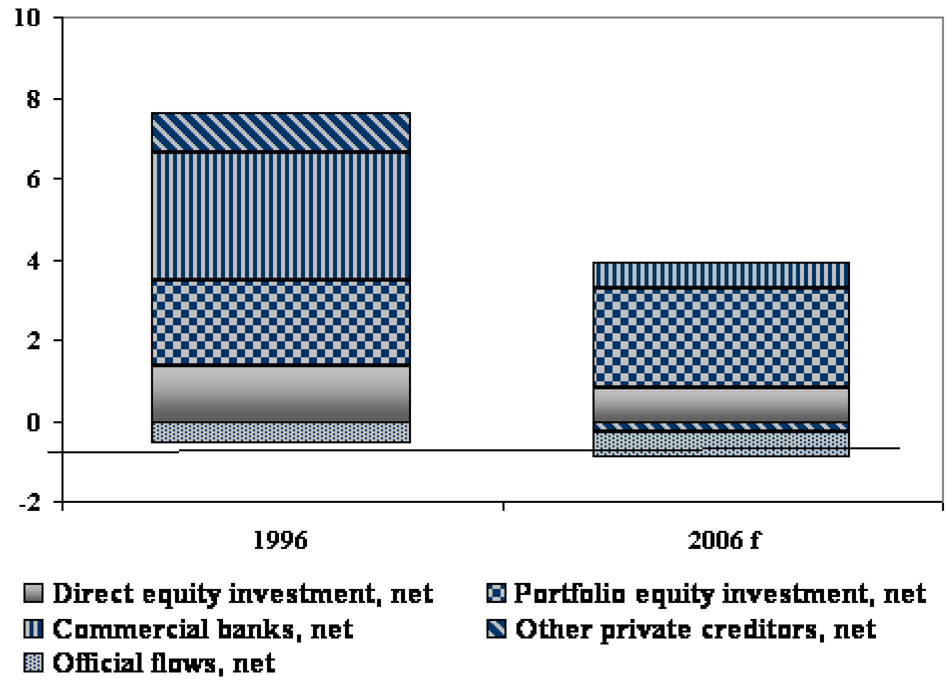


Figure 6: External Financing—Malaysia, Indonesia, Philippines, Korea and Thailand *(continued)*

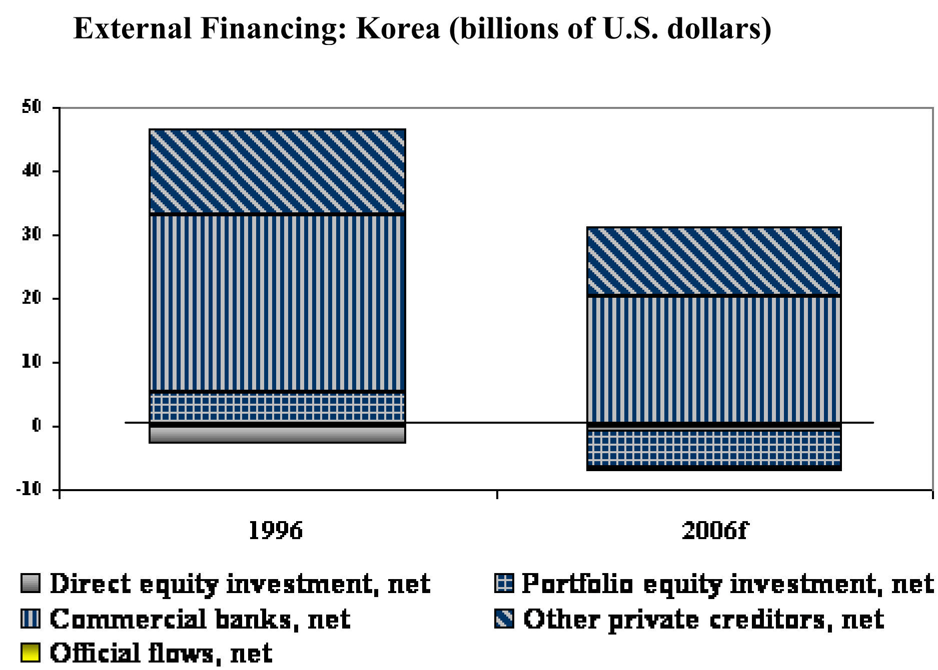


Figure 6: External Financing—Malaysia, Indonesia, Philippines, Korea and Thailand *(continued)*

External Financing: Thailand (billions of U.S. dollars)

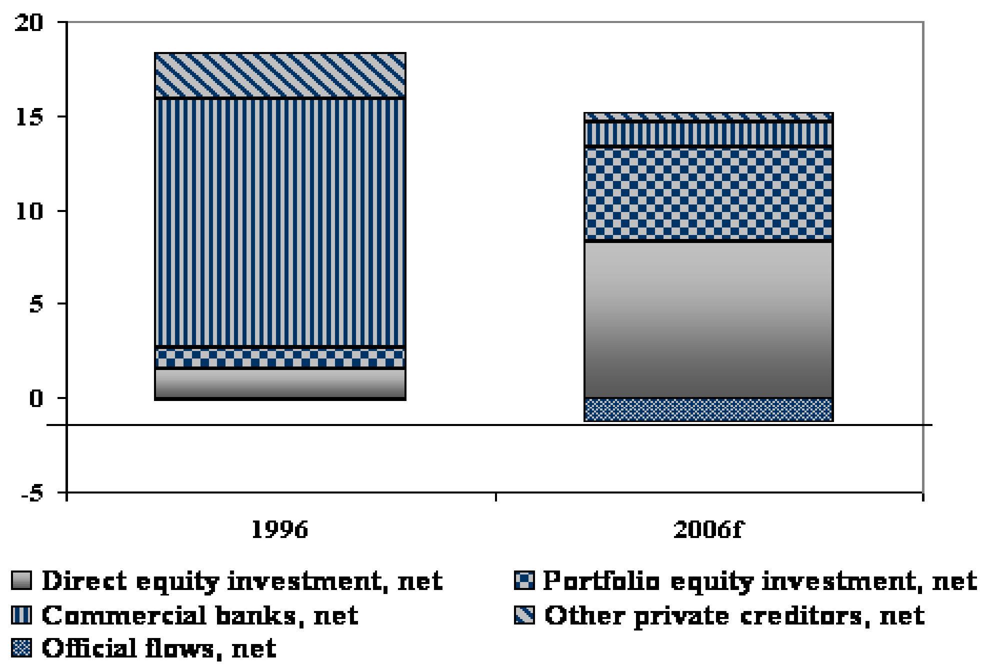
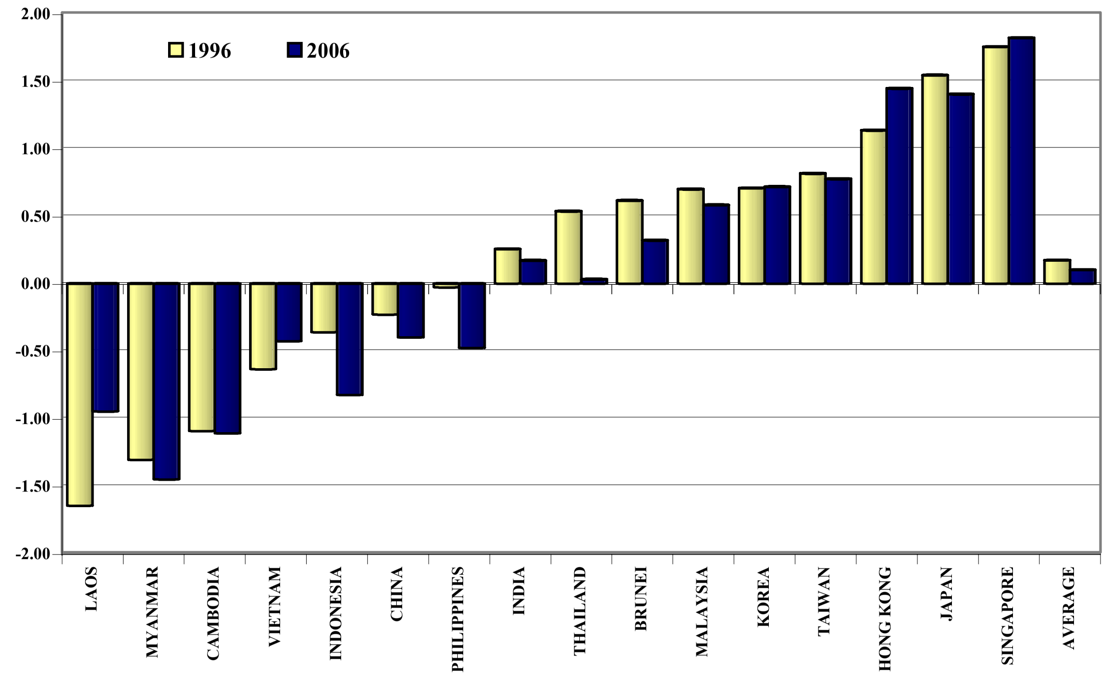
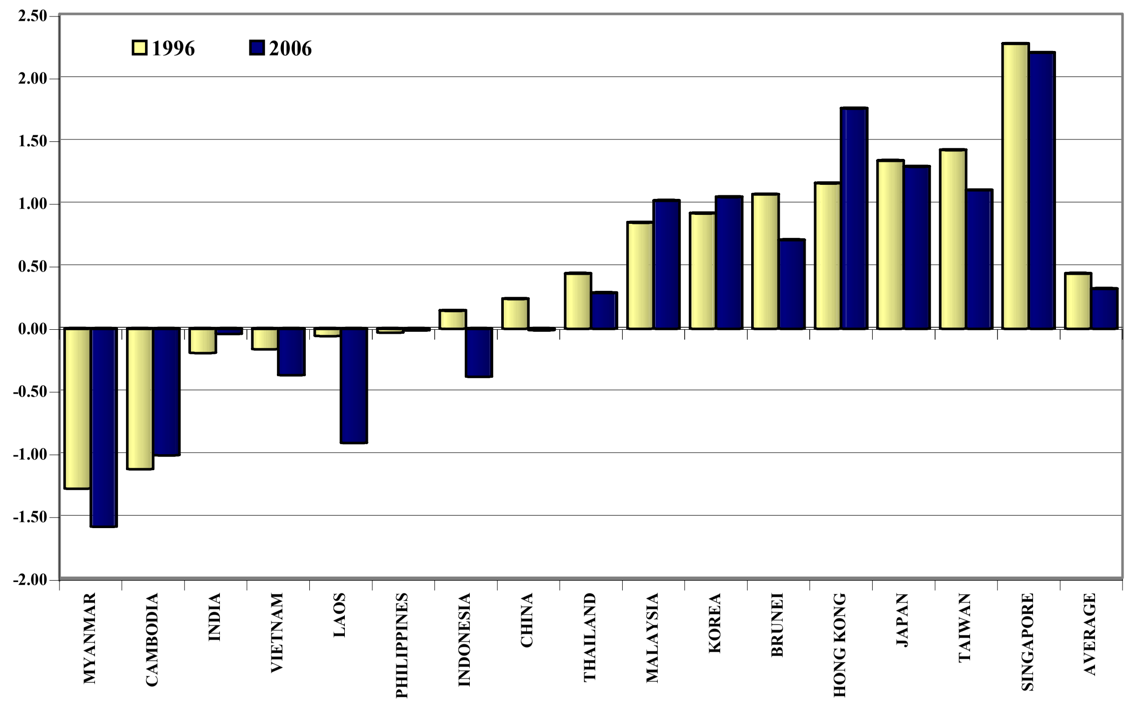


Figure 7: Rule of Law



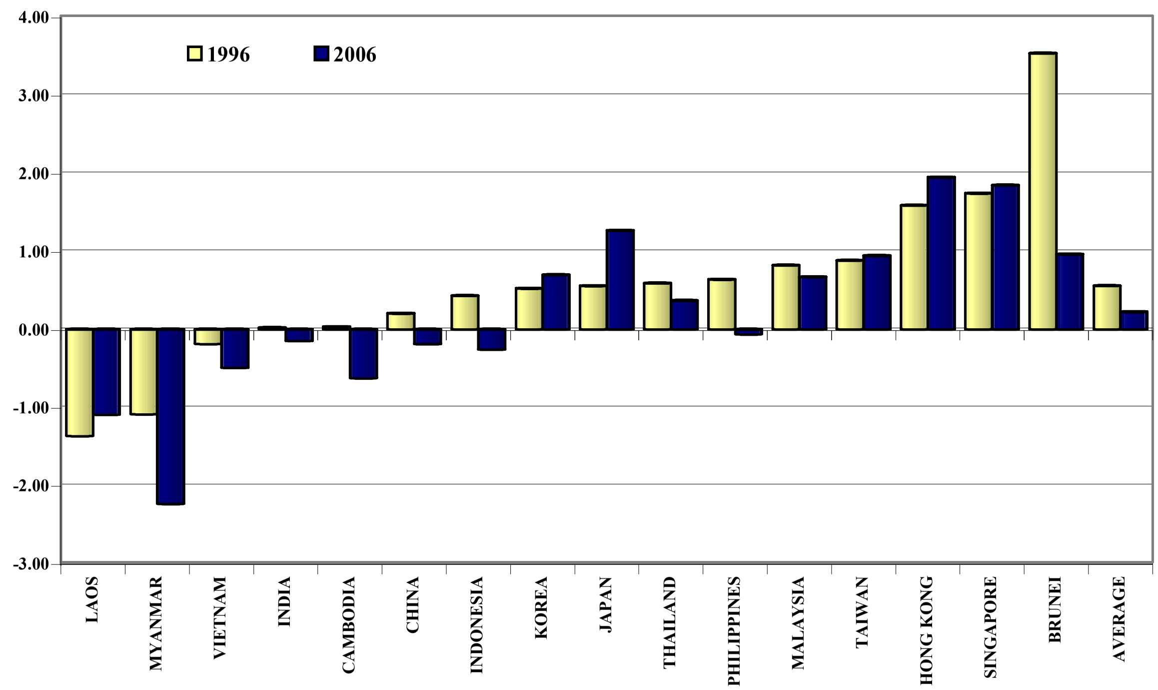
Notes: The rule of law index measures the extent to which the agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence. A higher index is translated in a better rule of law. Source: World Bank governance indicators.

Figure 8: Government Effectiveness



Notes: The government effectiveness index measures the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. A higher index is translated in a more effective government. Source: World Bank governance indicators.

Figure 9: Regulatory Quality



Notes: The regulatory quality index measures tha ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. A higher index is translated in a higher regulatory quality. Source: World Bank governance indicators.

Figure 10: Rule of Law

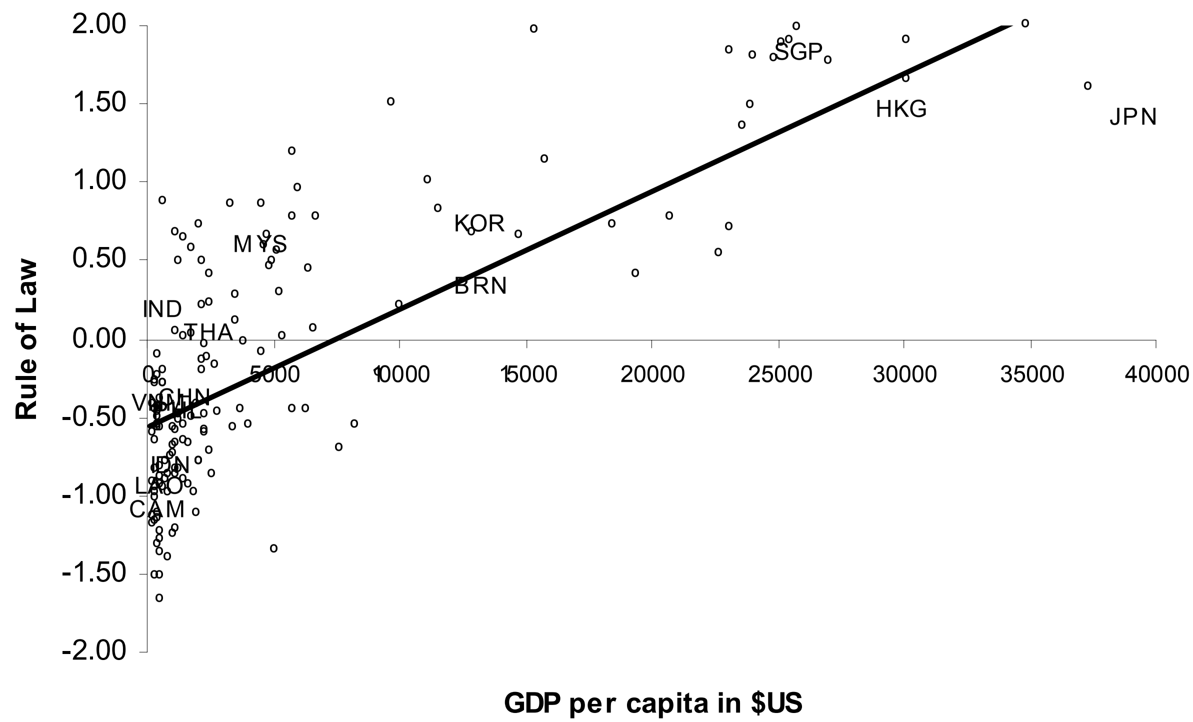


Figure 11: Government Effectiveness

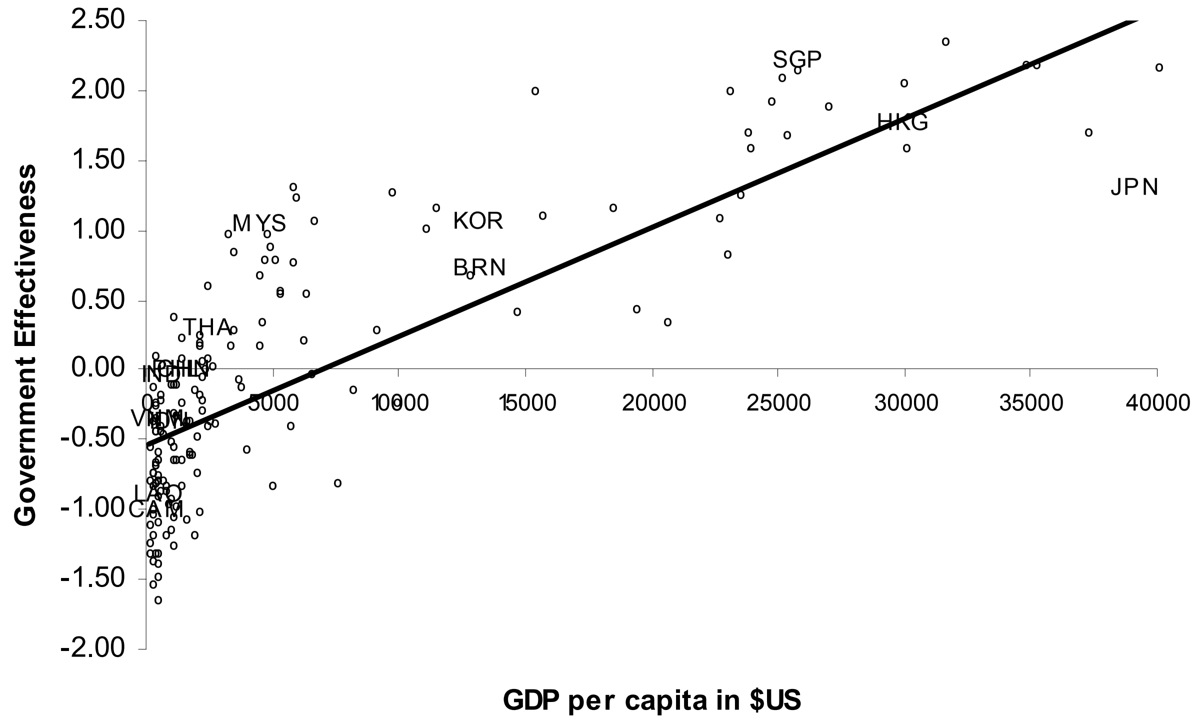


Figure 12: Regulatory Quality