A STRATEGY TO PREVENT FUTURE CRISES: SAFELY SHRINK THE BANKING SECTOR

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I was reading an article in the New Yorker the other day, and it was a history of how people have tried to reduce the number of traffic fatalities in the United States. Essentially, there were two basic strategies undertaken: there was the strategy of making safer cars and there was the strategy of trying to make better drivers. If your goal is to reduce fatalities, these both seem like legitimate means. And so we have things like airbags and crumple zones to make cars safer and we also have Mothers Against Drunk Driving and "wear your seatbelt" regulations to make safer drivers. But what never really occurred to anybody, this being the United States, was to reduce the number of drivers. If you have fewer drivers, you have smaller accidents and fewer fatalities.

Like traffic fatalities, financial crises are bad, so the fewer, the better. When we look at financial crises and really think about the historical record (and what was discussed at this conference), financial crises are in essence banking crises. So as with traffic, you can try to make a safer banking sector by having prudential rules and credit standards, and so on. You can also try to make safer bankers and better bank supervisors by exchanging experiences at conferences like these and having the BIS' Financial Stability Institute train everybody, and instilling market discipline. I am going to suggest instead that the best strategy to prevent future crises should be reducing the number of banks. If traditional deposit-taking, long-lending banks were to play a reduced role in most economies, and therefore the amount of damage bank failures could do was limited, the extent of financial crises would be more limited.

Of course, this raises questions of what economies give up when you reduce the number of banks, and how feasible or likely it is to reduce the number of banks. I will argue on the first point that you are not giving up all that much by reducing the number of banks, that other financial services can replace them easily for both borrowers and depositors. On the second point, I will suggest that the trends in corporate finance and technology are so strongly against traditional banking, that the public policy issue is how to assure sufficient safe exit of banking firms-feasibility of exit is not a problem.

The first issue is: why? Why should we be shrinking the banking sector? The answer is simple: we economists now seem to have an exceptionally good understanding of financial crises. Everybody agrees[1]: imperfect information, regulatory forbearance, connected lending, illiquid collateral, untransparent accounting, deposit insurance not fully creditable, shake it up, add a macroeconomic shock, and presto-a banking crisis. And the consensus on this analysis is actually pretty wide. This is why regulators can call for prediction,[2] and then we can talk about making use of early warning.[3] Yet, with all due respect, early warning does not seem to work, right? We have known all these things for some time, and we are constantly improving our forecasting, but the problem is not so much warning as acting on the warnings.

At issue is not whether there is time enough to react, but instead, if banks and regulators have too much time to react, what do they do? We all understand that the basic danger is that when an economy has undercapitalized regulated banks, they behave badly, they are subject to a moral hazard, which results in adverse selection in the financial markets. The resulting rolling over and accumulation of bad loans is an enormous drag on growth. You either suffer the cost of recapitalizing the banks quickly at large cost in terms of real output (which was repeatedly the case in Latin America), or you suffer the costs of having wasted a lot of your capital, foregoing growth, and eventually paying a larger bill (which is arguably a major part of what has happened in Japan for the last ten years). This is serious stuff. And we all knew ahead of time both that bank crises are serious and where they were occurring.

So that is my second point: learning, unfortunately, does not seem to affect behavior when it comes to financial crises. Now as a think tank person, I am supposed to believe in the power of learning. My colleagues' and my only hope of having influence, is that people listen to one of us and say: "Ah ha! Good idea, I'll do that." But this does not seem to overcome the incentives underlying bank crises. Consider US-Japan foreign economic relations, specifically financial relations, in the last 20 years.[4] What is very interesting is that, going through the history, the amount of transpacific and international exchange in the happy community of bank supervisors was already quite great by the late 1980s. Yet, we still had the US S&L crisis, and prior to that we had the UK land-bubble, and immediately following that we had the Swedish banking crisis, and then we have the ongoing Japanese financial crisis. This lists *only* some of the instances in *only* wealthy countries, just to remind everyone this is a universal problem. So even with the best of intentions, real public oversight, best training, best of supervision and, assumedly, mostly non-corrupt civil servants, learning about banking

crises does not seem to take place. The US savings and loan crisis ended when there was a political demand *ex post*; the Japanese banking crisis we are hoping will be ending now that there is a political demand ten years ex post. And there was no shortage of advice or warning to Tokyo from Washington and elsewhere in the bank supervisory community by the early 1990s.

There are very fundamental economic and political incentives for why this is the case.[5] One need not be an experienced political cynic, however, to model these processes. There are reasons why banks rollover bad loans and why bureaucrats engage in regulatory forbearance, and it is very difficult to get beyond those. As so often in economic policy, one is caught between the choice of either removing discretion totally, which seems self-defeating since the whole point of the bank supervisory exercise is the judgment of imperfect information, or leaving regulators the discretion to engage in regulatory forbearance (which is sometimes euphemized as "prompt corrective action").[6] So, that is the why. There does not seem to be any easy consistent way to keep banks from falling into crisis if their capital is short once bad times start. We can try to box in bank lending behavior as a useful effort, but there does not seem to be any way to fundamentally remove this difficulty with regulators. So what do you do instead?

That is my third point. I think we should make a new emphasis, perhaps our primary emphasis, on minimizing the banking sector in market economies. This raises the question of why we have banks, besides tradition and the fact that their buildings look familiar and solid. There are two essential reasons we have banks. The first, on the deposit-taking side, is small depositors supposedly need these institutions in order to conduct their day-to-day transactions and to have a safe place to put their money. The second reason, as grows out of the work of Fama (1985) and Stiglitz (1993), has to do with imperfect information in financial markets. There are certain smaller businesses, or risky businesses, that cannot go directly to capital markets to get their financing, so they have to go to an intermediary. When they go to an intermediary, these businesses must put up some asset as collateral, because only then does the intermediary have the incentive to look through the imperfect information about the firm, make a judgment, and spend a lot of time monitoring the loan. Thus, the argument for banks to exist is both on the depositor's side and on the corporate finance or borrower's side.

I will return to why I think neither side of that argument is as valid now as it used to be, but first consider the vulnerabilities and costs of banking. It is banks, more than any other actor in

the financial system, that have a maturities mismatch. Any financial sector business can of course have one, but banks inherently have deposits on demand and inherently have illiquid long-term loans, or else why are they banks? Because banks tend to lend in domestic currency, and because they tend to get temporarily overstretched and have to borrow in international markets, they tend to have currency mismatches. Again, individual corporations can have them, but it is worse for banks. Banks also have a perverse incentive from the deposit insurance system when their capital dips too low: it seems to say to bankers with weak balance sheets that once having lost as much capital as can be lost, there is still money to gamble with, because depositors do not withdraw their money.

Meanwhile, banks inherently have to deal with proprietary information. We hear a lot about transparency, but, as I said working from Fama (1985) and from first principles, the reason you have banks is they lend on the basis of information that cannot be publicly traded and disclosed. Without that proprietary information, there is no reason a borrower cannot take its business plan and instead go directly to financial markets. It is banks whose assets are not securitized, it is banks who are dependent on illiquid collateral, or rather they depend on things like real estate for collateral, which in a financial crisis normally becomes illiquid. So banks remain vulnerable in a way that very few other financial institutions do.[7]

Now, these vulnerabilities and their potential costs to the public could of course be outweighed if banks provided unique and special services. The question is, at the margin, or even pretty far away from the margin, do they still do that? Looking back, the first argument that is often made is that banks play a special role in development. If you come from Harvard, like I do, you actually read Alexander Gerschenkron (1967) and he offers a whole historical argument about German industrial development relying on *Hausbanken*, for example, and that is how you get machine tools, chemicals, and steel. And then you can turn to Aoki and Patrick (1990) and they will offer you a similar argument for the Japanese main bank system. And then there was that ill-timed World Bank report (1996), *The East Asian Miracle*, that suggested intertwined bank relationships played a role in the Asian NIC's success. And then, of course, you have lobbying interest groups, not least in the United States, who particularly enjoy saying things like: "Small business is the backbone of our society," and ask for government supported loan programs.

The problem is that much of this belief does not hold up very well to econometric analysis. There is a vast literature out there, much of the best work done by Gerald Caprio and his

colleagues at the World Bank, though a number of people have contributed.[8] The bottom line is while an economy does need some financial intermediation to get proper investment allocation, it does not have to be banks doing that allocation. In the cross-national evidence, what matters is the amount of credit being disbursed, the amount of private-sector investment, and the rates of return, not the institutional structure of financial firms per se. Moreover, as is becoming clear after the Asian crisis, when you have banks, especially in developing societies, there is a tendency towards politicization of lending-either there is government pressure on the banks to make loans for specific purposes, which would be more difficult to do in a marketized framework, or there are insiders' clubs, industrial networks and other relationships, that are very hard for new firms to break into.

Now, there are a number of economists who reconsidered Japan's postwar economic history, and suggested Japan grew despite the main-bank relations in the post-war era, not because of them.[9] There is a very good book forthcoming by Takeo Hoshi and Anil Kashyap (2001), entitled *Corporate Financing and Governance in Japan*, in which they develop very clearly with persuasive evidence the idea that the *Keiretsu*-type financing people had focused on in Japan was largely an artificial post-war construction that does not really reflect the mainstream of Japanese economic development. And in fact, at the end of Mr. Utsumi's opening remarks to this conference, he cited the example of Japanese banks in the early postwar era who had the foresight to lend on the basis of no collateral to what became Sony and Honda as we know them today. In those days, however, they were not acting as banks, they were acting as venture capital funds in so doing. These were not set loans; these were investments in return for equity stakes. Japan, once upon a time, had a venture capital culture, even if you would not know it now, and it was replaced by a commercial bank culture.

Now, in addition to this backwards-looking long-term view, minimizing the uniqueness of the role of banks in development, there are also some trends that are gaining strength right now that I think are very important. We are moving towards a world where there is less need for banks in corporate finance. If you think about the fact that historically banks made their profits by arbitraging information imperfections, there is reason to doubt such a large role in today's world where there is superior accounting, improved computerization, better disclosure and training, and the accumulation of financial innovation. Taken together, it is easier and easier across the world for firms to go directly to markets for their financing. This is a

worldwide trend, albeit less so in emerging markets than in Japan, and less so in Japan than in the United States.

We should also acknowledge that international capital mobility is increasing, granted with major interruptions, but with sufficiently deep global financial markets, such that we are no longer in the Feldstein-Horioka world—that is, we are no longer in the world where the amount of capital available for investment is the amount of savings that happens to be available in a given country at given time. And the further we move away from that, the less we need a depositor base in every country to aggregate savings for investment. Look at the U.S. We do not have much in the way of domestic private sector savings, but we still manage to get investment funding. For emerging markets, saying "be like the United States with easy access to capital markets" is, of course, facetious, but the basic point remains: with deeper financial markets, with better information flows, with advanced technology, with lower transaction costs, with new financial instruments, with better trained financial professionals and regulators, and with more people in the world exposed to financial concepts, the need for financial intermediation goes down, and the ability of firms to go to markets directly goes up.

How do we know this? Banks are becoming less profitable as competition and technology reduce the cost of intermediation. Mitsuhiro Fukao, in his superb paper for this conference, goes through the declining profitability of Japanese banks and uses that as a major explanation of Japanese financial problems. Many of us know this basic story we tell of the Japanese financial crisis: that you have partial financial deregulation in Japan in the mid 1980s; that the best firms, the large nonfinancial corporations on which banks were making high margins with little risk, then go directly to financial markets; that the margins for what is left of the banks' business with those firms shrinks; that unprofitable banks are not allowed to exit because exit is seen by regulators as market instability; that the banks have a captive body of deposits, which they have to keep lending out; and that they shift to real estate based lending to riskier SMEs, and earn no profits. And this went on for years.[10] Even in the United States, which liberalized earlier and more extensively its financial markets, you arguably still have a great deal of over-banking. For Japan, it is very frightening to look at table 1 in Yoshio Okubo's paper for this conference, which shows how many banks there are in Japan, and the number is almost completely unchanged in any part of the banking sector, despite the fact of zero profitability for five, six, seven years. This is a major problem.

So far I have covered why banks may be bad public risks given what some of their costs are, and why they are so vulnerable. Then I have turned to why the role of banks may be less important to finance than it used to be, and the various evidence consistent with these trends. Now let me talk about what I mean when I call on policymakers to shrink the banking system. I am obviously not looking to pass a law saying all traditional banks shall be shut down on day X. Nor am I suggesting the Basel II capital accords suddenly move the capital requirement up to 15 percent for banks in international commerce and shut down every bank below that. What I am suggesting is that we take advantage of certain of these major long-term trends against traditional banking that are already in place and encourage them. And when I say we, I mean the policymakers, the elected legislators, the people working at the IFIs-there is a real role for efforts to improve supervision, but equally there is a role to encourage the decline of traditional banking. Banks only exist due to regulation, and their unregulated closure can have systemic effects.

I offer four suggestions on how to do this: First, and this was mentioned by several people at this conference, emerging markets or even developed small open economies should import foreign financial services. This may sound opportunistic, because obviously a great beneficiary of this process would be US financial firms. But, I think it is important to realize that FDI in the financial sector, just like in every other sector, tends to transfer skills, technology, management techniques, and these are embodied in the actual investment. Moreover, as we have seen in country after country, including Japan, when financial sector FDI comes in, investing firms do need to hire local people. Usually the most successful financial firms (including banks) are those whose top management and financial principles come out of the world's financial centers, but which train or retrain local people to implement it. Moreover, except for the possibility of systemic risk—and that will be my next point—there is no special reason to think that protection of the banking sector is any better than protection of anything else.[11] The relevant thought experiment is to imagine a US auto industry that starting in the late 1970s managed to successfully say, "okay, no one needs exit, we'll not take any FDI from Japan, nor import any production or management techniques." How uncompetitive those firms would be, how backwards their production techniques would be, how underperforming the whole US economy would be. It is very clear now in the auto sector that the intellectual battle has been won; yes, there is still a GM and Ford, but they basically follow Japanese production, shop-floor management, and inventory techniques, and they were prompted to do so by Japanese FDI and competition. This kind of openness matters.

I think there are two other reasons why the import of financial services are good as a practical measure in emerging markets or all small economies: For one thing, such FDI allows the smaller economy to do some free-riding on more diversified portfolios and on better supervision. As we know, Latin America, especially the major countries therein in terms of size, has been in the forefront of taking in foreign investment in the banking sector. Argentina has weathered its recent storm perhaps as well as it did in part because of a very strong financial system, and that financial system strength is in significant part the result of foreign investment. You can free-ride to some degree off of Federal Reserve supervisors, and you are not relying solely on locally invested portfolios for the stability of these banks. The second important advantage of the import of financial services is it is a useful constraint on government behavior. I have already mentioned, and many people have made reference during this conference, to the idea that banks, under regulatory control, can be arm-twisted into doing things for the government. Not everything in the world should be privatized, but anything that is not, I think we would all agree should be on the public books in a transparent fashion. Putting in foreign financial firms, and having competition make banks more independent, tends to weaken the ability of governments to exert hidden pressure for the allocation of investment.

The second suggestion I would raise in terms of how policymakers should bandwagon on the transition to a world with fewer traditional banks would be extending securitization and transparency. In the United States, one of our great success stories is, of course, Fannie Mae, Freddie Mac, and all the semi-private institutions that securitize vast numbers of otherwise illiquid long-term bank-based loans to individuals. There are efforts to do this outside of the United States, but the general point is that securitization allows markets and regulators to work together. It allows you to get in more market signals, it allows you to set very straightforward performance requirements, and, once you have a financial crisis, it helps you unload what financial firms have in terms of distressed assets. I guess the way to make the comparison is to combine my previous point about government influence with this one: would you rather have the Japanese Fiscal and Investment and Loan Program (FILP), taking savings directly to government uses, or would you rather have Fannie Mae, adding liquidity to lending, but holding no specific loans? I think you would rather have Fannie Mae.

I think the other thing that has to be said here when we talk about transparency are the advantages it offers to trying to make sense of what is a reasonably profitable bank and what

is not. I have perhaps already beaten to death the fact that banks in general are not profitable, not just in Japan, but elsewhere-that is, banks who have not diversified their activities out of traditional deposit taking and lending long are losing margins and should be going away. Now the usual answer to this process by regulators is to encourage consolidation, mergers and acquisitions, either forced or voluntary. Unfortunately, in practice, this tends to be much like regulatory forbearance. It tends to be a way of just keeping banks afloat.

So, again, not to beat up on Japan, but we have a system now in Japan where of the top thirteen banks, there are going to be four new merged groups of three, and each of these has supposedly gained in capital strength and in capabilities by undertaking such mergers to garner economies of scope. The problem is the announced reductions in labor force and in branch networks to date are miniscule. Consider the merger of two city banks in Japan. Both have national branch networks. Both have thousands and thousands of employees. Then both announce they are going to shrink their branch networks by 5 percent, and they will shrink their workforce by voluntary attrition over the next four years. What they need is movement into new services, and some investment in new IT, and they need new products with which they can compete-this is something that has been mentioned by many regulators at this conference-and they certainly do not need that much staff, and they certainly do not need branches across the street from one another throughout Japan. Especially in a world where the trends are towards Internet banking and ATMs, shrinking of workforce and branch networks should be happening even in the absence of mergers (at least for banks to make a profit). And if that is true in Japan, the same will be true in almost every emerging market.

The third trend against banking on which to piggyback comes on the deposit side. We can tell a story about the hypothetical Argentinean grandmother who is more financially sophisticated than the average American bank teller, given what instability she has had to cope with in protecting her savings over the years. Savers who get burnt enough times will put their money offshore, or will realize that other forms of investment impose not much more risk than bank accounts. They will not simply take it.[12] I think we can expect there will be a very rapid tipping point at which the demand for standard user branch deposit services is going to go away. It is better to promote the shrinking of banks beforehand than to have a bloodbath of called in loans and failures when that happens.

But also making reference to the more timid Japanese-type of grandmothers, let us ask what then happens to the depositors and consider bank runs. As a US citizen, I have seen the movie

It's a Wonderful Life many, many times, so I have an image in my head of what a bank run looks like— some of you who have lived in Latin America know from experience what a real bank run looks like. But, as was demonstrated in Martinez-Peria and Schmuckler (2001) (presented at this conference) there does not seem to be true market discipline or full credibility in any deposit insurance system. Even in Japan in recent years, say in 1997-98, when the crisis was at its most overt (so far), though there was explicitly unlimited deposit insurance through government guarantees, people still moved a significant portion of their savings out of private banks into the postal savings system, or into Citibank accounts, or into cash in their home safes—and that is in Japan. Obviously, two things are going on: one, deposit insurance does not really seem to do that much good, except for a very limited subset of small depositors, and two, most people do seem inclined to react and take preemptive action on their own (whether or not this constitutes full self-insurance).

Now, I do want to protect small depositors, who does not? But I would like to suggest a different way of doing it. Remember there was a term that used to be kicked around called "narrow banking"? Narrow banking was the idea that the government could create a bank whose job was solely to provide simple financial services—secure small deposits, checking accounts for industrials—and which would invest in very safe assets, and which would charge a very transparent fixed price (in the form of below market returns) for providing these services. So, for example, you could take the Postal Savings System in Japan, buy a bunch of Japanese government bonds (oh, they already do that) and use that as the investment portfolio of a narrow banking system. Unlike the current Postal Savings in Japan, however, you would buy the government bonds in the secondary market and not give the government discretion over allocation of lending, and you would offer *lower* returns on accounts than private banks. The creation of such an institution has the beneficial side effect of adding depth in the secondary market for government bonds in any country you choose. You essentially create money market mutual funds with check-writing privileges that do not pay quite full rate, to give an option to the Japanese grandmother who does not feel like moving her own money as often as her Argentinean counterpart. And everybody else, all other depositors, are entitled to the risks and rewards of being equity investors or whatever type they wish to be.

So the final issue we come to in taking advantage of the trend against traditional banking regards the payments system. When I used to work at the New York Fed, there were these very smart but somewhat quiet people who worked a few doors down the hall in "Payment

Studies." I tried occasionally to figure out what they were doing, but they used many acronyms I did not understand, and I just sort of gave up. But, the bottom line that I think things have come down to is that we are moving more and more towards use of real time gross settlement for financial transactions. And we are moving more and more to where even private nonfinancial entities are able to settle their books very quickly, or to off-load payments risk through derivatives and other means. There is even some movement towards privatizing many forms of payment.[13]

Now, if that were to happen to a wide extent, it might take away from the potency of monetary policy. But for the purposes of today's discussion, it does tend to shift the risk onto the counterparties in any given transaction and limit the exposure to interbank payment problems. In a system that is largely securitized, if there are fewer banks, shorter-term assets, more real-time settlement, the Herstatt and related kinds of risks tend to decrease. For the individual depositor, we are moving more and more to everyone having credit cards, e-money, debit cards, and so on. I would by no means pretend that is replacing all checking accounts, but you can imagine it plausible for a citizen of Ecuador, or perhaps even Argentina, to think: "Gee, do I need to go through my banking system to get a means of payment, or can I buy a value card from Citibank or Banco Santander, or a non-bank, like AOL or Microsoft, since they're already out there? Yes, there's corporate risk, but this money is on the card for only a month and then I use it and I'm fine, and I shed some payment or bank-run risk."

So those are four very practical, reasonable steps to shrink the banking sector that piggy-back onto ongoing trends in order to increase financial and allocative efficiency. These by no means replace bank supervision, and by no means replace the need to recapitalize banks so far as banks remain. But if we do not shrink the banking sector, we not only remain unduly vulnerable to financial crisis, we will also become increasingly so over time as bank profitability erodes. It is therefore both feasible and preemptive for emerging markets to encourage FDI and imports in the financial sector, to promote securitization and transparency, to shift depositors to either narrow banking or risk-based assets, and to privatize payments systems as far as reasonable.

So where is monetary policy in this bottom line? I think one interesting aspect of this conference was that until we reached the last panel, there was very little said about macro and monetary policy. A couple of people observed quite accurately that it would be nice for the

world at large if the Bank of Japan added some liquidity, and to that, I give a hearty, "Hear, hear!"[14] But, looking forward, the question is, to what extent is monetary policy either a cause or a fix for the pressures on bank profitability and for slow response to a mounting financial crisis? And what I think Japan has demonstrated for us, from its experience in the last several years (which is what we are suppose to be drawing on for this conference), is that the effect of monetary policy is very asymmetric. Unduly deflationary monetary policy can cause great harm, although actively inflationary monetary policy may not do you very much good. In other words, as I have said many times in many contexts, the reason for the Bank of Japan printing money, buying JGBs, buying dollars, and so on, is not because inflation will fix the Japanese economy, but because doing so will remove the additional drag and burden of deflation. A hammer may not be the correct tool for every kind of repair, but it is still worthwhile to stop repeatedly hitting yourself in the head with one.

But what about the supposed connection between loose money and crises? I think it illustrates another way that shrinking the banking system reduces vulnerability. Monetary policy that targets asset price very well. Admittedly, this is an open debate in economics. In Mikitani and Posen (2000), two very brilliant economists, Ben Bernanke and Olivier Blanchard, come down on opposite sides of this question. Nevertheless, stepping back into my mindset as a former central-bank employee, you want to err on the side of caution, meaning you do not want to commit to tackling issues beyond your control. A central bank can be very confident in its capabilities to be lender of last resort for one bank. A central bank can generally presume that if it raises interest rates a lot, it can probably make asset prices decline, but only by being unsure when, or for how long or how much. And no central bank can be sure how much real effect there will be from increasing money in the banking system once the banking system is already broken. So, rather than distracting from the main matter with monetary policy, I think the most important thing is to simply keep it sectioned off into a macro focus. You do not want high inflation, obviously you do not want deflation, or we would have hoped that would have been obvious, but avoiding these extremes is not the fix for financial crises, nor is it likely to prevent them.

This leads to where I want to close. I do a lot of work on US-Japan relations, and one of the things that used to happen in the last couple years was various people from Japan would visit me, and they would say, after a conversation, "What's going to happen when the US bubble bursts?" And I would always say, "Well, I think I agree with you, it is a bubble, that's why I

didn't invest myself. But I do not think the effects will be the same in the United States as in Japan because we are not as bank dominated, we are much more securitized, our collateral is more varied, and our real estate markets are much more liquid." Many of you have heard this before. But certain visitors would hear this and start gnashing their teeth, and would reply, "You'll see, you'll see." Well, without wanting to sound overconfident, I think we have by now seen. The US technology stocks have deservedly crashed, US productivity growth indeed may have been somewhat inflated by how much was attributable to the cyclical upswing, and there may even be some problems in consumer lending that we do not yet know about (which could explain why the Fed has been so aggressive about cutting rates). But there has been nothing of the transmission mechanism, of the financial fragility, of the devastating effects on growth we saw in Japan from the asset bubble there. That, of course, is an argument against banks, which is where I started.

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Notes

1. For summaries of the current thinking, see Goldstein (1998) and Mishkin (1997).

2. See the papers by Okubo and Roberts for this conference.

3. See Goldstein, Kaminsky, and Reinhart (2001) for the best recent attempt at an early warning system.

4. Discussed in Posen (2001b).

5. The paper by Barry Hager for this conference discussed the situation in the United States and the types of things that occurred here during the S&L crisis.

6. Friedman (2000) and Glauber (2000) explain how in the US context these discretionary abuses were endemic, even though they still only lasted a few years in the S&L crisis compared to Japan.

7. See the papers by Krivoy and by Sato for this conference.

8. See *Financing for Growth* (2001).

9. See Hall and Weinstein (1996), Weinstein and Yafeh (1998), and Posen (1998), ch. 6, among others.

10. See Mikitani and Posen (2000).

11. Graham (2001) goes through this argument in detail.

12. The exception is Japan, but even this is changing - see Posen (2001a).

13. See Friedman (1999).

14. See Posen (2001a).