Financial Globalization

Culprit, Survivor or Casualty of the Great Crisis?

A publication of the Yale Center for the Study of Globalization
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Financial Globalization
Culprit, Survivor, or Casualty of the Great Crisis

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Part One

Taking Stock of the Causes and the Damage So Far

Economists are still debating what are the key causes of the crisis, or at least the weight that each should be given. It will still be a matter of question how long it will take before the crisis is over and a recovery is achieved. Also it is a subject of contention whether, if and when the recovery takes place, growth with price stability can be resumed as before the crisis. This section of the conference is intended to address these and related questions.

William Nordhaus
Sterling Professor of Economics, Yale University

Moderator

Since the name of the session is “Taking Stock Of The Causes and Damage So Far,” I was reminded of Keynes’s phrase in one of his marvelous passages, which I’ll paraphrase, that we overstate the power of vested interests but understate the power of vested ideas.

There is a passage from the transcript of a House hearing just after the Lehman bankruptcy, where Representative Henry Waxman (D-CA) asked Alan Greenspan about his views. He said, “Dr. Greenspan, do you think you made a mistake?” And Greenspan said, “Yes, I found a flaw in the model that I perceived as a critical functioning structure that defines how the world works. I was shocked because I’d been going for 40 years or more” (so that takes it back to 1968 or more), “with the very considerable evidence that it was working well. I made a mistake in presuming that the self-interest of organizations, specifically banks and others, were such that they were best capable of protecting their own shareholders. So, the problem here is something that looked to be a very solid edifice,
and indeed a critical pillar to market competition, and free markets did break down. And that shocked me, and I still do not fully understand why it happened.”

This is, as much as anything, a testament to the power of vested ideas and a good introduction to this session.
We do understand the global roots of this crisis. Ken Rogoff, my predecessor as chief economist at the IMF, and I, were going on and on while we were at the Fund about global current account imbalances. I think Ken, perhaps more than I did, recognized that the way they might come down might just be through a financial crisis. But I think none of us saw the magnitude of what might happen.

What I want to do here is talk a little bit about why it was the banks that got hit, and I’m going to offer some hypotheses. I don’t think we really know the answer, but to my mind this suggests that we have to be very careful when we’re thinking about regulation. Since we don’t really know what the answer is, we have to be careful that whatever regulation we put in place can actually mitigate the kinds of problems we saw this time, even while helping to ward off future problems -- the unknown unknowns so to speak.

If you drill down to what was happening in the financial sector in industrial countries, especially in the United States and the U.K., you will conclude that the financial firms were taking a variety of tail risks – low probability risks with very costly consequences if they occurred.

For the macro-international economist, this is often known as peso risk. For the micro-finance types, this is tail risk, the classic example being earthquake insurance. The point about writing earthquake insurance is if you can collect the premium up front and nobody knows that you’re writing earthquake insurance, you look like a genius.
making money with absolutely no risk. And that allows you to pay the premiums out to yourself or to the firm’s shareholders as big dividends. The problem, of course, is when the earthquake actually hits. People ask you to pony up the insurance. And if there’s none left, you go to the government and say, “Surprise. It’s your baby now – you own the problem.”

That, in reduced form, is essentially what happened -- two broad kinds of tail risk were being taken. One was default risk. Now, default risk -- idiosyncratic default risk -- is not really a tail risk. Firms go bust all the time. But there was risk being taken on the collective default -- for example, on mortgage-backed securities -- which pooled mortgages across the country. The tail risk there was the low probability event that house prices across the country could fall and create severe distress in the housing sector.

This kind of default risk was being taken, for example, by AIG, writing insurance against the super senior pieces of mortgage-backed securities; and by UBS, doubling and tripling the size of its balance sheet, investing in AAA mortgage-backed securities, borrowing at UBS’s cost of capital, making the little spread, and multiplying that many times.

Default risk was one form of tail risk. The other form of tail risk that was being taken was liquidity risk; a lot of banks were funding illiquid positions with very short-term debt. A classic example of this was the off-balance sheet Structured Investment Vehicles (SIVs) and conduits that banks had created to hold mortgage-backed securities. We didn’t know they existed until they showed up, back on bank balance sheets when the SIVs’ commercial paper financing dried up. The banks were financing these vehicles with little capital and lots of short-term debt and making a small but tidy spread. Unfortunately, the
vehicles came back onto bank balance sheet at the worst time, when liquidity, including for banks, had dried up in the markets.

Why did they do this? This is where I’m going to focus much of my discussion. The first and obvious answer, and something I wrote on some time back, was that this was all about compensation structure.

The finance profession understands that bankers can produce any amount of return they want, provided they take appropriate amounts of risk. So compensation structures have to be risk adjusted. Management looks at what returns traders make and adjust for the kind of risk they took, and that determines compensation.

If you’ve got that kind of system, the way to beat that system is to take on risk that the system doesn’t recognize. Tail risk is one example of such a risk. Take on risks that happen very infrequently, that are hard to measure, and hope and pray that by the time the risks actually materialize you’ve made your money.

There are various descriptions of this kind of behavior on Wall Street. It’s known as the Acapulco put (after the put option where you “put” your losses to the firm while preserving the gains). It’s known as IBG or “I’ll be gone,” for obvious reasons. It’s also called the O’Hare play in Chicago, which is that you put the position on, and then you go to O’Hare Airport. If the position works out, you come back home. If the position doesn’t, you take the plane and fly off into the horizon.

In response, politicians want to regulate the level of financier pay. That, to some extent, is pure politics, matched only by the sheer political insensitivity of bankers who have been bailed out. But there is also more sensible discussion about trying to get holdbacks or clawbacks, the idea being that we don’t recognize the risk in real time nor can
we adjust compensation for it properly. We need the passage of time to see if the risk actually materializes. And even if it doesn’t, if you have a long enough compensation period over which the traders’ bonuses are at risk, they have a greater incentive to act for the long term rather than for the short term. So, fixing compensation, fixing risk management, would ameliorate this.

The banks will say, “We can’t do this on our own. If we start putting in clawbacks, our traders will walk across the street, especially in good times, and therefore it’s very important that this be induced by the regulator.” There might be some merit in that.

One of the things we’ve discovered in this crisis is that risk management is least reliable at the top of the boom. When you have a trader who’s made money over the last five or six quarters taking risky positions, and your risk manager has been telling you that this guy is really out on a limb, and your risk manager and the trader come barging into your office and say, “Either the other guy goes or I go,” who are you going to listen to? Invariably we saw during this crisis that it was the risk manager who had to find a new job.

Risk management loses force after a string of successes even if those successes are due to luck. At the top of the boom looking back, you have had a string of luck, and at that point risk management tends to get relatively weakened. We need to preserve the integrity and power of risk management, by giving it more independence in corporations, paying it more, getting the best talent including former traders into it, and ensuring it has direct access to the board.

A second possibility is that this was about management and not as much about traders. There have been a lot of books published recently with fly-on-the-wall descriptions of what happened inside corporations. For example, books on Lehman
Brothers would suggest that Richard Fuld was really envious of Peter Peterson, a former Lehman manager who went out and made tons of money at Blackstone. And as a result, that envy moved Lehman into kinds of business -- real estate, for example -- that they shouldn’t have been in.

Similarly, Stan O’Neal, having to face the ire of shareholders who said Merrill Lynch was falling behind and not making profits while Goldman Sachs was making tons of profits, pushed Merrill into, again, real estate, because he wanted to keep up with the Joneses -- in this case the Goldman’s. It may be that the leading firms are very good and understand their business. The followers don’t. And the leading firms get out in time. The followers are left holding the brick or the bucket.

If that is what happened, we need to improve corporate governance. Of course, there are lots of questions about whether corporate governance itself can be improved.

A third possibility -- as you can see, I’m getting more and more macro with these possibilities -- is that this was all about equity value maximization. Now, this may seem strange. How could they have taken their firm to the brink and it be about equity value maximization? But looking back from a crisis is the wrong way to think about this. You want to look ex ante, that is, before the crisis. Ex ante the probability that any firm would go under was relatively small until you got pretty close to the crisis. The firms that fared the worst in this crisis were the firms that did the best before. The profitability of Citibank, for example, was extremely high in the years before the crisis, while J.P. Morgan was lagging behind, clearly because they took different levels of risk.

The point is that from an equity holder’s perspective, it may be the right thing to do to take these bets. If the system tanks, so be it -- but it’s a small probability event. You’re
making money most of the time. And to look back from the crisis and say, “This was a terrible, horrible thing to do,” mistakes ex post assessments for what should be considered from an ex ante perspective. All prior risk-taking looks bad from within the crisis. That does not mean it was the wrong thing to do given the weight of probabilities.

For instance, someone as savvy as Robert Rubin is purported to have pushed Citibank into taking more risk in 2005. The point here is that somebody who is extremely smart and whose reputation is impeccable actually thought it was in the best interest of the firm to take on more risk, suggesting, in fact, that banks may indeed have been trying to enhance shareholder value.

If bank actions are consistent with equity value maximization, but not with maximization of societal value, you can’t rely on corporate governance. It has to be regulatory oversight that limits risk taking, and this requires a lot more interventionist regulation than we have been doing so far.

The fourth possibility -- and this is where I link to Carmen Reinhart -- is that this was the same as earlier crises; this was an emerging market crisis all over again and the banks were relying on a variety of implicit guarantees and pushes from the government. The whole push into subprime credit, as others have documented, was driven very, very strongly by the government all through the 1990s, all through the 2000s: the affordable housing mandate from the Clinton administration, the ownership society push by the Bush administration. It’s no surprise that when you have directed credit, in the sense that Fannie Mae and Freddie Mac were given mandates to lend to this sector, this suggests to the private sector that there will be government support. And when the private sector thinks there is government support, it could well go overboard.
John Taylor\(^1\) talks about the fact that monetary policy was more lax than what the Taylor rule would suggest. The biggest problem was not so much the level of the interest rates, though I think that did create problems. But also, it was the famous Alan Greenspan statement in 2002 made at a Jackson Hole conference, where he said the Fed could not avert a boom but in fact could pick up the pieces in a bust and ease the transition to a new boom.\(^2\) Essentially he was offering the markets a liquidity put. This suggested to everybody that the Fed would come in with tremendous amounts of liquidity provided everybody failed together. So everybody had the incentive to take correlated risks because that was when you would be bailed out.

Along these lines, it is possible that everybody forecast what would happen in the crisis, and therefore were acting on that basis. For example, think of the too big to fail institutions. If you’re writing insurance against disaster, and if you want to purchase insurance against disaster, from whom would you purchase insurance? Well, typically you would purchase it from the government because in a widespread disaster, everybody would go under. The next best thing to the government is to purchase it from an entity that is too big to fail because the too big to fail entity will stay around.

A lot of the disaster insurance, whether it be the credit default swaps that were being sold by AIG or the default risk that was being taken on by UBS, was written by too big to fail institutions. In fact, they might have been trying to make money off the fact that they were implicitly guaranteed by the government. AIG made that explicit saying, “We’re writing insurance against states of the world which are not going to happen. We’re


collecting free money here,“ -- free money until the bill came to be paid, at which point it was presented to the government.

The point is that a variety of government interventions -- and this is the link to past crises -- may in fact have accelerated the pace of deterioration, and that might be a problem.

The last possibility is that nobody knew. We’re saying there are a variety of reasons why this might have been design rather than ignorance. But, of course, it could be ignorance. The fact that there were a few people shouting here and there that the world was coming to an end doesn’t necessarily disprove the fact that collectively we thought disaster was a small probability event. You will always find a distribution of opinions at any point in time. Right now you’ll find people saying the world is going to come to an end in the next few years. And, of course, if a crisis hits, we look for the guys who cried out about the world ending back then. We will find a few and they will be our new heroes, or should I say, Cassandras.

So, it may be that collectively the opinion was that this crisis was a small probability event. If that is the case -- and this opinion was held as much by regulators as by the regulated -- it would suggest that we can’t have a lot of faith that the regulators in fact will get it right if we put the burden on them.

And that ultimately leads to the question how do you deal with this kind of problem. Aaron Wildavsky\(^3\) talks about resilience, and I think that’s the right approach here. If you have a problem and you are unsure where it is coming from, in addition to

\(^3\) Aaron Wildavsky (1930-1993) was an American political scientist who wrote extensively about the benefits of resilient social institutions and risk management.
everything else that you do, you want to create a fair amount of resilience, which often means creating buffers.

How do you create these buffers? That, to my mind, is a very interesting issue, but that goes to solutions, and rather than address that here, I will cede the podium to my colleagues in the interest of having more discussion.
Minsky and Godley and the Future of Globalization

My discussion of the evolution of the globalized economy and the future of globalization will draw on the complementary ideas of a pair of economists who have worked at the Levy Institute, Wynne Godley and Hyman Minsky.

Starting from the basic idea that globalization was initially based on globalization in the area of finance, rather than in trade, Minsky’s work on financial fragility provides a valuable guide to the evolution of the current period of globalization. Godley’s analysis of what is now called consistent stock-flow econometric modeling, from its initial versions, has been based on the idea of stability of certain financial variables, most of which have departed persistently from their trend values as globalization progressed, raising the question of whether the process was stable. Combining the two approaches provides insights into the future of globalization not available from other points of view.

One perhaps little known fact is that Minsky’s idea of financial fragility, which has now become popular in reference to the current crisis as a “Minsky moment,” was initially based on his reaction to a prevailing opinion in the 1960s that Keynesian fine-tuning had been able to produce economic stability. This position was exemplified by the well-known National Bureau Conference⁴ announcing the “Death of the Business Cycle.” But Minsky argued that this was mistaken. First, because it was a misrepresentation of Keynes’s theory, but more importantly that even if Keynesian “fine tuning” managed to stabilize the

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http://www.nber.org/books/univ51-1
real economy, instability in the financial sector would eventually disturb it. The business cycle was not dead because it would be impossible to permanently eliminate financial crises. And he was right.

Something very similar seems to have happened in the recent past with respect to the “Great Moderation.” While it may have provided stability in the real sector, that stability was accompanied by a very substantial increase in financial fragility. Indeed, the increase in financial flows that accompanied and supported globalization was largely produced by that great moderation and eventually undermined it. This rise of globalized finance was a mechanism that produced what Minsky called “Ponzi” investment schemes. Not Bernard Madoff’s fraudulent investment scams, but rather Ponzi schemes at the level of global finance that required extending the rate of increase in international capital flows to maintain stability.

*Why Is The Current Globalization Different From Every Other?*

Consider the recent period of globalization. While it is not the first in the history of capitalism, it has been characterized by a number of peculiar factors. The first is the persistence of historically high average growth rates in the United States in the 1990s, accompanied by historically high rates of productivity growth. Back in the 1970s and the 1980s the presumption was that the United States was never going to be able to produce high rates of productivity growth and high average growth rates. Yet, during periods in the 1990s and the 2000s it reached growth rates of around four percent and reached

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productivity rates which were double what people believed would have been possible two decades earlier. So, from that point of view it was exceptional. But it was also exceptional from the point of view of the performance of developing countries experiencing high growth rates in Latin America, in Africa, and in Asia all at the same time. This is something that has rarely occurred in the past.

In addition, inflation rates remained low in the US and especially so in developing countries, many of which had suffered some seemingly incurable hyperinflation. Current account balances in those developing countries that had been plagued by external constraints became positive. And most of these countries managed to build substantial foreign exchange reserves as income levels improved as a result of increasing terms of trade. In many countries, and in particular some countries in Latin America, income inequality, which had been a plague on development, was also reduced. Brazil, for example, has been able to reduce measures of income inequality over the recent past, and in a number of other countries this has also been the case. So, it was a peculiar period in the sense that developing countries also performed extremely well during this period.

The counterpart to this, and part of the counterpart to the improved performance in the United States, may be found in the anomalous performance of real wage growth in the US that, for some periods, declined and over the longer stretch of 10 or 15 years turned out to be more or less stable and was accompanied by increasing income inequality in the new millennium. There was thus a paradoxical reversal of position in which it was the United States that suffered from income stagnation, rising inequality and a deteriorating external position that in developing countries used to produce endemic financial crises.
In analyzing the persistence of financial crises in developing countries, the research unit at the United Nations Conference on Trade and Development (UNCTAD) suggested that they were driven by “debt-led” development. And this seems to describe the recent experience in the United States as households sought to offset the failure of their real purchasing power to rise by increasing their level of indebtedness. This was a source of increasing demand in the United States, and also the increasing global demand that provided the improved external account balances for many developing countries.

Many failed to identify the dangers in this trend, but Wynne Godley, who was a modeler and believed in more or less stable financial ratios, became increasingly concerned as the share of household debt to household incomes started to depart from its trend value in the late 1980s. He firmly believed that there would be a return to the trend value that would involve a decline in aggregate demand and the probability of a financial collapse. For almost twenty years he argued that “this cannot continue” and we now know that he was right.

The other initially unnoticed aspect to this increase in household indebtedness is what Minsky would have called a very sharp increase in financial “layering.” Financial layering has a number of meanings, but in the present period it may be represented by the figures from the flow of funds accounts that indicate the most rapid increase in indebtedness in the economy has been within the financial sector: financial institutions borrowing from other financial institutions, rather than lending to households, business firms or the government. This is a direct indication of increasing financial fragility in the system. One of the bases of Minsky’s idea of financial fragility was that the crux of the stability of the system turned on banks in particular, and financial institutions in general,
being able to convert “safe” liquid assets into cash when faced with a shortfall between returns on financial positions owned and the payments required to maintain those positions. This could mean either the ability to meet the interest carried on a position or to be able to roll over the short-term funding of the position. Positions that could be easily liquidated through sale to other financial institutions, or as collateral for borrowing from banks, thus provided a cushion against unexpected events and the insurance against default.

Increasing financial layering, representing increasing financing of positions owned by borrowing from households in the form of insured deposits, or by borrowing from other financial institutions, is visible in higher rates of financial leverage -- that is, the ratio between bank equity and its owned assets. But there is a big difference between borrowing from the public through deposit taking and borrowing from another financial institution. In the former the bank receives the lowest risk, most liquid asset: the liability of the central government; or cash or the liability of the central bank in the form of reserves deposits with the central bank.

In the latter case the bank receives the liability of another financial institution which still has to be converted into cash in the market before it can be used to meet a claim or to finance a position. The higher the ratio of bank positions funded with the liabilities of other banks, the lower is the possibility of any individual financial institution being able to convert the assets into cash. If everyone owes everyone else, the failure to make a payment on a commitment may lead to all attempting to do so, generating a liquidity crisis until the central bank, the only autonomous provider of cash, decides to intervene and create a market for banks’ assets.
Thus, the increased layering, what is often called an increase in financial leverage, or an increase in the depth of the financial system when talking about developing countries (where it is generally believed to be a positive attribute), in fact turns out to be a very negative part of the story.

These two factors in and of themselves -- that is, the increase in household indebtedness and the increase of the internal indebtedness within the financial system -- can be identified as what may be called the engine of global growth and the engine of global financial flows. It is these two factors that produced the beneficial performance of global growth, supported by global financial flows and trade, that produced improved results for developing countries.

*Why the Current Factors Supporting Globalization of Trade and Finance are Not Likely to Continue*

The first conclusion is then that since this particular combination of events is unlikely to continue, developing countries are going to have to change dramatically the policies they adopt in response to the crisis. They are no longer going to be able to count on increasing terms of trade, increasing income levels, or increasing foreign finance -- as financial institutions respond to the crisis by retiring and writing off loans and reducing the amount of leverage they need to support their assets. It seems clear that the amount of international finance will by necessity decrease -- and a steady and secure export market in the United States will no longer be guaranteed to these countries, so that the current account surpluses, or the strong external positions, will in fact become much more vulnerable and constrained.
This is a rather complicated way to say that as a result of the adjustment of financial institutions to the crisis, the global system will in fact become more fragile. But there is a more fundamental point behind this, and it’s a point that has plagued international policy makers since the post-war period.

When the United States came out of the Second World War, there was an academic debate about how the United States would avoid going back into depression. There were two points of view. One was the simple Keynesian proposition that the government should deficit spend by creating domestic indebtedness. On the other hand, the United States came out of the war with a strong external surplus position. And the alternative point of view was that the United States could in fact continue to grow and to achieve full employment by means of adopting an export-led growth policy.

The debate was very lively and can be followed in the pages of the Proceedings of the American Economic Association reporting on the Annual Meetings in which the question was debated. (See Hinshaw, Lary, Mikesell, Polak and Young) In the end, those backing the external solution were victorious as a result of the rising backlash against increasing Keynesian stimulus policies.

The most interesting part of the analysis concerned the question of whether it would be possible to have a permanent external surplus in order to continue to drive domestic growth.

Initially this has seemed a reasonable possibility until economists recognized that having an external surplus that was a stable share of national income would require that the rest of the world have the dollars to buy US exports. And this would be possible only if the US would lend the dollars to them. But that was not the end of the story, as the foreign
lending would lead to increasing claims on foreigners for interest and amortization. The interest payments are income items and are credited to the factor services account. It would then be necessary to lend not only to finance the purchase of US exports but also to finance the payment of interest on the US lending. Thus, it is possible that a permanent current account surplus could be maintained, but that it would be completely composed of interest payments coming from the countries that are buying US exports. The sustainability of such a policy thus appeared much less plausible.

The solution to the problem was provided by Evsey Domar who had already worked out the answer to the question of whether deficit spending could provide full employment without creating an infinitely large domestic debt. His solution to that problem was that as long as the rate of interest on the domestic debt is not greater than the rate of growth of GDP, the ratio of debt to GDP will eventually stabilize and it need not cause worry.

The extension of this solution to the problem of external lending was straightforward. As long as a country increases its external lending at a rate that is equal or less than the interest rate that it charges on the outstanding accumulating debt, it is possible for a country to follow an export-led growth policy on a permanent basis since the ratio of debt to GDP will stabilize. On the other hand, the ratio will not stabilize if the rate of interest is higher than the rate of increase in lending.

Now, reflect on that stability condition. The condition is that the interest rate has to be equal to or lower than the rate of growth of foreign lending. Now remember how to run a successful Ponzi scheme. This is done by borrowing from new investors at a rate that is at least as high or higher than the rate of interest paid to existing investors. Thus, the
simple answer is that the stable condition for a global lending policy by a country that wants to use export led growth is that it is a Ponzi scheme. Even if it is stable, in the sense of not being explosive, it must eventually break down. This will happen as soon as there is doubt about the ability to pay the interest and lenders refuse to roll over existing lending or to increase current lending.

And this is what has happened in the current globalized international financial system, only the positions have been reversed. Instead of being the surplus country and being the foreign lender, it is Asia, and in particular China, that is the surplus country and the foreign lender, while the US is the foreign borrower. History and financial markets have shown that, true to Domar’s condition and Minsky’s identification of Ponzi finance, this is a condition that may be stable as long as it is continues, but it cannot continue forever.

It cannot continue forever because eventually the buildup of the stock of foreign debt will lead to a condition in which the foreign holders of that debt will no longer have confidence in the ability of the borrower to service it, and they will no longer be willing to hold it. And at that point the system breaks down.

The other side of US borrowing is the consumption of US households, largely financed by the appreciation of house prices and the creation of mortgage debt written to reflect that appreciation. As long as the process continued it was stable, but once the rate of increase in house prices fell below the financing rate, that process was also unstable. It was a Ponzi process that had to come to an end. Or, in Godley’s approach, it represented a departure of the debt to income ratio that was far out of the norm and eventually had to
revert to trend. It is now in the process of doing so, which is the flip side of the impossibility of the export-led growth process to continue.

This is a simple structural explanation of why the kind of globalization based on international financial flows and debt-financed consumer expenditure that has characterized the recent period is unlikely to be reestablished on a permanent basis -- in fact it cannot be reestablished. This is a more fundamental flaw in the system than the exorbitant privilege granted to the issuer of the international reserve currency and other problems related to international adjustment and stability.

References:


Hinshaw, Ronald, “Foreign Investment and Full Employment”


It is very nice to be back at Yale. Strangely enough this is only the second time since I left here as a faculty member in 1994 that I’ve been back.

My presentation is about lessons for the usual trio of policymakers from this crisis -- central bankers, finance ministers and regulators/supervisors.

We know about the macroeconomic imbalances that contributed to the crisis: the great stability breeding instability in a very Minsky sense\(^6\) -- too much Merton\(^7\) and too little Minsky - all part of the problem that the world is trying to recover from now; the ex ante global savings glut; the strange portfolio preferences of the “nouveaux riches” nations for reserves and safest securities; Bretton Woods II consisting of a large number of emerging markets trying to keep their exchange rates down, which was part of the mechanism through which large foreign exchange reserves and large safe portfolios were accumulated; the unsustainable U.S. current account deficit and the Chinese current account surplus. And then, very importantly also, the macroeconomic mismanagement of the leading central banks’ interest rates, too low for too long in the U.S. and in the Euro Area especially. And also the entry of labor-rich countries into the global economy, leading to a secular decline in the share of labor income almost everywhere, including in the countries that entered the global economy, and very weak real wage growth in major industrial countries including the U.S., where politicians and households were desperately


\(^7\) Refers to American sociologist, Robert K. Merton, who popularized the “law of unintended consequences.”
looking for other ways to fund private consumption and home ownership so that they could keep on living in the way that they would like to remain accustomed to. One such way was found in the U.S. through asset booms and subprime mortgages.

*Ways in Which This Time it was Not Different*

There are many ways in which this crisis was not different at all except for being global and big. As in past crises, there was excessive credit growth and broad money growth. There were asset booms and bubbles, especially in real estate and equity & credit – in equity & credit, almost everywhere, in real estate not everywhere. Germany, for instance, had no real estate boom of any kind for the very simple reason that the maximum loan-to-value ratio you can get there is 60 percent.

This time again there was excessive leverage in the banks and the shadow-banking sector, defining leverage broadly as on-balance-sheet, off-balance-sheet and embedded through options and derivatives. Financial innovation and the belief that this time was different and that the way had been found not just to trade risk, but also to create a black hole that would absorb it and make it go away. There was the increasing financialization of the economy, especially in the U.S. and the U.K. and other, smaller, global financial centers like The Netherlands, Iceland, and Ireland.

There was regulatory arbitrage: within country in the U.S. with its array of banking regulators (all of them incompetent in various ways); and also between countries in a major way, globally. And there was the phenomenon of regulation being used as a tool of industrial development to attract financial business or to retain it in the major financial centers.
There was not only regulatory incompetence on a large scale, but also capture, in some cases crass capture -- the kind that goes with brown stuffed envelopes; but mostly, in this part of the world, cognitive capture of regulators and the political class by the financial sector. They believed that the Masters of the Universe had indeed found the perpetual mobile of enrichment.

There was also cognitive capture of much of the economics profession. We don’t come out of this well as a profession, but the efficient markets crowd especially will take even longer than usual to recover -- maybe six months or so. In the banking world equity analysts of specific stocks are subject to quite stringent conflict of interest and transparency requirements. This does not apply to economists who talk about the market at large or who make industry-wide and economy-wide presentations, and I think there is a problem here. As a profession, we have acted irresponsibly and sometimes venally. It is not a proud moment.

*Lessons for Monetary and Fiscal Policymakers*

The lessons of the Great Depression were learned and the old mistakes were not repeated; instead, new mistakes were made. Monetary policy was aggressively expansionary, with rates cut to the zero floor (of course, there is no zero floor except through lack of imagination by central bankers). Once the rate cut channels were exhausted, new channels were used, such as quantitative easing, credit easing and, for the European Central Bank, enhanced credit support, which is basically “all you can eat” at 1 percent for one year against any kind of collateral at the repo window.
Systemically important financial institutions were not let go. They were bailed out, with the odd exception. Countercyclical fiscal policy was used wherever governments had continued access to capital markets. It couldn’t be done in Ireland. It couldn’t be done in Iceland. But every country that could, with the possible exception of Russia, which is only just accessing the capital markets, used the Keynesian automatic stabilizers and discretionary stimuli quite effectively.

There has been protectionism and it was bad, but not as bad as it might have been. When the Group of 20 got together in London in April of 2009, they held hands and said, “We will not engage in protectionism, ever.” Every three days since then, one of the G20 has introduced a protectionist measure; but it’s nothing compared to the 1930s. It could have been a lot worse.

Now, the good news for this crisis is that emerging markets account for almost 50 percent of global GDP, and most of them had V-shaped recoveries, Central and Eastern Europe being the main exceptions (that’s the basket case of this recession in many ways outside the U.S. and the U.K.). The reason was that in emerging market countries the domestic financial systems had not been destroyed, they had limited direct exposure to the toxic assets, and they had balanced macroeconomic situations before the crisis started, very unusually. Brazil in a fiscally responsible equilibrium is something I thought I’d never see, but it has happened.

Other factors included fiscal strength and massive foreign exchange reserves, self-insurance following the “never-again” determination of many emerging markets after they paid the bill presented by the IMF in response to the ’97 and ’98 crisis. And there was no excessive dependence on external finance, either net or gross, for most of these countries.
So, we could be in a world where in 2010 the emerging markets grow at 6 percent or more, and in the overdeveloped world at 2 percent or less. The world as a whole may grow at 4 percent, but it’s a tale of two cities. It’s good news for us.

Yet More Lessons for Monetary, Fiscal and Regulatory Authorities

Financial stability requires a tripartite framework: the monetary authority for liquidity support; the fiscal authority to fill solvency gaps; and once you have these two in, any kind of discipline on the parties that are getting the liquidity support and solvency support is gone, so you need a supervisor/regulator to minimize the moral hazard.

A tripartite framework is necessary but not sufficient. The U.K. had one and it was a big shambles because it wasn’t designed and operated well. But it is necessary. You need this trinity to work together to deal with the financial crisis. It could involve no more than two institutions if the regulator is the central bank -- which I think is a terrible way to go; you could even have just one institution do it -- the treasury as regulator and central bank, which would be worse. But the three functions have to be there.

Lessons for Central Banks

Central banks should not be the regulators/supervisors for individual financial institutions or markets. This is inconsistent. For starters, its independence for monetary policy, narrowly defined, which I continue to think is important, would be undermined. You can’t make the Chairman of the central bank, the Governor, untouchable as a rate setter and fire him or her as a regulator for incompetence. The European Central Bank becoming the
defining, dominant entity in the European Systemic Risk Board is a disaster waiting to happen. In addition to that, the European Systemic Risk Board does not have a fiscal presence. It is quite extraordinary.

Central banks should not be in the consumer protection business -- that’s just a distraction -- and central banks should not act as a quasi-fiscal actor. In the U.S. that has been a major role of the central bank in this crisis. What I think the central bank should pursue is a de facto “Treasuries only” model on the asset side. Forget the foreign exchange for the moment. The central bank should hold either Treasury securities outright or repos & loans secured against Treasury securities. Anything else -- and they will have to do other things as lenders of last resort -- they have to do as agents of the Treasury, with full indemnity. The lender of last resort and market maker of last resort roles should only be performed with full Treasury indemnity or guarantee against default risk, so that from the point of view of the balance sheet, there is a clear separation between the fiscal side and the liquidity support side. The central bank must be part of the Systemic Risk Council or Board, but the Chair of the Systemic Risk Council/Board should be the Treasury.

Lessons for Regulators/Supervisors

Capture is inevitable. I have seen not a single regulator/supervisor anywhere in this crisis that wasn’t at least cognitively captured. It’s very distressing.

On the question of how to deal with too big to fail and the moral hazard associated with saving systemically important institutions, the key message is: save banking but not necessarily the banks in the legal sense, and certainly not bankers, boards, management,
bank creditors or bank shareholders. The only part of this recommendation that has been followed in practice is that bank shareholders have been let go to a large extent. But bank creditors, both secured and unsecured, have been saved, and I think that is a terrible mistake.

*Risk of Financial Instability Greater after Crisis than before It*

As a result of all this, there may be limited risk of financial instability going forward for the next two or three years while the memory of the disaster still lingers. The half-life of memory in the financial sector is two and a half to three years; then everybody has a new job and there’s no institutional memory. Going forward, beyond three years and certainly five to ten years from now, the financial fragility of the industrial world system will be greater than it was. The banks and other large, systemically important financial institutions will then know severally that they are too big to fail, having previously only suspected it, so they will be more inclined to take excessive risks.

Unfortunately they will be wrong collectively because collectively they are likely, at least for the next ten years or so, to be too big to save. The fiscal authorities who bailed them out this time are going to be so fiscally impaired, mainly as a result of the recessions that followed the collapse and to a lesser extent by the actual cost of re-capitalizing the banks, that there will be, in fact, no safety net for the collectivity, although individual banks can still be bailed.

*Too Big to Fail*
So, what do we do with the problem of too big, too complex, too interconnected and too international to fail? First of all, it is really size that matters. The rest -- the complexity, the interconnectedness, the internationalization -- only matter if the fragile interconnected aggregate (it may not be a single entity, but the node and the network) is too big to fail. The complexity and internationalization have often been deliberate policy choices motivated by regulatory or tax arbitrage rather than by the logic of economic efficiency.

Mega-banks are not necessary for efficiency. Banks want to be big to exploit economies of scale and economies of scope. But they also want to exploit monopoly power and political clout whereby they can become more effective rent-seekers and perpetrators of DUPE (directly unproductive profit-seeking) activities. And very importantly, when put alongside economies of scale and economies of scope, you've got exploitation of what I call “synergies of conflict of interest,” with a huge multi-purpose organization on all sides of a given transaction.

Then there are the very joys of being too big to fail and the associated subsidy: banks want to become too big to fail because then they can get the subsidized insurance -- the subsidized guarantee -- from the taxpayer.

**Remedies for Too Big To Fail**

One “solution” to this too big to fail problem, is that banks become too big to save, so they fail after all. That’s a solution to the moral hazard problem, but then there is also the potential for economic disaster that befalls countries like Iceland at the moment. We’re going to have a situation in which if you keep large banks and large banking sectors, then
only large countries will be able to have large banking sectors because there’s no such thing as a safe bank, even if the bank is sound in the sense that its assets, if held to maturity, would cover the liabilities. Liabilities are short-term and assets long-term and often illiquid. There is always a “run equilibrium” even if the assets are sound. Therefore, any banking system has to be backed by a lender of last resort.

If the banks, in addition, aren’t sound -- and in the Iceland case most of them weren't -- for systemic stability reasons you need to be backed by a fiscal authority. And if a bank is backed by both central bank and fiscal authority, you need the regulator to limit the moral hazard damage. If you can’t provide the fiscal backup, and a fortiori if you cannot provide the liquidity backup (Iceland couldn’t even find the liquidity backup because most of the liabilities were foreign currency denominated), then you have the Iceland problem of the inconsistent quartet – a small open economy, a large cross border financial system, a currency that is not a global reserve currency, and limited fiscal capacity.

The next country on this list is Switzerland. It has the advantage that its liabilities are stickier than those of most other banks because a lot of the liability side represents tax evasion and money laundering. It doesn’t move as easily in response to normal market incentives, but it too faces the inconsistent quartet problem. In fact, before the crisis it started de-leveraging its banking sector, which was 800 percent of annual GDP in asset size in 2006. It’s now at 600 percent or so - still a loony number. The U.K. may also fall foul of the inconsistent quartet problem. Ireland, Luxembourg, the Netherlands and Belgium all have a moderately serious currency, the euro, as their own, but share the other three vulnerabilities.
What other remedies are there for restoring financial stability? What of a return to narrow bank or public utility banking? Or increased transparency and robustness of the central infrastructure, the trading, clearing, counterparty, custodial mechanisms to avoid the idiocies of the Lehman-London situation, where hedge funds which deposited assets with Lehman can’t get them back for years -- by which time it is moot because they have all gone out of business. There are clearly ways of dealing with these matters, but infrastructure should be treated as a regulated monopoly or even a public monopoly.

Keeping a lid on the size of investment banks might be a good idea if a way can be found to split banks along conflict of interest lines. Taxing bank size is another remedy -- an obvious way to do this is to make capital requirements progressive in the size of the balance sheet. Another idea is to use competition policy. In Brussels, the Commission is doing God’s work; but they are using an inappropriate instrument -- regular competition policy and state aid policy -- to deal with a “too big to fail” problem. It is nice to have the instrument, but they should go after the problems specific to banks and financial institutions more directly.

Very important ultimately, if you’re going to keep large institutions and limited liability, is the need to create an effective special resolution mechanism for high frequency transformation of both secured and unsecured creditors into shareholders when they least expect it, or least want it. This should apply to all systemically important financial institutions, defined by (collective) size, leverage and mismatch in duration, liquidity and currency composition.

This Special Resolution Regime (SRR) ought to be the ex post complement to prompt corrective action ex ante: permitting a very powerful Conservator/Administrator to
financially restructure failing institutions overnight, or at most over the weekend, by writing down claims of unsecured creditors and even secured creditors, or by mandatorily converting them into equity, going up the seniority scale starting with sub-debt and moving, if necessary, up to senior debt. No public money should go in as long as there’s any unsecured creditor that hasn’t been converted fully into a shareholder.

The final ingredient in remedies for ‘too big to fail’ is the living will. This is not a crisis management mechanism because of the three to six month horizon that people have in mind for the orderly dissolution and liquidation of banks that are no longer viable in the long term – an instrument for the prevention of the Lehman Europe problems.

The key problem with all these proposals is that they are unlikely to be implemented because they are opposed by industry interests that have become powerful again since the immediate heat of the crisis and the threat of immediate liquidation are gone.

Measures to Help Prevent or Mitigate Future Crises

What other measures would help prevent or mitigate future crises? More capital, especially tangible common equity, would help. Any other capital is rubbish. Debt instruments with a contingent conversion into tangible common equity or “contingent capital” could be useful. This is a case of a power I want to give to the Special Resolution Regime; presumably the SRR would have a trigger that would be pulled by the regulator or administrator of the Special Resolution Regime which would convert the debt of that particular instrument into tangible common equity when the regulator/supervisor deems it
necessary. That would be helpful, but I think all unsecured debt has to view itself as being in the contingent capital category.

I think requiring banks to hold more liquidity is socially wasteful. Liquidity is a public good and should be provided by the central bank beyond normal trading requirements. Hard budget constraints or solvency should be a private good.

Other measures include adopting Islamic finance principles - replace debt by equity. I've already described the measure with regard to banks. For households, have Sharia-compliant mortgages that don't have the repossession problems of ordinary mortgages. For the government, turn public debt into growth warrants. For instance, issue variable rate, nominally denominated public debt for which the nominal interest rate on the debt is related to the growth rate of nominal GDP in a simple way.

The case for limited purpose banking - the only thing that would really work - is based on two basic assumptions. First, finance is special. If Boeing wants to triple its capacity, it takes five years to build a new plant. If a bank wants to increase capacity ten-fold, it shifts the decimal point. All you need is confidence, trust, optimism, and euphoria. And it goes even faster in reverse. Finance is trade in (contingent) promises expressed in units of abstract purchasing power (money). Second, finance is different, and finance -- especially limited liability plus leverage -- is a disaster waiting to happen. You can't have the three: finance, limited liability and leverage. That's a lethal trinity.

Limited purpose banking is the proposal that the only financial businesses that can have limited liability are “direct pass-through” mutual funds -- basically unit trusts in the U.K.: pure intermediaries investing the money of the external investors in a specific class of financial instruments. So no leverage by the intermediating institution of any kind is
permitted, nor proprietary investment and trading. All other financial business is fine, but subject to unlimited liability. I’m a softie. I’m ready to consider limited liability partnerships.

Only Kotlikoff’s proposal for limited purpose banking⁸, I think, could work from a technical, operational perspective; but that’s why it won’t be implemented. So, the next financial crisis will be with you within ten years.

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⁸ This refers to a proposal by Laurence J. Kotlikoff, Professor of Economics at Boston University, for limited purpose banking. http://www.kotlikoff.net/content/limited-purpose-banking-putting-end-financial-crises
Global Imbalances, National Rebalancing, and the Political Economy of Recovery

When the leaders of the Group of 20 (G20) major economies met in Pittsburgh at the end of September 2009, the topic of “rebalancing” the world economy was high on the agenda. The final communiqué’s first substantive commitment was “to work together as we manage the transition to a more balanced pattern of global growth.” There were good reasons for this focus. Global macroeconomic imbalances—massive borrowing by some countries and massive lending by others—drove the financial boom and bubble that eventually burst into the current crisis. There is now nearly universal agreement that such imbalances cannot be sustained, and that the former deficit and surplus nations need to move toward macroeconomic balance.

However, rebalancing requires a fundamental reorientation of some of the world’s major economies, a reorientation that will lead to major economic, social, and political tensions. Foreign borrowing by the deficit countries fed an orgy of consumption that was wildly popular so long as it continued; but the accumulated foreign debt that has resulted will now begin to impose sacrifices that will be just as wildly unpopular. Nations that have relied on foreign borrowing to fuel government and household spending will have to cut back drastically. They face a reduction in real wages, in consumption, in the standard of living. At the same time, nations that have relied on exports as the engine of economic

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9 This paper was originally published as a Working Paper by the Center for Geoeconomic Studies and International Institutions and Global Governance Program at the Council on Foreign Relations.

10 http://www.g20.org/Documents/pittsburgh_summit_leaders_statement_250909.pdf
growth will have to figure out how to power their economies without relying on foreign markets. These political economies dominated by powerful export interests face fundamental challenges to those interests, as their export orientation may no longer be sustainable.

In deficit and surplus nations alike, the attempt to adjust to a new international economic reality will almost certainly lead to major conflicts within nations and among nations. What are these conflicts likely to be, and what do they say about prospects for the future? For guidance, one turns to history and theory. First, this paper reviews some of the extensive historical record on how the world economy, and the countries within it, has attempted to redress macroeconomic imbalances. Then it explores what theory says about the adjustments necessary to rebalance, and how this is likely to play out in national and international political economies.

Imbalances and Rebalancing Past

What one now think of as “global imbalances,” sustained current account surpluses and deficits, are as old as the modern global economy. Previous experiences with international borrowing and lending make clear how hard it can be for governments to manage rebalancing without losing domestic support for involvement in the world economy. Some of the most revealing experiences come from the interwar years, when a previous era of global capitalism came crashing down—in part because of problems that flowed from global macroeconomic imbalances.

For generations in the late nineteenth and early twentieth centuries, the world
economy was tightly integrated. In this first era of globalization, the world grew more rapidly than it ever had, in an environment of general macroeconomic stability. Despite seventy years of success in confronting periodic crises, however, this integrated global economy did not make it through the interwar years.

Both the cohesion of the world economy, and its ultimate collapse, depended upon political factors. While markets themselves might be self-regulating, an open world economic order is not: it requires that the governments of the principal economies cooperate actively and consciously, especially in times of crisis. And this cooperation in turn relies upon domestic support for a global economy. No government could make the sacrifices necessary to collaborate with its trading and financial partners without firm domestic political support for these endeavors. And without domestic support for policies to maintain international economic cooperation, the world risked—and indeed experienced in the 1930s—a downward spiral in which attempt after attempt at international collaboration failed.

The principal global macroeconomic imbalance of the 1920s was between a great power in continual and very substantial deficit, and a rising power that financed that deficit. The first country, Germany, ran deficits for largely political reasons. Its weak governments had to pay reparations to the victorious belligerents, finance reconstruction, and satisfy massive social demands. So Germany borrowed very heavily from abroad, largely from the United States, and this borrowing helped fuel a consumption boom that, among other things, dampened some of the underlying social tensions that beset that country’s Weimar Republic. This was no small matter: without American financing to sustain the dynamism of the German economy, Weimar social and political instability
might have caused serious problems for the rest of Europe.

There was no inherent technical or economic problem with German deficits and American surpluses. But there were political problems, for there was no real enthusiasm for the relationship on either side of the Atlantic. The German people resented the subordinate position defeat had put them in, the reparations they were forced to pay, and the social disruptions caused by the settlement imposed upon them. On the other side of the ledger, although there were plenty of Americans willing to lend to Germany, the American public, in this heyday of American isolationism, rejected any official involvement of the United States in European political or economic affairs.

The German-American financial relationship rested on weak political foundations, as neither country was really prepared for the implications of the capital flows. The United States was not willing to provide an open market for German goods that would facilitate debt service, or any government measures to deal with eventual financial distress, and the Germans were unwilling or unable to make the sacrifices necessary to provide prompt debt service.

In a 1932 presidential campaign speech, Governor Franklin D. Roosevelt emphasized the contradictions of the incumbent Republican government’s international economic policy, comparing it to the fantasy world of Alice in Wonderland:

A puzzled, somewhat skeptical Alice asked the Republican leadership some simple questions:

“Will not the printing and selling of more stocks and bonds, the building of new plants and the increase of efficiency produce more goods than we can
“No,” shouted Humpty Dumpty, “The more we produce the more we can buy.”

“What if we produce a surplus?”

“Oh, we can sell it to foreign consumers.”

“How can the foreigners pay for it?”

“Why, we will lend them the money.”

“I see,” said little Alice, “they will buy our surplus with our money. Of course these foreigners will pay us back by selling us their goods?”

“Oh, not at all,” said Humpty Dumpty, “We set up a high wall called the tariff.”

“And,” said Alice at last, “how will the foreigners pay off these loans?”

“That is easy,” said Humpty Dumpty, “did you ever hear of a moratorium?”

And so, at last, my friends, we have reached the heart of the magic formula of 1928.11

The magic formula failed as soon as recession hit the United States and Europe in 1929, and both Americans and Germans turned inward with a vengeance. The United States enacted the infamous Smoot-Hawley Tariff in June 1930—a move that certainly made it that much harder for its German debtors to earn the money needed to service their debts to Americans. As the Depression deepened, so did American absorption with the demands of the country’s own dire domestic conditions. Almost immediately after assuming the presidency in March 1933, Franklin Roosevelt took the dollar off gold and engineered a substantial devaluation. Three months later, Roosevelt effectively broke up the London Economic Conference, probably the last hope for international cooperation,

by insisting on the primacy of national measures to combat the crisis.

The crisis hit Germany even harder, and within a few months the country collapsed into social disorder and political unrest. Eventually the Nazis took power, on a platform that included rejecting the country’s international economic commitments. And, indeed, Hitler’s first major economic initiative after taking power in January 1933 was to declare unilaterally that Germany would not pay its foreign debtors. Ironically, Hitler waited until after the collapse of the London Conference to make official this first step on the Nazis’ road to extreme economic nationalism and aggression.

The U.S.-Germany connection was the largest, most prominent, and eventually most disastrous interwar macroeconomic imbalance, but there were many others—that is, there was a lot of international lending at the time. And in instance after instance, attempts to implement—or to avoid—macroeconomic adjustment led to massive political and economic upheavals. When the governments of debtor nations attempted to impose the austerity measures necessary to continue to service their debts, they met with powerful resistance. Either they acquiesced and stopped paying their creditors, or they were overthrown—or both. The nearly universal result was that countries almost everywhere turned inward toward economic nationalism—or, if outward, toward aggression and predation. Nazi Germany was only the most prominent example. Over the course of the 1930s, virtually every debtor nation in central, eastern, and southern Europe turned toward virulent forms of economic nationalism, often with an implicit or explicit fascist bent. The debtors of Latin America, too, turned inward, although here the political complexion of the turn away from the world economy varied from left-leaning (as in Mexico) to right-leaning (as in Brazil). In country after country, the previously predominant
“internationalist” interests gave way to new “nationalist” coalitions.

Macroeconomic imbalances, and the turmoil that the eventual rebalancing can bring, have been common in more recent times as well. Latin America in the 1970s and early 1980s, and East Asia in the early 1990s, ran up yawning current account deficits and massive foreign debts in an atmosphere of general economic euphoria. In both instances, borrowing typically fed a very popular expansion in consumption, and in finance, real estate, and other services, which eventually led to a bubble in some or all of these sectors. Each cycle ended in collapse and forced rebalancing, with dramatic effects. The Latin American debt crisis of the 1980s forced economic adjustments that were so drastic as to undermine most incumbent governments—including some of the world’s most entrenched dictatorships, as in Brazil and Argentina. In the 1990s in East Asia, too, the expansion was overwhelmingly popular, while the contraction that began in 1997 led to political upheaval almost everywhere, and the collapse of one of the region’s longest-standing dictatorships in Indonesia.

Then there was Argentina, which over the past 150 years has probably gone through more cycles of borrowing boom and bust than any other nation. The country embarked on its latest roller coaster ride in the early 1990s, with the adoption of a currency board tightly linking the peso to the dollar. As money flooded into the suddenly bankable country during the middle and late 1990s, Argentines were overwhelmingly enthusiastic about the debt-financed consumption boom that ensued. Though many observers warned that the imbalances were not sustainable, any politician who suggested that the currency board be abandoned was committing political suicide. When the
financial merry-go-round eventually did stop, the result was nationwide riots, five presidents in two weeks, the biggest default in history, and a national economic collapse that was extraordinary and unprecedented even by Argentine standards.

The interwar and more recent experiences with macroeconomic imbalances reveal some important things that are of contemporary relevance. The symbiotic surplus-deficit relationships—that is, foreign borrowing and lending—are popular in the upswing, but the adjustments necessary when it comes time to rebalance can be most difficult. Domestic hostility toward the adjustment process can force governments toward policies that impede international cooperation, or even exacerbate international conflict. When borrowing ends in crisis, countries can turn inward in ways that can make it extraordinarily difficult to strike bargains at the international level.

It is not inevitable that the problems of adjustment and rebalancing will lead countries, and the world, down so unappealing a path. Some aspects of the aftermath of the debt crisis of the 1980s in Latin America provide a counterexample to the dreadful experience of the 1930s in central and eastern Europe. While the crisis led to political and social turmoil, it also set off a wave of economic reform and renewal. Latin American countries could no longer rely on debt financing and had to promote exports, while their currencies collapsed. In much of the region, the result was the rise of large and powerful export sectors very interested in international economic affairs, willing and able to support international economic engagement. These new export-oriented groups were major supporters of such things as the regional trade agreements that have flourished since the early 1990s.

These lessons are important and relevant, for what have come to be known as
Macroeconomic imbalances are central to globalized financial markets. More integrated capital markets mean more capital flows, more imbalances. And this is not a bad thing: savings should flow from surplus to deficit countries. To the extent that international financial markets function, there will—and there should—be countries in deficit and countries in surplus.

Political difficulties arise when it comes to the distribution of the adjustment burden. As the popularity of a borrowing boom turns into the disaster of a financial bust and debt crisis, thorny questions about winners and losers come to the fore. There are hundreds of examples of just how difficult rebalancing can be; and these serve as a warning of just how much conflict may be expected as the world adjusts to a new macroeconomic reality over the coming years.

The Political Economy of Rebalancing Today

The global imbalances that were central to the sources of the crisis, and whose resolution will be central to the aftermath of the crisis, have powerful domestic political economy effects. The run-up to the crisis, as capital flowed from surplus to deficit countries, was associated with the prominence of particular groups and sectors in both sets of economies. The surplus countries were dominated by their export industries—that, of course, is where the surplus is coming from. But this, in turn, meant that resources were being reallocated away from consumers and the non-tradable sectors.

For thirty years, the Chinese government has based its economic growth strategy on ever-increasing manufactured exports. Those whose livelihoods have depended on export markets—provincial authorities, coastal regions, state and local enterprises, foreign
investors—have been central players in the country’s political economy. So, too, have other East Asian export powerhouses, such as South Korea and Taiwan, bound their fortunes tightly to the fate of their manufactured exports. The pattern is not unique to developing countries. Germany and Japan, too, have powerful export interests that have been central both to these nations’ economies, and to their political economies. All of these strategies were encouraged by the United States’ enthusiastic consumption binge, which included an insatiable thirst for imports.

And, indeed, deficit countries were the mirror image of this, as the capital inflow primarily benefited consumers and the non-tradable sectors. As capital flowed in and the price of non-tradables rose, there was an expansion in finance, insurance, real estate, and services more generally. Meanwhile, tradables producers were weakened, especially as the capital inflow led to a surge in imports. Borrowing fed spending sprees in the United States, the United Kingdom, Spain, and elsewhere, with much of the spending going to imports, and much of the rest going to financial services and real estate. The American real estate bubble was only the largest—but not the most extreme—example. In Spain, another deficit country, housing prices tripled over the decade to 2007, at the end of which one job in seven was in construction; at the peak of the boom, more houses were being built every year in Spain than in France, Italy, and Germany combined.

Eventually, as the inevitable rebalancing takes hold, borrowing nations must reduce their deficits and lending nations their surpluses. The deficit countries have to wean themselves from foreign borrowing, and to service their debts. During the borrowing spree, the deficit countries consumed more than they produced and invested more than they saved; now they have to produce more than they consume and save more than they
invest; they also have to increase exports and reduce imports. The domestic political economy of this sort of adjustment cannot be popular, involving as it does reduced consumption and lower real wages. While some will applaud the decline in housing prices, and the shrinkage of oversized financial sectors and overpaid financiers, much of the previous economic growth of the deficit countries depended upon these industries. Without capital flooding in, without a ceaseless stream of new building, without a continual rise in home prices to make homeowners feel richer, many of the sources of the past decade’s prosperity will dry up. Now economic growth will have to depend on a reorientation of the previous deficit economies toward making belt-tightened nations more efficient, and their products more competitive. The easy days of credit-financed growth are over.

Surplus countries face problems, too, that are the mirror image of these adjustments. They have to reduce their dependence on exports, which implies that they have to increase consumption and activity in the non-tradables sector. Exporters will be less favored than they were in the upswing, as their economies turn away from relying on the export sector and toward the promotion of consumption and domestic services. This process might be driven by stronger national currencies—almost certainly the case in China, probably the case in Germany—or from a generalized decline in the demand for imports from foreign markets now struggling with austerity. From Shanghai to the Rhineland, industries will need to find expanded markets at home, or new markets abroad—in an environment in which most of the previous sources of export demand will have strictly reduced their ability to buy foreign goods.

Rebalancing is likely to create great political difficulties within nations. Deficit
countries face obvious tensions, as they confront austerity and reduced consumption. Their attempts to implement the policies necessary to deal with their accumulated debt overhang will inevitably impose serious costs on many. Adjustments in the surplus countries will not be trivial, either. It will be no minor matter for the Chinese government to oversee a reorientation of the economy toward the production of goods and services for the local market. The manufactured export sector that has been at the center of the country’s economic, social, and political order for decades is unlikely to welcome anything that might displace it from its privileged position. Nor will Japan and Germany easily trim the economic and political influence of their powerful export manufacturing sectors. In all instances, rebalancing implies a fundamental change in the center of gravity of the economic, and therefore political, life of the societies in question.

The economic changes brought on by crises of this sort often lead to fundamental political change, as winners became losers, losers became winners, and political conflict ensues. Whatever becomes of these conflicts, there is little question that the countries in question will be absorbed with the domestic problems they face as they deal with the national social, political, and economic implications of rebalancing.

Rebalancing and International Economic Conflict

Looking past the immediate future to the medium and long run, the world will adjust to a new reality, one in which a return to the macroeconomic imbalances that have characterized the past ten years cannot be expected. This raises important challenges to the political support for an open international economy.

As the major countries in the system undergo substantial economic, social, and
political change, it will not be easy to sustain domestic support for global economic engagement. The new environment will threaten politically important interests in many societies. Interests under threat will resist the kinds of economic changes required for rebalancing and adjustment to take place, and for the major economic powers to maintain collaborative relations.

The threat is not so much that crassly nationalistic politicians will deliberately sabotage international cooperation. Instead, it is that well-meaning governments facing insistent demands from their constituents may be pulled toward policies that unintentionally harm their neighbors. This harm can then provoke hostile reactions, eventually dragging all parties concerned into bitter conflict.

Such conflict might begin on the monetary front. American policymakers are likely to face powerful temptations to address the country’s problems, at least in part, with a bit of inflation and a bit of depreciation. Inflation will reduce the real burden of the country’s enormous debt—both to itself and to others—while depreciation will help reduce the current account deficit. Both measures excite fear in foreigners, both by reducing the real value of their investments in American assets and by reducing their producers’ ability to sell into the American market. Or conflict might emerge in trade policy. Countries desperate to increase exports and reduce imports might embark on aggressive unilateral moves to force open foreign markets, or attempts to close their own. Again, the response is likely to be hostile, and the results damaging.

Positive and constructive ways forward certainly exist, but finding them will not be easy. The structure of interests in the major societies will change as their economic
orientation changes. These economic transformations, and the austerity measures associated with them, are difficult to manage and sustain without appropriate policies to smooth the path of adjustment. The more exposed citizens feel to the dangers these transformations entail, the more likely they are to attempt to shift the adjustment burden onto others, at home or abroad. One way to facilitate a more orderly rebalancing, then, would be to enhance the panoply of compensation mechanisms, social safety nets, and adjustment assistance available to those liable to be hardest hit by the process of rebalancing. Governments that provide adequate assistance to those who will be harmed, or who fear they will be harmed, by global economic trends thereby reduce the risks associated with rapid economic change. This will not be easy, especially as deficit countries emerge from the crisis with even greater debt burdens than when they entered, but the alternative to compensating the dissatisfied socially is confronting them politically—never an enviable prospect.

By the same token, national governments can facilitate positive change by making political use of real and potential supporters of international economic integration. A shift from reliance on debt-financed consumption to a more productive export capability will expand the range of businesses, workers, and regions with a stake in the world economy. Just as opening developing countries to the world economy created or strengthened more internationally engaged groups, reorienting the previous deficit economies to search out opportunities abroad is likely to create or strengthen eventual supporters of an open international economic order. Governments can look to the beneficiaries of rebalancing, and can help mobilize them to support international economic involvement.

The institutions of international cooperation can also play a role in sustaining and
strengthening the environment in which collaboration among the major powers takes place. There are always temptations to pursue national policies without regard for the harm done to other countries; international institutions and international consultation can help ensure that these temptations do not lead countries down the road of international economic conflict. The International Monetary Fund (IMF) has largely focused on monitoring the behavior of developing debtor nations, on the principle that the actions of developing-country debtors can have systemic consequences. In the current setting, the more urgent task facing the world economy—and the IMF—is to monitor the behavior of rich countries, both deficit and surplus.

At Pittsburgh, the G20 recognized the need for much more consistent surveillance of national macroeconomic policies, and the IMF is expected to enhance its efforts on this front. However, the attention paid to this has been limited, even desultory, as policymakers and analysts focus on the purely economic components of rebalancing, which appears to be taking place as market forces operate to reduce deficits and surpluses alike. This misses the true challenge the world faces. It is not the purely economic features of rebalancing that will be difficult: markets will clear, one way or another. It is, instead, the political implications of the coming adjustments that will test the capacity of national governments, and of international institutions. If national leaders grasp the political stakes, they may manage the unwinding of imbalances in a way that reinforces an open international economic order. If they fail to grasp those stakes, the recent financial crisis may be a harbinger of even greater dangers to come.
I was deeply impressed by Ernesto’s artful use of the subjunctive in his opening remarks. He spoke of what might have happened had we not acted as we did. This is well above my syntactic pay grade. I rather think that things did happen. I will elaborate on that.

Secondly, with respect to Bill Nordhaus’s exposition of the quotation from Alan Greenspan, I think we should be quite cautious about that. It makes the man appear substantially more innocent than he actually was.

Turning to business, what we know now is that the Anglo-Saxon model, as it’s called, in finance -- statistical control of risk via diversification and liquidity -- leads toward massively correlated behavior and therefore systemic risk as a central feature of the sector. *Ex ante*, everyone is fat, dumb and happy. Nothing can go wrong. And since everyone is making very similar bets, very little does go wrong. Robert Lucas¹² was evidently right -- it is as though there were one representative agent. The problem is that death comes before the long run.

One thing I think that has not been sufficiently emphasized in the discussion so far is the role of fraud in the underpinnings of the present financial crisis. The actual extent of fraud, particularly in the origination of mortgage loans in the latter years of the past decade, is at this stage unknown because no comprehensive audit has been done. But we do know that the subprime mortgage sector was infested with the language of fraud. The professionals in the business spoke of “liars loans.” They spoke of “Ninja loans” given to

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¹² Nobel Laureate and John Dewey Distinguished Service Professor of Economics at the University of Chicago
people with no income, jobs or assets. They spoke of “no doc loans.” They spoke of “neutron loans,” which were destined to destroy the people but to leave the buildings intact.

We know that in 2007 the ratings agency, Fitch, did a small survey of well-rated mortgage-backed securities and found, as they state in their report, “fraud or misrepresentation in virtually every file.” We know that the write-downs on the portfolio left in the bank when IndyMac Mortgage Service was taken over by the FDIC were on the order of 80 percent, and that IndyMac originated about $90 billion of those mortgages and sold off $75 billion. That there was public complicity in this is very clear, and I emphasize this in the discussion in my book, which is entitled The Predator State, to call attention precisely to this point. But I would argue that the main element in the public complicity was de-supervision of the financial sector followed by a kind of Gresham’s law\textsuperscript{13} of deregulation – in which the bad players showed the highest profits and quickly took over the market.

It is, I think, quite wrong to argue that the contribution of public policy was aimed specifically here to help the poor and the disadvantaged. When the prosecutors get to the e-mails, it will be clear that the objective was, in fact, to fleece them.

Raghuram Rajan spoke of earthquake insurance, but it seems to me that is a metaphor that is far too innocent. An earthquake is, after all, something of an external shock. What we had here was time bomb insurance and those issuing the insurance were well aware of the length of the fuse. This is not the first time this has happened and this is not an unfamiliar feature of American political economy. In the savings and loan crisis,

\textsuperscript{13} “Bad money drives out good.”
which was eventually resolved in the early part of the 1990s, the resolution involved the conviction on federal felony charges and imprisonment of about 1,000 industry insiders. I am told that such is the magic of leverage that we could probably get away with substantially fewer this time.

The results achieved in the system under which we’ve been operating in terms of physical investment qualitatively resemble those of primitive central planning from, let’s say, the 1950s in central Europe. You get the same revolutionary enthusiasm. You get the same overcapacity lurching from one great leap forward to the next. Sometimes the results are embarrassing by the standards of Budapest of 50 years ago. There was 50 times overcapacity in fiber optics in the late 1990s, and the overcapacity in the housing sector today has similar properties in terms of the effect on the underlying asset prices.

There is a distinction, of course. A distinctive feature of our system is the relationship between the bubble phase and economic inequality. As I’ve shown in some quantitative work, you can practically read the measurement of income inequality in the United States on a daily basis from the log of the movement of the NASDAQ stock index or the stock indices generally. This can in no way be described, and no one here has attempted to describe it, as the efficient matching of ex post allocations to ex ante desires.

The system is prone to the Minsky process, just as individual debtors are. Minsky described quite precisely the phased transition from speculative to Ponzi and the consequence of the realization that one has entered the Ponzi phase. Everything collapses at once. A system collapse is a Minskian super-cycle – it happens when the same properties are applied not just to an individual scheme, but to the operation of the system as a whole. And that, I would argue, is something quite close to what we’re seeing now.
Practically speaking, what we are observing and have observed is something quite close to a collapse of the financial wealth of the middle class built up over six or seven decades since the New Deal and the Second World War. It leads to a long period of debt deflation and financial revulsion whether the institutional shell of the banking system is preserved or not.

The only way to preserve the institutional shell is a \textit{de facto} public takeover, either the outright nationalization or, as has happened, the placing of state guarantees at practically every turn, and in effect making the state the chief counterparty in the system. That’s what had to happen, and that’s what in practice did happen.

The fact that it could happen comes as a shock initially, but the shock wears off quite quickly. I would argue that exiting from this situation is therefore quite difficult. One cannot go back to the \textit{status quo ante} to a situation in which the crisis has not actually occurred. What did happen once can obviously happen again. The illusion, therefore, that the largest financial institutions are anything other than arms of the state or vice versa is difficult to rebuild once it has been dispelled.

What is the damage done? I would argue that the damage done is, practically speaking, to an entire world-view -- a system identity. I was in Beijing last week speaking to a small meeting that involved some members of a think tank associated with the Chinese Communist Party, and I told them, “Congratulations. For decades the West has been criticizing you for having a financial sector composed of large parastatal institutions with massive nonperforming loan books protected by impenetrable accounting schemes, but now we’ve decided this is the only way to go, and we’ve adopted the Chinese model.”
The question then becomes, if you have the Chinese banking system, what do you do with it? Do the banks run the government or should the government perhaps run the banks? Is there any legitimate dividing line, practically speaking, between private enterprise and public purpose?

The question is now, I would argue, coming up repetitively and not about to disappear. It comes up with respect to the question of the appropriate size of banking institutions, and therefore their accessibility to the ordinary competence of bank regulators. It comes up with respect to the question of executive compensation. It comes up with respect to the legitimacy of shell corporations, of schemes for tax evasion and regulatory arbitrage. It comes up – or should come up -- with respect to bank conduct in commodity markets and their role in fostering commodity speculation. It should come up, and will come up, with respect to their policies on mortgages and foreclosure relief.

Looking down the road, it will come up with respect to the question of whether there is an appropriate strategic direction to be chosen for the economy going forward. Is there a path of new lending which would shape a program actually to achieve an economic expansion over, for example, a medium term time horizon? And the question will certainly come up and should come up with respect to the balance between institutions that are capable of taking risk on a global scale, but which are ultimately accountable to and dependent upon the national authority to rescue them when things go wrong.

Once you start asking these questions, there is no end to it. It would certainly have been better never to have had the crisis in the first place. But I would suggest it's too late for that.
Many of the things I am going to say are based on the book that we wrote at NYU Stern School of Business last fall. It is called *Restoring Financial Stability: How To Repair A Failed System*.\(^{14}\) I don't know about the rest of the world, but the crisis has been good for us in that it managed to get 33 academics together at NYU to collaborate on this effort.

Let me say at the outset that I am going to focus on the causes of the financial crisis. I stress the words “financial crisis” because there were a lot of strong economic undercurrents such as global imbalances, the loose monetary policy in the United States, and perhaps also the political economy pressure for certain kinds of lending to take place. But it is not clear to me that all of this should have necessarily resulted in a financial crisis.

Take the recession of 2001-2002, for example. Historical default rates then were at the highest they have been so far in terms of corporate default rates. But the reason why the financial sector was very stable in that recession was that the new innovations for securitization had been used in the right way. These innovations had been used to disperse risks to the rest of the financial sector rather than concentrating them on the balance sheets of the financial sector.

I contend that what was really different in this crisis, and the reason why the economic crisis converted itself into a wholesale financial crisis was because banks turned the model of securitization on its head. In particular, they used securitization to devise financial products and innovations in ways that allowed them to manufacture “tail” risks

(infrequent or rare aggregate disasters), and retain these on their balance sheets rather than parcel them off to the rest of the financial sector.

I am going to take three specific examples and go through the nuts and bolts of them as that also enables one to touch upon how that which the financial sector was attempting to do – manufacture tail risks – was interacting with global imbalances.

There were three significant strategies that were going on in the financial sector to take on tail risks. One was the shadow-banking world of conduits and SIVs (structured investment vehicles). These were essentially the off-balance-sheet entities. Put simply, this was the commercial banks’ way of creating off-balance-sheet leverage, in effect, doing what Enron had been doing before its failure.

The second, and this was a big revelation to me, was who was actually holding the bulk of the subprime mortgage risk, which is basically the AAA-rated tranches.

And third is the whole role that AIG financial products and mono-lines played in creating poorly-capitalized tail-risk guarantees for the financial sector.

On each of these I would also argue that regulators knew, or had at least some idea as to what was going on. They sometimes turned a blind eye to these activities, and in some cases they actually made or amended laws that allowed these things to happen.

Let us consider how the banking model has been evolving over the course of the last 100 years. The traditional bank was essentially one where the banker raised some deposits. It had to be demandable to constrain the risk-taking or diversion incentives (the moral hazard problem) that the bankers would have after raising deposits. The bank would make loans, but typically these loans would sit on the balance sheets of the bank till maturity. And either because of the bank wanting to protect its own franchise or forced by
regulation once we had deposit insurance in place, these banks would hold a certain amount of capital or equity cushion.

Over time banks realized that capital is costly, either because debt is cheap for tax reasons or because capital has some other cost associated with it. For instance, capital reduces the discipline that demandable debt has on bankers’ moral hazard problem. And increasingly, flows into intermediation did not happen just through the deposits being put into the banking sector. They started happening through the development of the parallel banking world or the “shadow banking world” of money market funds, hedge funds, asset management funds, and derivatives.

So, banks, once they made loans, started putting these into structured purpose vehicles, and given the different risk profiles of different kinds of investors (pension funds, hedge funds, corporations, etc.) wanting to earn higher yields than demand deposits would offer, banks started slicing and dicing risks through the asset-backed securities that they sold to the rest of the world.

This is the “securitization” or the “originate and distribute” model of banking, and in spite of the fact that it brings with it the risk of deteriorating banker incentives to make good loans and monitor them properly, it seemed to work quite well for a while. Banks that set up these structured purpose vehicles often retained the first losses that would be incurred on them, and those were then also subject to capital requirements. The remaining risks were passed onto end investors, effectively dispersing the risks originated by banks to capital market investors.

The first model that I spoke about, the one of off-balance sheet entities (conduits and SIVs) was, however, different from this. In fact, it was securitization without risk
transfer. It worked as follows: instead of just setting up the structured purpose vehicle and letting the end investors bear the risks after the first-loss cushion, banks started selling guarantees to cover 100 percent of risks associated with assets in these conduits.

Of course, if this guarantee is 100 percent, then there is no risk transfer (except in the highly unlikely event that the bank fails and is unable to honor the guarantees). In effect, due to global imbalances, there was a ton of liquidity out there in the Western world. Banks wanted this to enter their balance sheets, and importantly, in the least capital intensive way. Therefore, banks set up off-balance sheet banks, which were not subject to capital requirements and were in fact over 99% debt financed. Further, banks guaranteed 100% of the risk of assets in these off-balance sheet banks (guarantees implicitly backed by their own-balance sheet capital) and this allowed them to raise monies from money market funds in the form of short-term asset-backed commercial paper (ABCP).

This is an example in which end investors who lent money to banks did nothing wrong and, in fact, an example in which rating agencies got nothing wrong. Rating agencies rated the commercial paper of these conduits to be of the highest quality. The end investors lent money at the cheapest possible rates. And this, *ex post*, turned out to be exactly right because when the losses materialized in August 2007, due to the guarantees, they had recourse back to bank balance sheets.

Now, let me offer just a little bit of the mechanics about this because it gets at some interesting issues of regulatory arbitrage and poor regulation. As the guarantee is 100 percent, even though the conduit assets are off-balance-sheet, they are really on-balance-sheet.
If assets were on-balance-sheet, the loan, depending on its credit rating, would get a 1.6 percent to 8 percent capital charge. However, what banks did was to provide these guarantees as lines of credit with less than one year of maturity. Such “revolvers” are typically sold to corporations for working capital management. So, they are charged in the Basel Accord\(^\text{15}\) at most 1/10\(^\text{th}\) of the capital requirement of a loan (and often no capital requirement). Banks realized that if they want to sell a long-term credit guarantee, it was much cheaper from the standpoint of holding capital buffers to sell a one-year line of credit and keep rolling it over each year; that way they did not attract any capital charge against this at all.

So, effectively when the shadow-banking world of ABCP conduits started developing, banks were multiplying assets without being required to hold any capital against them. In other words, when regulators thought or told us that, “the banks are well capitalized by Basel standards,” and we believed that meant 8 percent capital requirement, the actual capitalization was a lot lower. Put another way, the leverage in the system was much higher due to the presence of opaque, off-balance-sheet leverage.

Now, to stress what role regulation played in this, Enron’s collapse happened in 2001. The off-balance-sheet leverage Enron had created with recourse to its balance sheet was similar in structure to ABCP conduits. This was a highly debated issue at the time of Enron’s failure. Regulators were aware that banks could also engage in this kind of off-balance-sheet leverage activities. There was a period of uncertainty for two to three years.

\(^\text{15}\) A set of agreements set by the Basel Committee on Bank Supervision (BCBS), which provides recommendations on banking regulations in regard to capital risk, market risk and operational risk. The purpose of the accords is to ensure that financial institutions have enough capital on account to meet obligations and absorb unexpected losses.
following Enron as to how capital requirements would be modified to capitalize these kinds of structures.

In 2004, however, there was an explicit decision taken by the Office of the Comptroller of the Currency (OCC), the FDIC, and the Board of Governors of the Federal Reserve System that regulators would not subject the conduits to any higher capital requirements. Data reveals that this was really the takeoff point for this off-balance-sheet activity. In a period of two and a half years from 2004 till 2Q 2007, the off-balance-sheet leverage in the form of these conduits doubled from around US$ 650 billion to US$ 1.3 trillion. And when the crisis hit, it actually reversed to the 2004 level by 1Q 2009.

A digression here, which is that even though the global imbalances view inherently points to the United States and some of the deficit countries as becoming the centers of fragility, and I think that is broadly right, I wish to point out that in a world of global banking, the imbalances can really percolate to any country out there. In fact, the first country where banks failed in this crisis was actually Germany, which is a surplus country. And that was because German banks (West Landesbank, IKB and Sachsen Bank, for example), realizing that a lot of easy money was flowing into the U.S., had set up huge U.S. subsidiaries to borrow in U.S. dollars and fund assets there in the form of ABCP conduits. West Landesbank had ABCP leverage at three times the on-balance-sheet capital it had; ABN Amro in the Netherlands (again, a surplus country), had basically about twice its capital in the form of off-balance-sheet leverage. Not surprisingly, these banks fared rather poorly in the crisis.

So, we need to think about global imbalances a lot more carefully in a world of global banking because as long as any country (surplus or deficit) has a poorly regulated
financial sector, that financial sector is going to be able to direct the easy money towards it.

When the crisis broke out on 9th August 2007 with BNP Paribas revealing publicly the illiquidity of sub-prime asset-backed securities held by its hedge funds, the cost of issuing asset-backed commercial paper grew from 15 basis points (relative to the Fed funds rate) to 150 basis points. The conduits were no longer profitable as their assets yielded around 50 basis points over the Fed funds rate. Conduits could not roll over their short-term debt, and most of the assets had to be brought back onto bank balance sheets due to guarantees sold by banks to conduits. Thus, it was banks – and not investors in ABCP – that took the losses. Hence, ABCP conduits were securitization without risk transfer.

Hence, in my view, there should have been no doubt whatsoever right at the inception of the crisis that there was a bank solvency problem. There was an over-leveraging or undercapitalization of the system. This manifested itself in the form of illiquidity of securitized assets and mark-to-market losses, but that was simply because credit was now traded in secondary markets. In the past, credit risk was not traded, so balance-sheet losses would be recognized only when losses actually materialized; whereas now they manifest themselves when the market figures out that losses are going to happen at some point in the future and that this likelihood has gone up.

So, the shadow banking world of ABCP conduits caught us transferring about $600 billion of debt back onto bank balance sheets, stress from which is felt by some players such as Royal Bank of Scotland (acquirer of ABN AMRO) and Citigroup even today.
I want to stress that a lot of banking activity that gets called securitization is actually not securitization at all. We checked this conduit by conduit. Did the end investors in these conduits make any losses? We found that for more than 75 percent of this activity, the end investors lost no money whatsoever. And taking account of where they did take losses, their average recovery rates were in fact as high as 96 percent. Far from being designed for true risk-sharing, conduits were just vehicles to raise short-term leverage for funding long-term assets, as banks always do, but without holding precautionary capital buffers.

I also stress the regulatory arbitrage and regulatory failure point. These conduits were typically earning only about 10 to 30 basis points per annum. If the regulatory capital requirements had been charged in the right way, which is to recognize that these are actually recourse loans, then conduits would have been asked to hold about 8 percent capital. If we assume that cost of equity capital is 500 basis points higher than cost of debt, this would have meant banks would have had to generate an additional 40 basis points on conduit business, implying that many conduits would not have been profitable in the first place.

Turn it the other way around. We know that deposit insurance has been accorded to all the commercial banks that were actively engaged in conduit activity, but for all practical purposes banks are never charged for this insurance. In a sense, governments write insurance exactly the way banks write it, which is to write the insurance and forget about it! If commercial banks had been charged even 25 to 30 basis points for deposit insurance, which doesn’t seem terribly expensive or restrictive of economic growth, then a lot of these maturity-mismatch activities would not have been profitable in the first place.
That completes my rather elaborate description of the first model of manufacturing tail risks that are poorly capitalized.

The second model I wish to discuss is that of buying of AAA-rated tranches. To many, this was the biggest puzzle at the beginning of the crisis because, once again, holding by banks of the safest tranches of securitization is completely counter to the traditional motive for securitization. In traditional securitization, banks originate assets to distribute. But assets can be informationally sensitive, so the rest of the world is not going to just come and buy these assets from banks. Banks might be passing lemons down the road. So, the model of securitization is that banks pool together a lot of risks, and essentially create riskless securities to sell to the world. Banks retain the risky – first-loss – part in order to get around the asymmetric information problem.

This was the business of creating AAA-tranches in the first place, but the traditional idea was always to pass the risks of these AAA-tranches on to end investors rather than to retain the risks on one’s own balance sheets. What we saw in the crisis was that banks that were securitizing sub-prime assets were themselves holding AAA-rated tranches of securitization rather than selling all of them to the Norwegian pension fund (the popular example for buyer of riskless tranches).

This is the reason why I believe that while rating agencies might have been a very critical part of the plumping, Goldman Sachs, Morgan Stanley, Merrill Lynch and the like that held the AAA-rated tranches did not need to know from rating agencies whether something was AAA-rated or not. They had their own internal models to value and understand risks of these securities. They would have bought this stuff even if it were
rated AA or A rated because, as I explain below, it offered a rather attractive leverage for taking on tail risk.

There is an interesting twist here, which is that AAA-rated tranches looked like “hot potatoes” because to get the capital relief, banks first had to completely shed the risk off their balance sheets. That is, each bank had to complete its securitization the traditional way and pass the risks on to other investors. But then, each bank could buy the AAA-rated securities of another bank and so on. And that is the way this risk-taking went on.

There is in fact a systematic way of showing that the real problem was that banks simply did not transfer credit risk. Consider a “google map” of who owned what of the U.S. real estate exposure as of June 2008. Such a picture tells us out of the $10.68 trillion of financial exposure created through the real estate in the U.S., who is actually holding what, in which form.

There are the traditional exposures -- loans, home equity lines of credit, agency mortgage-backed securities (the GSE\textsuperscript{16}-guaranteed part of securitization). And then, there are the securities backed by the subprime and the Alt-A\textsuperscript{17} mortgages, which banks securitized themselves because Fannie Mae and Freddie Mac could not. In effect, these are the non-agency AAA-rated securities and the subordinated tranches.

If the model of securitization was being used for its economic motive as we traditionally thought about it, which is to disperse risk out to capital market investors, then the safest AAA-rated tranches, backed by sub-prime and Alt-A mortgages, should not have had very large entries in the exposures of banks, Fannie Mae, Freddie Mac, and the

\textsuperscript{16} Government-sponsored enterprises are a group of privately held corporations with public purposes created by the U.S. Congress to reduce the cost of capital for certain borrowing sectors of the economy.

\textsuperscript{17} Alternative A-paper mortgages, considered riskier than prime, but less risky than sub-prime mortgages.
broker/dealers to the U.S. real estate. But what you find is that out of $1.6 trillion of AAA-tranches backed by these mortgages, about half were residing on the balance sheets of the banking sector. So, banks and GSEs chose to hold over 50 percent of the safest tranches, which under the traditional model of securitization should have been sold to pension funds, money market investors, and so on.

How did this come about? I think the reason is clear. AAA-rated tranches, under whatever capital requirements, are tracked at close to zero capital charge. In 2004, there was an important law that was repealed by the SEC – the Net Capitalization Rule -- that before repeal required that investment banks maintain leverage restrictions. Along with the repeal, investment banks were simultaneously given the go ahead on using their internal models for risk calculations, which meant that for an investment bank to hold a AAA-rated tranche, it had to hold practically no capital whatsoever.

But a AAA-rated tranche is a highly systematic asset. It will default only when a large wave of mortgages defaults at the same time. Its average maturity is about eight to ten years, depending on the pool of mortgages. So, in a reasonable world, this asset will earn a “risk premium” because it has systematic risk and it has term-structure risk in it.

Thus, in good times banks could take on tail risk on the US economy and housing sector by holding onto AAA-rated tranches that had no capital backing them, or in other words, were funded entirely through short-term leverage. In fact, Fannie and Freddie were holding about $300 billion of the sub-prime AAA-rated tranches. This is the classic moral hazard of government guarantees and in fact everyone else in the financial sector, especially large banks, is just a form of Fannie and Freddie because they all have guaranteed debt to some extent, and they are not made to pay for it. So, anything we
want to learn about how to regulate the financial sector can be learned by asking the question how do we regulate Fannie and Freddie?

Before I come back to this point about regulation, I will mention in passing that AIG. Financial Product’s selling of over $500 billion of insurance or protection through credit default swaps on CDOs and AAA-rated tranches was also another regulatory arbitrage. As AIG’s December 2007 quarterly statement shows, over $350 billion of such insurance was sold to European banks “for regulatory capital relief and not risk mitigation.” It is often wondered why banks did not manage better the counterparty risk of AIG’s default on these credit default swaps. The reason is that they benefited from these swaps in the form of regulatory capital relief: If banks bought insurance on AAA-rated tranches from an insurer better rated than them, there was in fact NO capital charge whatsoever! So banks, especially European banks, managed to enjoy no capital requirements – like the US investment banks did under their internal models – by buying protection from AIG and, if they had required AIG to hold more collateral on its protection, they would have got less of it and been able to take on lesser leverage.

Having demonstrated three leading examples through which banks got around capital requirements to take on tail risks of an aggregate nature and ended up creating a highly leveraged and fragile financial sector, let me jump ahead and end with some brief remarks on how we might be able to regulate better the financial sector, and its tail-risk seeking behavior.

The primary reason why manufacturing of tail risks has become attractive to banks is because in the end they have government guarantees backing them. Hence, we have a tremendous (mis)allocation of capital inside banks to proprietary trading, structuring and
buying of products that offer banks high “carry” over their debt cost of financing, because the risks in the carry trade are implicitly backed by the government.

So, here is my main suggestion. The problem with the creation of tail risks is that it results in a conflict of interest between the senior-most debt and the junior-most claimants. Tail risk will generate carry or premiums in good times, but when the risk materializes, it is going to produce losses into the government-insured parts of debt. And if banks are not paying for it, all the three trades that I have described are going to look attractive to them in the not too distant future. We need to be charging banks *ex ante* for these government guarantees to restore their cost of debt financing to economically “correct” levels. In particular, we need a tax on financial institutions for their systemic risk contributions.
The Second Great Contraction

“Overindebtedness simply means that debts are out-of-line, are too big relative to other economic factors. It may be started by many causes, of which the most common appears to be new opportunities to invest at a big prospective profit... such as through new industries... Easy money is the great cause of over-borrowing.”

Irving Fisher (1933).

Introduction

The issues I address fall into three broad areas. The next section takes stock of the collateral damage that followed the financial turmoil that began as the subprime crisis in the United States in the summer of 2007. In particular, it considers the incidence of banking crises and currency and crashes around the world. Apart from its impact on domestic and international financial flows and the changes in the landscape of the financial industry that this crisis has produced, the toll on the real economy has been great. The evolution of world trade helps to illustrate the breadth and depth of the economic downturn. Global equity prices have similarly ridden a roller coaster. The evidence presented here places these developments in a broader historical and international perspective that allows us to gauge the unusual severity of the unfolding global crisis.

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18 This note follows my remarks at the conference “Financial Globalization: Culprit, Survivor or Casualty of the Great Crisis?” Yale University, November 12-13, 2009 and draws heavily from Carmen M. Reinhart and Kenneth S. Rogoff, This Time is Different: Eight Centuries of Financial Folly (Princeton: Princeton University Press, 2009), which will henceforth be referred to as RR. The references cited throughout provide further elaboration of the main points made in this note.
Section III dwells on the aftermath of severe financial crises and speculates on our current position in the post-crisis cycle. The comparisons focus primarily on the housing and labor markets, where the aftereffects of the crises have tended to linger the longest. The fiscal implications and consequences of severe crises are discussed. Section IV poses the questions of what caused these great crises and what factors make them more severe.

This discussion emphasizes causal factors that are common to severe financial crises across countries and across time rather than those that are idiosyncratic to the political and economic circumstances. The last section concludes with words of caution on the dangers of complacency about the emerging view that the storm has passed. There is some discussion regarding concerns about the high (and rapidly rising) levels of public sector indebtedness.

Taking stock: The global dimensions of the crisis

1. A global crisis index

Where are we in a historical global context? We present an index that proxies world economic turbulence. These aggregate crisis indices are the time series shown for 1900-2008 in Figure 1 for the “World”. The indices are weighted by a country’s share in world GDP, as we have done for debt and banking crises. The 66-country sample accounts for about 90 percent of world GDP. The country indices (without stock market crashes) are compiled from the time of independence (if after 1800) onward; the index that includes the equity market crashes is calculated based on data availability. While inflation and banking crises predate independence in many cases, a
sovereign debt crisis (external or internal) is by definition not possible for a colony. In addition, numerous colonies did not always have their own currencies. The BCDI index stands for banking (systemic episodes only), currency, debt (domestic and external), and inflation crisis index. When stock market crashes are added (shown separately) to the BCDI composite, we refer to it as the BCDI +

Figure 1 chronicles the incidence and, to some degree, the severity of the varied crisis experience. A cursory inspection of the figure reveals a very different pattern before and after World War II. The pre-war experience is characterized by frequent and severe crises episodes ranging from the banking-crisis driven “global” panic of 1907 to the debt and inflation crises associated with World War I and its aftermath. The only period after World War II that we see as high an incidence of crises is the fifties, when the losing combatants—Germany, Austria, Japan, Italy—were in a state of default. Plus, of course, there were many countries that had gone into default in the thirties that were still in default. But since the immediate aftermath of World War II, we had not seen a crisis this global in scope.

The sharp rise in the blue line (BCDI index) in 2007 and more so in 2008 is mostly dominated by banking crises and also currency crashes. Indeed, a large share of countries in the fall of 2008 had sufficiently large depreciations to classify as a currency crash (i.e., exchange rate depreciations exceeding 15 percent). The red line adds stock market crashes—which were ubiquitous in 2008.
Figure 1. Varieties of crises: World aggregate, 1900-2008
A composite index of banking, currency, sovereign default and, inflation crises, and stock market crashes (weighted by their share of world income)

Notes: The banking, currency, default (domestic and external) and inflation composite (BCDI index) can take a value between 0 and 5 (for any country in any given year) depending on the varieties of crises taking place on a particular year. For instance, in 1998 the index took on a value of 5 for Russia, as there was a currency crash, a banking and inflation crisis, and a sovereign default on both domestic and foreign debt obligations. This index is then weighted by the country’s share in world income. This index is calculated annually for the 66 countries in the sample for 1800-2008 (shown above for 1900-onwards). In addition, we use the Barro and Ursua (2009) definition of a stock market crash for the 25 countries in their sample (a subset of the 66-country sample except for Switzerland) for the period 1864-2006; we update their crash definition through December 2008, to compile our BCDI+ index. For the United States, for example, the index posts a reading of 2 (banking crisis and stock market crash) in 2008; for Australia and Mexico it also posts a reading of 2 (currency and stock market crash).
2. World trade

As to trade, we offer an illustration of the evolution of trade during two global crises. Figure 2 plots the value of World merchandise exports for 1928-2009. The estimate for 2009 uses the actual year-end level for 2008 as the average for 2009; this yields a 9 percent year-over-year decline in 2009, the largest one-year drop since 1938.\(^{19}\)

Other large post-WWII declines are in 1952, during the Korean War, and in 1982-1983, when recession hit the United States and a 1930s-scale debt crisis swept through the emerging world. Smaller declines occurred in 1958, the bottom of a recession in the United States, 1998 during the Asian financial crisis, and in 2001, after September 11.

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\(^{19}\) While we have reliable trade data for most countries during World War II, there are sufficient missing entries so as to make the calculation of the world aggregate not comparable to other years during 1940-1947.
Figure 2. World export growth, 1928-2009
(annual percent change)

Sources: Global Financial Data (GFD), League of Nations, World Economic Survey (various issues),
International Monetary Fund, World Economic Outlook, and the authors (see notes).
Notes: The estimate for 2009 uses the actual year-end level for 2008 as the average for 2009; this yields a
9 percent year-over-year decline in 2009, the largest post-war drop. Other large post-WWII declines are in
1952, during the Korean War and in 1982-1983, when recession hit the United States and a 1930s-scale
debt crisis swept through the emerging world. Smaller declines occurred in 1958, the bottom of a

3. Global equity prices

Figure 3 plots the Financial Times 1200 Global Stock Market Index deflated by
consumer prices; real stock prices. The blue line shows the path of prices during the
Great Depression. It sets 1928 equal to 100. The red line is the current FTSE 1200, and
that sets 2007 equal to 100. Figure 3 highlights that the recovery during 2009,
notwithstanding, still left real equity prices (following the collapse during 2008) at
comparable levels to those recorded during the Depression.
**Figure 3. Global stock markets during global crises: Composite real stock price index**

(End-of-period)

Sources: Global Financial Data (GFD), Standard and Poor’s, International Monetary Fund, World Economic Outlook, and the authors (details provided in the data appendix).

Notes: World composite stock price index from GFD for 1928-1939 and from S & P for 2007-2009. The Global 1200 index covers seven distinct regions and 29 countries, and captures approximately 70% of the world market capitalization. Stock prices are deflated by world consumer prices. For 1928-1939 these are constructed using median inflation rates for the 66-country sample; for 2007-2009 these are taken from the World Economic Outlook, end-of-period prices. The years 1928 and 2007 marked the cycle peak in these indices.

4. The “big picture”

In sum, Figures 1 to 3 highlight the breadth, depth, and internationally synchronous nature of the post-2007 financial crisis, especially in relation to the milder, more scattered crises episodes of the post war landscape. Even “significant global” events, such as the break-down of the Bretton Woods system of fixed exchange rates, the oil shocks of the mid-1970s, and the emerging market debt crisis of the early 1980s, pale in comparison in terms of the incidence of crises and impacts on the real economy.
Indeed, the output declines registered in many advanced and emerging market economies in 2009 rank among the largest declines in the history of their national income accounts. In several countries, the declines in real GDP during the second great contraction (2008-2009) matched and even exceeded those recorded during severe “home grown” financial crises. This list includes such diverse countries (the prior crisis year in parentheses) as Finland (1991); Mexico (1995); Singapore (1982); Spain (1977); Sweden (1991); Turkey (2001), among others.

Having suggested that the severity of this crisis is on a different scale from the post-war norm, the logical sequel is to expect that the aftermath of the crisis will, in all likelihood, also depart from the “standard” post-war recession-recovery pattern. To this end, the next section summarizes selected empirical findings of the RR study on the aftermath of severe financial crises.

*The Aftermath of Financial Crises*

As to the current conjuncture in the United States, the post-war recession experience should not be seen as an instructive benchmark for where we are at present or what we should expect. The average NBER post-war recession lasts less than a year. The worst one lasted 16 months. We passed those milestones.

Broadly speaking, financial crises are protracted affairs. More often than not, the aftermath of severe financial crises share three characteristics. First, asset market collapses are deep and prolonged. Real housing price declines average 35 percent stretched out over six years. Second, the aftermath of banking crises is associated with profound declines in output and employment. The unemployment rate rises an
average of 7 percentage points over the down phase of the cycle, which lasts on average over four years. Third, the real value of government debt tends to explode, rising an average of 86 percent in the major post–World War II episodes. Interestingly, the main cause of debt explosions is not the widely cited costs of bailing out and recapitalizing the banking system. In fact, the biggest driver of debt increases is the collapse in tax revenues that governments suffer in the wake of deep and prolonged output contractions.

1. Unemployment

To illustrate, Figure 4 examines unemployment rates in the wake of the 14 worst financial crises in the post-war period. The left panel shows the increase in the unemployment rate from the low point to the high point. That is, it is the cumulative increase in unemployment for that particular crisis. What the right panel shows is the duration in years of the time it takes to go from the lowest unemployment level to the highest. On average from bottom to top, unemployment increases by about 7 percentage points during the worst financial crises. In the U.S. context, low point in unemployment in 2006 was around 4 percent—a 7 percentage point increase would take it to 11 percent. The average duration (bottom to peak) is 4.8 years.

These indices are the official unemployment rates; we are now all aware of more encompassing measures, such as the Bureau of labor Statistics’ U6 that are much higher than this after taking into account underemployment and discouraged workers.

To reiterate, recovery in the aftermath of severe financial crises are protracted affairs, in general.
Past Unemployment Cycles and Banking Crises: Trough-to-peak Percent Increase in the Unemployment Rate (left panel) and Years Duration of Downturn (right panel)

Sources: OECD, IMF, Historical Statistics of the United States (HSOUS), various country sources, and authors' calculations.

Notes: Each banking crisis episode is identified by country and the beginning year of the crisis. Only major (systemic) banking crises episodes are included, subject to data limitations. The historical average reported does not include ongoing crises episodes.
2. Public debt

Whenever there is a substantial economic downturn, high and rising unemployment, and imploding real estate prices, major fiscal consequences should be expected. Not surprisingly, the true legacy of a major financial crisis is more government debt. Figure 5 shows the rise in real government debt in the three years following a banking crisis. The deterioration in government finances is striking, with an average debt rise of over 86 percent. We look at percentage increase in debt, rather than debt-to-GDP, because sometimes steep output drops would complicate interpretation of debt–GDP ratios. As RR note, the characteristic huge buildups in government debt are driven mainly by sharp falloffs in tax revenue.

Figure 5
Cumulative increase in real public debt in the three years following the banking crisis

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Increase</th>
<th>Index=100 in year of crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>1997</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>1994</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>1992</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>1987</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philippines</td>
<td>1997</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korea</td>
<td>1997</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>1991</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>1997</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Historical Average</td>
<td>1977</td>
<td></td>
<td>186.3 (an 86 percent increase)</td>
</tr>
<tr>
<td>Spain</td>
<td>1977</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>1997</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chile</td>
<td>1980</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>1991</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colombia</td>
<td>1998</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: Reinhart and Rogoff (2008b) and sources cited therein.
Notes: Each banking crisis episode is identified by country and the beginning year of the crisis. Only major (systemic) banking crises episodes are included, subject to data limitations. The historical average reported does not include ongoing crises episodes, which are omitted altogether, as these crises begin in 2007 or later, and debt stock comparison here is with three years after the beginning of the banking crisis.
3. Public debt: an update

We are certainly on track to the 86 percent mark. We updated this exercise, measuring real debt increases from 2007 to the latest numbers for 2009. Across the real public debt of Iceland, the U.S., the U.K., Ireland and Spain, in the first two years following the onset of the crisis, the average index is 171 percent. If Iceland is excluded, it is still 157 percent. Thus, we are marching towards the near-doubling of the public debt.

*Causes, Symptoms, and Amplifiers of Financial Crises*

As to the causes of these great crises, we next focus on those factors that are common across time and geography; we discriminate between root causes of the crisis, its symptoms, and features such as financial regulation which serve as amplifiers of the boom-bust cycle. Pertinent to the globalization theme of this conference, the discussion begins with the link between financial liberalization (internal and external), the financial innovation and credit booms these spawn and banking crises.

1. The roots

There is a striking correlation between freer capital mobility and the incidence of banking crises, as shown in Figure 6. *Periods of high international capital mobility have repeatedly produced international banking crises, not only famously as they did in the 1990s, but historically.* The figure plots a three-year moving average of the share of all countries experiencing banking crises on the right scale. On the left scale, we graph the index of capital mobility, due to Obstfeld and Taylor (2004), updated and back cast using their same design principle, to cover our full sample period. While the Obstfeld–
Taylor index may have its limitations, we feel it nevertheless provides a concise summary of complicated forces by emphasizing de facto capital mobility based on actual flows. For the post-1970 period, Kaminsky and Reinhart (1999) present formal evidence on the links of crises with financial liberalization. In 18 of the 26 banking crises they study, the financial sector had been liberalized within the preceding five years, usually less. In the 1980s and 1990s most liberalization episodes were associated with financial crises of varying severity. Only in a handful of countries (for instance, Canada) did financial sector liberalization proceed smoothly. Specifically, the paper presents evidence that the probability of a banking crisis conditional on financial liberalization having taken place is higher than the unconditional probability of a banking crisis.

Figure 6

Capital Mobility and the Incidence of Banking Crisis: All Countries, 1800-2008

Share of Countries in Banking Crisis, 3-year Sum (right scale)

Capital Mobility (left scale)

Sources: Bordo et al. (2001), Caprio et al. (2005), Kaminsky and Reinhart (1999), Obstfeld and Taylor (2004), and these authors.

Notes: This sample includes all countries (even those not in our core sample of 66). The full listing of banking crises dates are shown in Appendix II. On the left scale, we updated our favorite index of capital mobility, admittedly arbitrary, but a concise summary of complicated forces. The smooth red line shows the judgmental index of the extent of capital mobility given by Obstfeld and Taylor (2004), back cast from 1800 to 1859 using their same design principle.
2. The setting

Across countries and over the centuries, economic crises of all type follow a similar pattern. An innovation emerges. Sometimes it is a new tool of science of industry, such as the diving bell, steam engine, or the radio. Sometime it is a tool of financial engineering, such as the joint-stock company, junk bonds, or collateralized debt obligations. These usually accompany or are a direct result of financial liberalization, as described above. Investors may be wary at first, but then they see that extraordinary returns appear available on these new instruments and they rush in. Financial intermediaries—banks and investment companies—stretch their balance sheets so as not to be left out. The upward surge in asset prices continues, and that generation of financial market participants concludes that rules have been rewritten: Risk has been tamed, and leverage is always rewarded. All too often, policy makers assert that the asset-price boom is a vote of confidence on their regime—that “this time is different”. Only seldom, to my knowledge, do they protest that perhaps the world has not changed and that the old rules of valuation still apply.

But the old rules do apply. The asset price rise peters out, sometimes from exhaustion on its own or sometimes because of a real shock to the economy. This exposes the weaknesses of the balance sheets of those who justified high leverage by the expectation of outsized capital gains. Many financial firms admit losses, and some ultimately fail. All those financial firms hunker down, constricting credit availability in an effort to slim their balance sheets. With wealth lower and credit harder to get,
economic activity typically contracts. Only after the losses are flushed out of the financial system and often with the encouragement of lagging monetary and fiscal ease does the economy recover.

3. The symptoms

The recurring historical pattern described above is associated with some well-defined symptoms. I will focus here on a few of the symptoms or quantitative parallels (those listed in Table 1) that have been present during the current crisis in several countries and that we have seen systematically in numerous earlier crises in advanced and emerging market economies alike. Specifically, large capital inflows, sharp housing and equity price run-ups lead the “leading indicator” group. So have been surges in private domestic and external debts. These symptoms are quantifiable, unlike the more nebulous amplifiers that are discussed in the remainder of this section.

<table>
<thead>
<tr>
<th>Table 1. Quantitative antecedents of financial crises: The “lead” of the leading indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large capital inflows</td>
</tr>
<tr>
<td>Sharp run-ups in equity prices</td>
</tr>
<tr>
<td>Sharp run-ups in housing prices</td>
</tr>
<tr>
<td>Inverted V-shaped growth trajectory</td>
</tr>
<tr>
<td>Marked rise in indebtedness</td>
</tr>
</tbody>
</table>

If we were to quantify periods of capital flow bonanzas—periods where capital inflows are unusually large—who comes up on the radar screen prior to the 2007-2009 crisis? As Reinhart and Reinhart (2008) document, in addition to the U.S. and the U.K.,

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20 These and other economic and financial indicators are analyzed in detail in Kaminsky and Reinhart (1999).
the other names that are listed there—Spain, Italy, Iceland, Ireland—are all countries that have had a period where the large capital inflows ended badly. Capital inflows facilitate domestic lending, fuel asset prices, and in most instances increase the indebtedness of the private sector, the public sector (if the government behaves procyclically), or both.

Table 2. Capital Inflows Typically Surge Ahead of Financial Crisis

<table>
<thead>
<tr>
<th>Countries with recent notable capital inflows</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Iceland</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Italy</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Jamaica</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Latvia</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>New Zealand</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pakistan</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Romania</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Slovenia</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>South Africa</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Spain</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Turkey</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>United States</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Notes: For full list of recent bonanza episodes see the paper.

There is a sense that the U.S. housing price bubble during 2000-2006 (primarily) is both unique and unprecedented. The magnitude of the bubble is certainly unprecedented to the United States—at least during the past century for which we have comparable data. However, in a broader global context, the sub-prime bubble is neither unique to the U.S. nor it magnitudes out of line with other real estate bubbles that have also ended equally lamentably in financial crises.
Figure 7 compares the run-up in housing prices. Period T represents the year of the onset of the financial crisis. By that convention, period T-4 is four years prior to the crisis, and the graph in each case continues to T+3, except of course in the case of the U.S. 2007 crisis, which remains in the hands of the fates.21 The chart confirms the case study literature, showing the significant run-up in housing prices prior to a financial crisis. Notably, the run-up in housing prices in the United States exceeds that of the “Big Five” crises (Spain, 1977, Norway, 1987, Finland, 1991, Sweden 1991, and Japan 1992).

The boom in real housing prices (or real estate, and other asset prices, more broadly) is typically fueled by ample domestic credit availability, large capital inflows, and an easy liquidity environment. Coupling the ample liquidity environment with the presumption that this time is different and that the old rules of valuation do not apply, then you have the makings or the ingredients for a crisis.

As to growth (inverted V-shaped pattern)—growth does very well ahead of the crisis when credit is ample and wealth effects are positive (as asset prices climb) and falls subsequently. For further evidence the reader is referred to RR.

I cannot stress enough the importance of the last entry in Table 1, a marked rise in indebtedness. Rising indebtedness can be domestic, external or both. In can be private, public or both. Any combination of these forms of rising indebtedness has been a hallmark of the pre-crisis period as far back as our data can take us. Perhaps Iceland illustrates this point in its most extreme form, as external debts rise from about 90 percent of GDP in 2000 to well over 900 percent of GDP in 2009. It is worth noting that

21 For the United States, house prices are measured by the Case-Shiller index, described and provided in Robert Shiller (2005).
stating that there are capital inflows is usually a different of observing that a country is borrowing from the rest of the world.

Figure 7. Real Housing Prices and Banking Crisis

Source: Reinhart and Rogoff (2009).

4. The “amplifiers”

The list (shown on Table 3) of what I have dubbed the “usual suspects”, despite its breadth, is not meant to be exhaustive. It is a list that has withstood the test of time, as several of these amplifiers come up on a recurring and it is those are not unique to the United States subprime crisis. Countless case studies of banking crises, across countries and time (see references in RR) list these factors on a recurring basis—often blamed as underlying causes of the crises. However, these factors exacerbate both the boom and
bust phases of the crisis cycle. For example, the stylized evidence presented in Caprio and Klingebiel (1996) suggests that inadequate regulation and lack of supervision at the time of the liberalization may play a key role in explaining why deregulation and banking crises are so closely entwined. But it is difficult to explain a cycle with a constant. Supervision may have always been lacking and the regulations ill defined. Such deficiencies may have limited consequences when credit conditions are tight (or in the case of emerging markets when access to international capital markets is not possible).

If, in contrast, financial liberalization (domestic an external) creates lending possibilities that did not exist before, then inadequate supervision can make a bad lending scenario worse. Outright fraud, (often through connected lending) which crops up as another hardy perennial in studies of the run-up to crises works the same way.

The procyclicality of credit ratings (both at the sovereign and corporate levels, see Reinhart, 2002) also acts to amplify the cycle of lending and subsequent default and crash. Overvalued currencies are a magnet for capital inflows while procyclical fiscal policies add to the surge in borrowing during the boom phase of the cycle.

Far from being mutually exclusive many, if not most of the items in this list are present simultaneously in the most severe financial crises through out history.

Table 3. Amplifiers of boom-bust cycles: The usual suspects

<table>
<thead>
<tr>
<th>Procyclical macroeconomic policies</th>
<th>Procyclical macroeconomic policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hidden debts (implicit guarantees)</td>
<td>Hidden debts (implicit guarantees)</td>
</tr>
<tr>
<td>Overvalued currencies</td>
<td>Overvalued currencies</td>
</tr>
<tr>
<td>Poor regulation</td>
<td>Poor regulation</td>
</tr>
<tr>
<td>Myopic credit rating agencies</td>
<td>Myopic credit rating agencies</td>
</tr>
</tbody>
</table>
5. A digression on the sequencing of crises

Just as financial crises have common macroeconomic antecedents in asset prices, economic activity, external indicators and so on, so common patterns appear in the sequencing (temporal order) in which crises unfold. Obviously not all crises escalate to the extreme outcome of a sovereign default. Yet, advanced economies have not been exempt from their share of currency crashes, bouts of inflation, severe banking crises, and, in an earlier era, even sovereign default. The point of this short digression is to note that the long debt cycle we have discussed does not necessarily end with a banking crisis—more bad news usually follows—a stylized fact that should be kept in mind when trying to make sense of the current conjuncture.

Investigating what came first, banking or currency crises, was a central theme of Kaminsky and Reinhart’s (1999) “twin crises” work; they also concluded that financial liberalization often preceded banking crises; indeed, it helped predict them. Demirgüç-Kunt and Detragiache (1998), who employed a different approach and a larger sample, arrived at the same conclusion. Reinhart (2002) examined the currency crash–external default link. Our work here has investigated the connections between domestic and external debt crises, inflation crises and default (domestic or external), and banking crises and external default.22 Figure 7 maps out a “prototypical” sequence of events yielded by this literature.

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22 Reinhart and Rogoff (2004) also examined the relationship between currency crashes and inflation as well as the currency crash–capital control (specifically, dual or multiple exchange rates) timing.
As Diaz-Alejandro (1985) narrates in his classic paper about the Chilean experience of the late 1970s and early 1980s, “Goodbye Financial Repression, Hello Financial Crash,” financial liberalization simultaneously facilitates banks’ access to external credit and more risky lending practices at home. After a while, following a boom in lending and asset prices, weaknesses in bank balance sheets become manifest and problems in the banking sector begin.\footnote{In contrast to other studies of banking crises, Kaminsky and Reinhart (1999) provide two dates for each banking crisis episode—the beginning of a banking crisis and the later peak.} Often these problems are more advanced in the shakier institutions (such as finance companies) than in the major banks.

The next stage in the crisis unfolds when the central bank begins to provide support for these institutions by extending credit to them. If the exchange rate is heavily managed (it does not need to be explicitly pegged), a policy inconsistency arises between supporting the exchange rate and acting as lender of last resort to troubled institutions. The very numerous experiences in these studies suggest that (more often than not) the exchange rate objective is subjugated to the lender of last resort role of the central bank. Even if central bank lending to the troubled financial industry is limited in scope, the central bank may be more reluctant to engage in an “interest rate defense” policy to defend the currency than would be the case if the financial sector were sound. This brings the sequence illustrated in Figure 7 to the box labeled currency crash.
The depreciation or devaluation, as the case may be, complicates the situation in (at least) three dimensions: (a) it exacerbates the problem of the banks who have borrowed in a foreign currency, worsening currency mismatches; (b) inflation usually worsens (The extent to which the currency crisis translates into higher inflation is highly uneven across countries, as countries with a history of very high and chronic inflation usually have a much higher and faster pass-through from exchange rates to prices); and (c) if the government has foreign currency–denominated debt, the currency depreciation increases the odds of an external and domestic default.
At this stage, the banking crisis either peaks following the currency crash, if there is no sovereign credit crisis, or keeps getting worse as the crisis mounts and the economy marches toward a sovereign default (the next box in Figure 7).

This is a very common pattern in the sequencing of crises. Notice the first entry there has financial liberalization. And financial liberalization is really not just liberalization proper, but big innovation, creations of new market. In the current conjuncture, the creation or the growth of securitization of mortgages is a big factor. Notice, perhaps more grimly, that the last entry is a debt crisis, which brings me to my concluding remarks.

Concluding reflections on complacency and debt

Many (if not most) of the advanced economies of the world are faced with a worrisome public debt profile over the medium term. The debt profile is even more alarming if contingent liabilities and the graying of the population is factored in the analysis.

Many emerging markets—singularly in Eastern Europe and the former Soviet Union—also have external debt levels (public plus private) that have been often associated historically with debt servicing difficulties and outright default.

Outside of Emerging Europe, the view is that emerging markets have weathered the storm. Indeed, a very important factor in this capacity to cope with such a massive adverse shock during 2007-2009 is importantly linked to the fact that many important emerging markets, most notably in Asia and Latin America had reduced their debt burdens (particularly external debts) during the boom of 2000-
2006 (where the private sector in advanced economies were rapidly becoming highly leveraged). Governments have been well placed to finance the recession-induced deficits through domestic debt. Indeed, many generally knowledgeable observers have argued that the recent shift by many emerging market governments from external to domestic bond issues is revolutionary and unprecedented.\textsuperscript{24} Nothing could be further from the truth; this is “dangerous complacency.” As RR highlight, domestic debts accounted for more than half of public debts in emerging markets since 1900. There are also plenty of examples of defaults on domestic debt. Domestic debt, no doubt has many advantages over external debt—but is not the panacea that many believe it is. Advanced economies are in the process of painfully illustrating this point at the time of this writing. Domestic debt also has to be repaid.

I will conclude with this uplifting note. Public debt levels have been soaring in many countries owing primarily to a weak economy; private debt levels are not coming down quickly enough for virtually for the same reason. Without being melodramatic, the odds for a much higher incidence of default and (or) a higher incidence of inflation, should not be underestimated.

\textsuperscript{24} See the IMF Global Financial Stability Report, April 2007; many private investment-bank reports also trumpet the rise of domestic debt as a harbinger of stability.
References


Part Two


Under the impulse of the crisis, national and international political leaders, financial regulators, and supervisors are already committed to undertake profound reforms. Are the politically probable reforms the ones that are needed to deliver both an improved international financial architecture as well as national regulatory and supervisory systems? Will the steps likely to be taken plant the seed of the next global crisis, or is there a way to improve the chances of providing the global public good of financial stability?

William Brainard
Professor Emeritus of Economics, Yale University

Moderator

One thought that some economists have, and I surely do, is that this whole period has been a rather embarrassing one for economists. I remember at a meeting just a few years ago with some smart economists, not unconfident, someone said, “You know, you get three or four smart economists together and they can solve almost any economic problem except health care.” Today health care looks really simple compared to what we’ve been learning about in this conference.

It’s too bad we didn’t have a little more of a crisis five or six years ago and had this conference then, because there’s been a sad lack of analysis by economists of the kinds
of issues which are now so much part of our discussion. There’s been a sea change, in fact you could call it a tsunami, in the way the public press and indeed the various reports have written about the crisis itself and financial reform and the matters that need to be thought about. Almost everybody, including Greenspan, had heard of moral hazard and too big to fail and the fact that the mortgage issuers who don’t have any skin in the game have no incentive to get it right. Those things were actually talked about, but they were thought to be of limited liability. They were thought to be of modest importance, and surely swamped by the enormous social benefits of this incredible proliferation of new financial instruments and markets.

As you know from this morning’s discussion and from reading the reports and literature, there has been a sea change in the way we talk about these issues in which systemic risks and the externalities of economic agents, particularly of financial institutions or the environment within which other institutions operate, now pervade the discussion. That’s a very healthy thing.

I’m going to turn now to the first four presenters who are primarily dealing with continuations from the last talks we’ve heard -- issues of regulation of the financial system -- then we’ll turn to three presenters who are more concerned with global architecture and the dollar and the international financial situation. I’m sure that embedded in some of the remarks will be issues of regulation, which are cross country;
but it’s natural, I think, to start to talk about regulation as it affects individual institutions and markets because that’s in a way where things start.
There is probably an oversupply of conferences on international financial regulation today; but the organizers must be congratulated for bringing together such a wonderful collection of leading thinkers -- with the exception being me, of course ... on this subject. It's truly daunting to share a panel with such illustrious people.

One of the many unhelpful features of financial crises is that they are extremely complex and multifaceted. Everybody can look at a financial crisis and feel vindicated. Financial crises should be a source of great learning. Instead, they tend to be a source of reinforcing previous prejudices.

I'm going to give you three stories about this crisis, and two of them are about things that have changed my mind from where I was before. I may have been creeping towards some of those ideas, but they have been helpful in changing my thoughts about financial crises and about how we prevent them, about the international dimension, and about financial innovation.

Financial crises are highly politicized. When governments put up trillions of dollars of taxpayers’ money, and as a result have their domestic policy agenda completely overturned, have their objectives on issues of welfare and other things turned upside down, the process becomes deeply politicized. And taxpayers want public executions. They want retribution.
Governments quickly fall into what I call the “bad apple” theory of financial crises, which is that they are caused by bad bankers selling bad products out of bad jurisdictions. We need to shoot these people, to stop them from doing this, and then we’re going to solve the problem. It’s very appealing politically. Voters can relate to this much more than the idea that it’s a macro prudential problem of the system.

There is a common idea that this crisis is caused by bankers pulling out of their trousers pocket a hand grenade, a toxic hand grenade, throwing it into a crowd of bewildered consumers, and running away (my characterization). That is the story in the minds of many politicians. But the reality was that the bankers pulled out of their trousers pocket this hand grenade, this toxic hand grenade, threw it into the crowd of bewildered consumers, and ran towards it.

They kept on picking up the hand grenades that had been dropped by other people and stuffing them in their pockets. They couldn’t get enough of this stuff. They were trying to maximize their exposure. They wanted to get more exposure than capital adequacy requirements would allow, so they had to devise all kinds of special conduits or SPVs (special purpose vehicles) to get more exposure.

The fundamental problem is this: booms and busts are caused by many factors, but a large factor is people underestimating the risk. We need to deal with the underestimation of the risk in the boom that supports the boom, fuels the boom, creates the boom. If we think that what we need to do is stop people from doing risky things then we’re not going to solve that problem because, at the time, they don’t think what they are doing is risky.
Indeed, what causes a boom? What causes booms is a belief that something is not as risky as it was; that something has changed risks; that something has reduced the risk of economic activity or reduced the risk of behavior, such as having railroads, electricity, the Internet, financial innovation. And if that belief is the fundamental problem, creating commissions that employ people like us -- economists who say that's bad, that's good, that’s risky, that’s safe -- is not going to do it.

I’m not arguing that we shouldn’t be concerned about those micro prudential issues, but I am saying that if we think about the causes of this crisis at the heart -- the fundamental heart – there is an underestimation of risks. It is much more complex than the idea of fat tails. I think fat tails is the way it looks post hoc. Ex ante, people believe it is low risk, and therefore they do too much of it, which creates the risk.

Take subprime mortgages as an example. The very first subprime mortgage is still paying out. Default delinquency rates are low when you go after the only person in the community and give them the best quality credit in the community. You give them a mortgage. When you’re going after the 99th percentile, the risk has changed.

This teaches us another lesson -- and clearly this is an important problem we need to solve -- some people believe that we need to prescribe to the credit rating agencies how to rate a credit. We need to do many things with credit rating agencies; the first thing is to remove them completely from banking regulation, but that may be a hard genie to push back into the bottle. But when you’re processing the first subprime mortgage and the credit rating agency has rated this mortgage and come up with a way of doing it, we then define that as a right way to rate a mortgage. The problem is that
the world changes when it’s the 99th percentile, and indeed by giving it a rating, we’re encouraging more of these things to happen so we get to the 99th percentile of the mortgage quickly.

We need to make sure that whatever we do captures the endogeneity and the dynamism of risk. This is one of the fundamental problems.

Another aspect of risk that relates to this issue is complexity. Many of my friends feel that the fundamental problem is in information asymmetry, that bankers know a lot more than their customers. I think that is exactly correct with retail customers. I’m not so sure that applies on the wholesale level. If you are a banker selling an option to General Electric, I’m not sure who knows more in that situation. In my experience, many of these products are investor driven. It is the GE Treasurer who goes to the bank and says, “Sell me a zero cost option,” and the banker says, “Well, you know that it is going to be a risk to have a zero cost option,” and the GE Treasurer says, “I want to buy a zero cost option.” In other words, are you going to sell it to me, or am I going to go to another bank?

So asymmetry of information is an issue, although more of an issue on a retail level and less of an issue at the wholesale level. But it has made people think that we are going to get rid of complexity. One of the things I’ve realized this year is that risk is created by mismatches. Let’s say we have a liability and we have an asset that does not match that liability. We’ve got a risk. If our asset is perfectly matched to our liability, we have much less risk.
What happens if the world is one in which liabilities are complex, but we try and protect people by saying they can only buy simple assets? Have we made them safer? The irony is that those with some of the most complex liabilities are not GE, but individual consumers. We used to sell individual consumers products that for them were simple, but actually were highly complex -- endowment products, life insurance products. And for a whole set of reasons, we don’t sell them those products anymore. We tell them, “The best thing for your 401K is the NASDAQ Index,” as if the NASDAQ Index, a simple product, a cheap product, a transparent product, one in which they can see the price trading every minute of every day completely mismatches with their liabilities. It does not in any way match their lifecycle earnings. We’re not making people safer by selling them these simple products.

Risk is about this mismatch between assets and liabilities, and we must remember that. We must make it the onus of banks and financial firms not to sell instruments where the sole purpose is to confuse the client through their complexity. We certainly must stop that. But let us be aware that liabilities are complex. And if we don’t allow some matching of these complex liabilities, we’re actually creating risks.

There’s a third thing on which I’ve changed my mind. In 1999, when Glass-Steagall was repealed, you could not find a greater insult to an American than to call him or her a liberal. I will bare my soul to you and say I’m a liberal, and as an instinctively liberal person, I used to believe in global regulation. As an instinctively liberal person, I believe in international cooperation, and I believed that global regulation was a good thing. I have learned that there are many problems with that.
The first problem is that banks, as Mervyn King\(^1\) nicely captured in this phrase, may be global in life, but they are local in death. If the taxpayer is the person who ultimately is going to stand behind the bank and taxpayers are local, you’re going to have the onus of regulation at the local level. Europe is a special case. In Europe we are trying to create a European entity. But outside of Europe, around the world, the taxpayer aspect is going to make it hard for global regulators not connected with the taxpayer who stands at the back of banks to be effective.

A second key issue is how are we going to solve the problem of there being an underassessment of risk in the boom, and an over-assessment of risk in the crash. The way to solve that problem is with buffers, probably time-varying buffers, because if we look at the underestimation of risks and the endogeneity of the way risks are created, they are strongly linked to the credit cycle. They create the credit cycle. It’s a cyclical phenomenon.

But there isn’t such a thing as a global cycle. Sometimes it feels like it. Today we must be in the mother of all global recessions. And, yet, almost every country is going through a slightly different phase of the cycle. China is in a different phase of the cycle than America, and America is in a different phase of this cycle than Germany, than Brazil, than Italy, than South Africa; so countercyclical buffers are going to be local rather than global.

I mentioned the politicalization of finance, and one of its aspects is that we have global regulation. We have a very close approximation. My liberal friends

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\(^1\) Governor of the Bank of England.
would like to say that we need more global regulation, a global set of rules, in which the home country regulator would regulate banks internationally. One of the reasons why this fails is because the home country regulator is a national champion of their banks. They want their banks to go abroad and bring profits back to the home country.

So, how do you deal with what in the U.K. I’d call the Iceland problem, and in Europe you might call the London problem: that the local regulator is busy encouraging its banks to be global and international. How do you deal with that? Is Iceland your best protection against the permissiveness of Icelandic banks? If you’re sitting somewhere in India or somewhere in China or somewhere in Italy, is London your best protection against British banks doing something that may be macro-prudentially unstable for you?

Take the problem of Swiss franc mortgages in Hungary. Who is going to best protect the Hungarians from the problem of an excessive inflow of foreign currency mortgages? Is it the Swiss regulator? Do they care? Or is it Hungary?

My conclusion has been that a large part of the locus of regulation must be at the host country; that we must try as much as possible to have international cooperation, information exchange, a discussion about what’s working and what others are doing; other regulators must be fully aware of what’s going on. But at the end of the day, if you want to influence the macro-prudential issues in your country caused by capital flows, caused by bank lending, caused by a host of other factors, you need to have local powers to do that.
Let me end with an interesting observation rather than a lesson. A short while ago there was a week in which I happened to sit in front of some U.S. regulators, some European regulators, and at different times some Asian regulators. One of the things I observed that only hit home to me when I was in Asia having gone through this cycle, was that everyone is now talking the same vocabulary of financial regulation. Everyone is talking about systemic risks, about how we need more macro-prudential regulation; but they all have totally different meanings. In America I found that when people say macro-prudential and systemic, they seem to boil this down largely to one thing -- too big to fail. I’m not even sure too big to fail is a macro-prudential problem. I think you can deal with too big to fail in micro-prudential issues. I think you can deal with too big to fail in issues of competition and micro-prudential regulation.

Macro-prudential problems are problems that relate to the fallacy of composition. We need macro-prudential regulation if and only if the micro-prudential of individual institutions does not deal with all the risks, if there is a systemic risk that has a life beyond the individual regulation of each individual institution. That’s especially the case with the endogeneity of risks and with the credit cycle. That’s why we have macro-prudential regulation.

But one of the things that struck me also at the end of that week was that everyone was talking about systemic risk. Where is there a well thought out framework for what makes systems safe? How can we talk about systemic risk and yet we’re not talking about what makes a system safe? We haven’t translated ourselves into macro-
prudential issues unless we have a well thought out framework for what makes systems safe. Otherwise we’re just doing micro-prudential regulation.

What makes a system safe? Some of you I came across first after some of the work I did on sending the herd off the cliff edge, about the way that common rules, common valuation, common risk management systems, common public ratings, greater reliance on these ratings and commonality, was creating common behavior; and that makes systems unsafe. Systems are safe through diversity. If you write an economic model in which everyone has identical taste and identical behavior, it breaks down; yet, that was the philosophy of regulation up until a couple of years ago.

Basically regulators didn’t trust banks. They thought bankers were very bad at banking, and that’s quite a reasonable assumption. They thought we could replace bankers by having public ratings and use the financial markets -- the marketization of finance. The problem with this is that it destroyed diversity; people using the same ratings, the same valuation, the same risk management, would tend to buy the same things at the same time or sell the same things at the same time. Systemic liquidity requires diversity. Systemic liquidity requires people to be happy to buy something when everyone else is selling it. And that’s why the mantra we need today is not so-called risk sensitivity based on common approaches to value and risk, which just generates homogenous behavior. We need an emphasis on risk capacity.

Let me end with these thoughts. There is in the financial system, the local financial system and the global financial system, a natural degree of heterogeneity. Within this room, there are people at different stages of their earning,
living, saving, retiring, lifecycle. So, there’s a natural degree of heterogeneity. We have to make sure in financial regulation that we are supporting that heterogeneity and not destroying it.

There is one thing I know has many of my economics colleagues scratching their heads. When there were institutions that had long term funding, that were forced to sell assets because their short term risk tool and their short term mark to market valuation told them these assets were now very risky and you should sell risky assets even though they had a capacity to hold them -- they had a capacity to diversify risk through time. They had a capacity to diversify risks through time, a powerful tool of systemic stability, and they weren't allowed to use that. They were unable to use that by their valuation tools, by their risk tools, by their adherence to public rating tools.

When I look around and everyone’s talking about systemic stability, about macro prudential regulation, we can’t go far on that unless we have a frame working of thinking of what makes systems safe. And if we don’t have that, ultimately we’re just redefining micro prudential regulation in a different way. We’re not really doing something different.

The key thing to macro prudential regulation is thinking about risk capacity and making sure in our regulation that those with a capacity for certain types of risk, that we’re not stopping risk going there. There are different types of risk. There’s credit risk, liquidity risk, market risk. Some institutions have capacity for liquidity risk. Some do not. And we need to make sure that our regulation is not getting in the way -- and if anything incentivizes -- risk going to win as a capacity.
You can imagine a financial system with less capital than today, but it’s safer because risks are better allocated to where there’s a capacity for that risk.
Charles Goodhart
London School of Economics Professor Emeritus

Our Chairman said that this had not been a good crisis for economists, and he gave a couple of examples. He did not, however, give the example that I feel is most important, which is that macro economists have used as their basic workhorse tool the DSGE model (dynamic stochastic general equilibrium) which, by construction, assumes away all default and thus assumes away all financial crises. Indeed it assumes away the need for financial intermediaries, banks, and if you go into it properly, assumes away money as well, so that the basis of our macro economic analysis involves an assertion that the present crisis could not happen, not a very good advertisement for our profession.

There has been much discussion that one needs to be more concerned with the governance of our financial intermediaries and the incentives of bankers. I have been much influenced by the papers and books that Lucian Bebchuk has been writing on this particular subject. But I have also been persuaded recently by a powerful paper, by Rene Stulz and his Swiss colleague Rudiger Fahlenbrach, who compared the outcomes for each of the major banks with the way that the CEO and the other major officials had actually been remunerated. For example, they looked to see the share of their existing wealth that the CEO had in his bank. And you might expect that the larger that share, the less risk they would take. Equally they looked to see if there was any relationship between the option value that the CEO had and the amount of loss that the bank made,
on the grounds that the greater the option value, one might therefore expect that the 
CEO would go quite logically for the riskier activity.

What they found, if this stands up, was that there was no relationship 
whatsoever, and indeed that the only significant finding was that the more of their own 
wealth the CEO had tied up in their own bank, the worse loss the bank suffered. And 
this was not just a Dick Fuld effect. If you excluded Dick Fuld as an outlier, it still stood 
up.

The only conclusion that could be drawn from that was the one which Avinash 
Persaud drew, which was simply that the bankers did not understand how risky the 
situation was, and that the problem was a mis-appreciation of risk rather than having 
reflected an incentive to take on more risk.

I would go further than Persaud did, to note that one of the difficulties with 
regulation is that it tends almost by definition to make all the regulated behave in the 
same kind of way. And as he rightly points out, if you make every agent and every 
institution in your system behave in the same kind of way, then the system as a whole 
becomes more fragile rather than less, which is one of the reasons why the hedge 
funds, which are small with very diversified policies, have not represented a systemic 
problem.

Regulation is usually one of the most backward-looking activities. Regulation 
normally has a reactive approach: “We must not let that happen again.” So, regulators 
very, very rarely think about what the implications of their “reforms” for the future 
structure of the financial system are likely to be.
What is actually likely to happen? What are the outcomes going to be? We are going to impose much higher capital requirements on our banks. We are going to restrict the leverage that they can previously undertake, particularly in Europe where there was not a leverage ratio requirement, and we are going to enforce much higher liquidity requirements. So, we are going to require banks to hold a much larger proportion of low yielding public sector debt.

What all of this will mean is that banks are going to face much higher costs of doing business. If they have got to face higher costs and they have got to obtain a return on equity, what is the only response that they can conceivably make? They are going to raise their spread between deposit and loan rates, as indeed they already have, and they will go on doing so.

What is the cost of banking intermediation? The cost of banking intermediation is the spread between the deposit and the loan rate. So, we are going to make banking as an activity a great deal more expensive.

One of the features of the last few decades has been that the growth of loans, the growth of credit, has been much faster than the growth of retail bank deposits. One of the problems has been that, because the rate of growth of credit expansion has been so much higher than the rate of growth of the availability of bank deposits, banks have been induced to undertake measures such as originate to distribute and financing loans via wholesale financial markets through SIVs and elsewhere off balance sheet; they had to get hold of alternative sources of financing.
What is going to happen now is that we will make our banking sector smaller as a proportion of total intermediation; in some part that is the purpose of the exercise. The aim is to make the banking sector smaller, and safer.

If we are going to make the banking sector smaller, that is not going to be a problem for the large corporates. They will simply go to the capital markets. But what is now going to happen to the demand for, or the availability of, credit to households and to SMEs (small and medium enterprises)? Who is going to do it? The banks will not and cannot do enough. The banks will be quite shackled by the regulatory measures. Might that effectively lead us into a low Japanese rate of growth because credit expansion through the system simply will not be there?

One possible alternative is to try and restart securitization. Such securitization was very badly done in the past because it was opaque, it was complex; and it certainly needs to be done in a much more transparent and simpler way in future. But another element of regulation has been to claim that the problem with securitization was that there was not enough ‘skin in the game‘ for the banks, so the banks are now going to be required to hold some significant proportion of securitized products on their own balance sheets. Now, that in turn may -- particularly depending on how it works out -- lead to the banks not being able, or prepared to do that.

What is going to happen to the flow of new credit through the system? Many of the so-called liberalizations of the past have frequently been due to the attempt to make the financial intermediary system sufficiently able to provide the credit that the system was needing. Why, for example, did we get away from the 19th century means
whereby we kept bankers honest? How did we keep bankers honest? We kept bankers honest by unlimited liability.

Now, why was unlimited liability stopped? Unlimited liability was stopped particularly because there were a number of banking crises in the middle of the 19th century in the U.K. When that happened, a large number of people in the crisis, for example the failure of the City of Glasgow Bank and one or two others, lost everything. That experience was traumatic, as you can expect, and that meant that no one was putting their money into the British banks.

Meanwhile, the U.K. felt itself at a competitive loss compared with France and Germany, and in order to try and encourage the development of banking and the cheapening of credit, introduced limited liability as a means of getting sufficient capital and sufficient funding into the banking system, to get sufficient credit flowing through the U.K. to keep the U.K. competitive with the Continent.

What was said at the time was that we would deal with the additional moral hazard of moving from unlimited liability to limited liability by increasing transparency. Every bank had to have an annual audited account. There is a great book by George Rae called *The Country Banker*\(^2\) in which there is a wonderful passage that I can almost remember by heart which runs something like this: “Now that the banks have to have their books annually audited by an independent accountant, there is no possibility whatsoever that the crises that we had in the past can ever occur in future. These horrible crises will now be prevented by the eagle eye of the accountant.” And he goes

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on and on and on and on about the marvels of transparency aligned with market discipline. And it was wonderful, but of course it was totally oversold for a whole series of reasons.

If we regulate banks into a position where they cannot provide the credit to keep our economies growing at the speed that we would want, what is actually going to happen? What will then develop over the next decade or two? We do not know. People (innovators?) may find some way of encouraging, or restarting, the rate of growth of credit through our system. But we will probably not know how such innovations will operate in a downturn, so they may be the source of the next crisis.

Another issue that has been raised is that of home/host regulatory responsibility. Virtually every systemic financial intermediary is a cross-border financial intermediary. All of the really big systemic institutions are now cross-border; and as Avinash Persaud again correctly said, the problem here is that these cross border institutions are international in life, but national in death. And, beware, can you get screwed, as the Americans screwed us in London with Lehman’s. There has never been a more disastrous, chaotic mess than what happened in Lehman’s London after the collapse of Lehman’s U.S.A. It was not only that all the available cash was transmitted the Friday before to the U.S.A., so Lehman’s, when the liquidator came in, was a shell. It was so much of a shell that the accountant who was put in as a liquidator found it difficult to raise the money to pay for the electric lighting for the Lehman building the next week.
Meanwhile, the legal position in Lehman’s London, or Lehman Brothers International Europe to name it properly, was a total unmitigated disaster. It will be the longest, drawn-out attempt to resolve a bankruptcy that the world has ever seen; while over here in the U.S. the future of Lehman’s U.S. broker/dealer was nicely wrapped up.

There is a serious problem in resolving cross-border difficulties because the home regulator will usually, and the home government will always, look after their own, and the problem with the subsidiaries and whatever else is abroad will be ignored. That concern, together with the problems of the Icelandic banks, is going to lead to a shift of control towards the host regulator.

There is a problem here -- essentially a European problem. There are two logical ways of dealing with this cross border resolution issue. Logical way number one is to make all branches that are at all significant into subsidiaries and to treat subsidiaries effectively as a standalone host country-managed, host country-regulated institution, so that the cross-border institution as a whole is just a holding company, and all the control mechanisms then go to the host country.

The problem is that within the eurozone and within the European Union, this runs entirely counter to the single European financial system, let alone that it runs counter to the desire for a globalized financial system more generally. The European Commission and most Europeans will simply not stand for the possibility of having a logical solution in which the host country, in effect, does everything.

The second alternative is to have a global, or in the European case a federal European, resolution in which you have federal crisis resolution; in which you have a
common legal basis, common insolvency laws, common bankruptcy laws, and all that. The problem is that for the world as a whole it is impossible. The problem in the European zone is that although we can move towards common laws or a common legal basis, common insolvency, we have got no federal mechanism for resolving or providing taxpayer funds for that resolution.

The consequence is going to be that neither of the logical ways of reconciling the home/host cross-border issues will be undertaken. What will happen will be a mixture between muddle and incoherence.

Moving to my next general subject, the discussion of what to do is being deflected into turf wars over who does what. That was underlined by the differences between the Senate Bill and the House of Representatives Bill on regulation, which came out in October/November 2009. Moreover, the degree to which we will have self-insurance or countercyclical regulation as a means of dealing with the problems of “too big to fail” and asset price boom/bust remains uncertain. Europeans will adopt a leverage ratio, possibly adjustable by discretion.

One of the difficulties in all this is that the banks will generally win any contest with the regulators. The standard phrase is that “regulation is static, but markets and banks are dynamic.” That makes many think that what is needed is changes to incentives, changes to governance systems, so that banks themselves are induced to be more cautious. But that goes back to the problem that I started with, that Rene Stulz and others have suggested: that in this crisis it was not a governance problem so much as a misappreciation of risk problem. And if it is misappreciation of risk, which is
generally followed by regulators as well as by the regulated, what protection does that give you? I do not really know the answer to that one.

My last point concerns a difference of view that I have with Willem Buiter. Willem has been arguing that you do not need any special liquidity requirements for banks because it is the métier of the Central Bank to provide liquidity, and the Central Bank ought to provide liquidity against whatever it is the commercial banks have to offer.

That is certainly not a widely shared view. The U.K., for example with Adair Turner,3 has just introduced new liquidity regulations. The Basel Committee on Banking Supervision is in the process of trying to think about new liquidity regulations. And Willem’s view is not my own, but the great advantage of Willem is that he always makes you try and think why you take a different view.

There are a number of reasons. One is that the purpose of liquidity in some large part is to buy time. The commercial banks are currently only holding relatively risky, relatively illiquid assets, as they did in the run up to this crisis -- because they more or less denuded themselves of easily saleable public sector debt. The ratio of such holdings went down from about 35 percent of assets in the 1960s to somewhat under 3 percent of total assets recently. The erosion of bank liquidity was just enormous. If you are going to have banks left with these relatively difficult to sell assets, it means that if they try and sell them, you get fire sale contagion, while if they have to go straight to the Central Bank, there is also a problem of stigma. It gives the banks much

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3 Adair Turner is Chairman of the Financial Services Authority (FSA).
longer to be able to adjust their position if they have readily saleable public sector debt than if they have to go to the Central Bank with this illiquid stuff right at the start of problems developing.

Moreover, there is a problem of how does the Central Bank actually value these things? And that was one of the difficulties with TARP, because you did not know how to value these illiquid mortgage-backed securities, partly because you did not know what was going to happen to the housing market. If the Central Bank valued them too highly, you got back into what Willem described as a quasi-fiscal position -- in effect, you were subsidizing the banks from the Central Bank. If it valued them too low and took too much of a haircut, it was not much of a help to the banks. In any case, insofar as the banks were perceived as going to the Central Bank, they could lose out in reputation what they got in the form of additional liquidity from the central bank.
The Global Financial Crisis: Challenges to the Regulatory Path Ahead

The intensification of the global financial crisis, following the bankruptcy of Lehman Brothers in September 2008, made the economic and financial environment very difficult for the world economy, the global financial system and for central banks and financial regulators alike. The fall out of the current global financial crisis could be an epoch-changing one for central banks and financial regulatory systems. It is, therefore, very important that we identify the causes of the current crisis accurately so that we can then find, first, appropriate immediate crisis resolution measures and mechanisms; second, understand the differences among countries on how they are being impacted; and, finally, think of the longer term implications for monetary policy and financial regulatory mechanisms.

What I try to do in this paper is to first give a brief interpretation of what went wrong with the financial system leading up to the crisis, and then to describe some of the shortcomings of the financial regulatory regime itself. I had the privilege of co-chairing the G20 Working Group on financial regulation and supervision. The recommendations of that Group have largely been adopted by the G-20 leaders and, as may be expected, I stand by the views of that Group. I’ll say a little bit about that and then focus on some of the challenges that arise from those recommendations.
What Went Wrong with the Financial System

*Accommodative Monetary Policies*

It is generally agreed that a variety of factors led to the crisis: developments in the subprime sector; excessive leverage in the financial system as a whole in recent years; lax financial regulation and supervision; and global macro imbalances. What I have been especially interested in is the role of lax monetary policy in the advanced economies, particularly in the United States. In examining the waves of capital flows to emerging market economies that have occurred over the last 30 years, it is noteworthy that almost each wave has been preceded by a loosening of monetary policy in the advanced economies -- usually led by the U.S. -- followed by tightening, leading to the reversal of capital flows. In the period after the dotcom crash, lax monetary policy led to excess liquidity and low interest rates worldwide. In previous episodes of such excess liquidity over the last 30 years, it was emerging market economies that suffered from crises. This time it rebounded on the North Atlantic economies.

When there is an extended period of lax monetary policy and low interest rates, there is a natural search for yields, leading to outward capital flows in search of higher yield. This time what happened is that with monetary policies being accommodative for an extended period in the US and other advanced economies, in addition to capital flows going outward in search of yields, the volume of liquidity generated was such that there was also a burst in financial innovation within these countries, so that higher
yields could be obtained within. This search for higher yields within led to many of the irregularities that have been talked about in this conference. The consequence is that it has been the advanced countries of the North Atlantic that have suffered from financial crises this time.

The other issue of note is that this time – in the last ten years really, not just the last five years -- the accommodative monetary policy practiced and increased liquidity did not lead to higher inflation as measured by the Consumer Price Index (CPI), or even higher inflation expectations conventionally measured, which is what the central banks were focused on for guiding monetary policy decision making. It did lead to huge increases in asset prices of different varieties, particularly housing and real estate, not just in the U.S and Europe but in other parts of the world as well (See World Bank, 2010).

Central Banks felt no pressure to tighten until very late because they were not observing increases in the CPI, and being generally focused on the CPI, they avoided reacting to asset price growth, and even to supply induced commodity price increases. To my mind, this is a major issue for central banks, financial regulators and academics to discuss: In what circumstances should monetary policy take cognizance of variations in asset prices and in commodity prices and how? In the presence of low CPI inflation, central banks typically come under significant public and market pressure not to raise rates.

During the same period, the U.S. household savings rate came down to close to zero in 2005-2007 from around 7 percent in the early 1990s. Aggregate demand in the
U.S. clearly exceeded aggregate domestic output, leading to the large, persistent and increasing current account deficits along with high fiscal deficits as well. US consumer demand was responding to low domestic interest rates, but also to low goods prices emanating from the Chinese export policy orientation, aided and abetted by their rigid exchange rate policy.

In understanding the effect of alleged Chinese mercantilist policies on the emergence of the large US current account deficits and low savings rates, one interesting issue is that, faced with all the same conditions and policies as far as China is concerned, the Euro area, as a whole, did not exhibit similar large current account deficits; in fact it was mostly in surplus. So it is difficult to attribute the existence of the persistent U.S. current account deficits primarily to Chinese policies, though they may have contributed to it. Thus US macroeconomic developments should be better understood by examining that country’s own internal policies that might have led to the emergence of large imbalances.

Coming back to the issue of accommodative monetary policy, over an extended period, short-term interest rates were being determined by monetary policy; however, it was low long-term interest rates that affected the boom in real estate prices. Thus it has been argued by some that accommodative monetary policy cannot be held responsible for the boom in real estate and other asset prices. The short-term interest rates caused private capital to flow out in search of yields; but these private capital outflows could not be absorbed in the recipient countries and hence came back as official capital inflows from the central banks, particularly from the Chinese and other
Asian central banks, but also from the Middle Eastern oil-producing countries. Official reserves were invested directly in US government treasuries and in the securities of the government-sponsored agencies, like Fannie Mae and Freddie Mac. This increased the demand for these securities and thus reduced long-term interest rates. This was a vicious circle: low interest rates fuelled demand for consumer goods, contributing to greater demand for Chinese consumer goods and hence Chinese exports and surpluses; the back flow of official reserves dampened long term interest rates contributing to the increase in housing and other asset prices, and hence household wealth, which itself resulted in lower household savings and higher consumption... and so on.

Why has US monetary policy behaved the way it has over the past couple of decades? In observing cycles in monetary policy, there appears to be much greater willingness in the United States to loosen monetary policy in dealing with downturns. Monetary policy response in the US appears to be faster than in other countries. Raghuram Rajan often makes an interesting structural point on this issue: the greater willingness of the US to act in downturns can perhaps be attributed to the fact that it does not have the same social and economic automatic stabilizers that the Europeans have. So, the Europeans do not have to act as fast and as deep in terms of loosening monetary policy to deal with downturns because they have automatic stabilizers, which lessen social distress even in the face of adversity. I believe that this is an important point that deserves much greater analysis and discussion for looking at what to do in the future in the interest of macroeconomic and financial stability.
Increased Credibility of Central Banks

It may be ironic that the success of central banks in the last 10 or 15 years in achieving increased credibility in monetary policy, greater transparency, and greater predictability could itself have led to mispricing of risk, or under-pricing of risk, in capital and financial markets. The market had, perhaps, begun to repose too much confidence in the ability of central banks to maintain low inflation and low interest rates along with high growth amid financial stability, as was observed throughout the Great Moderation. In some sense the private sector was really outsourcing risk management to the central bankers, and central bankers were proud to take that outsourcing! They tended to say, “Yes, we know what’s going to happen, therefore we are giving you guidance also on what’s going to happen.” And everyone believed that the central banks knew what they were doing. So, it is perhaps that very success, or perceived success, of central banks in achieving greater credibility in monetary policy-making that contributed to the generic mispricing of risk that then led to some of these problems!

Thus, it is the combined interaction of lax monetary policy, choice of exchange rate regime among some countries, lax regulation, belief in efficient markets and, as mentioned by Willem Buiter, the cognitive capture of regulators that contributed to the various developments that ended up as the global financial crisis. The last issue is itself a very important one that deserves much greater attention. The prevailing academic orthodoxy with respect to the theories of efficient markets, rational expectations, and inflation targeting monetary policy constrained both central banks and financial
regulators from adopting activist roles in curbing some of the excesses that prevailed prior to the outbreak of the crisis.

Speaking as a regulator who was not captured (the Reserve Bank of India, which is a central bank and financial regulator combined) I can tell you that our life was not at all easy! We were consistently excoriated over the period of the boom years by academia, the financial press, bankers, capital market participants and even segments of the government, for not practicing the kinds of policies followed by most central banks and light touch financial regulators elsewhere. It was very, very difficult. Going against prevailing conventional academic wisdom is not for the faint hearted!

Financial Regulation

As a consequence of the global financial crisis there is ongoing intense discussion on the shortcomings of financial regulation and supervision. There have been a large number of authoritative reports on the issue, some of whose authors participated in this conference. These include the de Larosière Report for the European Commission (2009); the Group of 30 Report (2009); the Geneva Report (2009); the Turner Review (2009) of the UK Financial Services Authority; the various IMF Reports; the G20 Report (2009); the U.S. Treasury Report (2009); the U.K. Treasury Report (2009); and the Stiglitz Report for the UN (2009), among others.

The report that I have found of greatest interest personally is Adair Turner’s Review, including all the data that have been compiled in that one. Among the more
interesting features for academic discussion is that Lord Turner has actually questioned
very starkly the core assumptions underlying financial regulation of recent times. As
stated by him, the core assumptions that need to be questioned are:

- Market prices are good indicators of economic value.
- Securitized credit has improved allocative efficiency of markets leading
to financial stability.
- Risk analysis can be done through mathematical models.
- Market discipline can be used to curb harmful risk taking.
- Financial innovation provides value addition.

He feels that all these five assumptions need to be questioned closely. These
are indeed the right questions to be asked even though they raise doubts about some
of the core beliefs underlying much of monetary and financial regulatory policies of the
recent period. Thus a lot of reputational capital is at stake.

There is a long history of financial crises, which have been dealt with earlier by
Charles Kindlberger (Kindleberger and Aliber, 2009) and documented in detail more
recently by Carmen Reinhart and Ken Rogoff (2009): a common feature of their
analyses is that the crises have all resulted from the buildup of excessive leverage. Of
course, at any given time it is difficult to define, ex ante, what is excessive and what is
not excessive, but ex post certainly, almost all crises have resulted from excessive
leverage. The question is, if this has been so obvious why are regulators not able to see
such excessive leverage as it builds up each time?
Growth in Securitization

Among the notable developments in the last decade was the explosive growth in trading of securitized instruments. It was assumed that securitization takes risk off bank balance sheets, which is then diversified by selling these securities to dispersed investors. What actually happened was that it got concentrated back into the financial sector, and that is what caused the problem (Mohan, 2007). If risk had actually been dispersed, that would clearly have been in the interest of overall financial efficiency and stability. Instead, it all came back to the financial sector. This was documented in detail in the Turner Review in terms of the huge increase in the share of intra financial sector debt as opposed to real sector debt during the 5 years or so preceding the crisis.

The second issue related to securitization as it emerged is that banks are supposed to do maturity transformation. That is the purpose of financial intermediaries, particularly banks; they are expected to do maturity transformation as part of their normal functions. The difference -- particularly during the last five or ten years -- is that through securitization banks believed that they had turned their illiquid assets into tradable liquid securities, which could then be funded safely through increasingly short term liabilities, including overnight repos. Because their original illiquid assets were notionally turned into liquid securities, they had little incentive to monitor closely the credit quality of the underlying assets, and hence they did not need to continuously monitor their risk over time. With the unfolding of the subprime crisis, the liquidity of the securitized instruments disappeared overnight and the mispricing of
risk became apparent. Many of the ills that emerged in the US housing mortgage market showed that increasingly little attention was paid to actual risk assessment in the origination of mortgages, both subprime and otherwise, with the expectation of a continuing trend of increasing housing prices.

The complexity and magnitude of intra financial sector transactions exploded over time and the financial sector was increasingly just serving itself – financial institutions were simply taking in each other’s washing -- until everything exploded, and systemic risk therefore increased.

Regulatory Framework

With regard to what should be done to improve the regulatory framework, my remarks mostly reflect the views expressed in the Report of the G20 Working Group. The G20 leaders have endorsed most of that Group’s recommendations in their subsequent meetings in London and Pittsburgh, and a great deal of work has been going on among the international standard setters such as the Financial Stability Board (FSB) and the Basel Committee on Banking Supervision (BCBS), among others, to implement those recommendations. The recommendations are also reflected to some extent in the reports on financial regulation brought out by the U.S. Treasury and the U.K. Treasury and in some current discussions going on in their respective legislatures. As may be expected, resolution on many issues is still some distance away.
First, overall financial regulation has to be strengthened; but an important point is that if this is done, all systemically important financial institutions must be regulated. If banks are regulated much more strongly, that will inevitably lead to regulatory arbitrage and much of the financial sector activity would tend to go to other, more lightly regulated financial institutions. I think that view, put forward earlier by Charles Goodhart, is absolutely correct, which is why the G20 Working Group stressed the need to regulate all systemically financial institutions. The question again is: how much regulation; how do we know what is systemically important; and how do we make sure that everything does get regulated, and in what form? Similarly, there is a great degree of continuing discussion on the regulation of large complex financial institutions. We can be sure that they will continue to have a global presence. How will they be better regulated across borders? How will we find better global resolution regimes that work in practice?

Second, there is now general agreement on the need for higher capital adequacy requirements for banks. There is, however, also a need for less complexity -- unlike in Basel II -- as the new guidelines are framed. The imposition of higher Tier I requirements is likely to be one component of the new regime, along with new requirements for countercyclical buffering, and countercyclical provisioning.

If there are higher capital requirements, capital buffering of different kinds, countercyclical provisioning, and the like, they will imply the emergence of lower potential returns to equity in the regulated firms in the financial sector. This, I believe, is a very important issue that needs further work. What will be the impact on future
financial sector expansion? How will financial intermediation be affected? Will the cost of financing go up?

We need to ensure that, in the future, the financial sector serves the cause of economic growth in the real sector, and not of itself; and that when we apply more regulation, we need to make sure that we strengthen the financial sector for better accomplishing its core function of intermediating savings to the highest productivity users for promoting growth in the real economy. We also need to remember that financial markets will remain global and financial innovation will continue to occur. It should not be stifled. The issue that is very difficult for regulators to resolve is that whereas there is a clear need for restraining unproductive financial innovation, how do they know ex ante what is productive and what is unproductive? It is easy to agree on this issue in principle, but how can it be dealt with in practice?

Third, in financial market activity, we need to reduce counterparty risk and increase exchange-traded derivatives. But we still need to recognize that the reason OTC markets exist is because there is a need for customization of risk. OTC derivatives cannot just be eliminated in favor of exchange-traded ones, but we do need to find some kind of greater safety in OTC derivates.

Why is there High Compensation in the Financial Sector?

Fourth, there is a need for further questioning of the widespread discussion around compensation in the financial sector: is the compensation issue really a red herring? Is it
not the excess profitability of financial institutions that has led to the very high compensation levels of their employees along with the high returns to shareholders? If a firm has such high returns, they have to go somewhere: they are either distributed to shareholders, or to the employees, or a combination of both, which is what has been happening; but it is then difficult to restrict compensation levels as is being argued currently. Much of the discussion has veered off into the minutiae of compensation practices related to the various forms in which compensation is given. To my mind the real question relates to the high profitability observed in recent years in segments of the financial sector.

The question really is: Is there a lack of competition in the financial sector, and if so why? Are there some regulatory provisions that restrain competition or are there some entry barriers inherent in the structure of the financial industry? If there is no lack of competition, why do these profits not get competed down? And again, if the answer is indeed that there is a lack of competition, what can be done? What kind of competition policy measures would be relevant and applicable to the financial sector? Addressing these questions is probably more useful for dealing with the compensation issue rather than dealing directly with compensation patterns and levels.

Fifth, the regulatory regimes have to be more effective over the cycle. There is general agreement on the need for putting in place a regime of macro prudential regulation and financial stability oversight. The issue under discussion in different jurisdictions is: Who will do it? Would it be a council of regulators, the central bank or the treasury? I have perhaps a biased view, having been in a central bank, though I have
also worked in the treasury! I do not believe that effective macro prudential oversight or financial stability oversight can be done without the central bank being at the helm of this activity. Any kind of group can be set up depending on the country’s overall regulatory set up -- including the treasury and the heads of the other regulators. The central bank is the lender of last resort; it is also the only agency that has an overall view of the economy along with exceptional stability in terms of staffing and continuity in thinking, relative to most treasuries; and it should have its ear to the ground with respect to evolving developments in all financial markets, if it is doing its job well as a monetary authority. Given different countries’ large variations in institutional legacies, traditions and systems, no one size can fit all; but at the same time, I think that the central bank does need to play a lead role as far as financial stability is concerned within any kind of arrangement that is deemed fit in a particular country.

Emerging Challenges

In participating in the G20 Working Group, I found it very interesting how harmoniously this disparate Group worked. All the G20 countries were represented in this group, along with all the standard setters, i.e. the (then) FSB (Financial Stability Board), the BCBS (Basel Committee on Banking Supervision), the IAIS (the International Association of Insurance Supervisors), the IOSCO (International Organization of Securities Commissioners), and the IASB (the International Accounting Standards Board. It was astounding that we could produce a report within two to two and a half months with only one face-to-face meeting and about ten conference calls, and it was
done by a remarkable degree of consensus. There was very little disagreement despite the contentious issues at hand. There is nothing like a good crisis to concentrate the collective mind! I think the reason is that the principles are mostly agreed upon. The real questions are arising now, as the standard setters and national regulators are getting down to the task of implementing this wide consensus which has also been articulated by the leaders in the subsequent official G20 pronouncements. Those are the questions I will outline now.

Consequences of Tightened Financial Regulation

Everyone seems to agree that there is a need to have increased levels of regulatory capital. The problem that I have already put forward is that this does imply lower profitability in the financial sector. That in itself may not be such a bad idea for the maintenance of financial stability, but there is still a need for greater understanding of its implications for the financial sector as a whole. Would more stringent capital requirements imply a slower pace of credit intermediation and overall lower economic growth? Or does it just mean that there will be less intra financial sector activity with negligible implications for the real economy? There is clearly a great need for working out the overall economic effects of the current recommendations related to the proposed regulatory overhaul.

In a paper written in May 2009 (Mohan, 2009), I had speculated that as soon as any kind of normalcy returns to the financial markets, financial sector institutions, with
their immense power in the political sphere, will lobby intensively to scuttle many of
the regulatory initiatives that have been set in motion internationally. That is exactly
what is happening. A semblance of normalcy has returned much faster than anyone
expected as far as the markets are concerned, if not in the banks themselves. One can
see that, in the process, in the U.S. Congress and in other legislatures elsewhere a good
deal of the consensus achieved internationally is in danger of not being followed on
adequately.

Second, on the issue of implementation of countercyclical macro-prudential
regulation, the provision of capital buffers, provisioning and the like, how will
regulators know when the cycle is turning in either direction? This issue will assume
even greater importance in emerging market economies where data availability is still
inadequate. Moreover, although there is an overarching global business cycle, the
timing of these cycles can vary significantly between different economic jurisdictions.
So, how will regulators actually implement countercyclical prudential regulation,
macro-prudential or otherwise?

Third, in the identification of macro-prudential risks -- what is systemic and
what is not? It is easy to say, “Look for systemic risk. Curb it.” But what is systemic?
How do we know what is systemic? How could we have known ex ante that the
subprime mortgage market – one small segment of the overall housing market – could
potentially be a systemic risk? What prior regulatory actions could have been effective?
Difficulties in Pro Active Countercyclical Financial Regulation

Fourth, there is the issue that everyone knew about. The existence of global imbalances was debated at length, including by the IMF in international fora. But no effective action could be taken. The asset price bubble, the mortgage explosion, and unprecedented expansion in derivative trading were obvious to all: central banks, regulators, governments, financial institutions and other market participants. That was public information. There was no lack of transparency about it in terms of the way that U.S. housing prices, U.K. housing prices, and Spanish housing prices were going up. Everyone knew about it, but nothing was done.

But there is an additional question -- what could have been done? I can give an illustration from our experience in the Reserve Bank of India. We observed some similar developments in India in 2005 – 2007. We also felt (a la Greenspan) that if we took strong monetary policy action in response we could kill the economy. So we acted from the regulatory side and increased certain prudential measures to tighten bank credit to housing finance, to real estate and some other “sensitive” sectors. We took this action ex ante with imperfect information in a forward-looking fashion. We also knew what we didn’t know. For example, in a country like India which is urbanizing and growing very fast, housing finance can be expected to exhibit rapid growth, higher than other segments of credit growth. People are becoming better off; they are acquiring houses and associated consumer durables for the first time; so housing and real estate finance can be expected to grow rapidly. It is difficult to know what may be the optimal rate of
credit growth in some of these sectors. All that one knows is that rapid growth will take place. The question is how fast. Consequently prudential decisions have to be taken with very imperfect information. Central bankers and prudential regulators and supervisors then have to take decisions based largely on judgments about the needed prudential actions that are in the interest of maintaining sustained economic growth with financial stability. That is exactly what we did and raised risk weights and provisioning requirements for dampening growth in some of these fast growing sectors.

Fifth, a similar issue arises with regard to regulation of all systemically important financial institutions. How does one know which financial institution is systemic? One of the problems is that individually one institution may not be systemically important, but collectively a particular class of institutions may be so. Furthermore, ex ante they may not be systemically important, while they may become systemically important ex post. So, again, it’s not easy to actually regulate all systemically important financial institutions even though there is wide agreement on this issue.

The same issue arises with the regulation of financial innovations. The Turner Review, for example, questions quite strongly the social value of financial innovations. The question once again is: how does one know what is productive and what is not? What you don’t want to do is to stifle “useful” financial innovation while acting on this issue.
Monetary Policy and Volatile Capital Flows

Finally, one issue that I’ve been working on much more intensively is the issue of cross-border capital flows. If one examines recent history, huge cross-border flows have almost always preceded financial crises as they have emerged in emerging market economies. Actually, the increase in cross-border flows among advanced countries 2004 to 2007 was the highest ever, and a huge multiple of anything that went to emerging market economies. Again, the question is why did this happen? As a proportion of the world’s advanced country GDP, it was far greater than anything that had ever been seen. To my mind, why it happened has also not been analyzed enough, because it does seem to be one of the reasons for the kind of crisis that took place. How does monetary policy and financial regulation react to such large volatility in cross-border capital flows?

References


Committee on Global Financial System (2009), Capital Flows and Emerging Market Economies
(Chairman: Rakesh Mohan), CGFS Papers No 33, Bank for International Settlement.

(Chairman: Jacques de Larosiere), Brussels.

http://ec.europa.eu/internal_market/finances/committees/index_en.htm#delarosierereport

(http://www.cepr.org/pubs/books/CEPR/booklist.asp?cvno=P197)


www.g20.org/Documents/g20_wg1_010409.pdf


(http://www.group30.org/pubs/reformreport.pdf)


(http://www.fsa.gov.uk/pubs/other/turner_review.pdf)


(http://www.hm-treasury.gov.uk/d/reforming_financial_markets080709.pdf)


Washington DC: US Department of the Treasury.

(http://www.financialstability.gov/docs/regs/FinalReport_web.pdf)


http://www.growthcommission.org/index.php?option=com_content&task=view&id=115&Itemid=213
Wasting the Crisis

We are on the verge of “wasting the crisis.” In both Europe and the US, reform of financial regulation is either taking the wrong directions or stalled. Politicians are picking the easy targets that they believe will appease public opinion or caving in to well-connected, well-financed lobbying by the resurgent big banks.

That is not for want of good analysis by academics and others. We understand what happened, why it happened, and what could lessen the risk of a future crisis of this magnitude. The best of the regulators, as well as the Financial Stability Board, have some agreement on the appropriate solutions; but they are not calling the shots. And the national regulators are often part of the problem rather than the solution. They are reluctant to collaborate with each other and with supranational institutions, partly for fear of losing some of their authority, partly because they too face strong lobbies and are subject to regulatory capture.

Let us start where our political leaders started – and, mainly, seem to be ending: tax havens, bonuses, regulating hedge funds, private equity, and credit rating agencies. We then consider the banks themselves, macro-prudential regulation, and regulating the markets. We conclude with an important set of cross-border issues that hinder progress in many of these areas.

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Tax havens had nothing to do with the crisis, nor will they with preventing or mitigating future crises; but they were easy, convenient targets. And they are disappearing. That is good, but we might wonder why they were not shut down earlier, since the major countries always had the instruments of pressure that they have finally used.

The quick return of big bonuses is offensive. So was the overall widening of income differentials that we saw in the two decades preceding the crisis, which provoked neither outrage nor intervention. Anyone who did criticise greed, whether earlier or recently, should not be surprised that there is no shame. Calls for self-restraint or new, higher standards of behavior are unrealistic. The right policy response to deal with extreme inequality is to raise taxes on very high incomes and to tax wealth.

Bonuses may have encouraged ‘short-termism’, but there is little evidence for this. In any case, compensation caps will be evaded as the big financial firms compete for stars who, they believe, contribute much more to profits than whatever bonuses they need to offer them. Even if enforced, new compensation rules will not significantly curb dangerous risk-taking, nor instill long-term incentives. After all, most employees of Bear Stearns and Lehman Brothers had much of their personal wealth invested in their companies’ shares – and lost it. The issue here is institutional culture: conservative and risk averse or aggressive and gambling. There should be room for the latter in a dynamic capitalist economy so long as such firms are allowed to fail when the gambles go wrong. The difficulty is to ensure that market distortions (excessive emphasis on
quarterly results, etc.) do not drive out the sound, conservative players who take a long-term perspective. The problem has grown as stockholder discipline has weakened.

The draft Alternative Investment Funds Directive proposed by the European Commission without external consultations and embraced by indignant parliamentarians and some heads of government is another misplaced, irrelevant effort. There is no evidence that hedge funds or private equity had any role in causing the crisis, although hedge fund deleveraging has been a part of the process through which the financial crisis has hit both asset prices and the real economy. Still, the funds were not as highly leveraged as the big banks, and they played no part in the emission of toxic securities, and relatively little part in their absorption. These institutions require more regulatory oversight only insofar as they behave like banks and do maturity transformation with unduly high degrees of leverage.

The European Commission and Parliament rushed to regulate the credit rating agencies, and now the US Congress may take similar measures. But this is precisely the wrong way to go. Rather than registration, surveillance, and monitoring their models, which will have no effect whatsoever, the right policy would be to remove the agencies from the regulatory system. That is, eliminate the “regulatory license” that gives the ratings a direct role in limiting investment choices by asset managers and banks. The regulators have in effect outsourced to the agencies their own responsibilities for evaluating the riskiness of institutions’ portfolios, while eliminating the institutions’ responsibilities for due diligence. And official “recognition” of a few agencies is one reason for the highly oligopolistic structure of the industry and its dysfunctional
incentives, which in turn underlie some of the shocking practices that were an
important element in the creation and sale of toxic assets. The SEC and some
congressmen have raised the fundamental issues, but it seems unlikely that they will
take effective action. In Europe, policy-makers underestimate the importance of the
regulatory license.

The banking sector was already overly concentrated before the crisis. It is now
more so, and there will be many more failures of small and medium-size banks, with
resulting further ‘consolidation’. The remaining big banks have even more power. Far
from being humbled by their egregious errors, they are vigorously – and successfully –
-opposing reforms that might reduce their profitability or their capacity to “innovate,”
for which read “generate new kinds of overly complex, opaque, highly profitable
financial instruments and activities.” The banks are not just too big to fail; they are too
big and too complex to regulate, even to manage effectively, or to control risk. But only
Neelie Kroes\(^5\) has any apparent desire to break them up because they are oligopolists –
the UK Competition Commission and Financial Services Authority (FSA) and the US
Department of Justice and financial regulators have no appetite for this, nor do finance
ministries.

The Governor of the Bank of England has proposed separating deposit-taking
institutions – more broadly, commercial banking – from investment banking, with its
risky proprietary trading side.\(^6\) In the US, this would in effect be a return to the Glass-
Steagall Act of 1933, which was progressively eroded from the early 1980s and finally

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\(^5\) European Commissioner for Competition, 2004-2010.
replaced with the Gramm-Leach-Bliley Act in 1999. Paul Volcker has advocated this. No major country could alone go back to Glass-Steagall, because the competitive position of its banks would be compromised and they would move elsewhere. Since there is little support for the King-Volcker proposals in either country, nor in other financial centers, it will not happen. And there are good reasons why at least some non-financial firms and individuals prefer dealing with global, full-service banks for all their requirements. There may also be some economies of scope and synergies across the activities of the big international banks. That does not mean they need be as big and dominant as they are.

More fundamentally, perhaps, the fault revealed by the crisis was not speculative proprietary trading by deposit-taking institutions. It was off-balance-sheet activities that involved long-term investments in high-rated securities that no one understood and should not have been highly rated, funded mainly in the markets, with short-term money; or excessive exposure to overvalued real estate, again sometimes funded by issuing short-term paper; or heavy exposure to CDS contracts, concentrated on the wrong side. The institutions that failed most spectacularly and most dangerously were Northern Rock, Lehman Brothers, Bear Stearns, AIG – which of these would have been affected materially by restrictions of the Glass-Steagall type?

There has been some serious discussion among officials of setting capital ratios that rise with bank size or simply taxing banks on the basis of their assets. This is feasible and might be effective, but ministers and legislators have so far shown little interest. A ‘Tobin tax’ on financial transactions would doubtless reduce their volume – if
it were enforceable, which is highly unlikely. But that would have little effect on size or concentration in the financial sector. Moreover, at any realistic rate it would not curb speculation; and although financial markets’ transaction taxes might drive out volatility-inducing "noise trading,” those analyses suggest they would raise rather than lower volatility. This is a bad idea whose time has fortunately not come.

The bottom line: nothing much will be done about the banks and their modus operandi, despite – rather, because of – their highly vocal concern about "overregulation” and the supposed proliferation of national-level constraints on their activities. The US Treasury’s proposal for a new agency to protect the consumers of financial services is perceived by the banks as a threat sufficiently serious to warrant strong opposition, which may well gut it, even if the new agency is created. Some initiatives – including public ownership – and the deleveraging process itself will for a time reduce the degree of globalisation of the big banks, but probably not enough to ease the severe problems of cross-border regulation and crisis resolution.

The only potentially effective policy instrument here is the excellent “living will” proposal that big banks be required to elaborate detailed, pre-packaged resolution procedures that would apply when regulators judged that the bank had gone beyond the stage where prompt corrective action could save it. These would be agreed ex ante with all the bank’s regulators, which would require some degree of ex ante acceptance of burden sharing across regulatory jurisdictions. But this would not be in the form of

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burden-sharing rules that would apply uniformly, regardless of the particular circumstances of the institution. Many policy-makers who have opposed such rules therefore seem keen on the living will. It would have the additional, important benefit of forcing the banks to unwind some of the most complex features of their organizational structures – the many and interlocking subsidiaries and branches whose primary purpose is often tax avoidance and whose secondary effect is to hinder effective control and risk management by the center.

We know what to do for macro-prudential regulation, an essential new component of a reformed regulatory regime: some combination of countercyclical capital ratios, liquidity ratios, leverage ratios, and perhaps mortgage loan-to-value ratios. The banks will complain that this is all too complex, too constraining, so the outcome is likely to be a relatively weak set of requirements, with the ratios set too low to make much difference. There is one important consequence of such macro-prudential regulation, however, that has been somewhat neglected. Although business cycles may be more highly correlated across countries now than in the past, they are still to a considerable extent national, as are some asset price bubbles (e.g., within the eurozone, we saw housing price bubbles in Ireland and Spain while German housing prices actually fell). That implies that the parameters of countercyclical macro-prudential regulation have to be set at a national level, which in turn implies that the host regulator rules. That means that branches of global banks would be treated differently in different countries – an unsustainable position. Hence there will be pressure on cross-border banks to go from branches to subsidiaries.
New regulation of securities markets is likely to be weak. It is widely recognised that the US Commodity Futures Modernization Act of 2000, which precluded any regulation in this area, was a major mistake, but proposed changes are minor. The pressure to move some over-the-counter transactions to central counterparties has finally had some effect, but just as the banks have dragged their heels as long as possible before conceding this, so they will fight to retain opacity for the most lucrative transactions. They maintain that many of these instruments are so tailored to customer requirements that their specificity makes it impossible even to put them through central counterparties, much less to permit exchange trading. But it is only exchange trading that could really provide the transparency necessary for effective regulatory oversight and control. That transparency, and the limits on specificity, the commoditization of these instruments, would make them much less profitable. If some specificity is lost, so much the better – it is the complexity and lack of transparency that has turned out to be dangerous.

It is not surprising that the lobbying effort here is intense and likely to be decisive. And some segments of the non-financial sector have been lobbying too, with effect, by claiming that even routing swaps through a central counterparty would require them to put up large amounts of collateral. In any case, their interest rate and foreign exchange derivatives are not particularly dangerous – but credit default swaps (CDS) are, not so much in their original form as insurance, but in the way the market morphed far beyond this role.
It is even more unlikely, however, that there will be any move to enforce exchange trading for CDS contracts. Nor will there be any attempt to ban “naked” credit default swap (CDS) contracts, where the buyer is not insuring against credit risk on a holding of an underlying bond, but rather is simply taking a position on which way the market’s perception of the riskiness of a firm or sovereign will move. These instruments have been a potent source of destabilizing speculation, even market manipulation. There is no justification for these instruments as beneficial hedges, and since the cost of funds for issuers must stay above the CDS price, the market can be a key link in a vicious circle that brings an institution down. That major weakness in our financial structure seems likely to survive, simply because the market is so profitable for a few big banks.

Finally, the problems of cross-border competition and obstacles to cooperation are formidable. Competition in the labor market makes it difficult for any national regulator to enforce really hard-hitting curbs on potentially harmful compensation practices. Competition among financial centers leads to regulatory arbitrage and unwillingness of national regulators to disadvantage their own large cross-border institutions. Memoranda of (mis)understanding among regulators, with no binding force and bureaucratic obstacles to quick action, are useless when crises come. Again, the only feasible and effective way of organizing resolution of a large, complex financial institution in distress is the “living will” proposal. Some politicians, including the British Chancellor of the Exchequer, seem keen on it. But we need broad agreement among the major countries. That could be well worth the considerable effort it would require.
Overall, then, the perception that we have avoided catastrophe has already weakened the momentum for serious reforms, and the obstacles are formidable. We know the lessons of the crisis but may be unable to apply them. That would be a huge missed opportunity.
Rehabilitating the Unloved Dollar Standard

The world dollar standard dominates the financial underpinnings of most international trade—even trade not directly involving the United States. The dollar standard is an extremely robust institution that, amazingly, nobody likes. Foreigners don’t like it because they consider it an exorbitant privilege of the United States. Americans don’t like it because they can’t control their own exchange rate. Nevertheless, the dollar standard survives despite major worldwide crises precipitated by errant American monetary policies: in 1970–72 with the forced breakdown of the original Bretton Woods dollar parities, and in the recent global credit crisis cause by an overly easy Federal Reserve policy in 2003-04. Nobody may love the dollar standard, but it is too valuable to lose and too difficult to replace.

For this session, consider Ernesto Zedillo’s neat title, “Financial Globalization: Culprit, Survivor, or Casualty of the Great Crisis?” Financial globalization is necessary for multilateral trade. Without financial globalization, all trade would be close to bilateral barter and very inefficient. Even so, why should the dollar standard be the basis for continued financial globalization?

The dollar plays two distinct roles as international money. At the microeconomic level, it facilitates multilateral international exchange. At the macroeconomic level, it naturally serves as a monetary anchor for the price levels and exchange rates of many other countries. The dollar has performed, and still performs,
very well as a facilitator, but it has become shaky as an anchor—and that is the main contradiction in the current dollar-based system. However, there need be no contradiction if American monetary and financial policies are suitably internationalized. A more outward-looking U.S. monetary policy is not only in America’s own best interest but also in that of the rest of the world.

The Robust Facilitator

In a world of N countries with N currencies, markets if not governments will inevitably select one to be the central money—as Robert Mundell (1968) taught us long ago. This Nth currency will then intermediate the clearing of international payments among banks, exporters will use it for invoicing most commodity trade. The other N-1 governments will choose it for intervening (if they intervene at all) to target their exchange rates and for holding most of their official exchange reserves. Although this naturally asymmetrical monetary system is politically unpopular, the efficiency gains are very high.

To see this efficiency gain, consider a world of 150 countries and 150 currencies but without one central money. To preserve monetary symmetry, you would need 11,175 bilateral foreign exchange markets for trading goods and services. However, if one money—the Nth—is mutually selected to be the common intermediary currency among banks, then only 149 markets need to be actively traded. Once these 149 dollar exchange rates are established, then private triangular arbitrage will be sufficient to establish the remaining 11,175 cross rates within each currency pair. With little or no
direct trading between minor currencies, many of these bilateral cross rates will be just notional—but still useful to exporters or importers in comparing costs for shipping goods across countries.

This economy of markets is particularly important for forward exchange or options markets, where trading is naturally thin. On a bilateral basis, such markets would be hopelessly illiquid. Brokers would have to wait uncomfortably long between matching buy and sell orders. Their resulting exposure to foreign exchange risk would generate much higher transactions costs (in the form of widened bid-ask spreads) compared to forward transacting against one central money.

Consequently, having one central money to facilitate international exchange is a natural monopoly. More than one intermediary currency would increase the number of foreign exchange markets that must be actively traded. Thus a second intermediary currency could only be justified if there was a sub group of countries, perhaps contiguous with each other, among which trade was particularly intense—so liquidity in these markets would not be a problem. Otherwise, just one national money will naturally be chosen as the intermediary currency for minimizing (private) interbank trading costs worldwide.

But which one? The country must be of substantial size so that the extent of its own foreign trade transacting is large and intense [Krugman 1984]. Beyond that however, the choice of the intermediary currency is largely an historical accident. After World War II, the U.S. dollar emerged as the only major currency unscathed by the war in the sense of having full currency convertibility on both current and capital accounts
(no exchange controls). The United States had a relatively stable domestic level with a minimum of price controls. In 1945, the other industrial countries had varying degrees of open and repressed domestic inflation coupled with strict exchange controls.

Since 1945, therefore, banks everywhere have traded against the dollar as the main intermediary currency to service the spot and forward foreign exchange needs of their nonbank customers. Dollar-based interbank markets are relatively deep and liquid at every term to maturity, greatly reducing transactions costs. Empirical evidence shows that the dollar is on one side or the other of 80 to 90 percent of all foreign exchange transactions. But dollar-based foreign exchange trading doesn’t have to be centered in New York: much of it has migrated to London, with smaller “offshore” interbank markets in places like Singapore and Hong Kong.

Since 1999, the euro has played a facilitating role for smaller European countries to the east of the euro area—and for a few former European colonies in Africa and elsewhere. But the dollar is much more important for trade among third countries—such as when China trades with Brazil, or anywhere within Asia or Latin America. Thus between 60 and 70 percent of the world’s official exchange reserves remain in dollars despite the monetary travails of the center country. The encroachment of the euro in international transacting has been slow. That said, one area of greater euro encroachment is in international bond issues—where the dollar and euro seem to be about equally important as the currency of denomination.

What about foreign trade in goods and services? It’s difficult to find up-to-date information on currencies used to invoice foreign trade on a broad basis. But the Bank
of Korea’s website shows about 84 percent of Korea’s exports and 83 percent of its imports are invoiced in dollars. For China’s foreign trade, the proportions of dollar invoicing are probably even higher—despite recent efforts of the People’s Bank of China (PBC) to encourage RMB invoicing for trade along China’s most immediate borders. International trade in homogeneous primary commodities, such as oil, copper, or soya beans is virtually all invoiced in dollars. So beyond facilitating money changing among banks as an intermediary currency, the dollar remains central as an international unit of account in trade in many goods and services.

However, for the dollar’s facilitating role to work smoothly, the U.S. monetary authorities must observe two constraints.

First, the United States must maintain currency convertibility on both capital and current accounts. Other countries need only maintain current-account convertibility for importing and exporting, as per the IMF’s Article VIII\(^9\); otherwise they are free to impose capital controls—and many do. But because the dollar is the dominant intermediary currency for clearing international payments, the whole system would fall apart if the United States itself were also to impose capital controls. Because the U.S. maintains open capital markets, other countries are free to buy or sell dollar assets in these highly liquid markets. The Federal Reserve Bank of New York even maintains voluntary custodial accounts for foreign governments’ dollar exchange reserves, usually in the form of U.S. Treasury bonds or “agency” securities. Using the

Fed as their agent, they can then buy or sell U.S. government securities freely in the New York markets.

Second, the U.S. government must stay out of the foreign exchange markets, with no exchange rate target of its own. The other countries are free to select their dollar exchange rates. But, in a world with 150 countries, only 149 exchange rates can be determined independently. Thus, to avoid conflict, the United States normally stays passive—except in some unusual crisis, such as helping the Bank of Japan in 1995 to hold down the surging value of the yen.

While annoying many Americans that their government cannot set its own exchange rate, the United States gets an extra degree of monetary freedom. By not having to gear its monetary policy to an exchange rate target, the U.S. central bank is then freer than those in other countries to target its own price level. And if the Fed is successful in stabilizing the U.S. price level, the dollar becomes the natural anchor for the exchange rates and price levels of other countries.

But then a problem arises: what should be the modus operandi for monetary policy in the Nth country issuing the international reserve currency? In the American case, how can its domestic objectives be best reconciled with its key international role? The changing answers are best viewed in historical perspective.

*Insular U.S. Monetary Policy during the Early Dollar Standard*

From 1945 through most of the 1960s, reconciliation of America’s international and domestic monetary objectives was not a problem. The lack of confidence in the
currencies of Europe and Japan, whose industrial and financial sectors had been flattened by the war—leading to open and repressed inflation—meant that they had to ring their economies with exchange controls to prevent capital flight. This was the era of the “great dollar shortage”: people and corporations wanted to hold only dollar assets with their unique international liquidity.

When Western European countries began to recover under the Marshall Plan, they did so by fixing their exchange rates firmly against the dollar. The capstone of the Marshall Plan was the formation of the European Payments Union (EPU) in September 1950. Sixteen Western European countries declared exact dollar parities (without even small margins around these central rates) at which only their central banks cleared intra-European payments multilaterally while incidentally anchoring their price levels. In parallel, with the help of an American line of dollar credit known as the Dodge Line, Japan eventually managed to stabilize its macro economy by choosing 360 yen to the dollar in 1949 as the anchor for phasing out inflation and restoring a modicum of confidence in the yen [McKinnon 1996]. With the important exception of West Germany, even the industrial countries maintained capital controls well into the 1970s. However, with the fully convertible dollar as the clearing currency, multilateral trade became the engine of strong economic growth in the industrial economies from the 1950s into the early 1970s.

From 1945 through the 1980s, the large communist bloc—including China and the former Soviet Union—had currencies without even current account convertibility. In order to organize voluntary trade between nations within the bloc, their own
currencies with differing (disequilibrium) national prices were totally unusable. In the event, the dollar was used as a unit of account to price out the “value” of each communist country’s putative export basket to a designated bloc neighbor. However, for ideological reasons, the dollar was not used as a means of settlement—which made multilateral trade next to impossible. Trade within the bloc became narrowly bilateral with no net capital flows [McKinnon, 1979, ch. 3].

The American wholesale price index (WPI) approximates a worldwide index of tradable goods’ prices reinforced by the fact that so much world trade is invoiced in dollars. Figure 1 shows this WPI to be remarkably stable from the 1950s to the late 1960s during the Bretton Woods period of fixed dollar parities. The WPIs of major trading partners such as Germany and Japan closely tracked the American one. Under the Bretton Woods Agreement of 1945, national monetary autonomy was supposed to be paramount. But instead, the stable dollar became the monetary anchor for national price levels everywhere outside the communist bloc [McKinnon 1996, ch 2].

During this postwar period of high noninflationary growth, there were many controversies—particularly between monetarists and Keynesians—on how U.S. monetary policy should be conducted. Nevertheless, the lack of substitutability between dollars and the currencies of the other industrial economies with exchange controls meant that the Fed could conduct an inward looking monetary policy relatively successfully. It could ignore the ebb and flow of the demand for dollars in the foreign exchanges and focus just on conditions in the American economy, such as employment and inflation—while benignly neglecting the rest of the world.
These rather special historical circumstances of the early dollar standard then conditioned the American monetary authorities to be insular. They considered that the demand for money (dollars), and various operating rules governing Federal Reserve behavior, should be based on purely domestic financial indicators such as inflation and unemployment, or the reserve positions of American commercial banks with the Fed. This inward-looking monetary policy was correct for the time.

Unfortunately, however, this insular view became enshrined in U.S. textbooks on money and banking, and on monetary policy more generally, long after financial globalization had made it obsolete. In particular, this insularity has carried over to today’s era when runs from dollars into foreign currencies—and vice versa—have become commonplace. By ignoring the information contained in these runs, the Fed has become much less effective in stabilizing the domestic American system while undermining the anchoring function that the dollar had provided to the rest of the world.

*The Slipping Anchor*

The dollar has become increasingly erratic as an anchor for price levels and financial stability in the American and world economies. How can this be measured?

First consider the long-term purchasing power of the dollar in a comparative international context. Figure 2 plots the path of the U.S. and German CPIs since 1957, when comparable data first became available, and then splices the CPI for the euro area in 1999 onto the German series through 2009. When the euro area is spliced in, its
inflation rate is very similar to that of Germany’s—past and present. Since 1957 inflation in the U.S. has averaged 4 percent while Germany’s (and the euro area’s) is close to 2.7 percent. Because many central banks around the world ostensibly target CPI inflation at no more than 2 percent, the German-led continental Western Europeans clearly have provided better long-term price-level stability.

What about the short and medium terms? Much of the erratic behavior of American monetary policy in the medium term can be captured by plotting the exchange rate of the dollar against the more stable mark-euro (again spliced together as of 1999) as shown in figure 3. When the dollar was weak and falling (sometimes because the U.S government “talked” it down), this triggered a flight of hot money from the U.S. that connoted a fall in the (worldwide) demand for dollars. The falling dollar signaled future inflation in commodity and/or asset prices in the United States itself, and also abroad. As suggested by figure 3, two outstanding examples of this syndrome are the Nixon shock in 1971–73, and the Bernanke-Greenspan shock in 2003–05. Let us consider each in turn.

The Nixon Shock and Inflation in the 1970s

First, in the late 1960s under pressure from financing the Vietnam war, mild inflation began in the U.S (figure 1) which—under fixed dollar parities— made U.S. industry less competitive against that of the other industrial economies. Instead of disinflating by raising interest rates, the American government chose instead to maintain monetary ease, but insisted that the other industrial countries all appreciate their currencies
against the dollar. This was the famous Nixon shock of August 1971. Because discussion of dollar devaluation had already begun by 1970, hot money flooded out of U.S. dollars into all the European currencies and the yen. The resulting fall in the demand for money in the U.S. with no offsetting reduction in supply, and lower dollar in the foreign exchanges, started the great U.S. inflation of the 1970s.

This inflationary impetus was aggravated on a worldwide basis because other countries, industrial and developing, tried to resist further appreciations against the world’s dominant money. Their central banks intervened massively to buy dollars, and this triggered an explosion in their dollar foreign exchange reserves and in their domestic money supplies [McKinnon 1982]. Inflation became high in both Europe and Japan despite the appreciations of their currencies against the world’s central money. The 1970s’ high and variable inflations as well as wild exchange fluctuations knocked the industrial economies off their paths of high productivity growth that they had achieved under stable exchange rates in the 1950s and 1960s. The general slowdown in productivity growth was much greater than could be explained by exogenous oil shocks, if indeed such shocks were exogenous.

One might ask why the U.S. government failed to disinflate in the late 1960s when inflation was still quite mild (3 to 4 percent per year) compared to what was to come—see figure 1—in the 1970s? The short answer is that governments everywhere were in thrall to the Phillips Curve fallacy: the tradeoff between inflation and unemployment. They imagined that by tolerating (slightly) higher inflation the economy would settle down to a permanently lower rate of unemployment. Thanks to
Milton Friedman [1968], this fallacy has been discredited. Doctrinally, we are now in somewhat better shape to reestablish a stable international monetary regime with stable exchange rates. But, before reaching this nirvana, we must still dispense with two other intellectual fallacies.

*The Bernanke-Greenspan Shock and the Dollar Carry Trade, 2003–08*

Now consider the most recent episode of a persistent fall in the foreign exchange value of the dollar, again using the euro for comparison. Figure 3 shows the dollar falling persistently from about 1.2 euro in 2002 (the top of the U.S. high-tech bubble) to about 0.63 euro in July 2008—a period during which U.S. interest rates averaged much less than European ones. This unduly easy U.S. monetary policy did not show up as high inflation in the U.S. core CPI (figure 4), which excludes more volatile items such as food and energy, and which the Fed claimed to be tracking. But modest 2 percent or so inflation in this purely domestic (and backward looking) price level indicator missed the bubbles in asset prices in both the American and world economies. Figure 4, courtesy of Steve Hanke (2010), also shows that the Commodity Reserve Bureau (CRB) index, a very broad index of dollar commodity prices, rose more than 90 percent from the first quarter of 2003 to peak out in the second quarter of 2008. Housing prices, measured by the Case-Shiller index, surged 44.7 percent from the first quarter of 2003 to their peak in the first quarter of 2006.

Fearing deflation after the collapse of the high-tech bubble in 2001-02, the U.S Federal Reserve Bank set the Fed funds interest rate to just 1 percent in 2003-04. At the
time, this interest rate was far too low for balancing actual inflation in the “headline” CPI with the economy’s excess capacity. The well-known Taylor Rule suggested that the Fed funds rate should have been closer to 4 percent in 2003-04 (Taylor 2009).

Beyond the Taylor Rule violation, however, the persistent weakness of the dollar from 2002 to mid 2008 should have also signaled to the insular Fed that American monetary policy was far too loose. The asset bubbles themselves were not the only indicator. Both the euro area and smaller countries close to the United States with floating exchange rates, such as Canada and several in Latin America, were discomfited by the sharp appreciations of their currencies. China, which was trying to maintain a stable dollar peg, experienced hot money inflows that made it increasingly difficult to control its monetary base. The People’s Bank of China had to undertake massive sterilization efforts to mop up excess monetary liquidity that was contributing to the bubble in commodity prices, and then re-impose controls on capital inflows. But the Fed, with its orientation toward only domestic monetary indicators, ignored all this.

This insular view of how American monetary should be conducted interacted with a second (after the Phillips curve) major economic fallacy: the so-called efficient markets theory. Although observers in the Federal Reserve and elsewhere could see the extraordinary increases in asset prices from 2002 into 2008 shown in figure 4, most were convinced that such bubbles would be efficiently self-correcting without any thwarting action by the central bank.

But the persistently falling dollar from 2002 to mid-2008 (figure 5) was more than just a signal of a financial crash to come. It became a vehicle by which “carry
traders” helped to create the international bubble economy. Combined with the Fed’s relatively low interest rate policy, chartist speculators began to project further depreciation of the dollar. Although risky, this made short-term borrowing in New York at low interest rates to buy appreciating foreign-currency assets and primary commodities (such as oil) look very profitable in the near term. Thus did carry traders collectively accentuate these price movements on which individual traders hoped to profit\textsuperscript{10}.

\textit{The U.S. Trade Deficit, China, and the Exchange Rate Fallacy}

The Federal Reserve, and the U.S. government more generally, were more willing to tolerate the falling dollar from 2002 to 2008 (figure 5) because they believed that a lower dollar would reduce the bourgeoning U.S. trade deficit (figure 6). (The same was true with the more massive depreciations of the dollar in the 1970s when the U.S. government more actively “talked” the dollar down.) Figure 6 shows the trade deficit increasing since 1992, but then rising faster after 2002 to touch 6.5 percent of GDP by 2006. Only with the credit crunch beginning in 2007, and becoming severe in 2008, with the bursting of the bubble in U.S. real estate prices, did private spending fall sharply and reduce imports. From this trauma, the trade deficit was reduced to just 3 percent of GDP by 2009 as the dollar appreciated sharply (figure 6).

\textsuperscript{10} Japan’s zero-interest liquidity trap had been in place since the mid-1990s. So when the yen also began to depreciate after 2000, the yen carry trade became more intense as chartist-speculators projected further declines. Thus did Japan also contribute to the commodity price bubbles shown in figure 4. However, with our concern for the dollar standard, I shall treat Japan as a separate story for another time.
However, these trade balance gyrations—either on the upside or the downside—had little or nothing to do with the erratic movements in the dollar’s effective exchange rate. Nevertheless, American politicians and economists persisted (and still persist) in claiming that China’s “undervalued” exchange rate was the prime cause of its sharply rising exports to the U.S. before the 2008 credit crunch.

Similarly, when Japan developed a big bilateral trade (saving) surplus with the United States from the late 1970s, into the mid 1990s, Japan bashing took the form of serial “voluntary” restraints on particular classes of Japanese exports coupled with American arm twisting to force the yen to go ever higher [McKinnon and Ohno, 1997]. The yen skyrocketed from 360 to the dollar in August 1971 to touch 80 in April 1995, and the Japanese economy was thrown into a deflationary slump from which it has yet to recover; but its trade surplus persisted (and still persists) in the face of today’s high yen.

Clearly, we can’t have monetary stability in the U.S. itself, or exchange rate stability for the world at large, if the exchange rate of the center country is subordinated to an ineffectual chase to “correct” trade imbalances: the exchange rate fallacy. In a globalized world where capital flows freely, the conventional wisdom that the exchange rate should be assigned to correcting trade imbalances is misguided—as discussed in the Box on the next page.

If not the yuan/dollar exchange rate, what then accounts for the increases in China’s trade surplus and the even larger U.S. trade deficit over the past decade? Since 2000, the American national saving rate—personal plus government—unexpectedly fell
sharply, and China’s net national saving rose from unexpectedly robust enterprise profits and a surge in tax revenue (with no increase in tax rates). From this large international saving imbalance, the stage was set for a large Chinese trade surplus as the counterpart of America’s trade deficit.

Because Chinese exports are mainly manufactures, the real embodiment of China’s lending to the United States is China’s large trade surplus in manufactures—aggravating the painful contraction in America’s manufacturing sector. However, the trade imbalance is a net saving imbalance, and not an exchange rate issue. Any precipitate appreciation of the RMB could well have the perverse effect of increasing China’s trade surplus and America’s trade deficit—as shown in on the following page.
Box 1. The Exchange Rate and the Trade Balance: The Debate

For a “home” country, consider the identity from the national income accounts:

\[ X - M = S - I = \text{Trade (Saving) Surplus} \]

where \( X \) is exports and \( M \) is imports (both broadly defined), and \( S \) is gross national saving and \( I \) is gross domestic investment.

The left hand side of the identity suggests that a depreciation of the home currency will make exports cheaper in world markets, and they will expand. Similarly, the home country's imports will become more expensive in domestic currency, so they should contract. Thus the conventional wisdom has it that the overall trade balance should improve if the underlying price elasticities are even moderately high. This seemingly plausible result is very intuitive, so even journalists can understand and perpetuate it.

But this "elasticities" approach is basically microeconomic and quite deceptive. In this model, the export supply function is looked at on its own—and the demand for imports is looked at on its own—even by supposedly sophisticated econometricians who purport to measure separately the price elasticities of exports, and of imports, to exchange rate changes. Thus it is called the elasticities approach to the trade balance.

However, if you analyze the right hand side (\( S - I \)) of the identity, the emphasis is macroeconomic. For the trade balance to improve with exchange depreciation, overall domestic expenditures must fall relative to aggregate output. After some minor algebraic manipulation, this is the same as saying that domestic saving must rise relative to domestic investment. Looked at this way, one cannot presume that domestic net saving will rise when the dollar is devalued.

Indeed, the presumption may go the other way when domestic investment (fueled in part by multinational firms) is sensitive to the exchange rate. Suppose the RMB were to appreciate sharply against the dollar. This might set off a minor investment boom in the U.S. where expenditures rise, and a major slump in China's huge investment sector, so that expenditures fall, the economy slumps, and imports contract. This is what happened to Japan in the 1980s into the mid-1990s when the yen went ever higher. Japan became a higher-cost place in which to invest, large Japanese firms decamped to invest in lower cost Asian countries, and in the U.S. itself. The trade surplus of the slumping Japanese economy increased!
Unfortunately, misinterpreting the trade imbalance as evidence of a misaligned exchange rate has become the conventional wisdom among most economists, which is then adopted by politicians. The U.S. government has continually threatened trade sanctions against China unless the RMB is appreciated. Giving in to this pressure in July 2005, China started appreciating the RMB at about 6 percent per year (figure 7). Unsurprisingly, with this one-way bet on the RMB going ever higher, hot money poured into China. More importantly, there were with no private (non-state) capital outflows to finance the large trade surplus. The government was forced to intervene and buy dollars to prevent the RMB from spiraling upward. But despite massive sterilization efforts, the huge increase in official exchange reserves and base money threatened a loss of monetary control with inflation—and contributed to the worldwide bubble in commodity prices shown in figure 4. China’s trade (saving) surplus got even bigger.

Then a “lucky” accident happened. In the global credit crunch of 2008, the dollar carry trade suddenly unwound: carry speculators could no longer renew their short-term dollar credits in New York and desperately had to sell off their long foreign exchange and commodity positions and get back into dollars. The dollar suddenly shot up in the last half of 2008 against most other currencies (figure 5)—including a 25 percent appreciation against the euro—and carried the RMB with it. (Prices of primary commodities also collapsed—see the fall in the CRB primary commodity index in Figure 4. With the RMB (and dollar) much higher against the currencies of most other countries, the People’s Bank of China was emboldened to stop appreciating against the
In July 2008, it reset the rate at 6.83 yuan per dollar where it remains today (figure 7).

This newly stabilized rate was credible for 9 or 10 months into mid-2009: hot money inflows to China stopped and some private capital flowed out. Most importantly, the government could now safely promote a massive internal expansion of bank credit by cutting the reserve requirements on the commercial banks and loosening direct restrictions on bank credit. China’s bank-financed “fiscal” stimulus was hugely successful. In the global downturn, the increase in China’s domestic demand has largely offset the 40 percent fall in China’s exports. Neighboring countries, particularly in Asia but also with echo effects in the U.S. and Europe, have benefited enormously. China’s domestic demand (not exports) has been the engine of the surprisingly fast worldwide recovery from the global credit crunch of 2008. But it would not have been possible without the stabilization of the yuan/dollar rate.

What is the lesson here? A moderately strong dollar makes it easier for trading partners to stabilize their own exchange rates against the dollar. In times of a worldwide recession, trading partners can then come up with more effective countercyclical policies to everyone’s advantage.

A sad footnote to this otherwise encouraging story is the depreciation of the dollar after March 2009 which of course, incidentally carried the RMB down with it. Again a Greek chorus of economists is complaining about China (not the U.S.!) deliberately undervaluing its currency—and hot money inflows into China have started up again in anticipation of another possible RMB appreciation. But the problem lies
with America’s ultra-loose monetary policy with zero short-term interest rates, which has the “mercantilist” effect of overvaluing floating currencies such as the yen and euro—while generating hot money flows into countries trying to stabilize their dollar exchange rates.

The unfortunate domestic and international effects of the Fed setting short-term interest rates at zero since 2008 into 2010 is a good starting point for discussing how future American monetary policy should be internationalized to reduce financial volatility at home and abroad.

*Bagehot’s Rule for Internationalizing American Monetary Policy*

Suppose the U.S. Federal Reserve became less insular and resolved to adopt a more outward-looking monetary policy as befits the center country in the world’s monetary system. To lay out a new set of rules for the dollar standard game would require an additional paper—perhaps even a book. Short of this, let us take a quick glimpse at what history might teach us.

Fast-backward 137 years to 1873 when Walter Bagehot, the eminent Victorian institutional economist and constitutional scholar, wrote *Lombard Street* at a time when the London capital market was the center of world finance under the gold standard. Bagehot described the intricacies of how money markets worked, including counterparty risks, but he also prescribed how the Bank of England should confront major financial crises.
When people flew from paper money or from domestic bank deposits into gold so as to cause a seizing up of internal financial markets, Bagehot called it a *domestic drain*. A flight of capital abroad so that the pound sterling became weak in the foreign exchanges, he called an *external drain*. What should the central bank (The Bank of England) do when confronted with either or both?

“The two maladies—an external drain and an internal—often attack the money market at once. What then ought to be done? ...

...We must look first to the foreign drain, and raise the rate of *interest* as high as may be necessary. Unless you can stop the foreign export, you cannot allay the domestic alarm. The Bank will get poorer and poorer, and its poverty will protract or renew the apprehension. And at the rate of *interest* so raised, the holders—one or more—of the final bank reserve must lend freely. Very large (domestic) loans at very high *rates* are the best remedy for the worst malady of the money market when a foreign drain is added to a domestic drain. Any notion that money is not to be had, or that it may not be had at any price, only raises alarm to panic and enhances panic to madness. But though the rule is clear, the greatest delicacy, the finest and best skilled judgement, are needed to deal at once with such great and contrary evils.”

Walter Bagehot, *Lombard Street* (Chapter II).

How would Bagehot’s Rule have applied to the credit crunch in the United States in 2007-08? Bagehot worried about gold losses to foreigners that would cause domestic credit markets to seize up even more and, worse, weaken the pound in the
foreign exchanges. During the carry trade from the falling dollar and low U.S. interest rates from 2002 to mid 2008, carry traders disinvested from private U.S. financial assets to buy foreign currency assets and take long positions in primary commodities, worsening the credit crunch in American capital markets. Additionally, foreign central banks, to stem the appreciations of their currencies against the dollar, built up large dollar exchange reserves—much of which are invested in U.S. Treasury bonds. But U.S. Treasuries are the prime collateral for borrowing and lending in the multi-trillion dollar U.S. interbank markets. Thus, there was a foreign “drain” of prime collateral from the already-impacted private U.S. markets. The depreciating dollar also greatly exacerbates the threat of future inflation in the U.S. Consequently, a strong case can be made for raising the federal funds rate as much as is necessary to strengthen the dollar in the foreign exchanges—as Bagehot would have it—and to cooperate with foreign governments to halt hot money flows and reverse the appreciations of their currencies against the dollar.

By slashing interest rates too much in 2003-04 and again in 2007-08, the Fed accentuated the foreign drain and thus made the alleviation of the domestic drain more difficult. Indeed, the Fed’s current policy of setting the short-term U.S. Federal Funds rate at zero causes congestion in the wholesale interbank market that contributes to the continued unwanted fall in retail bank credit in the United States [McKinnon 2009].

Yet, despite these mistakes, Bagehot would approve of other actions the Fed took to deal with the domestic drain by unblocking specific impacted domestic markets in 2008. These include swapping Treasury bonds for less safe private bonds, opening its
discount window to shaky borrowers, maybe even rescuing Bear Sterns. He would also approve of the relaxation of capital constraints on Fannie Mae, Freddy Mac, and so on, for mortgage lending.

To repeat Bagehot’s Rule: “Very large (domestic) loans at very high rates are the best remedy for the worst malady of the money market when a foreign drain is added to a domestic drain”. The Fed, and the U.S. government more generally, got it only half right.

References


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Figure 1: The World’s Nominal Anchor: U.S. Wholesale Prices (1951–2009)

Source: IFS
Figure 2: Consumer Price Indexes for the United States, the Euro Area, and Germany (1957 Jan = 100)

Source: IFS and globalfinancialdata.com
Figure 3: Mark-Euro/USD Exchange rate (1950-2009)

Notes: Exchange rates before 1999 are calculated with DM rates.

Source: www.globalfinancialdata.com and Federal Reserve Economic Data
Figure 4: Price Indexes (2003 Jan = 100)

Notes: reproduced from Steve Hanke (2010).

Source: www.globalfinancialdata.com and Federal Reserve Economic Data
Figure 5: The U.S. dollar’s Exchange Rate Movements (Jan 2000=100)

Source: Federal Reserve Economic Data
Figure 6: The U.S. Current Account (% of GDP)

Source: Bureau of Economic Analysis
Figure 7: China’s monetary policy and the yuan/dollar rate (1995-2010)

Source: Federal Reserve Economic Data
Global Imbalances After the Economic Crisis

Jan Kregel, in the first morning session, mentioned that the Levy Institute has a particular distinction in that both Hyman Minsky and Wynne Godley worked there, both contributing so much to real world economics. Wynne Godley had the foresight to see the current economic recession coming as early as in 2005. I want to use his work at the Institute that analyzes a country's macroeconomic trends, both internal and external, and to discuss how the growing global imbalances of the last two decades were crucially important in having played a significant role in causing the financial crisis, and what their effects may be after the crisis is over, if they are allowed to reemerge.

Global imbalances emanate from current account balances. A sample of some of the U.S. key trading partners’ current account balances expressed as percentages of U.S. GDP is illustrated in Figure 1. The use of the same denominator facilitates an easier comparison between the U.S. current account balance and those of others. Notice the serious deficit position of the U.S. as compared to the surplus positions of China, Germany, Japan, the OPEC countries and Russia.
Figure 1: Key Global Current Account Balances

Note: German data for years prior to 1990 are the current account balances of the Federal Republic of Germany. Amounts shown for “OPEC Countries and Russia” do not include balances for Iraq prior to 2005 or for Russia before 1992.

Sources: Organisation for Economic Co-operation and Development; IMF; BEA; authors’ calculations
Many have suggested that one of the culprits causing the current crisis was the unbalanced trade positions which led to global imbalances among nations, with the United States becoming a debtor country financing its external debt from the savings of the trade surplus economies. This, in the words of the current Chairman of the Federal Reserve, Ben Bernanke (2005), is the “savings glut” hypothesis. According to this hypothesis, the excessive inflow of capital from emerging market economies in the United States helped increase the U.S. current account deficit and, together with low interest rates, in turn encouraged higher rates of housing construction, higher home prices, securitization and the introduction of risky financial products. Higher home prices encouraged households to use their equity to increase spending.

Chairman Bernanke, in September 2009, once again, stressed the importance of addressing global imbalances in the medium term by reducing the government deficit in the U.S. and adopting other policies aimed at increasing national saving. Adjustments would be necessary primarily in emerging market economies to stimulate their domestic demand by decreasing their saving propensity, expanding fiscal policy, opening their financial markets and letting their currencies appreciate against the U.S. dollar.

The next figure, Figure 2, decomposes the U.S. external balance into the current account balance, the trade balance and the non-oil imports trade balance. Since the oil shocks in the 1970s, the U.S. trade position began to change. If oil imports are excluded, the U.S. turned into a trade deficit country in the late 1980s. As is shown, the
external deficit turned briefly into surplus in 1991, but then started to increase dramatically up to the current recession.

**Figure 2: U.S. Current Account and Trade Balances**

Persistent current account deficits will cumulate into foreign debt, and the U.S., as is a well-known fact, has turned from being a major creditor into a net debtor nation. As Figure 3 shows, however, it has the privilege of being able to borrow in its own currency, while holding its own foreign assets in other currencies. A devaluation of the
dollar, therefore, increases the dollar value of U.S. assets abroad while leaving the
dollar value of U.S. liabilities unchanged. This figure also shows the difference between
historic costs and market values of U.S. net external assets.

Figure 3: Foreign Debt and the Dollar
Federal Reserve data show that irrespective of strong worries about the safety of U.S. denominated assets, especially from China, foreign central banks and others are (still) willing to buy and hold them as official reserves. This is demonstrated in Figure 4 and the accompanying Table 1. One can never assume, of course, that this will continue indefinitely, but as James Galbraith indicated earlier, it doesn’t seem that the appetite for them has actually changed that dramatically.

Figure 4: Foreigners’ Role in Financing U.S. Government Deficit

Foreign holdings of U.S. Treasury securities

Source: FoF
Table 1: Foreign Holdings of U.S. Treasury Securities

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>China</th>
<th>Germany</th>
<th>Oil exporters</th>
<th>U.K.</th>
<th>Financial centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 2000</td>
<td>31.3%</td>
<td>5.9%</td>
<td>4.8%</td>
<td>4.7%</td>
<td>4.9%</td>
<td>8.2%</td>
</tr>
<tr>
<td>December 2006</td>
<td>29.6%</td>
<td>18.9%</td>
<td>2.2%</td>
<td>5.2%</td>
<td>4.4%</td>
<td>7.9%</td>
</tr>
<tr>
<td>August 2009</td>
<td>21.2%</td>
<td>23.1%</td>
<td>1.6%</td>
<td>5.5%</td>
<td>6.5%</td>
<td>9.9%</td>
</tr>
</tbody>
</table>

Source: Department of the Treasury
Financial centers: Caribbean Banking Centers, Luxembourg, Switzerland

A most important factor to trade imbalances, which was alluded to earlier, is oil. The relevance of oil imports cannot be minimized. Imports of oil still play a major role in the U.S. external balance. The August 2009 trade deficit was 2.4 percent of GDP of which 1.6 percent was due to imports of oil. Fluctuations in the price of oil have played a major role in recent movements of the U.S. trade deficit. What has been happening is illustrated in Figure 5.
The figure shows that as the dollar started to weaken, the price of oil seems to have been more stable when calculated in euros, although the spot price is still denominated in U.S. dollars. An exploratory analysis — using a VAR — of the relationship between the dollar exchange rate to the euro reveals that the exchange rate helps predict the price of oil.
Furthermore, this exploratory analysis – by the Levy Institute -- of the determinants of oil imports shows a structural break at the end of the 1970s and a stable, low elasticity (-0.12) of oil imports with respect to the price of oil. If the dollar devalues, the dollar price of oil increases, and since U.S. imports are relatively price – inelastic, the devaluation will worsen the trade deficit. This is shown in Figure 6 with the upward trend of the ratio of the standard deviations between the price of oil in dollars and in euros.

Figure 6: Volatility of the Oil Price

Relative volatility of the price of oil

Standard deviation of the price of oil in dollars relative to the st dev. of the price of oil in euro over an 18 months period

Sources: Fed, EIA, IOGA
An important determinant of a trade imbalance is relative income growth among trading nations. If domestic absorption is increasing faster in the U.S. than in her trading partners, imports will increase faster than exports in the U.S. Notice the decline in U.S. relative real GDP up to the 1980s, implying that U.S. trading partners, primarily Japan, were catching up during this period. The reverse was true during the “dot.com” bubble, when the U.S. deficit reached a negative peak. Fast growth in Asian countries later, determined to be another catching-up, seems to have ended in the last two quarters of 2009.

Figure 7: The Role of Relative Income Growth

Growth in U.S. Real GDP Relative to U.S. Trading Partners

Index 1990=100

\( \frac{\text{U.S. Real GDP}}{\text{U.S. Trading Partners Real GDP}} \)

Sources: NIPA, Levy
The first scenario, the baseline scenario, uses the assumptions embedded in the last projections of the Congressional Budget Office (CBO) that include the expiry of President Bush’s tax cuts, the gradual ending of the fiscal stimulus and the gradual reduction of the budget deficit. Additionally, other assumptions include: first, even though household borrowing is in negative territory — latest Federal Reserve reports show negative borrowing (debt repayments in excess of new loans) — confidence will gradually return to the financial markets so that borrowing by households and businesses will revert very gradually (after 2012) toward its long-term average; and second, U.S. trading partners’ real GDP is assumed to grow according to the recent projections of the IMF. Finally, a further assumption is made of relatively stable oil prices and exchange rates.
Figure 8: Main Sector Balances in Baseline Scenario

Sources: BEA; authors’ calculations

The results of this scenario imply real GDP will resume, but remain sluggish throughout the simulation period, below the rate to reduce unemployment -- which will rise above 10 percent and stabilize at this level through the end of the simulation period in 2015, as shown in Figure 11 below. The internal and external balances will converge toward more sustainable levels (due to low growth rate and high unemployment). The convergence of these balances notwithstanding, this is undoubtedly a pessimistic projection given that growth in the economies of U.S. trading partners could resume at
a faster rate, as the latest statistics show. Some analysts have suggested that China, India and other emerging economies may be decoupling from the world recession, the result of applying fiscal stimuli aimed at strengthening domestic demand. This, if sustained, may have a positive effect on U.S. exports. It must be noted, however, that in 2008 only 3.6 percent of U.S. exports went to China and a mere 1.7 percent to India. The bulk of U.S. exports go to Canada and Mexico (21.1 percent combined) and the euro area (17.6 percent). Lastly, under this scenario, the U.S. government debt will increase by another 30.3 percent of GDP added to the present level of about 60 percent to reach 91 percent by the end of the simulation period.

The next scenario assumes postponing the government’s declared intention of deficit reduction.
Figure 9: Main Sector Balances in Scenario 1, Postponed Deficit Reduction

In this scenario, government maintains its current fiscal policy stance in which nominal expenditures and transfers are maintained at their historical pre-recession trend, and President Bush’s tax cuts are extended. All other assumptions are the same as in the baseline scenario.

Sources: BEA; authors’ calculations
The results of this scenario show that by the end of the simulation period, unemployment falls below 7 percent, shown in Figure 11 below, and real GDP growth rates are above 3 percent on average, but not high enough to shrink the output gap from potential. The government debt increases by 39.2 percent of GDP to reach 100 percent at the end of the simulation period. As domestic demand grows, the current account balance worsens, increasing from its current level of 2.4 percent of GDP to 4.1 percent. Based on these results, any policy that sustains growth and reduces unemployment will bring back the problem of current account imbalances.

The second and last scenario assumes that government expenditures follow the CBO projections, with the exception that government transfers are maintained (as included in the previous scenario). The key assumption in this scenario is that the broad measure of the U.S. dollar nominal exchange rate is devalued by about 12 percent from its current (3rd quarter 2009) value.
This projection is not that dramatic, as can be seen in Figure 10 – about 2 percent below the second quarter of 2008. This assumption is based on the depreciation that will mostly come from the appreciation of the major surplus countries in East Asia, and not from the Eurozone.

The results of this scenario show that unemployment is gradually reduced to 7.5 percent as shown in Figure 11.
Figure 11: Unemployment in Three Scenarios

- Baseline Unemployment
- Scenario 1 (Postponed Deficit Reduction)
- Scenario 2 (U.S. Dollar Devaluation and Some Deficit Reduction)

Sources: BLS 2009b; authors' calculations

In Figure 11, government deficit falls faster than in the previous scenario to about 5.6 percent of GDP and the external balance is dramatically improved to a sustainable level of 1.4 percent, while the non-oil balance of trade achieves a surplus. The government debt increases by 30 percent to reach 90 percent of GDP—a bit lower than in the baseline since growth is higher under this scenario. Figure 12 demonstrates the main domestic and external sector balances.
Figure 12: Main Sector and Trade Balances in Scenario 2, U.S. Dollar Devaluation and Some Deficit Reduction

The conditional projections presented above lead to the following conclusions:

1. Orderly devaluation of the U.S. dollar cannot happen automatically or by market forces, and it is expected that there will be strong resistance from the European Central Bank to the euro’s further appreciation. The revaluation of the currencies of trade surplus countries, however, will be effective in reducing both global and U.S.
domestic imbalances. Such revaluation will require concerted actions of central banks, particularly in East Asia. On the other hand, the overvaluation of the dollar and the projected new imbalances could lead to adverse consequences beyond those considered in the scenarios presented. An example of an adverse consequence would be if investors sell U.S. Treasury Securities en masse, leading to a sudden collapse of the dollar. The effects of the U.S. dollar devaluation on interest rates should be avoided.

2. The rapid increase in U.S. government debt will not be a major problem as long as interest rates remain low.

3. The U.S. government deficit can be reduced only when net exports begin to sustain aggregate demand sufficiently. A quick reversal of the government’s deficit will imply severe costs in terms of high rates of unemployment.

4. Energy policies are needed to reduce the impact of oil price changes on the U.S. trade balance, and the U.S. oil trade deficit.
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I will focus on two topics: a little on regulation as it relates to the current financial crisis, and mostly on the role of the International Monetary Fund, in the crisis and the future. This last topic is one that deserves much attention, but whether because there is despair as to any prospect for significant positive change, or because we are still so nation-state centered, there has been much less discussion of potential welfare-improving changes than, in my judgment, is warranted.

The regulation discussion earlier today was both substantively good and topical. But I want to make one plea: at this stage, one risk in advocating or making changes in “regulation” is that there is still a lot of confusion in public discussion. There are many calls for “regulation,” but not all people are calling for the same types of regulatory changes. Just as Sarbanes-Oxley seems to have resulted in more harm than good in attempting to address the Enron affair (and would not have prevented the illegal activity anyway), so there is now a risk that new “regulation” might be harmful, rather than helpful. While it is unquestionable that policies with regard to minimum equity, incentives for risk-taking, and other aspects of financial regulation need adjustment, some proposals (such as caps on executive pay) seem very wide of the mark. Other issues, such as international dimensions of the financial system, seem to have received rather less attention than they deserve. Advocating quick legislation to address the regulatory issues may well be dangerous before there has been sufficient public
discussion and understanding of what in fact went wrong. Certainly it would make sense to have more discussion of changes in incentives and less of regulation by fiat than currently is going on.

Turning now to the international financial architecture, I intend to focus almost exclusively on the International Monetary Fund and its role, although of course there are additional issues regarding architecture -- such as cross-border coordination of financial regulation and regulation of banks with major presences in more than one country -- that I will not address. But the International Monetary Fund was intended to be central to the international financial system, and it is a going institution. It is more likely that changes can be made in its role than that agreement can be achieved on entirely new international architecture, which would be an improvement on what the Fund can do within its Articles and mandate.

As the saying goes, "The Fund has had a good crisis" By this is meant that, prior to the crises, a mantra of allegations that the Fund “had lost its relevance” was heard. No matter that countries such as Argentina, Turkey and Uruguay would have had far more serious crises without Fund support, and much less satisfactory recoveries. No matter that Brazil was heading into crisis, and Fund actions prevented one. Since there were no crises in the several good years leading up to the financial crisis in 2007, the “irrelevance” discussion dominated.

But starting in 2007, the Fund’s ability to support needed changes and countries as they adjust to economic realities has been highly visible. From Iceland (the first developed country to need Fund financial support in thirty years) to Hungary, Ukraine
and Latvia, to name just a few, the Fund has lent in support of countries whose governments were deemed to be undertaking reasonable adjustment measures.

The Fund, in fact, has several roles. It is the international institution charged with responding to crises, which means that it must support policy changes in the crisis country so that sustainability can be restored. After the beginning of this financial crisis, talk of the Fund’s irrelevance has died out and most would accept and support the Fund’s role in crisis resolution.

But the Fund is also charged with “surveillance” of all its members annually, with a view to analyzing each member’s underlying macroeconomic policy stance (including exchange rate, borrowing from abroad, and outstanding indebtedness, as well as fiscal and monetary policy). The Fund’s “core competence” lies in its ability to send a mission which, just weeks after initial preparatory work has been done, can go to the country, assess and report on a member’s macroeconomic policies, and on their advisability (this core competence is also invaluable for crisis-related work). Focus is necessarily on variables, such as the exchange rate regime, that are of major concern to the international community and that can have spillover effects on other countries.

To be sure, member governments need not -- and often do not -- heed the Fund’s warnings or suggestions, although the Fund staff’s position often strengthens those voices within governments seeking to improve macroeconomic policy. But any number of countries have failed to heed the Fund’s messages until a crisis was upon them. Nonetheless, I would argue that the Fund’s role in assessing individual countries’ policy stances is a useful one. The work is not highly visible, and as such is perhaps
somewhat underrated; but it serves to enable the Fund to keep abreast of developments, warn of impending difficulties (and potential crises), and supports those seeking amelioration of policies in member countries. There is also a role in supporting new finance ministers and their teams and shortening the time it takes to become effective in their roles, especially when those appointed to the posts have little background on some of the key issues.

While surveillance normally refers to the monitoring of individual economies, the Fund is also charged with assessing the global economy, with a view to the stability of the international financial system. The Fund’s assessments, in its semi-annual *World Economic Outlook*, are highly regarded and often serve as a basis for private sector and governmental decisions. The Fund warned, during the mid-2000s, that global imbalances were a serious concern, and highlighted the role of low real interest rates in the search for yield and housing bubbles. There was even an effort, led by then Managing Director Rodrigo de Rato, to bring together the main countries involved, to discuss the dangers inherent in global imbalances, and what the requirements, of surplus and of deficit countries, would be to resolve them. All agreed, or seemed to agree, on the need for adjustments to reduce surpluses and deficits. But, as might be expected, the surplus countries felt that the burden of adjustment should fall on the deficit countries, and vice versa. Nothing happened.

While there are some who claim that the U.S. alone was largely responsible for imbalances, it is useful to perform the following mental experiment. Imagine that in 2004 (a presidential election year), the Federal Reserve, perhaps with the support of the
Treasury, had announced that the U.S. current account deficit was a major problem and that there would be a huge crisis in several years unless tightening measures took place in the U.S. Imagine further that enough policy makers had been convinced that the U.S. had unilaterally sought a significant tightening of monetary and fiscal policy. Ignore the virtual certainty that the politicians supporting the decision would have come under strong attack and probably been voted out of office. The economic result of such tightening would surely have been a worldwide recession unless some other countries had altered their monetary and fiscal policies to be more expansionary. It is for this reason that global imbalances did, and do, call for global solutions. The point of the mental experiment is that global imbalances were exactly that: neither the surplus nor the deficit countries could have adjusted alone without paying a large price in their domestic economies and in the rest of the world.

As it was, low real interest rates certainly intensified, if they did not cause, the housing bubbles in several countries, and encouraged the “carry trade” and the “search for yield” which increased risk-taking in many financial institutions.

The current crisis brought home the lesson that measures should have been taken. But to date, G-20 and other pronouncements have been, in my judgment, somewhat unrealistic. The G-20 has recognized the problem, and has called upon countries to submit their macroeconomic policies for Fund evaluation, requesting the Fund to evaluate the consistency of these policies across countries for macroeconomic and financial stability. When pushed on how the Fund should achieve this goal, the response has been that peer pressure among countries would do it.
The Fund at present has no enforcement power. While it is to be hoped that peer pressure might somewhat reduce *ex ante* imbalances, I find it difficult to believe that, without an underlying enforceable mechanism, the Fund’s peer review and peer pressure could achieve enough to seriously reduce global imbalances. It is here that there is currently a large “demand” for greater Fund involvement, but as yet no discussion of enforcement tools the Fund could use to carry out that role, other than moral suasion.

Other issues being discussed, such as “voice and representation,” are clearly important. No international institution can maintain relevance if its decision-making mechanisms do not roughly reflect the relevant global power structure. In the case of the Fund, that translates into a need to increase the voting shares of the emerging markets. A small step in that direction has already been taken. And no doubt further adjustments will take place. The essential issue is that Europeans are overrepresented (perhaps reflecting the economic realities of the 1950s and 1960s) while emerging markets are underrepresented. In fact, most Fund decisions are by consensus and a larger voice by representatives of emerging markets would no doubt be felt in the Fund even without adjustment of voting shares. That, too, will come.

The major problem is the lack of international authority to enforce alterations in macroeconomic policies that contribute to instability in the international financial system. To date, there has been no serious suggestion as to how to address that issue. Indeed, even to raise the subject is to have someone point out that the Maastricht criteria were violated. If the issue is not addressed, imbalances are likely to reemerge as
global economic growth resumes. As that happens, the danger is that there will be another build up of surpluses and deficits, and ultimately, another financial crisis.
Twenty-seven months ago, in August 2007, the gathering storm clouds of what would become the worst financial crisis since the depression darkened in an ominous fashion. Yet, at that time few of us, either in the public sector or the private sector, recognized that we were literally on the cusp of financial and economic disaster. We knew the housing bubble was unsustainable; we knew that the massive global imbalances in trade and capital flows were unsustainable; we knew that financial leverage in its many forms was bloating the size of the financial system relative to the economy in ways that were unsustainable; and we knew that the prevailing narrow credit spreads and low risk premia generally were unsustainable.

But, even in the face of these obvious red flags we failed to anticipate the speed and devastating degree in which "hot spots" in one segment of the financial system and the real economy were transmitted to the financial system and the economy as a whole. In short, we systematically failed to appreciate the manner in which, over a long period of time, excesses and distortions in the financial and economic system were linked together in ways that made the perfect storm of the financial crisis virtually
inevitable. That inevitability was reinforced by the paradox of collective human
behavior in which thousands – indeed millions – of wholly rational individual decisions
at the micro level amplified the ravenous macro level appetite for risk taking on the
upside of the cycle and the panic of risk aversion on the downside of the cycle.

Fortunately, the response of governments and central banks to the unfolding
crisis has been very effective in damage control. Indeed, while the arm-chair
quarterbacks will have a field day in second guessing individual actions taken – or not
taken – by the authorities, I, for one, am hard pressed to imagine how the authorities
could have done a better job of damage control especially in the face of the imperfect
information and short time intervals for decision making that characterized the most
threatening days and hours of the crisis.

Today, of course, the focus is appropriately on needed reforms in the workings
of the financial system and the framework of official supervision and regulation of the
financial system – an effort that is well underway in the United States and the rest of
the world. Having said that, much remains to be done in a context in which the devil is
very much in the details.

As I see it, the objectives of the reform effort must recognize that human nature
being what it is, we can not eliminate future financial crises. Thus, the objectives of the
reform process should be to materially reduce the probability of future financial shocks
and, more importantly, to better contain or limit the damage caused by such future
shocks when they occur.
While the particulars of legislative and regulatory reform are never elegant, the process is proceeding reasonably well. Having said that, by a wide margin the most complex and sensitive issue on the table is how to better manage the acute policy dilemmas that arise in the context of the related issues of the so-called "Moral Hazard" and "Too Big to Fail" problems associated with financial institutions. Thus, the balance of my remarks will focus on these issues.

**Too Big to Fail in Perspective**

*Patterns of Government Intervention*

A simple check list of financial institutions in the US and elsewhere that have either failed outright or received large scale governmental assistance suggests the following:

First; during the crisis, individual big banks, small banks, investment banks, specialized banks and integrated financial groups have all encountered serious, if not fatal, problems. In the early phases of the crisis most write-downs were driven by sub-prime mortgages and structured credit products comprised of low credit quality mortgage instruments. In the more recent period, and driven by declines in economic activity and the rise in unemployment, large write-downs have occurred in very traditional credit instruments including prime mortgages, student loans, credit cards, leveraged corporate loans, and commercial real estate. Indeed, based on estimates prepared by Goldman Sachs Research, of the total US originated credit, losses and write-downs between Q3 2007 and Q3 2009, were about evenly split between lending activities and securities activities, including securitization. To a considerable extent
these observations drawn from the United States are broadly in line with experience in other countries. Thus neither similarities in business models for individual institutions that got into serious problems nor particular features of prudential supervisory approaches in individual countries can satisfactorily explain the incidence of serious problems at individual financial institutions with particular emphasis on large institutions.

Second; it is therefore reasonably clear that the common denominators for acute problems at individual institutions were the usual suspects of (1) macro-economic and financial imbalances; (2) managerial and governance shortcomings at individual institutions; (3) shortcomings in risk management; and (4) inadequacies in official oversight.

Third; notwithstanding the above, there is absolutely no question that seriously weakened large and complex financial institutions almost always entail elements of contagion and systemic risk that are so threatening as to result in policy responses with a strong bias toward "bail-out" as opposed to orderly resolution. This, of course, is the core of the Too Big to Fail problem.

*The Role of Large Integrated Financial Groups*

In the face of the understandable concerns about “Too Big to Fail,” it is perfectly natural that a great deal of attention is being focused on the role of large integrated financial groups. While the business models of the relatively small number of such groups differ somewhat from one to another, as a broad generalization most are engaged in varying
degrees in (1) traditional commercial banking both retail and wholesale; (2) securities underwriting; (3) a range of trading activities including at least some elements of proprietary trading; (4) financial advisory services; (5) asset management services including the management of so-called alternative investments; (6) private banking; and (7) elements of principal investing.

All of these large integrated financial groups are indeed large, with balance sheets ranging from the high hundreds of billions to $2.0 trillion or so. Among other things, it is their size that allows these institutions to meet the financing needs of large corporations - to say nothing of the financing needs of sovereign governments. As an entirely practical matter, it is very difficult to imagine how the vast financing needs of corporations and governments could be met on anything like today's terms and conditions absent the ability and willingness of these large intermediaries to place at risk very substantial amounts of their own capital. One of the best examples of this phenomenon is the role large intermediaries have played in the recent past in raising badly needed capital for the financial sector itself.

For example, over the past two years US-based banking institutions have raised about $200 billion of new private capital while banks in Europe (including the UK) have raised about $175 billion of fresh private capital and, the capital raising meter is still running. While there were some private placements, the overwhelming majority of such capital was raised in the capital markets and the associated underwriting, operational and reputational risk associated with such capital raising, was absorbed by various combinations of the small number of large integrated financial groups.
Moreover, many of these transactions took the form of rights offerings which involve extended intervals of time between pricing and final settlement, thus elevating underwriting risks. The ability and willingness of these large integrated financial groups to assume these risks depends crucially on large numbers of experienced investment bankers and highly skilled equity market specialists who are able to judge the tone and depth of the markets in helping clients shape the size, structure and pricing for such transactions.

More broadly, to a greater or lesser degree, most of these large integrated financial groups also act as market makers across a broad range of financial instruments ranging from Treasury securities to OTC derivatives. As market makers, these institutions stand ready to purchase or sell financial instruments in response to their institutional (and sometimes governmental) clients and counterparties. As such, market-making transactions – by their very nature – entail substantial capital commitments and risk-taking by the market maker. However, the capital that is provided in the market-making process is the primary source of the liquidity that is essential to the efficiency and price discovery traits of financial markets. Moreover, in today’s financial environment, market makers are often approached by clients to enter into transactions that have notional amounts that are measured in hundreds of millions, if not, billions of dollars. Since transactions of these sizes cannot be quickly laid off or hedged, the market makers providing these services to institutional clients consume large amounts of capital. Thus, only large and well capitalized institutions have the capital resources, the expertise and the very expensive technological and
operating systems to manage these market-making activities. Having said that, it is also true that some of these activities are indeed high risk in nature. Thus, the case for greater managerial focus, heightened supervisory oversight and larger capital and liquidity cushions for trading and market-making activities are all part of the post-crisis reform agenda.

Alternate Approaches to Too Big to Fail

Before discussing alternative approaches to the “Too Big to Fail” problem there are three important points of perspective that provide some insight into the merits of these alternatives approaches as follows:

First: it is inevitable that at some point in the future, asset price bubbles, financial shocks and seriously troubled financial institutions will again occur. Surely, we can do a better job of reducing the frequency and damage associated with such events, but individually and collectively we are not wise enough to anticipate such events or to stifle their contagion hot spots before they unleash systemic risk factors. This reality does not, of course, imply that we are at the mercy of fate in efforts to better contain systemic risk, but it does imply that we must be realistic in our ambitions, and it certainly implies that great care and precision is needed in evaluating alternative approaches to “Too Big to Fail.”

Second: deliberations about systemic risk and “Too Big to Fail” must take account of the architecture of the so-called public safety net associated with financial institutions. While this architecture differs somewhat from country to country the more
or less common features of the safety net include (1) governmental sponsored insurance on deposits usually up to some ceiling; (2) access to the account and/or discount window facilities of central banks; and (3) consolidated prudential supervision of institutions that have access to items (1) and (2). Historically the safety net was a "package deal;" institutions received the benefits of (1) and (2) in exchange for the burdens of (3).

Today, things are becoming more complicated in that the door is now open to a modified architecture of the safety net whereby systemically important institutions are likely to be subject to consolidated prudential supervision even if such institutions are not, even in part, depositories and do not have access to this discount window except possibly in some extreme emergency. In the United States it appears likely that the responsibility for identifying "systemically" important financial institutions will be vested in some form of an Official Board or Council, but how and where the line for systemically important institutions will be drawn is far from clear.

The framework for "today" that I have described above has a striking similarity to one that I outlined in a January 1987 lengthy essay that was entitled "Financial Market Structure – A Longer View." Over the period since 1987, the financial structure in the US evolved in ways that have many similarities with the evolution that was contemplated in that essay – but with one huge exception; namely, the essay warned that absent greater prior restraint in the financial intermediation process and absent more enlightened prudential supervision, the systemic risk problem might worsen. Unfortunately, events – and not only those associated with the current crisis – have
graphically illustrated that the threat associated with financially driven systemic risk has not diminished, but has sharply increased.

Third: given the global character of the financial intermediation process and the fact that virtually all large and complex financial institutions have a global footprint, it is very difficult to imagine how material differences in the architecture of the safety net for internationally active institutions and the structure of financial systems at the national level can exist without either or both (1) compromising the obvious benefits of the global system of finance; and (2) introducing major competitive distortions and/or new forms of regulatory arbitrage among institutions across countries or regions.

With those points of perspective in mind, and at the risk of considerable simplification, there are three broad approaches to mitigating systemic financial risk and containing the “Too Big to Fail” problems that are being widely discussed as follows:

First: steps could be taken in legislative and/or regulatory terms to shrink the size of all large institutions (however defined) over time and/ to substantially limit the scope of activities conducted by such institutions to so-called "narrow" banking activities of deposit taking and lending. These narrow banks presumably would have deposit insurance, access to the central bank account and discount window facilities and would be subject to consolidated supervision.

Second: certain classes of "high risk" trading and principal investing activities would, over time, be removed from all large and complex institutions and housed in a separate "spin-off" entity that would not have insured deposits nor access to the central
bank. The remaining "banks," however, would have insured deposits, access to the central bank and would be authorized to conduct a wider range of activities than the narrow bank alternative described above. However, depending on how and where the line is drawn between classes of activities, the risk-based spin-off approach would impact many, if not most, existing large and complex institutions. The "spin off" entities housing the high risk activities would almost surely be considered "systemically" important and thus subject to consolidated supervision.

Third: large and complex financial groups would remain largely intact subject to a number of conditions including (1) materially higher capital and liquidity standards for certain classes of trading and related activities; (2) much more aggressive and enlightened prudential supervision with a very strong bias toward prompt corrective action in the face of emerging problems; and (3) the ongoing responsibility of such institutions to actively engage in detailed contingency plans for shrinkage of activities and/or assets sales in the face of emerging problems. Such contingency plans would be regularly shared with supervisory authorities. The last feature of this approach is often referred to as the “Living Will.”

As an extension of this, consideration might be given to the concept of "contingency capital" that has been suggested by a number of public officials and private observers. Essentially, the contingent capital concept contemplates that all systemically important institutions would maintain a block of supplementary capital above already robust capital positions in the form of debt convertible into common equity. The supplementary, or contingent capital, would be converted into equity if, for
example, existing capital positions breached some quantitative trigger point as determined by the authorities. This concept is not without its own problems, not the least of which is that it might inadvertently result in a drift to lower levels of “base” capital.

My clear preference – guided by both philosophical and pragmatic considerations – is the third alternative. In saying that, I recognize that some might suggest I am biased or conflicted by virtue of my place of work. While I accept that some might take this view, and while I also accept the view all of us are influenced by our environment, I am very much at ease in saying that my views of this subject matter – in both of my professional careers – have always been driven by what I believe to be in the public interest.

With that said, my preference for alternative three reflects the following major factors:

First: looked at over the business and credit cycle, the economics of traditional lending - particularly commercial lending – are at best uncertain – a fact that cannot be dismissed even with the perceived benefits of hold-to-maturity accounting for the loan book as a given. For some institutions and their shareholders the prospect of relatively low rates of return on equity might be quite acceptable and, over the long run, such low rates of return might help shrink the size of the banking system – an outcome that may not be a bad thing so long as it occurs in an orderly way over time. In any event, the potential implications of the economics of lending business over the cycle seems to me to be particularly troubling for alternative 1 and, depending on exact configurations, it
can also be troubling for alternative 2. More importantly, it is quite possible that narrow banks, lacking diversification in risks and revenues, could be a source of greater instability rather than a source of greater stability.

Second: for both alternatives 1 and 2 the task of carving up large and complex institutions in a sensible way strikes me as incredibly difficult even if there was agreement as to what "goes" and what "stays" and even if there were a very lengthy phase in or grandfathering provisions. Large integrated financial groups typically have multiple legal entities operating in multiple jurisdictions. Individual transactions may be initiated in one such legal entity and booked in another legal entity. In these circumstances, the "mechanics" of spin offs would be very complex. Netting and collateral agreements, close out documentation, contracts with customers and counterparties, membership rights and privileges in payments, clearance and settlement systems, technological and operating systems, risk management systems, transfer pricing and many other arrangements would have to be adapted to the new legal structure of the spin-off entity and the regulatory requirement of the entity itself and its affiliates. I may be wrong, but all of this strikes me as a Y-2K problem elevated by several orders of magnitude with huge implications for operational and reputational risk. Further, the risk profile of the spin-off entity would likely be higher, not lower, with potential adverse implications for systemic risk.

Obviously, given sufficient time and resources, the "carving up" approach could be made to work but the surviving spin-off institutions would, in most cases, still be
large and still be complex, but would also be less diversified and, in all likelihood, still seen as systemically important and thus, still subject to consolidated supervision.

Third: I believe that alternative three - when coupled with a well designed and well-executed framework of "Enhanced Resolution Authority" represents the best approach to substantially mitigating the “Too Big to Fail” problem. Recognizing that no alternative is failsafe, alternative three, for starters, avoids the messy and risky need to carve-up all or most large and complex institutions. More importantly, the enhanced capital, supervisory and related initiatives associated with alternative three as described earlier should – by themselves – go some considerable distance in the direction of a greater stability and mitigation of “Too Big to Fail.” Having said that, the risk of the disorderly failure of systemically important institutions will never be zero. That being the case, the creation of a broader and more effective system of Enhanced Resolution Authority will get us closer to financial stability and closer to a setting in which direct governmental intervention to bail out large institutions can be reduced to some very low level but, realistically, not to zero.

Enhanced Resolution Authority

Reduced to its basics, the concept of Enhanced Resolution Authority is one that contemplates a statutory and regulatory framework in which an authorized governmental body could, in effect, take control of a large and complex financial institution that is experiencing serious or life threatening problems in order to organize an orderly wind-down of that institution in a setting in which shareholders are likely to
be wiped out, boards and senior managers are dismissed and most classes of creditors are at risk.

However, in the highly charged environment that would almost surely accompany efforts to "resolve" such a situation, the practicalities of effective resolution are of staggering proportions. Indeed, there is a risk – however small – that an ill-conceived or executed approach to enhanced resolution could be a source of heightened instability rather than stability. There is, however, a relatively short list of guiding principles which I believe can go some considerable distance in insuring that Enhanced Resolution Authority can achieve its objectives including substantially mitigating the “Too Big to Fail” problem. Those broad principles include the following:

First: the authorizing legislation and regulations must not be so rigid as to tie the hands of the government bodies that will administer those laws and regulations because it is literally impossible to anticipate the precise circumstances in which the authorities will be required to act.

Second: in my judgment, the authority and responsibility to trigger the use of Enhanced Resolution Authority in a given situation should not be vested in any single governmental body even if a single body has much of the authority and responsibility to execute the resolution authority.

Third: to the maximum extent possible, Enhanced Resolution Authority should be administered using the open institution approach which probably means the troubled institution would be placed into conservatorship allowing that institution to continue to perform and meet its contractual obligations. The open institution
approach has many benefits including (1) preserving the value of assets that might be sold at a later date; (2) minimizing the dangerous and panic prone process of simultaneous close out by all counterparties and the need of such counterparties to then replace many of the closed-out positions; and (3) reducing, but by no means eliminating, the very difficult and destabilizing cross-border events that could otherwise occur as witnessed in the Lehman episode. However, the open institution approach is not without its problems, the most sensitive of which is the question of how well an institution in conservatorship can fund itself. During the transition period, this might require some form of aggressively secured interim liquidity support from the official sector, which would – by its terms – entail very low risk of loss by the official sector.

Fourth: to the maximum extent possible, the rights of creditors and the sanctity of existing contractual rights and obligations need to be protected. Indeed, if the exercise of Enhanced Resolution Authority is seen to arbitrarily violate creditor rights or override existing contractual agreements between the troubled institution and its clients, its creditors, and its counterparties, the goal of orderly wind-down could be compromised and the resultant precedent could easily become a destabilizing source of ongoing uncertainty.

Fifth: the effectiveness of Enhanced Resolution Authority pre-supposes that prompt corrective action by supervisory authorities is well established and is working effectively. This condition places a very large burden on supervisory authorities since
history suggests that the practice of prompt corrective action is – at best – somewhat mixed.

Finally: the orderly wind-down of any large institution is a highly complex endeavor that will take patience, skill and effective communication and collaborations with creditors, counterparties and other interested parties. Shrinking a balance sheet or selling distinct businesses or classes of assets or liabilities may prove relatively simple but the winding down of trading positions, hedges, positions in financial “utilities” such as payments, clearance and settlement systems is quite another matter, especially since there are instances in which individual institutions essentially operate some such utilities.

Based on my own recollections, I can recall only three pre-crisis episodes in which such orderly wind-downs worked reasonably well. One was the Continental Illinois Bank in which FDIC resources and private resources were used. A second was Drexel in which no public or central bank money was used. The third was Long Term Capital in which no public money was used but the Fed played a major role as the honest broker in putting together the "club" of private institutions that provided the multi-billion dollar rescue package.

While these wind-downs all worked reasonably well, a massive and highly complex effort involving aggressive supervisory intervention and effective public sector/private sector cooperation were needed – all in a setting in which the wind-downs occurred in circumstances that were much less complex and threatening than is the case today with highly inter-connected institutions and markets.
These contemporary realities are the reasons why I, and others, have consistently placed so much emphasis on strengthening the infrastructure (or the “plumbing”) of the financial system. Real progress has been and is being made in these efforts but much remains to be done in a setting in which success will only come with aggressive leadership from the public and private sectors and the commitment of very substantial resources.

In stating these principles, I am mindful that the public body responsible for the execution of Enhanced Resolution Authority must have broad powers and discretion and that such powers and discretion must be exercised with care. In saying that, I also recognize that these principles – as with most statements of principles – bring with them certain tensions. The most basic of these tensions is the challenge of orchestrating wind-downs that avoid disorder while insuring a high degree of fairness and equity in the process. That will not be easy but I am convinced that Enhanced Resolution Authority, together with other reforms that are on the drawing boards, offer the best hope for containing “Too Big to Fail,” enhancing financial stability and sustaining economic growth and rising standards of living.
Part Three

National and Regional Perspectives

Although unquestionably global, the crisis has spread differentially across borders. Early claims of decoupling were proven wrong. Countries’ policy reactions and structural capacities to contain and overcome the crisis are also differentiated. Even if global trends were not dramatically affected in the medium and long term by the present shock, as yet it is unclear whether or not its effects will be lasting at the level of some countries and regions. Consequently, it is relevant to examine a selected number of country and regional experiences with particular regard to the above three issues, among others.

T.N. Srinivasan
Samuel C. Park, Jr. Professor of Economics, Yale University
Moderator

This session is on the regional perspective on the financial crisis. The regional perspective is important because, although there are many commonalities in the crisis among a wide range of countries, there are distinctive features specific to countries, particularly in the emerging market economies, such as the policies that have been adopted to mitigate the crisis. It is difficult to say whether the commonalities are inherent in the nature of the crisis, or whether to some extent the policy responses have another characteristic -- that whatever has been adopted in the United States and Europe is imitated in the emerging countries whether or not their situation warrants that.
The Financial Crisis: Some Lessons for Developing Asia

When assessing the impact of the financial crisis on Asia, especially its current growth engines, China and India, attention has been focused on two aspects. First, the consequences of the exit of foreign portfolio investors who chose to book profits on their investments in these countries and transfer money to meet commitments resulting from losses at home. Second, the impact of the slowdown of global GDP and trade on exports and therefore on growth in these economies that are deeply integrated with the world economy.

In sum, while analyses of the financial crisis in the US, UK and Europe focused on the fault lines in their financial systems (consisting of markets, institutions and instruments) and the inadequacies of their regulatory and macroeconomic frameworks, the focus of attention in developing Asia was on problems imported from abroad. This does tend to overlook an important question, underlined by the challenge posed by the recent financial and real economy crises to mainstream perceptions about the functioning of financial markets and the efficacy of regulatory regimes. Over the years when developing countries, including developing countries in Asia, were attracting large financial flows from the developed countries, they were also accommodating in their financial systems the carriers of those flows, namely foreign financial firms, and reshaping their financial and regulatory structures in the image of those in the
developed countries. Did this generate institutional and regulatory inadequacies of the kind that have now been discovered in the developed countries? And, if so, are there lessons to be learned by the developing countries from the experience of the developed countries during the run up to, and during the course of, the crisis?

The question of how Asia was affected by the crisis has been substantially answered. There are two features of this crisis which have been noted in the literature and in the financial press. First, though the impact of the crisis in Asia was significant, it was uneven. For example, South Asia was not so badly affected, though there was a decline in the rate of growth that was marked until the middle of 2009. Southeast Asia, which of course is more export dependent, was affected even more than South Asia was.

But the second noteworthy feature of the impact of the crisis in Asia was that the region experienced a rapid turnaround, noticeably from the latter half of 2009 and the early months of 2010. The recovery was marked in stock markets, though not restricted just to those markets. If we look at the evidence on industrial growth in India, for example, we find that during the July to September quarter of 2009, which is the most recent for which we have numbers at the time of writing, you can observe a reduction or even reversal of the negative rates of industrial growth. Thus we seem to have had some kind of a V-shaped movement in growth rates. There was a sharp fall, at least in some countries, but subsequently there was a significant recovery.

As noted above, there is some consensus on the explanations for these trends. One is that the global downturn affected these countries because of their
dependence on developed country markets, especially in the case of China and the newly industrialized countries (NICs). In other cases, it was their dependence on developed country capital, especially short term portfolio capital and debt, that made them vulnerable. Having to meet commitments in their home countries, international investors decided to move their capital back in order to settle claims that were being made on them from where they originated. This disrupted credit markets and adversely affected credit financed investment and consumption in developing Asia.

The recovery then is attributed to the end of decline in global trade flows and the return of capital flows to these countries. With cheap liquidity being pumped into financial markets worldwide to save banks and other financial sector players, capital has been flowing to developing countries in search of better returns. Many attribute the recovery to this. Besides this there was the role of the fiscal stimulus. We know that the stimulus in China, for example, was substantial. In India, the stimulus was partly fortuitous, stemming from the implementation of a decadal pay commission award for civil servants that required payment of large arrears. But, this stimulus only contributed to the strengthening of the recovery resulting from the other factors.

A feature of these explanations, however, is a tendency to assume that the crisis itself is not Asian, that many of the factors which led up to the crisis are not part of any Asian disease, but one that afflicts the developed countries. It is only because of their integration with the developed countries -- through trade and capital flows -- that Asian developing countries are seen to have been through difficulties in recent times. In fact, most people say that because of the kind of financial regulation which operates in these
countries, there was little exposure to the kind of toxic assets that proliferated in the
developed countries. Further, in response to the 1997-98 financial crisis in the region,
the financial sectors in these countries had been through a process of recapitalization of
banks, a cleanup of their balance sheets, some degree of re-regulation, and all of this is
seen as having made their financial sectors quite resilient. Therefore, if they were
affected by this crisis at all, which they were to different degrees, it was essentially
because of the fallout of their integration.

This is indeed true. We know, for example, that if you look at two-way trade as
a proportion of GDP, East Asia’s integration has been high. It was already significant in
the 1980s and intensified in the 1990s. Even though many were arguing initially that
this was partly because of a substantial degree of intra-Asian trade, we know that this
was reflective of an Asian export platform. In the case of goods catering to final
demand, only about 22 percent of Asia’s exports are intra-regional. Much of intra-
regional trade consists of trade in commodities that are intermediates, components,
and the like. On the other hand, around four-fifths of goods catering to final demand
are for export to the rest of the world outside developing Asia, and 60 percent of these
are directed at the big three: U.S., EU and Japan. Intra-regional trade reflected the
direct or indirect integration of countries with developed country markets. Therefore, if
the U.S. and EU are affected by a crisis, obviously trade from these countries would be
affected, despite the material importance of intra-Asian trade prior to the crisis.

Thus one implication which could be derived from the region’s experience with
the crisis is that excessive export dependence renders growth vulnerable. There is, of
course, no consensus on this, but even a regional economic outlook report from the IMF notes that domestic demand dependence reduces vulnerability, and the presence of countries where growth is largely based on the domestic market, like Indonesia in Southeast Asia and India and Pakistan in South Asia, is seen to have buffered the effects of the crisis as transmitted through the decline or the deceleration of global trade. It is not only because global imbalances have to be corrected that we need to see China moving towards a greater degree of domestic market dependence, but because such dependence would reduce the country’s vulnerability. This does challenge some ideas with regard to appropriate growth strategies which have been prevalent in these countries in recent years.

A similar argument applies to capital inflows. Countries that are successful in attracting inflows that are in excess of their current account financing needs not only find it difficult to manage their exchange rates and their monetary policies, but are vulnerable to the adverse effects of sudden outflows determined often by events outside the country. We must not forget that even the 1997 crisis in Southeast Asia was preceded by a surge in capital flows in the form of portfolio capital, foreign direct investment and debt. The crisis was associated with an outflow of capital, illustrating the boom-bust cycle that unbridled capital flows result in. Interestingly, after the decline in capital flows during and after the 1997 crisis, there has been a return to a situation of large capital inflows, which took the form of a capital surge in Asia after 2003. Moreover, there has been a high degree of concentration of these flows in a few countries.
That obviously could mean that any reversal of flows can generate capital and currency market problems, as happened in 2008 in Asia. In India for example, there was a reversal of capital inflow in the months up to January 2009. As a result there was a significant outflow of portfolio capital invested in equity securities, in particular. This obviously had some impact, in terms of instability in stock and currency markets. Foreign institutional investors (FIIs) drive markets which are not very wide and are pretty shallow in these countries, and you can see an almost one-to-one link between the movement of the stock exchange index and the movement of cumulative FII investment. This was not only an Indian problem but a pan-Asian problem. It is in this context that we should assess the restoration of large capital flows to the region since early 2009, driven by the cheap liquidity that has been injected into the system. We are witnessing a form of carry trade, financed with borrowing in US markets, for investment outside, in order to benefit from higher financial rates of return and from the depreciation of the dollar. Such trade being speculative also increases the vulnerability of countries that are the targets of such flows.

What implication could be derived from this? It is that these countries went too far in their effort to attract capital, especially in a period when the world was awash with liquidity. This made them more vulnerable to crises of the kind we witnessed in 1997. Some people would go further and argue that it suggests that capital controls still retain their relevance. In order to insure themselves against such vulnerability, countries must opt for a form of macro-prudential regulation in which capital controls have a role.
Finally, there is a third dimension to the problems faced by Asian developing countries in the new financial environment. This dimension, which is definitely less visible as of now, is the effect of what could be called “structural contagion.” What financial liberalization and reform aimed at attracting foreign capital has done is that it has encouraged these countries to recast their financial structures and regulatory frameworks to resemble those in the Anglo-Saxon world; to replicate, despite their lower levels of per capita income or levels of development otherwise measured, the Anglo-Saxon model of finance within their own borders. The idea appears to be that if you want to attract capital, you need to attract the carriers of capital. And if you want to attract the carriers of capital, you have to create for them an environment which they would find conducive. That kind of an environment is defined by the model which was shaped not in 1933 by the Glass-Steagall Act, but by developments after the 1980s, which culminated in the Financial Services Modernisation Act in the US. In the event, financial liberalization in Asian developing countries involves a process of external and internal deregulation which attempts to recreate within the borders of these countries a financial structure consisting of markets, institutions, and instruments of the kind seen in the U.S. and U.K. in particular.

If there is, therefore, a tendency for Asian financial systems to increasingly resemble those in the Anglo-Saxon world, the question arises whether the financial sectors in Asian countries are characterized by vulnerabilities of the kind we saw in the developed countries in 2008 and after. This question remains valid even if the crisis in Asia has not taken the form it has in most developed countries. There has been no
financial implosion in these countries. Asian banks are well capitalized. They’re not exposed to toxic assets such as collateralized debt obligations linked to the housing market in the developed countries. Nor are they engaged in risky profit seeking to the same degree. Even if you examine capital adequacy ratios there are a number of countries in which there is a relative degree of soundness of the financial system, though you can’t say that all of Asia is completely sound.

But this does not mean that the restructuring of financial systems in Asia has not had its own fall-out. Consider, for example, the case of India. To start with, one consequence of financial liberalization is that there has been a rapid expansion of bank credit. Of course, India’s bank credit to GDP ratio is not all that high when compared with many other countries. But if you look at the ratio inter-temporally, there has been a significant increase. Particularly over the 2000s, when we have seen a surge in foreign capital inflows to these countries resulting in an expansion of liquidity, we have had a significant increase in the provision of credit.

There has also been a change in the pattern of lending. A large part of the increment in credit takes the form of retail loans: loans for personal housing, loans for automobile purchases, loans to buy consumer durables, or just straightforward loans for consumption including credit card receivables. The search for higher net interest margins and profits has obviously driven this tendency. We are observing a situation where “profit seeking” encourages a shift into areas where returns are higher and where credit expansion is justified by the fact that the investment financed with credit also serves as the collateral for the credit that financial institutions provide.
The result has been a sharp increase in the retail exposure of the banking system. If you go back to the early 1980s in India, retail exposure of this kind was in the range of about 3 percent of total advances. Now it is about 23 percent or close to a quarter of all advances. This is the figure with respect to the stock of advances made by the banking system. The ratio to incremental advances would obviously be much higher.

In the event, there are signs, which have been noted by the Central Bank, of an increase in the potential for default. There is also considerable maturity mismatch, with the banks taking in short term deposits and providing long-term loans. According to one estimate quoted by S.S. Tarapore, a former Deputy Governor of the Reserve Bank of India, even by 2007 there was a significant chunk of subprime loans in the portfolio of many banks in India, particularly the private and foreign banks. There is also an increase in exposure to the sensitive sectors, stock, real estate and commodity markets, with the real estate market contributing about 18 percent of total advances and these sectors together accounting for a little more than a fifth of advances. In addition, the practice of securitization is gaining in popularity. As is accepted widely now, this results in a tendency to discount or undervalue risk. All of this occurs because countries in Asia have in substantial measure transformed their financial structures in the image of the Anglo-Saxon model and opted for the kind of regulatory forbearance that characterises that model, in the belief that it encourages forms of financial activity which are best from the point of view of the allocation of resources towards efficient ends.
So, even though the conventional indicators of banking sector performance in India and other Asian countries suggest that it is safe, you observe tendencies indicative of potential fragility. If these intensify and lead to financial failure, it could result in inadequate liquidity and credit stringency, especially if foreign capital exits these economies because of the uncertainties that arise.

This obviously would have adverse implications for the real economy, given the recent dependence of real economy growth on the availability of cheap finance. What the crisis did show is that the notion that speculative activity in the financial sector works against the real economy—that there is some kind of a conflict between productive capital (especially industrial capital) and finance capital—isn’t true. Rather, because of the leverage that these practices of finance permitted, debt financed private expenditure became a substitute for debt financed public expenditure, and helped sustain and raise real economy growth during the years of fiscal contraction. Such tendencies underlay India’s recent 9 percent growth trajectory, for example.

It is in this context that we need to assess the “positive,” recovering-inducing effects of the return of capital flows. Asia has once again become the main attractor of equity capital from abroad, with flows far exceeding those to developing Europe and Latin America. Bank credit in Asia, which did not decline too sharply in any case, also seems to be turning around and regaining the rapid growth it recorded in the period since 2003. Thus, underlying the V-shape growth trajectory, with a sharp recovery, is a return to precisely those tendencies that were temporarily stalled by the reversal of capital flows that magnified the effects of trade dependence on growth. In fact it is not
a substantial recovery in global trade flows that underlies the return to growth in these countries, but their ability to combine a fiscal stimulus with a return to a debt-financed, consumption- and investment-led growth path. The idea seems to be that when required to exit from the fiscal stimulus, to whatever degree, credit-finance demand would sustain growth in these countries.

This obviously raises a set of questions. Is the recovery and growth in these countries another liquidity-driven and credit-financed boom? Are there, therefore, structural weaknesses that lie below the ostensible financial strength of and robust recovery in Asia? And, therefore, does developing Asia, too, share the problems that were revealed by this crisis in the developed countries? In other words, are we victims of a new Orientalism, which sees Asia as different even though it chooses to imitate the financial structures and growth trajectories in the U.S. and the U.K.? Maybe they have not gone far in this direction. But this crisis may be providing the early warning, which if taken, as India and China took the warning from 1997, could do these countries much good.
I would like to first present a model, which I have been formulating for several crisis-affected countries with the help of my research assistant, Edmond Horsey. I will then explain the impact of the global crisis on the Russian economy in 2009 in terms of the model and how successfully the Russian authorities have managed to handle the situation.

The Model

The model gives an analytical framework for evaluating the 2009 crisis impact and the 2010 prospects, in terms of GDP growth rates, for four groups of countries. They belong to (1) Asia (2) South America (3) North America and Europe, and finally (4) some East European and Baltic countries and Russia. In Figure 1, the blue lines represent GDP growth rates in 2009, and the red lines the projected 2010 rates for these four groups.

There is a clear pattern in the 2009 performance on the left side of the divide in the figure and 2010 prospects on the right side in the figure. The 2009 crisis impact from Asia at the top to Latvia at the bottom on the left of the divide becomes more severe: The GDP growth rates become increasingly negative. At the same time, the 2010 growth prospects to the right of the divide in the figure decline from Asia at the top to Latvia at the bottom. I now discuss the main features of the analytical model which can effectively explain this pattern.
More precisely, four explanatory variables can effectively determine the 2009 crisis impact, in terms of the GDP growth rate (as the dependent variable) in the four groups of countries. We plan to collect data for these variables for about 70 countries. The sample will be large enough for us to consider parametric variations in the 2009 crisis impact and 2010 growth prospects among the four groups. The explanatory variables are four.

The Explanatory Variables of the Model

The first variable with impact on the 2009 GDP growth rates and 2010 growth prospects is the state of the banking sector, which in turn had three distinguishing features:

i. The toxic assets arising from the sub-prime mortgage-based securities, which affected major US banks, constitute the first feature. They also appeared in banks in Britain, which to some extent is a Siamese twin of the US. German banks too were infected by them but to a lesser extent.

ii. The second feature within the banking sector -- this is a sub-feature — was the extent to which banks in a given country had borrowed from hard currency banks for financing the export growth during the pre-crisis expansion phase of their economies. Among these are Hungary, Latvia, and Russia. Hungarian businesses, via their banks, borrowed from Swiss banks, and Latvian businesses from Swedish banks. With declining exports, these local banks could not meet the repayment schedules of their foreign creditors. Hungarian and Latvian authorities sought IMF credit support.
iii. The third feature of the banking sector that affected its viability was the non-performing loans in bank portfolios. These were largely non-performing loans with Chinese and Indian banks which affected bank balance sheets because local businesses which had borrowed in local currencies could not meet repayment calls from their local creditors as the economies went into a downturn in early 2009. Indian commercial banks cannot freely borrow from foreign banks. The banking sector in India and to a lesser extent in China has been managed conservatively with regard to activities involving foreign exchange transactions by commercial banks.

In short, the 2009 crisis impact and 2010 growth prospect in our sample countries were affected by banking sector problems outlined above.

The second explanatory variable in the model with impact on growth performance in 2009 and prospects in 2010 is export dependence. How heavily dependent are countries on exports as growth promoters? The exports to GDP ratios in the figure bring out the heavy dependence of the Japanese, German and to a lesser extent the Chinese economies on exports. The export magnitudes are gross and do not net out imports. With that caveat, note that the German ratio of exports to GDP in 2007 was 54 percent. Japanese exports declined in the first half of 2009 by a staggering 40 percent! We want to estimate the parameters relating the impact of export dependence on GDP growth rate decline in 2009 and prospects in 2010.

There is a further issue with regard to a country’s export dependence. Is it dependent on exports of a single volatile commodity as an engine of growth? The Russian economy’s growth from 2000 to 2007 resulted from high world prices of oil and
natural gas and commodities. The GDP growth rate and the budgetary health of Russia in 2009 plummeted into negative numbers as oil prices slumped from a high $147 a barrel in July 2008 to $30 a barrel in December with its sluggish recovery in the neighborhood of $70 a barrel in November 2009. Another economy in the sample similarly plagued by heavy dependence on a single commodity has been Ukraine, which relies on steel exports.

The third explanatory variable with impact on 2009 growth decline and 2010 growth prospect is the inflation rate. In short, a high inflation rate inhibits the policy makers’ ability to mount a stimulus package in order to mitigate the economy’s decline. The country inflation rates are presented in the figure. Indian inflation, running at 6 percent annual toward the end of 2008, inhibited the government’s ability to mount a sizeable stimulus in 2009. Russian inflation running at close to an annual 9-10 percent had a similar stimulus-restraining impact. By contrast, the low inflation rates at below 1 percent annual helped US and EMU policy makers mount a sizeable stimulus. Chinese authorities did not have to worry about the inflationary impact of a massive stimulus at 15 percent of GDP in 2009. On the other hand, Japanese authorities continue battling the opposite challenge of an economy in deflation.

The final explanatory variable affecting growth performance and prospects is political stability. From the US to the EMU countries, as well as Russia, China and India, political stability has promoted economic decision-making. On the other hand, the emergence of the crisis in 2008 destabilized some countries politically, among them Iceland, the Baltic lands and Japan. Iceland has been the worst case; in Japan the
Liberal Democratic Party was thrown out of power after 50 years. But the inclusion of political stability as an explanatory variable which affected crisis impact has problems. One might argue that the crisis caused political instability. We need to sort out the cause and effect link between the political situation and crisis impact.

The model therefore will estimate the impact of banking sector health, export dependence and inflation on the 2009 crisis impact and 2010 recovery prospects in the sample countries. We will run two sets of regressions for 2009 and 2010.

How might one assess the crisis impact and recovery prospects of Russia in terms of the model?

The Model and Russia

The Russian situation at the time of the onset of the crisis toward the end of 2008 was exceptional in contrast to any country included here in the sample. The Russian economy was hit negatively by each explanatory variable included in the model.

i. The Banking Sector:

The Russian banks’ balance sheets are in trouble. I was in St. Petersburg in June 2008 and got a sense of the situation in a panel discussion in which Finance Minister, Alexei Kudrin, and Deputy Chairman of the Central Bank of Russia, Alexei Ulyukaev, participated. It was hard to get explicit numbers but I got a sense that up to 15 percent of bank loans are currently non-performing. Occasionally, a Russian bank is significantly owned by an oligarch who borrowed heavily from foreign banks in the expansion phase of the economy during 2000-2007. Some of the non-performing loans were extended
by the banks to domestic businesses, which have slumped. The balance sheets have a mix of hard currency borrowings and local non-performing loans.

ii. Export Dependence on a Single Volatile Commodity:

From 2000 to 2007, the Russian economy was heavily dependent on oil and natural gas exports. Their high prices and substantial export earnings provided tax revenues of up to 60 percent to the budget, which ran surpluses and contributed to high growth and employment. This trickle down impact came to an end when oil prices collapsed and have remained low at their high of around $70 in December 2009.

iii. High Inflation:

While inflation has been brought down steadily from a high of 13 percent to a current 8 percent, it still reins in the ability of the policy makers to mount a stimulus that could lower the mounting unemployment rate, which has moved up to a current 9 percent from a low of 6 percent in mid-2008.

iv. Political Stability:

The final explanatory variable of political stability has worked in Russia’s crisis management. Prime Minister Vladimir Putin, in charge of government policymaking is also popular with his countrymen, with a steady approval rating of 70 percent. With his young handpicked protégé Dmitry Medvedev as president, the government and the executive branch have tackled the crisis management together.

How has the team, the prime minister and the president and their policy makers, handled the crisis?
Crisis Management from 2008-End to late 2009

Fortunately, the Russian economy had significant financial reserves to deal with the immediate impact of the crisis in September 2008. From 2001 to 2007, the Russian economy had grown at an annual real GDP growth rate of about 7 percent. The budget was in surplus at 6 to 7 percent of GDP. The current account was in surplus as well. The foreign exchange reserves of the Central Bank of Russia were $600 billion, the third largest after those of China and Japan. The budget had set aside a sizeable off-budget fund to deal with future emergencies. With abundant cash reserves providing policy maneuverability, what could go wrong?

But a disaster did strike ahead of the crisis impact when the brief Russian-Georgian war of early August 2008 prompted panicky investors to flee in massive numbers. The ruble, which traded at about 25 rubles to a joint dollar/euro basket in June of 2008, declined to about 35 rubles in December. The Russian central bank allowed the steady conversion of rubles into dollars over a period of six months rather than let it tumble sharply in a single stroke. In its judgment, a sudden sharp devaluation would prompt panicky Russian holders of rubles to switch into dollars and euros. Nor did the bank impose exchange control on the outflow of dollars. That would have deterred foreign investors from moving back into Russia.

While the central bank acted, the government announced a $200 billion stimulus package, of which $50 billion were assigned to bail out the oligarchs, initially in the amount of $10 billion, so that they could repay their hard currency loans. But the state bank, vneshekonombank (foreign economic bank) acquired their assets in nickel
and aluminum industries which otherwise would have reverted to the coffers of foreign banks. The process, devoid of approval by the lawmakers or discussion by the public, lacked transparency. Prime Minister Putin also declared that the repossession of the strategic sector stocks by the state bank was a temporary measure.

In a March 2009 stimulus budget, the government also announced support to the automobile industry and cash subsidies to the unemployed.

The ruble has currently stabilized in a managed float arrangement at about 28 rubles to a combined dollar/euro basket. Indeed, it is beginning to appreciate. Three days ago, the Russian Central Bank bought about $700 million from the foreign exchange market in exchange for rubles. The bank has also managed to bring down inflation to an annual 6 percent, a decline that has been helped by a weak economy with lagging demand by households and businesses. However, the central bank faces a formidable challenge in cleaning up the banking system in order to unlock the pervasive credit crunch. With that caveat, it would seem that the policy measures were appropriate and timely in handling the crisis.

*The Policy Framework for Handling the Crisis*

It would seem that macro economic policymaking in Russia would pass the strict test of market economy criteria. The stimulus from the budget was adequate. Monetary policy was focused on steadily bringing down the inflation rate. The exchange rate management was aimed at stabilizing the ruble. Several earlier legislative measures under the Putin presidency from 2000 to 2008 had initiated positive market economy
features The personal income tax rate is uniform at 13 percent; the corporate tax was reduced to about 24 percent; land sale is allowed, with some restrictions.

While the policy framework is remarkably forward-looking, the future prospects of the Russian economy at best provide mixed signals. The structure of the economy is dominated by large enterprises not only in the energy and commodities sector, but also in the trading, services, and technology providers. This interlocked entrenched enterprise structure is also controlled by the state with majority ownership and appointment of senior personnel in strategic decision-making. The inbred, secretive bureaucratized structure is also rife with corruption. Besides, the crisis has snuffed out the emergence of small trading and services sector, which were beginning to appear not only in Moscow and in St. Petersburg but also in outlying urban centers in the vast land.

In a recent statement in his blog, the Russian President described Russia as “a corrupt, raw-material based economy.” Yesterday the President said, “We have to invite foreign investment to reform our economy.” I have been saying that for quite some time now. In my letter in the Financial Times of three weeks ago, I suggested that the constraints on foreign investment moving into Russia’s so-called strategic sectors should be modified in order for the sector to become competitive in a corporate governance environment. Only a decisive “destructive creation” approach from the top leadership can unlock that process.
Forecasts for real GDP growth %

Prepared by Edmond Horsey, Columbia University ‘10
The title of this conference appears to me to divide countries into three groups -- culprit, survivor, and casualty. However, as in most areas in life, things do not always fall neatly into preconceived categories. In most discussions today on the global financial crisis, China is classified either as a culprit or as a survivor.

It is interesting to note in retrospect that at the very beginning of the crisis, the IMF thought that China would be a casualty. In November 2008, the IMF lowered its growth rate projection for 2009 for China from 9 percent to 7 percent. Then at the G20 meeting in November in Washington, D.C., Prime Minister Wen Jiabao said that China would go for 8 percent growth. As if in retaliation, in January 2009 the IMF lowered its growth projection further to 6.5 percent.

Being the contrarian that I am, I predicted in a congressional hearing in February 2008 that the actual outcome would be much closer to the 8 percent figure of the Chinese Premier than to the 6.5 percent number of the IMF.

Today, to continue to be the contrarian I sometimes am, I would like to propose a note of caution about China. In my opinion, there is the clear possibility that China could move from being a culprit and a survivor today to being a casualty; a casualty not in the sense of a dramatic output collapse in the short run, but a casualty in the sense of being caught in the middle income trap over the medium run.
Let us review what others have said about China being a culprit and a survivor. The culprit status -- I treat that as a status under dispute -- was put forward by Ben Bernanke who attributed that the excess savings in China, having forced down interest rates, created the asset bubbles that finally brought us down. Of course, he only mentioned the part about excess savings and low interest rates. The New York Times, on January 20th, 2009, connected the dots and said the logical implication is that it created the bubbles. Nicholas Lardy describes the U.S. as the addict and China as the pusher. Of course, there's a lot of historical irony in that, given the three opium wars that China fought in order to open trade.

Historical irony aside, we all, I think, would agree that China is projected now to grow around 8.5 percent in 2009. And you could say the survivor status should also be supplemented to do-gooder status. Number one, by keeping its growth rate so high, China certainly has brought prosperity to the rest of East Asia. Korea is growing the fastest it has for the last five years because of exports of capital equipment to China. Prices of raw commodities have not fallen in Southeast Asia because of China’s sucking in of raw commodities imports. You can certainly see why Australia is the first to raise its interest rates because Rio Tinto has bounced back because of high mineral prices. The economy in general has been pulled along by the Chinese locomotive. That’s China’s indirect benefit to the world because of keeping its own growth rate high.

China has now recognized itself as a world player, and hence has moved quite aggressively onto the international stage. For example, it is helping to raise the regional self insurance fund known as the Chiang Mai Initiative whereby there is pooling
of reserves within East Asia. The fund will be increased from $80 billion to $120 billion. China is giving around $10 billion to the Chiang Mai Initiative. This is a small amount compared to what China was giving to the IMF, which was $50 billion.

As you can see, getting the predictions wrong has not done the IMF any harm. It has gotten $500 billion extra in capital disbursement to improve its technical capacity.

So, China has been trying to do its part to enhance its status, mostly by using its foreign exchange reserves to stabilize the global financial system.

Let’s talk about China being the culprit, the claim of excess reserves. The claim of excess reserves comes because of the persistent current account surpluses of China. It’s often said that the Chinese have very high savings, possibly because they are a people who have newly left peasantry, and they retained the habits of thriftiness that is typical of peasants and conservatism. There is worsening income distribution in China, and if you think of the marginal rate of savings -- it’s been higher with the rich than the poor -- then this goes along with that explanation.

But if you look at the present demographic profile, China is going to be a rapidly aging society. What this means is that it is right in the phase where people are saving for retirement, especially now that given the one-child policy you cannot have your child as the dependent social insurance instrument he or she used to be.

I think the issue is not high savings. The issue is really a failure in financial intermediation because saving is very high in China, but we hear often the claim that the investment rate is too high in China. And so, China ought to reduce its investment rate.
The strange thing to me is this persistent current account surplus in China appeared only from 1994 onwards. Before that, on the average, if you take a two or three year average, the current account has always been near zero.

So, 1994 is a turning point -- I will explain later what the turning point is. But it is a turning point in which the rising savings of China now fails to be intermediated into savings, unlike before 1994. Why? Largely because before 1994, the banks would automatically put all savings into the state-owned enterprises, and the state-owned enterprises are in the process of spontaneous privatization. So, it means the loans are now returned. And so, non-performing loans (NPLs) appeared, and when NPLs appeared, that was the time when it was very popular to talk about the coming collapse of China. In fact, there is this book which predicted that, given its insolvent banks up until the end of the 1990s, China would soon face a bank run. Of course, none of that happened.

But the more important thing is because of the NPLs, which was a fiscal burden to the government, Zhu Rongji in 1994 enacted a rule that if the non-performing loans of any of the four major banks which dominate, or rather which account for most of the banking sector, if the nonperforming ratio were to go up two years consecutively, the president of the bank would be removed. What’s the direct consequence? The bank President called in all the provincial branch presidents and said, “If the NPL goes up in any single year, you are out.” In other words, “I’ll get you before Zhu Rongji gets me.”

The outcome was that they stopped lending to the usual customers. And having stopped lending to the usual customers, they did not begin lending to the other side of
customers, the private sector. In fact, the private sector is systematically discriminated against in China. Today, the interest rate for state-owned enterprises, or state-controlled enterprises more accurately, is roughly 3 percent. The interest rate today for private enterprises in the fastest growing province in China, Zhejiang, is 17.5 percent for the goods enterprises.

So, because of this discrimination against private enterprises, they have the perfect reason not to lend to private enterprises because the state banks say the balance sheets of the private firms are a bunch of lies. Yes, it’s true. It’s a bunch of lies because they are all in the business of not paying extra taxes if they don’t have to.

On paper the company is expanding, but its profit rate is low, largely because you don’t volunteer to pay more taxes than necessary. That is the problem -- they knew that the state-owned banks would not lend to them anyway. The outcome is a spillover of this excess savings as a current account balance into the rest of the world.

This is not the first time that has happened in China. This happened in the case of Taiwan. Taiwan in 1985 ran a current account balance of almost 20 percent of GDP. And it is because at that time all the Taiwanese banks, having been left behind by the Japanese at the end of World War II, were taken over by the government. And the government ran them strictly according to civil service regulations whereby a bank officer was responsible for every bad loan that he or she made. The only difference between China and Taiwan is that Taiwan did not discriminate against the black market in the financial sector. In fact, the black market interest rate is reported in the Taiwan newspaper every day.
In the case of China, because of the thin legitimacy of the government, they could not stand the social upheaval that comes with the crash of a black market financial institution, so the government has always bailed out each and every one of the black market financial institutions. And because of the government bailing them out in the past, it does not want to bail out any of them in the future; so it suppresses the black market even harder. And because it suppresses the black market harder, the market has become even more short term oriented in its operations, and hence much more risky than it would be.

The financial sector, the failure to intermediate China's high savings into investment, is the fundamental cost of the current account surpluses that we see. It is very unnatural for such a poor country to be a capital exporter to the world.

What is the cure for that? Let me talk briefly about a cure that has been often put forward about how to fix the trade imbalances. The Institute for International Economics has said 40 percent is the magic number to push China to do. This is not the first time that the United States has pushed another country to appreciate. We think back in 1985 to ’88 where ’85 was the Plaza Accord and ’88 was the Louvre Accord that said, “Stop appreciating the yen because it’s destabilizing the market.” The last part is seldom said. The Louvre Accord stopped the Japanese appreciation.

But, what happened? The yen went from 250 to 125. It is true that it reduced the Japanese-U.S. bilateral trade imbalance; it did not reduce the U.S. overall trade imbalance. Why? Japanese goods were more expensive, so the U.S. bought more from
the rest of the world, and the Japanese capital flooded out from Tokyo to Southeast Asia, to service the U.S. markets from there.

We don’t live in a two-country world. If China were to appreciate by 40 percent, I would predict that Vietnam, Indonesia, and possibly Mexico -- being next to the United State -- would be the primary beneficiaries. And unless the U.S. is able to put its fiscal house in order, which would mean raising taxes to fight the war in Afghanistan and Iraq, we will be unlikely to see the U.S. being happier even if the bilateral imbalance with China were to be reduced. After all, this is how the word, “structural impediment” got invented when, after the huge yen appreciation, the U.S. overall trade imbalance did not change.

Survivor -- why is the macro stimulus more effective in China than in the United States? It is not because China has undertaken more massive expansion of reserves than the United States. The expansion of reserves in the United States and China is about the same. The big difference is in the amount of loans -- the M2 growth is what’s so different between the two countries.

In other words, the United States is simply pushing on a string -- the reserves grow, but the loan volume is not growing; in China, the reserves volume goes up and the loan volumes goes up. The reason is because, number one, a lot of the instruments in which every demand is implemented are done by non profit-maximizing agencies. More importantly, the liquidity injections have different results because they are being used for different purposes. The easiest way I can think of showing it is to say the following. The U.S. crisis came about because of the collapse in working capital,
because of the damaged balance sheets of the banks from the bubble blowing up, and from the aggregate demand from the negative wealth effect; whereas from China it was just straightforward demand falling. What you see there is that FDI flows and export flows all crashed in November 2008.

In the case of China, it’s very clear. It was all external in origin and in demand and had nothing to do with what shape the balance sheets were in.

To tell this story very easily, let’s consider what a good balance sheet would look like. Let’s take the simplest case where the reserve requirement is 10 percent, the capital adequacy ratio rate is 10 percent. If the bank capital is 13, the bank can lend up to $130 million. It is below what it could lend, so this is a sound bank.

In the case of a loss of $10 billion due to a hedge fund going under, what happens is that the capital has to be written straight out -- in other words, a loss of 10 has offset the capital writing down. That means that the maximum amount of loans that a bank can now make is 30. That’s the capital adequacy ratio, an assumption of ten. So, it means that this number will have to be reduced to 30, they’ll be squeezing working credit in the capital because of the damaged balance sheet.

The $10 billion that has been put into the U.S. banks goes straight into here in order to prevent this from falling; whereas in the case of China, since the balance sheet was not damaged, it would go straight into reserves.
The Global Financial Crisis: A Latin American Perspective

This document discusses the origins of the global financial crisis and its impact on emerging market economies, particularly Latin America. Some thoughts on the lessons learned during this crisis with regard to the challenges that globalization represents to financial authorities are presented.

The Global Financial Crisis

In many aspects, the current crisis is not very different from the events seen in many emerging markets in the last decade: macroeconomic disequilibrium derived from large current account deficits and fiscal imbalances; high growth rates of consumption financed with short-term capital inflows; lax monetary policies; financial deregulation; and excessive leverage coupled with inadequate regulation and supervision of financial institutions. However, what makes this crisis different are:

1. Its truly global nature: while contagion resulting from the problems observed in emerging market economies in recent years was significant in countries believed to have similar characteristics, the crisis in the U.S. economy ended up substantially affecting all regions around the globe.
2. The magnitude of the crisis. This is not only explained by the fact that the crisis sprang from the largest economy in the world, but also by the high level of financial leverage that prevailed in many large financial institutions, as well as the disintermediation of resources from traditionally regulated financial agents in favor of less regulated ones—the expansion of the so-called parallel banking system.

3. The third aspect that characterizes the current crisis is the simultaneity of the events taking place in many different markets, as well as in economies as diverse as Germany, Korea and Mexico.

The trigger of the crisis may have been the bursting of the housing bubble in the U.S. However, the fundamental forces behind the current crisis are deeply related to large and increasing global imbalances among the most important world economies (an enormous U.S. deficit coupled with surpluses in Japan, China, Russia, and OPEC countries), abundant liquidity worldwide, and a prolonged period of very low real interest rates. It’s been a worrisome development that global imbalances are not being corrected in a sustainable fashion. It is likely that such imbalances and their effects, including the more immediate consequences for emerging markets such as capital flows and carry trades, will be around for a few years.

The deterioration of financial institutions’ balance sheets led to a deleveraging process, which contributed to a sharp fall in asset prices and to tighter credit conditions. As a result, lending plummeted, and thus business investment and consumer spending in advanced economies fell. The problems in credit markets and the fall in world trade have had a strong negative impact on the real economy in a very short period of time.
The Impact of the Financial Crisis on Latin America

The relatively good economic performance of emerging Asia and Latin America throughout 2007 led several analysts and policymakers to embrace the decoupling hypothesis. It was argued that emerging market economies (EMEs) had successfully been able to decouple themselves from the more developed markets. A sense of complacency flourished in many countries. It also was considered that countries like China could become engines sustaining world growth, replacing the U.S. economy in that respect.

However, the international risk aversion brought about by Lehman’s demise and the global nature and magnitude of the crisis soon engulfed emerging market economies. The decoupling hypothesis did not stand up, and financial turbulence in industrial countries spread to developing countries mainly through two shocks of considerable magnitude, as follows.

1. An external demand shock. The recession in global economic activity reduced the demand for emerging market exports, which led to two effects:
   
i) A fall in export volumes: emerging economies’ exports have experienced a sharp decline. The drop in the volume of exports is due to the global slump and the adjustment in spending patterns to sustainable levels in advanced economies.

   ii) Deterioration in terms of trade: the global recession has not only reduced the volume of exports for emerging countries, but also led to a change in
relative prices. In particular, commodity prices have declined significantly, although they have experienced some recovery recently.

2. An external financial shock. The rise in international investors’ risk aversion and the losses incurred by many large cross-border banks have led to a substantial decrease in risk positions held in the majority of EMEs.

i) Restricted access to external financing: Many EMEs faced a reduction in the amount of external financial funds available. This shock was related to both the increased risk aversion among institutional investors, as well as the deleveraging process taking place in advanced economies.

ii) Decrease of liquidity in EME foreign exchange and domestic debt markets: The increase in risk aversion and capital losses have forced many global banks to reduce their risk positions in EME securities and currencies. As a consequence, liquidity conditions in these EME markets have substantially decreased, leading to increased volatility and wider bid-ask spreads. The loss of liquidity in EME financial markets left them highly vulnerable. The flight to quality away from EME domestic capital markets after the Lehman demise led to sharp depreciations of many EME currencies.

iii) Tightening of lending conditions in domestic markets: Large global banks usually manage their risks, capital, and business lines on a global consolidated basis. The initial rise in risk aversion in mature markets and the capital losses incurred by many banks led some of them to reassess the allocation of their
capital and business lines. The reallocation has hit countries with a large foreign bank presence particularly hard. Subsidiaries of foreign banks, especially those of parent banks in trouble in their home-countries, tightened their lending conditions. This has led to a decrease in bank lending, particularly in EMEs with a large foreign bank presence. Some of these countries also experienced some pressure in their domestic interbank markets as a result of the channeling of liquidity by their subsidiaries to parent banks established abroad.

The adverse impact of these two shocks was not the same across all Latin American countries. The external demand shock has had a more profound impact on countries with a higher degree of openness, as the fall in exports had a larger impact on domestic economic activity. In contrast, Latin American countries with a relatively more robust internal market tended to be less affected. In the same vein, countries with a low level of export diversification, like Mexico, were particularly affected (Mexico has specialized in exporting manufactured goods to the U.S. economy).

However, in this respect there were significant differences between what happened in Latin American countries and what happened in several Eastern European and the Baltic countries. In Latin America, exchange rate risk has always been at the forefront in the minds of financial regulators. Past experiences have shown on multiple occasions that fixed exchange rates and currency pegs are doomed to fail sooner or later. Hence, domestic regulations prevented the large foreign currency mismatches that characterized lending in many Eastern European and Baltic countries.
Prior to the current crisis, several economies such as Hungary, Estonia, Latvia, and Lithuania experienced un-sustainable private credit booms, usually fueled by unhedged external financing. These credit booms led to huge debt overhangs and foreign currency exposures on their domestic balance sheets, making them highly vulnerable to capital outflows. The adoption of exchange rate pegs in some of these countries also contributed to the buildup of these imbalances. The sudden reversals of capital flows and the depreciation of many exchange rates left debtors and banks in these European countries facing significant insolvency problems.

Regulatory Policy Responses to the Global Crisis

Since the onset of the crisis, financial authorities of different countries, as well as international organizations and standard-setting bodies, have been working on a very ambitious agenda to strengthen financial regulations and to create a financial system better suited to support sustainable economic growth.

One of the outcomes of the current crisis has been the recognition that the G10 economies have lost some of their clout in favor of other countries and regions. This, together with the failure of some of these countries to regulate and supervise their own financial institutions, has raised the question of their ability to continue leading international policy coordination and to establish principles and standards for best practices and regulations. The result has been the acceptance of the idea that
international efforts should be led and coordinated by a wider and more representative set of countries -- the G20.

The ongoing crisis has also made it clear that the current international financial infrastructure and the cooperative efforts adopted in forums such as the IMF, the FSB and the Basel process, were insufficient to prevent the most severe crisis of the last six decades. However, it should be recognized that these organizations have lacked sufficient authority and tools to effectively carry out their assessments and enforce their recommendations in all countries, especially in developed ones.

Not surprisingly, one of the conclusions of the G20 is on the need to implement international financial standards and agree to undergo periodic peer reviews using IMF/World Bank Financial Sector Assessment Program reports, among other actions.

An important number of initiatives being discussed are aimed at preventing the financial system from leveraging itself to the extent that it did before the crisis. Capital adequacy and liquidity are at the center of the discussions. It is important to be aware that less leverage, although beneficial from a prudential perspective, probably implies less potential for economic growth.

Another important set of initiatives is aimed at modifying the regulatory and supervisory architecture. For example, in some countries discussions are taking place about moving banking supervision under the aegis of central banks. However, at the end of the day, what it is important about a building is not its size or particular style, but
whether or not it serves the purpose for which it was built. Buildings should be designed according to the particular climate in which they will operate.

The implementation of these regulatory agenda of reforms will not be an easy task. Risks remain that lobbying from the banking industry might attenuate some of the proposed reforms and this, along with the intrinsic difficulties of implementation, may result in a poor outcome relative to expectations.

Some of the lessons learned during this crisis with regard to the challenges that globalization represents to financial authorities are:

1. Regulatory and supervisory arbitrage: For any financial regulation to be effective, it is of paramount importance to avoid the sort of regulatory arbitrage that has been taking place to date, such as financial intermediaries’ practices of booking some of their operations in the places, entities or conduits where they face a more favorable regulatory or supervisory treatment. In this sense, it is crucial to advance in the international harmonization of domestic financial regulations—e.g., resolution regimens, accounting standards, provisioning rules, capital definitions.

2. Incentive structure: Regulations will not be effective if they do not alter incentive structures. Financial markets have some particularities. Within these particularities lie the incentives that make them vulnerable. And it seems that actions taken towards correcting some of these vulnerabilities uncover other weaknesses: limited liability and deposit insurance schemes create incentives for more risk taking. The problem is that the growing complexity of the financial system, as well as the
availability of new instruments (the products of financial innovation), complicate considerably the task at hand for regulators. The challenge faced by authorities is to create the right incentives and to understand the motivation behind innovation.

3. Large cross-border banks: There is ample agreement that systemically important banks pose a complex challenge to financial stability. A vast stream of literature has always seen as positive the consolidation and expansion of large cross-border banks. However, this crisis has highlighted the moral hazard posed by institutions that are deemed too big to fail, either due to size or interconnectedness.

There are no easy answers to deal with the problems represented by large and complex institutions. Distinctions should be made between those systemically important banks specialized in retail banking -- which are basically a collection of subsidiaries worldwide -- and those banks that engage in different kinds of much riskier activities and pose a much greater threat to financial stability. It is also clear that differentiation should be made among prudential measures and resolution tools. The first should be aimed at reducing the probability and impact of a large bank failure, and the second at making the financial system better able to deal with a large bank failure.

a. Reducing the probability of a large bank failure.

To reduce the probability of a large bank failure some policy makers argue in favor of imposing additional prudential requirements and oversight measures.
Among them, there is a group supporting the idea of applying a capital surcharge to banks deemed too large or too interconnected.

A capital surcharge will convey the wrong message to the financial market. The message will be that the authorities consider that particular bank as too big to fail. This certainly would not help to decrease the moral hazard posed by some institutions. Such a measure would also bring to bear particularly adverse effects on countries that have truly opened up their financial systems to foreign investment and maintain a large foreign bank presence, like Mexico and Poland. The imposition of proportionately higher capital requirements for large cross border banks would inevitably translate into higher intermediation costs. Foreign banks enjoy a large and dominant presence in many emerging market economies. Therefore, imposing higher capital requirements will also have potential negative impact on the achievement of a level playing field across countries. Furthermore, this measure would also represent a draw-back in terms of financial integration.

Others are in favor of strong measures such as breaking up banks into utilities and casinos. However, to draw a line between utility and casino banking may prove too difficult to do. There might be other policies that could make more sense. The European Commission seems to be leaning towards the idea that whatever the benefits of size in banking, the public interest requires smaller banks.
Measures should also be tailored to the nature and structure of the institutions. Different responses may be more appropriate for large and very complex cross-border structures with centrally managed capital and liquidity than for institutions organized as simpler networks of national banking subsidiaries, each with their own separate capital and liquidity.

Complex cross-border banks should be regulated at local levels. There are no global lenders of last resort, nor a global bank resolution process. There is not a global pool of taxpayers to fund the cost of rescue operations of cross border banks, or an international court to deal with legal differences. The ultimate responsibility for banks’ depositors, domestic payment systems and, in general, for the functioning of the domestic economies lies in the hands of the national authorities. Hence, liquidity and capital regulations should be subject to local regulations. Each subsidiary should be subject to the liquidity and capital requirements of its local jurisdiction.

b. Facilitating the orderly unwinding of large banks when they fail. The second issue deals with policies to improve the resolution capacity of authorities and those that make the financial infrastructure better able to deal with a large bank failure. These policies include the creation of conditions needed to facilitate a bank’s unwinding if it becomes troubled. Different international groups are already working on finding ways to facilitate unwinding. Simpler
corporate structures and more compatible national resolution regimens would make unwinding easier.

Final remarks

One lesson from the current global crisis is the importance of investing in building solid macroeconomic fundamentals with the aim of a more resilient economy and more maneuvering room to cope with external shocks. For instance, in this episode of financial turbulence, the most affected countries have been those with larger external imbalances, weaker fiscal positions, and banking systems characterized by currency mismatches and other flaws. On the other hand, those emerging economies with relatively better fundamentals have had more space to ease policy than they had in previous downturns. Although these economies are also feeling a sharp impact from the financial turbulence of the crisis, they have experienced a less disruptive adjustment process.

Another lesson from the current crisis is that international reserves help in episodes of financial stress. In principle, foreign investors interpret large holdings of foreign reserves as a signal that a country will be able to honor its external obligations. Thus, a capital flow reversal is less likely.

This means that a strong demand for reserves in many countries over the next few years is likely to be seen. Thus, under the current rules of the game in the
international monetary system, Triffin’s Dilemma could be faced again. In other words, if everything else is unchanged, the only means to satisfy the demand for reserves would be through high U.S. current account deficits, which, paradoxically, are at the root of the current crisis. Conversely, in the absence of high external deficits in the U.S., a shortage of liquidity would emerge, which could lead to a new period of economic contraction.

Enhanced international monetary cooperation can provide a way out of this dilemma. Certainly, the SDR allocations of 283 billion dollars, which multiplied the existing stock tenfold, have helped to complement many countries’ international reserves and boost confidence. But other avenues need to be explored to reduce the demand for reserves. Bilateral swap agreements such as those negotiated between the U.S. Federal Reserve and a number of other central banks could play a useful role in this regard. Moreover, the IMF should build on the success of the Flexible Credit Line (FCL) and consider more instruments offering credible alternatives to self-insurance through reserve accumulation. Indeed, the Fund needs to design additional financial instruments to promote long-term global stability and the proper functioning of the international monetary system.

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1 The observation by Yale economist Robert Triffin that under the Bretton Woods system in which the U.S. dollar was the world’s principal reserve currency, the United States had to incur large trade deficits in order to provide the rest of the world with the liquidity required for the functioning of the global trading system, and U.S. trade deficits eventually would undermine the foreign exchange value of the dollar because foreign accounts would hold an increasing quantity of dollars. Descriptions of Triffin’s Dilemma can be found at the website of the American Institute for Economic Research (http://www.aier.org/research/briefs/975-triffins-dilemma-reserve-currencies-and-gold) and the IMF in Money Matters: The Importance of Global Cooperation, 1959-1971. (http://www.imf.org/external/np/exr/center/mm/eng/mm_sc_03.htm)
Let me start with a comment on the general title of the conference: “Financial Globalization: Culprit, Survivor, or Casualty of the Great Crisis?” Since we probably agree that globalization cannot function without a financial dimension, we should also agree that if financial globalization – not simply globalization – was the casualty of the great crisis, then globalization itself would be the casualty. In fact, the crisis that we call “financial” is primarily economic.

If we confine our attention to finance, then what constitutes the problem is not the global character of it. It is, first, that finance has not been adequately regulated and supervised, and, second, that the international financial system has not been complemented or supported by an adequate international monetary order. In other words, the issue is monetary at least as much as financial. Moreover, it lies on the policy side more than on the market side of the economic system.

These remarks are not trivial. Remember that the approach legated to us by the founders of the Bretton Woods system, and rooted in the lessons of the global crisis of the ’30s, was that: a) the financial market should not be global, b) international capital movements should not be left to the market, but rather officially managed, and c) currencies should be anchored to an international standard. Thus, the system in which we have been, and in which we still are, fundamentally departs from the order created in the ’40s for the post-war era.
That said, I confess that I am often divided between two very different thoughts about the present crisis. The first is that the economics is clear and, as Anne Krueger and Jeffry Frieden said yesterday, the difficulties are entirely or predominantly in the political economy, and consist in finding ways to do what we have understood to be needed. But I also think, in an opposite sense, that there are many things we have not yet understood, which is not surprising if we only consider that it took decades to understand the crisis of the ’30s.

As a premise for what I’m going to say about the regional/national dimension of the crisis, let me briefly summarize my view of the crisis. This is really an interaction of three phenomena: if you look at it as seismic, you see three layers in the movement of the earth. On the surface there was the panic; underlying it, was the bubble and its bursting; and, underneath the two, there was a growth model based on consumption and debt in the United States and in some other countries of the advanced world. The panic was a classic one and the bursting of the bubble fits very well the description that has been made of past boom-bust cycles. What makes this crisis so special is, first, the peculiar interaction of the three layers of the seism, and, second, the fact that the deepest layer is affecting the largest economy in the world, and a sector as economically and socially pervasive as the household sector.

On other occasions I have said that this is not a crisis in the system; it is the crisis of a system. We can ask: what is the system of which this is the crisis? It is not capitalism or the market system per se. In my view, it is a particular version of the market economy characterized by three features, which are the deep “factors”
underneath the crisis (I don’t like so much the word “causes” because it gives a sense of mechanism that doesn’t fit this kind of historical development). The first factor is market fundamentalism, the illusion that markets are always moving in the direction of equilibrium. The second factor is the widening gap between the perimeter of markets and the perimeter of policies and governments, namely the lopsided globalization in which we are. And the third factor is short-termism, the fact that the time horizons of many manifestations of the individual and collective life of firms and persons, in economic fields, in finance, but also in politics, has collapsed and become very short, while there are still phenomena which are long and, over time, take their revenge. An image that clearly illustrates this factor is a car running in the night at too high a speed to be stopped when an obstacle becomes visible.

With this introduction, what can we say about Europe and the crisis? Is Europe the culprit, or the survivor, or the casualty?

Europe is characterized by five strengths and one weakness. Let me begin with the strengths. First, a sound overall macroeconomic condition. There were no significant macro imbalances in Europe prior to the crisis. The fiscal situation was on the whole good, sustained and disciplined by a particular fiscal rule, which is the Stability and Growth Pact. There were no significant external imbalances. There was no significant savings-investment imbalance in the private sector. In most European countries the households were not heavily indebted and continued to save at a reasonable rate.
Second, an, on the whole, sound conception of the market economy. The seed of market fundamentalism, which in the course of the 70s rose to intellectual prominence and conquered power at the end of the decade with the election of Thatcher and Reagan, gradually developed into market radicalism. In continental Europe -- and particularly in the EU policies decided in Brussels -- this trend never reached extreme forms as it did in the United States and the United Kingdom.

Third, a relatively sound financial model. Universal banking combined with the preservation of wide networks of customer relations between financial institutions and households or firms, proved to be more robust than a model based on the separation between investment and commercial banking, with huge financial activities based on very short-term market-drawn funds, which turned out to be easily reversible in extreme conditions.

Fourth, a strong social safety net. Once the crisis comes, Europe appears to be much better equipped than any other part of the world to survive the social and economic consequences of the fall in economic activity and employment.

And fifth, less short-termism. If you look at the EU legislation and policies you see that they often reflect a genuine concern for the long-term consequences of public and private economic decisions. We can observe this in fields like climate change, preservation of the environment or energy policy, where short-termism is particularly dangerous.

What is the weakness? It is that in some crucial fields, the EU is not a “union.” Referring to the title of this session - National and Regional Dimensions - we have to be
clear on which of the two is the policy masker. Latin America is a region, but is not a policy actor. The United States, instead, are a region, for which there is a policy actor. Europe is in between. In some fields it is a policy maker on its own: it has a single market, a legislative capability, a competition policy, it is the trade partner and negotiator, it has a single currency. In all these fields the EU is a true union and the complications of its institutional systems are not significantly larger than those of the U.S.: while Europe has fragmentation across countries, the United States have it across institutions.

However, there are other fields in which Europe is nonexistent -- a mere constellation of largely independent actors incapable of an effective unitary policy. These fields are -- to mention just those more closely related to the crisis -- fiscal policy, financial regulation and supervision, and crisis management.

Now, an incomplete union like the present EU is simply not equipped to cope with a financial and economic disruption of the magnitude of the present one. The policy response required to preserve the unity of the market, to restore stability and to sustain economic activity exceeds the institutional capacity of an EU that has no budget, no power to tax and spend, and no emergency powers.

As a consequence, the EU is put under the enormous tension of two opposite forces: disintegration and integration. The first force is pushing towards purely national responses, protection of local champions (be they banks or manufacturing industries), ring-fencing of the national labor and product markets. The second force works to fill the institutional gap and accelerate the creation of the still missing capacity to provide
a common response, to set up ‘federal’ instruments consistent with the dimension of
the challenge. Since the start of the crisis we have seen these two forces at work and it
is still uncertain which will prevail. What is, in my view, certain is that the “state of the
union” in Europe will hardly be left unaffected by the crisis.

Culprit, survivor or casualty? Not culprit, I would say; but whether the EU will
end up as a survivor or as a casualty is still an open question and will ultimately depend
on which of the two forces prevails. For the time being, the two sectors most hard hit
by the crisis - the financial sector and the production of consumer durables - are in a
process of disintegration. Largely as a result of the single currency, the banking
industry has gone through a significant cross-border consolidation in the ten years after
the euro, to the point that more than half of the euro area banking activities are
conducted by pluri-national groups. The crisis has reversed the trend. Some banking
groups disintegrated, others made their components more nationally rooted. The
banks that failed lost their character of pluri-national banks. The groups that survived
became less integrated. A similar dynamic can be observed in the industries of
consumer durables, most visibly in the automobile sector where responses were
national.

The reason for the unleashing of centrifugal forces lies in the link between the
actions and the actor of policy. In a crisis like this, the very nature of the policy response
is, first, to protect the sectors hit and, second, to stimulate the economy as a whole.
Both these responses have been deployed at the national level simply because there
were no instruments of this kind at the EU level and the consequence is that they have
carried an inevitable degree of national preference, protection, segmentation of the European market, and attempts to block cross-border spillovers. Indeed, fiscal stimuli were national, supports to the ailing industries were national, rescues of troubled banks were national, injections of capital, strengthening of deposit insurance and a number of other measures of this kind were equally national. And when the measure is national it brings with it inevitably a degree of protection of the national component of the receiving sectors.

However, we are not only seeing centrifugal forces. We have also seen attempts to go in the opposite direction, to respond to the crisis with an increased cooperation and the development of an EU-wide capacity for policy. For instance, an effort is underway to reform European financial regulation and supervision in order to provide more homogeneous rules and stronger capacity to act from the center. Consider that in the EU today there is no single place where the large trans-national banking groups are looked at simultaneously: they constitute a system, but this system is literally not observed by any authority having a capacity to intervene.

So, whether Europe will be in the end survivor or casualty is still to be determined and the final outcome will essentially depend on the Europeans themselves. The future is open.

Let me now turn to a word that is missing from the title: savior. Endangered by the crisis, globalization should be saved as a major source of prosperity and a basis for peaceful relationships among nations. But what can save it? Searching for an answer leads to the issue of growth, because it will be the nature and distribution of economic
growth across the planet what will determine the fate of globalization in the years and
decades to come. It is indeed interesting to note that in the discussions we had here
today, growth was the most frequently recurring word in all the presentations
concerning countries or regions other than the advanced economies.

To surmount the crisis doesn’t simply mean to end the panic; nor can it mean
stopping the fall in production. It can only mean a return to prolonged growth.
However, this unqualified affirmation is insufficient because returning to the same path
that led to the crisis cannot be seen as a desirable solution.

To understand what can save globalization we have thus to start by identifying
the growth path we should aim at for the after-crisis years. And the essential point,
here, is that this path should be sustainable, i.e. one i) that leads mankind out of
poverty and starvation, ii) in which nations settle their disputes by peaceful means, and
iii) that preserves the resources of the planet, the climate in the first place.

In the years before the crisis, growth, measured with the conventional GDP
yardstick, was exceptionally high, but not sustainable in three respects: not
economically and financially, as the crisis has shown; not socially, as global inequalities
threaten peace and security; and even less from an environmental point of view.

In the last five decades, the opening of markets and the expansion in cross-
border transactions have contributed immensely to raising the living standards of
hundreds of millions of people around the world. In spite of its distortions and
imperfections, globalization - both financial and economic - has been a good thing. For
it not to be a casualty of the present crisis, growth must resume, but in a sustainable manner.

In my view the crisis assigns to social scientists and policy makers a clear task for the years to come (and a correspondent responsibility). It consists, first, in designing a growth path for the post-crisis era, which should be not only global, but also sustainable in the three respects just mentioned (economic, social and environmental); and, second, in identifying policies and institutions capable of setting and keeping the international community on this path. This will be a daunting task.

I cannot even sketch the contours of a program for sustainable global growth, which can only be the outcome of an elaborate interdisciplinary research effort. Let me, however, hint at just two of its indispensable components: they concern, respectively, the economics and the politics of it.

As to the economics: in my view sustainable growth is bound to be differentiated, one in which per capita income in emerging countries continues to expand, while that of rich countries stabilizes. This is required by each of the three aspects of the sustainability constraint. Note that this would in no way imply an impoverishment of the average inhabitant of the affluent world. Indeed, almost all of them could drastically reduce their purchases and use of consumer durables (and even their daily ingestion of calories) without reducing their living standards, i.e. without being deprived of the services of cars, refrigerators, shoes, electricity and running drinkable water in their homes. Such reduction would dramatically reduce the waste-driven growth rate of the affluent countries and the depletion of non-renewable
resources of the planet. In the emerging world, instead, growth consists of the first acquisition of those same goods and services, it is the accession to the decent living standards that modern technologies permit. As such, it cannot and should not be stopped; on the contrary, it should be extended to every family on earth.

Turn now to the politics. As markets and political systems function now, a standstill in the per capita incomes of rich countries is hardly compatible with a continuation of growth in the emerging countries and perhaps with the way in which democracies select governments. A reshaping of the growth process will not result from a spontaneous market mechanism -- it can only happen if it is policy driven. Policy should certainly not be the oppression of a global central planner, nor the suppression of market mechanisms and private motives and incentives. Rather, it should be the same “mixed economy” combination of market and public actions that sustains prosperity, stability and social peace in some of the advanced economies.

Moreover, the policy maker must be global. To guide towards differentiated growth, new forms of international governance are indispensable, entailing a far greater sharing of sovereignty than the one we observe today. Two hundred policy makers seated in the capitals of as many allegedly sovereign countries are simply a source of chaos and conflicts.

This is, I know, a distinctly European conclusion: the savior must get inspiration from that part of the EU project that has already been implemented, namely the capacity to share sovereignty and to build collectively an order that is multinational.
Part Four

Globalization After the Crisis

The previous era of globalization really ended with the Great Depression. Although it is yet to be known how long and deep the present global recession will be, it is timely to start wondering whether and how it will affect today's globalization. Will the crisis be just a bump in the road or will it mean a major disruption of the trend that started to develop after the end of the Second World War and accelerated over the last three decades? Or, will it eventually become a positive stimulus for undertaking reforms, both at the national and international levels, which will provide enhanced viability to the process so that we could see further intensification of interdependence in the years to come.

Ernesto Zedillo
Director, Yale Center for the Study of Globalization

Introduction

All of you know by now that over the last two days we have held a conference which we titled “Financial Globalization: Culprit, Survivor or Casualty of the Great Crisis?”

It's been a very interesting event. We were able to convene people of great intellectual skill and great analytical capacity to discuss how we got into this crisis and how we are getting out of this crisis; what may happen with the phenomenon that is closely associated to the origin of this crisis; and the failure of the financial system. We have spent several hours discussing the analytics of the problem and also a number of possible policy prescriptions. And it’s been a fascinating journey, these two days. I am sure that it will be some time before I am able to distill the very interesting, pertinent concepts and discussions that we have heard over these two days.
But from day one, when we started to plan this conference, we thought that it was important to pose for ourselves the question of what will happen with globalization as a consequence of this crisis? When I made my introductory remarks yesterday, half serious and half jokingly I said that in the hectic days of September and October of 2008, when I sensed that we were on the brink of having a total collapse in the international financial system, then I became afraid that the subject of study of our center -- that is to say contemporary globalization -- was about to disappear in real time before my eyes. That may sound like a joke, but it has happened before.

Now we know that it wasn’t the case. The crisis has proven to be more benign than some of us thought a few months ago; but really significant question marks remain. I think we still don’t know what will be the lasting consequences of what we have gone through over the last year.

One of my mentors, Professor Bill Brainard, yesterday said that our economics profession is discredited after this crisis because we failed to predict it, and we are still struggling to make sound, relevant policy prescriptions. I think that is true, but only half true. We didn’t do that badly, but we would not listen. Economists would not listen. The profession has tried to be on top of this crisis and tried to produce ideas not only for today, but also for the future.
With these concerns about what will happen to the process of global integration that we have seen steadily evolving in this modern period since the end of the Second World War, we could not really envisage the future without having the mission of the historians. I decided that it would be very interesting to put together a panel in which I would have one of the champions -- and here is my champion -- Professor Jagdish Bhagwati who has been one of the greatest, most influential intellects for those of us who have not only fought for free trade, but also believe that part of the solution, if not the total solution, to many problems of humanity rests on having increased economic integration.

So, I invited my champion, but I also invited two great champions of history, Niall Ferguson and Harold James, who have written on so many subjects that it would be impossible for me to list their contributions. They have a common denominator in terms of their intellectual contribution. They both wrote some years ago warning politicians, economies, and people that we should not take globalization for granted. They have used history in a very enlightened way to tell us what could go wrong with globalization and what kind of regression we could have if we don’t look after certain critical aspects not only of the economy but also of geopolitics.

I am very proud that we are closing this conference with this panel discussion in which we have Professor Jagdish Bhagwati from Columbia University, Professor Niall Ferguson from Harvard University where he has positions both as Professor of History
and Professor of Business Administration, and Professor Harold James from Princeton University where again he has positions as Professor of History and also Professor of International Relations.
This panel discussion on “Globalization after the Crisis” has begun with me, an economist, and then we’re going to go progressively back into history with Niall Ferguson’s presentation followed by Harold James’s. This reminds me of my great teacher, Charles Kindleberger, who virtually pioneered the study of what he called “panics and manias” leading to financial crises. Every now and then, he would send me a new paper taking financial crises back yet another century. This kept happening until his death in 2003 (which deprived him of yet greater glory, which we will see once the recent crisis has reached iconic status, though he was profiled by the reporter Jon Hilsenrath in the Wall Street Journal just as the crisis was beginning to hit its stride). So at one stage I told him: “If you keep going back in time in this way, Charlie, you will wind up all the way back in the Garden of Eden. You will certainly find that Adam and Eve had run into a crisis, but it wasn’t a financial one.”

We have to recognize at the outset that the current crisis is not just a financial one. It started out as one, but it soon became a twin crisis, afflicting both Wall Street and Main Street, and doubtless the interaction between the two has intensified over time. Thus, for example, lack of finance has adversely affected trade, which in turn has affected the macroeconomic crisis; and in turn, that affects the profitability of banks. These interconnections are important, but they have been the subject of these deliberations already.
The focus of this Panel is rather on the three questions Ernesto Zedillo posed for us to think about. They are indeed the most important ones for all of us to answer. Zedillo reminds us that the previous era of globalization during the 19th century ended with the Great Depression. So, he asks us: (1) Will the current era of globalization be a bump in the road? (2) Will it end in the same way with the current crisis turning into a major disruption?; or, more optimistically, (3) Will the crisis be a wake-up call and be a positive influence for reforms that will strengthen and reinforce globalization?

Let me opt at the outset for the “bump-in-the-road” alternative, in the sense that I do not believe a “major disruption” such as that of the Great Crash of 1929 is likely. In fact the world economy has bottomed out already, with the green shoots that have already emerged1 likely to turn into green bushes. This is not to say that the bump has not been rough. The kind of bump you can get on what we call kachha (dirt) roads as against the packka (finished) roads in India is not a laughing matter: India is witness to countless victims of bumps and potholes.

It is well to remind ourselves that dire forecasts are routinely made when an alarming incident occurs on Wall Street, with many players and pundits spelling the death-knell of capitalism or globalization as we know it. Many of you must remember the ominous predictions after Black Monday, October 19, 1987. The Dow Jones Industrial Average dropped by over 22 percent by the end of that October and even...

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1 This refers to a comment made by Federal Reserve Chairman, Ben Bernanke, on a television segment that aired on 60 Minutes on June 7, 2009, although it was taped prior to that date. Bernanke said, "We are seeing progress in the money market mutual funds, and in the business lending area. And I think as those green shoots begin to appear in different markets and as some confidence begins to come back that will begin the positive dynamic that brings our economy back."
sharper declines occurred elsewhere worldwide; and many were of the view that “The End Has Come”.

I recall this particularly because I had just reviewed for The New Republic the first book by George Soros, entitled The Alchemy of Finance, with the opening line: “This book raises the question: money talks but can it write.” His assertion that he had worked out a magic formula to make money on the stock market was funny because he had made money instead by betting on currencies. I was therefore amused to see --- John Kenneth Galbraith, who had read and enjoyed my review, dropped me a line on this when Soros’s picture appeared in the New York Times with the story about his losses --- that he lost nearly a billion dollars at the time. He had some alchemy indeed!

The 1997 Long Term Capital Management crisis was another unnerving event; but that too is now behind us thanks to forceful corrective action. And, if I may permit myself a heretical comment for those who fearfully or (in the case of populists) gleefully, believed that we were, this time, in a “free fall,” even as the recovery is still fragile and the job situation is even more so, the fall has been arrested by an energetic set of actions, both on the financial and on the macro-stimulus side.

It is important to emphasize however that each reversal of misfortune has happened not because the financial markets effected this unaided or because the economy corrected itself without Keynesian stimulus spending. Rather, despite the contentions of some non-Keynesian macro economists, I believe that, in each instance, the economy could not have revived on its own. On the macro side, the Keynesian
stimulus helped, and the need for Keynesian spending was something that we learned thanks to the Great Crash of 1929.

For that reason I would argue that we have not witnessed the current crisis turning into a “major disruption” a la Ernesto’s second scenario. Principally, we have drawn fiscal lessons from the Great Crash of 1929 and its aftermath, and these lessons have helped us to moderate and reverse the current crash. In fact, Keynes’s General Theory grew out of his reflections over the 1929 Crash, and is now, as has been demonstrated, at the service of preventing another great crash.

We can confidently say therefore that we have learned from past history: it is hard to imagine anyone except ideologues today arguing for a balanced budget, as Hoover reputedly did. Nor have economists forgotten that a hasty declaration of victory and reversal of expansionary policies in 1934 contributed to a protracted slump.

We have run into problems maintaining stimulus spending thanks to the budget deficits that we accumulated throughout the George W. Bush years. This is the major “legacy” effect: we should have allowed for the fact that we might need to run budget deficits in a deep recession, even though the possibility was remote. In fact we never really gave it a second thought for a variety of reasons which scholars and prominent journalists, like David Wessel of the Wall Street Journal who is present here, have written about. If you have the problem of adding significantly to a very large debt-to-GNP ratio, then your possibility for maneuver is constrained, partly because it will lead to expectations of inflation down the road. And this is a real worry despite the best assurances by the Obama administration that running a deficit will trigger a reversal.
Indeed, President Obama is telling us that he’s going to set the fiscal engine in reverse, that he will shift his sports car into fifth gear now in terms of spending, and then into reverse a few years down the road. Can he however deliver on that? Even as I support his stimulus spending, one cannot but entertain doubts as to whether he can make this u-turn. The main problem is that, once you start spending, there will be entitlement problems on the political scene. Lobbies grow up around any spending; will things be very different this time around? Maybe; maybe not.

Then, suppose that one starts building infrastructure, such as roads or railways or schools. You cannot stop these projects half way. Will they be finished by the time we put spending into reverse? I was in Osaka at the end of the Japanese crisis and there was a big unfinished tower, and it was known as the Tower of Bubble (like the Tower of Babel). Construction had been stopped in its tracks. Will we repeat this kind of situation just to stop total spending on schedule?

But, these caveats aside, there is little question that from the 1929 crash and the policy mistakes we made then, we have learned how to manage the fiscal side better in coping with the current crisis and have avoided, therefore, a major disruption. But that is not all. The same can be said, in even stronger terms, about trade policy.

While the Great Crash occurred in 1929, the Smoot-Hawley Tariff was enacted in 1930. This tariff had little to do with the Depression itself because it had been coming on for a variety of “log rolling” reasons that historians have documented well; but it happened to come just one year after the Crash. That led in turn to two types of effects. One was tit-for-tat retaliation by other countries. Second, there was what I call
the “monkey see, monkey do” type of diffusion. When the U.S. raised tariffs, other nations reacted with, “Look, the U.S. is doing it, so we will do it, too.” Between the two reasons, a nuclear winter broke out on trade barriers.

Much scholarly work demonstrates that the outbreak of extensive protectionism did not cause the Depression, but it certainly accentuated it. So, one lesson regarding trade policy that we learned at the end of this period was that we had to set up obstacles and devise rules to govern the freewheeling resort to protectionism. The institutional creation of the GATT in 1947 embodied precisely this lesson. Never again would nations be free to indulge in unrestrained protectionism.

We also learned that, in times of inadequate world demand, the use of protection to divert demand away from foreign to domestic goods was, in the words of my Cambridge teacher Joan Robinson, a “beggar my neighbor” policy. Yes, I could start this game and divert a given world demand to my goods at the expense of other nations’ goods; but then others could do the same to me, also through the use of protection to divert the inadequate demand to themselves.

The process ended in a demand-diverting spread of protectionism that was likely to hurt all. It was soon understood, however, that if the source of the problem was inadequate world demand, the correct answer to that problem was to create additional world demand, not to try to divert it. So, we also learned the idea that protectionism is not an answer to recessions. This set of ideas has certainly shaped the G-20 declarations against surrender to protectionism in the current crisis.
In addition to the institution of the GATT, and since 1995 the WTO, and the changed idea that protectionism is not the way to fight recessions, a third factor has also prevented a slide back into protectionism. This factor relates to lobbies, or what political scientists call interests, and reflects the changed structure of the world economy.

Today, there is extensive interdependence in the global economy. Components of goods are produced in many different countries, so protecting against imports can be expensive for a nation’s own companies that rely on importing such components. When protectionism hurts firms at home, they then lobby against it. Since many firms are now into export markets -- over 70% of General Electric’s total sales are estimated to be abroad -- if others retaliate against our protectionism, as they will, these firms will find their sales endangered. So, when President Obama was surrendering to the Buy America demands, GE, Boeing and Caterpillar, all with big sales abroad, were among the firms that lobbied hard against such provisions and moderated their downside.

On all three dimensions --- ideas, institutions and interests --- protectionism has been held in abeyance. But the role played by what we learned from the experience of the 1929 Crash and its aftermath has been critical. In particular, on both fiscal and trade policy, we have managed to avoid “massive disruption”.

Let me then turn to Ernesto’s third scenario: will the current crisis lead to further learning and hence also to the strengthening of globalization? I believe that it will, chiefly within the financial sector that precipitated the current crisis. Indeed the Conference has been addressing this very question: why did the financial crisis arise and
what can we do to prevent its reoccurrence? Let me make a few observations which reflect the key points that I have made on the subject since my “celebrated” article on “The Capital Myth” in *Foreign Affairs* in 1998 during the East Asian financial crisis, and in recent writings, many but not all in *The Financial Times*, during the current crisis. I will confine myself to four observations.

First, we have to confront the fact that there is what I called in 1998 a “Wall Street-Treasury Complex.” Top people such as Robert Rubin go back and forth between Wall Street and the Treasury. From the Wall Street experience they share the same euphoria, and this spills over into Treasury and the financial area. The optimistic scenarios about new financial instruments and about the beneficial effects of spreading capital account convertibility worldwide -- all defined by the optimistic world view of financial liberalization here and abroad shaped by life on Wall Street -- are therefore diffused and the guard against their downsides is suspended.

This concept caught on, sometimes with lame attempts at product differentiation. Some called it simply the Wall Street Complex while others, such as Robert Wade, added the IMF to it, as I had intended since the to-and-from movement often takes place between the IMF, or the State Department and the World Bank for that matter, and Wall Street as in the cases of Robert Zoellick and Stanley Fischer.

Since President Eisenhower had talked about the “military-industrial complex” while he

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was the President of Columbia, and the sociologist Wright Mills had written about the “Power Elite” while at Columbia, the three of us were occasionally described as the “Columbia Trio”. In fact, the idea of the Wall Street-Treasury Complex is widely disseminated, partly because of my extensive writings on the subject. Recently, the brilliant MIT economist and former Chief Economist of the IMF, Simon Johnson has also drawn on this idea in an article in The Atlantic, but paraphrasing it as the “corridor” rather than the “complex”, and vulgarizing it to talk of “capture” of the Treasury by Wall Street instead. He was cited by both Martin Wolf (in The Financial Times) and Paul Krugman (in The New York Times), the former a long-standing friend and the latter my MIT student, both of whom should have known where the idea came from and that it had been around for over a decade. But, as someone who believes that intellectual property protection is carried too far, I am happy to bask in the glory of having my 1998 idea diffused by Simon Johnson.

Second, let me repeat that the prevalence of the Wall Street-Treasury Complex did imply that financial innovation was regarded even in Washington, regardless of the instruments in question, not as potentially volatile, but as necessarily benign. Securitized mortgages, derivatives, credit default swaps et.al. were all regarded the way we generally regard non-financial innovation; but this was wrong. With non-financial innovation, we know from Schumpeter that the problem is one of managing “creative destruction,” of avoiding Luddite reactions. With financial innovation, we have what I have called by contrast in The Financial Times the prospect of “destructive

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creation, “where the downside, when it occurs, can be almost lethal. This phrase, a play on Schumpeter, has also caught on, with the journalists Thomas Friedman and Gillian Tett among those who have embraced it.

Third, with these two ideas, of the Wall Street-Treasury Complex and the prospect of “destructive creation” in financial innovation, one can see that we need an independent set of experts who are intimately familiar with the arcane financial sector and yet are not part of the Complex (such as Ben Bernanke after retirement, Paul Volcker, Ken Rogoff), to provide analysis of the potential downsides of ongoing financial innovation. I am happy to see that, in essence, this idea has been embraced in several proposals to set up Committees to examine “long term risk,” though the necessity of their members being truly independent experts needs to be emphasized. These downsides are not easy to predict; Keynes famously remarked once in his mischievous vein “the inevitable never happens, it is only the unexpected.” We must try to narrow the range of the unexpected.

Finally, we need to look closely at the incentive systems not just in the financial sector but also in the manufacturing sector. For example, stock options were designed with a view to giving managers a stake in the firm's profitability; however, this incentive system works successfully only in a steady state. It does not work when the firm is verging on collapse because in that case, the managers have “insider” information, which the workers and other stakeholders do not, and so the managers typically sell off their stock options and cut and run, leaving the others to fend for themselves. These

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situations have caused a lot of opprobrium, not because the CEOs got away with large sums or because it violates some sense of "justice." The simple fact is that every Western child is brought up with the notion that when a ship is sinking, the passengers escape in lifeboats while the Captain stands on deck and goes down with his ship. Instead we have seen the CEOs fleeing in lifeboats while the passengers go down with the ship. It violates our deepest-held cultural beliefs about what is proper, ethical behavior.

We therefore need to look at our incentive systems to see where they can be counterproductive, undermining not just citizens’ trust in ethical behavior, but also efficient outcomes. This too must be part of our agenda. And it is. I am, therefore, confident that the current crisis will strengthen the financial system in ways that strengthen both capitalism and, in turn, globalization.
As I was listening to Jagdish Bhagwati’s excellent comments, I found myself wondering, why, if we’ve been able to learn so much from the history of the Great Depression, we didn’t learn enough to anticipate this crisis. It’s as if we’ve learned about the consequences of massive financial crises but we don’t seem to have learned much about their causes.

In our different ways, Harold James and I have been writing over the past few years in historical spirit, arguing that there were legible signs of impending crisis well before August of 2007 when the financial world began to wake up to the difficulties.

In an article that was published by *Foreign Affairs* in 2005, entitled “Sinking Globalization,” I tried to point out ways in which our highly optimized, integrated, international economy could disintegrate by showing that the first age of globalization had indeed disintegrated, having reached a relatively high level of integration in the late 19th and early 20th century.

In a piece that I published not long after that entitled rather pretentiously “When A Black Swan Lands on Lake Liquidity,” I tried to show how a massive liquidity crisis could strike our economy with as much force as the great liquidity crises that

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brought globalization to an end in the 20th century. That was published in January 2007.

I had a busy but rather frustrating 2006 and early 2007, trying to persuade people in financial institutions, and I might add economics departments, that there was indeed a major financial crisis imminent. And for my pains, I got very little thanks indeed.

One of the most important things to bear in mind when, as an historian one writes about the future is that there’s no such thing as the future. There are many futures -- plural -- and I always speak with great hesitation about events that belong inherently in the realm of uncertainty. Let me now tell you what I got wrong.

When I look back at the writings of 2005 and 2006, there was one fatal error in my analysis, and that was my assumption that the catalyst for the liquidity crisis and the breakdown of globalization would be geopolitical. The parallel I drew was not with 1929 or 1931, but with 1914. The first stage of globalization ended in 1914. There was an attempt to resurrect it in the 1920s, but it failed miserably.

1914 is fascinating because it struck like a bolt from the blue the financial markets of the world. It was an authentic liquidity crisis and a massive global contagion that spread from the market for commercial bills that financed trade between Germany and England in literally a matter of hours through the financial system, closing down all the major stock markets of the world.

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This crisis was so huge that before a shot had been fired in the August war of 1914, all the major stock markets of the world had had to close their doors. The New York Stock Market and the London Stock Market and Paris and so on remained closed for the rest of 1914. The only way to avoid a complete disintegration of capitalism at that point was to suspend all transactions in securities.

What followed? A massive injection of liquidity; the gold standard rules were suspended de jure or de facto; huge monetary stimulus was provided by central banks; and there was a large increase in public borrowing, primarily occasioned by the war itself.

So successful were these emergency measures that we’ve largely forgotten the financial crisis of 1914. Because there are no data, or virtually no price data, for the last quarter of 1914, economists tend not to include it in their data sets. Had markets continued to function, the collapse in stock prices would have been vastly greater than 1929 or 1931.

So, my analysis was right in one way and wrong in another. I was right that a highly optimized, integrated global economy in which financial institutions and households in the west had become highly leveraged was vulnerable to a liquidity crisis that would attack the liability side of balance sheets in ways that very few economists and professors of finance and practitioners on Wall Street were thinking about. Indeed, eyes had more or less drifted away from the liability side of the balance sheet. I defy you to find any article in the financial press from 2006 or early 2007 that discussed this issue.
But I was wrong in thinking that the catalyst for such a liquidity crisis would be geopolitical. By looking all the time at the Middle East for trouble, or for that matter at China and Taiwan, I missed the simple point that it doesn’t matter what the catalyst is. In a highly optimized system with excessive leverage, anything can be the catalyst. As long as expectations are dramatically changed, the liquidity crisis will be what it will be.

As we know, it turned out to be sufficient for there to be a crisis in the market for subprime mortgages and the securities with which they were collateralized to cause the crisis that I envisaged.

In the book I published more or less during the crisis, but researched before it, *The Ascent of Money*, I tried to set out the six pillars of the financial system, and to show how each one of them was in one way or another fatally flawed or fatally corrupted in the run up to 2007.

My theory of the financial crisis goes like this: one, excessive leverage on bank balance sheets; two, an inundation of bogus AAA-rated collateralized debt obligations and other mortgage-backed securities -- there were about 64,000 of them by the time the crisis struck; three, a massive error of monetary policy between 2002 and 2004 when the Federal Reserve funds rate was held steady while asset prices, and particularly real estate prices, were exploding; four, an attempt to sell insurance against the uncertain, particularly by AIG but also by other issuers of wildly mispriced credit default swaps; five, the political pressure to increase the proportion of households owning their own homes (we decided to find out what was the percentage that caused

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the financial system to blow up, and the answer is 69); and, finally, Chimerica -- the fact that for its own reasons, the People’s Republic of China cut a massive credit line to the United States through reserve accumulation and that provided the vital liquidity that caused asset markets to overheat in 2006 and 2007. That’s my theory of the crisis.

In other words, there was not necessarily a geopolitical trigger. There were enough sources of instability in the financial system for practically anything, and it didn’t even need to be subprime mortgages. That wasn’t essential. There were other things that could have triggered this reappraisal of risk.

The key point is this: if one is trying to understand the lessons of the past with respect to the *origins* of crises as opposed to the *consequences* of crises, the crises in highly optimized global economies can strike very swiftly, and in classic chaos theoretical manner, a butterfly’s flapping its wings can cause the storm. Vast events do not necessarily have vast causes. That is one of the most important insights of modern historical study. We do not need to generate enormously complex origins for the crisis. All we need to do is recognize that highly optimized, complex systems are vulnerable to such massive shocks, even from relatively small exogenous stimuli.

So, where are we? We’ve avoided Great Depression 2.0 -- just. Kevin O’Rourke and Barry Eichengreen have done some nice work lately matching up the trajectory of major indices for the global economy, 1929 through to 1933; 2007, 2008 through to now. If you look at almost any measure of global economic performance – trade, output, stock markets -- it wasn’t until around June or July of this year that one could be

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sure we were breaking from the trend of the Great Depression. The crisis pretty consistently followed the Great Depression trajectory until very recently indeed. And it's only really in the last few months that I've allowed myself to say “whew.”

We’ve learned the lessons of both Keynes and let’s not forget Milton Friedman because I don't think that Ben Bernanke was acting in a Keynesian spirit. On the contrary, Bernanke's response to the crisis has been to do the exact opposite of what Friedman and Anna Schwartz said the Federal Reserve did between 1929 and 1933. So, we've responded to the crisis by learning from history. Hooray. Ben Bernanke, a person who knew some financial history, was in the right place at the right time. That was lucky because having somebody who knew none at Treasury, in the form of Henry Paulson, turned out to be a pretty expensive bad appointment.

Now we have got some people working on these problems who have serious knowledge of financial history. And it turns out that knowing financial history is much more important than knowing the stuff they teach you in the standard macro textbooks.

The problem is that we don't know what happens next. We don't know what happens if you apply massive monetary stimulus more than double the size of the Fed balance sheet and then run deficits that we would normally associate with world wars. The U.S. federal deficit in the last fiscal year, the one that's just ended (FY 2009), is only comparable in magnitude with that of the early forties. It's about the same size as that of 1942, actually.
We don’t know what happens when we do these things, when we learn from history, as we have done; when we learn from the mistakes of the Great Depression and apply both a Friedman-ized solution to avoid bank failures with liquidity injection and a Keynesian solution to try to stimulate the economy with huge public sector deficits.

My sense is that the unintended consequences of these measures may not be good for globalization and we are now in the realm of the unintended consequences. Here’s what I think are the dangers. I’m more pessimistic than Jagdish for the following reasons.

One, the crisis, particularly last year, created a pretext for economic nationalism all over the world, and politicians seized the moment with both hands. “Buy America,” “Buy China” -- those slogans were only part of a wider scramble by national politicians operating in nation states to exert power in the realm of the economy, and thereby to distort the rules governing free trade in a whole range of ways that we’re only gradually beginning to discern.

This wasn’t just the financial sector. I think it was Mervyn King who said that banks are international in life but national in death. The near death of institutions like Royal Bank of Scotland and CitiGroup created the kind of expansion of government at the national level that previously we have only seen in wartime. It’s quite interesting that we are re-running the fiscal and monetary policies of a world war right now without the world war to justify them. That can’t be good for globalization.

Two, when you look not only at the national or nationalist quality of bailouts, but also at the consequences of massive fiscal stimulus for the global bond market, it is
quite puzzling. The sheer volume of new issuance, particularly by western
governments in the wake of this crisis, has no precedent in peacetime. In wartime it is
easy to finance a deficit of 12 or 13 or even more percent of GDP because economies
are closed in war time, and forced savings requires the citizenry to accumulate war
bonds and other forms of public debt.

That is not the case today. We are financing these deficits in an entirely open
global bond market. And although in my argument with the economist Paul Krugman I
have been in some ways misrepresented on this score as being an inflation
scaremonger, the real point that I've been trying to make is quite different. The point is
that if you have massive oversupply of government debt even in a deflationary
economy, there can be upward pressure on nominal rates. And more importantly, if
conditions remain deflationary against expectations -- people still expect inflation to
run at about 2 1/2 percent but it won't: it will be lower -- you will get rising real interest
rates, and that's global because this is one market inundated with public sector issues.

I think a reasonable scenario looking ahead next year is that there will be a rise
in real interest rates, that heavily indebted countries and heavily indebted households
and heavily indebted financial institutions will be squeezed, and this will result in a
more disappointing economic performance in the western world than most people
currently are expecting. And that is not good news for globalization.

Three, we’re in the midst of currency chaos at the moment. When you look at
the way the Chinese are behaving, it’s almost the exact opposite of the way in which
the West Germans and the Japanese knew how to behave under the old system of
Bretton Woods. Namely, that export led growth strategies are fine, and you can run the surpluses, but you have to accept periodic revaluations of your currencies as the price for playing this game of catch up.

The Chinese don’t accept this. For a decade, they held their currency pegged. In 2005 they allowed it to appreciate slightly. As soon as the crisis struck, they restored the dollar peg, and that dollar peg right now is the biggest single distortion in the global economy. Why? Because although you can argue for dollar depreciation as a natural response to the problem of the current account deficit and a solution to America’s economic problems, which would benefit more from export growth than from yet more debt finance consumption, there is no justification for a depreciation of the renminbi. But that’s exactly what the world is getting as a result of the peg.

I think these nominal exchange rate pegs are much more economically important than economists tend to allow. The huge reserve accumulation that was the core of Chimerica was really important in generating this crisis. And now we have a new phase of the crisis in which systematic intervention to weaken the Chinese currency is creating real pressures on all the other economies outside the Chimerican marriage. And so, we’re getting more and more panicky moves to try to contain exchange rate appreciation by economies from Brazil all the way across to the other Asian countries.

That’s a really worrying sign. If you believe in globalization, a game of beggar my neighbor played with currencies rather than tariffs is not a good game for us to be watching; yet, that’s the game that is being played.
Right now I don’t see why the Chinese should stop playing it. It is massively in their interests. Think of it as a kind of ten-ten deal. We get 10 percent unemployment. They get 10 percent growth. Why would they change that? And what exactly is our lever? Mr. Obama is going to show up in China on Monday\(^\text{10}\) and what is he going to say? “Please appreciate your currency or else ....,” what? Or else you’ll stop accumulating dollar denominated bonds of which we have to sell another trillion this year, and a trillion after that and a trillion after that? There’s no leverage there. There’s just no diplomatic bargain to be struck that I can see.

What begins in the realm of economic crisis naturally leads to the realm of political crisis. You do not have a near Great Depression without some kind of populist backlash. That, I think, is a reasonably straightforward lesson of history. You don’t need to look only at the 1930s for that. Go back to 1873 and the first Great Depression, as contemporaries called it, of the late 19\(^{th}\) century. Falling prices equals populism for the indebted. That’s what happened in the late 19\(^{th}\) century. It happened not only in the United States with the populists; it happened in Germany and elsewhere with the first organized anti-Semitic parties and peasant parties of that period.

The populist backlash to this crisis is in its early stages. Crises take longer to unfold than we are used to in our age of attention deficit disorder. Crises are multi-year phenomena. Just because we’ve had a few good months -- one quarter of positive GDP growth -- does not mean it’s over, because the second order effects and the third order effects in the realm of politics are going to play out through the midterms and into the

\(^{10}\) President Barack Obama made his first state visit to China November 15-18, 2009.
next presidential election. None of us has the faintest idea who is going to capitalize on the massive popular anger and disillusionment in this country and elsewhere. But believe me, somebody will.

Finally, geopolitical fallout is going to be a story here, too. I don’t believe we’re on the road to world war. That was never the argument of my original “Sinking Globalization” analysis. But I do believe that we’re on the road away from the relatively stable world of U.S. primacy towards a more unstable world of rival great powers. There will be at least one equal -- not necessarily opposite, but certainly equal -- economic superpower in the relatively near future. Goldman Sachs says that by the year 2027 China’s GDP is going to equal that of the United States. That’s a new phenomenon. We haven’t seen anything like a real equal in economic terms to the United States for over a century. Nobody knows what that implies other than that it implies a major change in the balance of power. Whether that plays out peacefully or leads to conflict has to do with the pace of the Chinese naval building program. I wonder how many of you follow that closely. You should. It is important.

The other thing you should do is watch where the aircraft carriers are. If you see two aircraft carrier groups approaching the Persian Gulf anytime soon, that means that the attack on Iran is likely. The probability of an attack on Iran in the next two years is much, much higher than most people who work in finance appear to realize.

That brings me to a fairly nice conclusion. In my original analysis three years ago, I thought that a crisis in the realm of geopolitics would lead to a massive liquidity crisis and then to a re-pricing of assets. Wrong. But it’s perfectly possible that I just got
the order wrong. In other words, we could have first the financial crisis and then, following on from that, a geopolitical crisis that would intensify the crisis of globalization.
What Can Economists Learn from History: or What is Problematical about Drawing Lessons?

It’s an enormous pleasure to be here. President Zedillo has organized a wonderful conference over the past two days, and being at this conference has made me feel gloomier than I would otherwise have been. The discussion of the last two days has led me to think that it may well be that President Zedillo’s center¹¹ should move from the economics department to the history department in that globalization is maybe a thing that is of the past. I was also surprised that Niall Ferguson said that he had let out a “whew” of relief because it seemed to me that his conclusions in the end were pretty gloomy as well.

We are all puzzled by the length and the severity of this financial crisis and its dramatic and long-lived effects on the real economy. We are also mesmerized by the possibility of parallels to the Great Depression; but at the same time we are sure that we have learned the lessons from the Great Depression. We often assume, as a result, that we can avoid a repetition of the disasters of the 1930s.

This response is not new to 2007 and 2008 and 2009: it characterized the whole of the postwar era. Politicians, bankers, academics, all like to suck on a comfort blanket. In the middle of any episode of financial turmoil the oft repeated solace is that

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¹¹ Yale Center for the Study of Globalization
we really understand what policies caused the Great Depression, and know how not to repeat them. Consequently, it became an article of faith that a catastrophe of that magnitude could not occur again.

The problem is that there are several different lessons from the Great Depression and they are confusing when we conflate them.

In the United States, the Great Depression is identified with the stock market crash of 1929. Economists have two simple macro-economic answers to that kind of collapse. The first is the lesson that John Maynard Keynes already taught in the 1930s, above all in the *General Theory* of 1936, that in the face of a collapse in private demand, there is a need for new public sector demand, or for fiscal activism.

The second is the lesson above all drawn by Milton Friedman and Anna Schwartz in the 1960s in their monumental *Monetary History of the United States*. In their view, the Depression was the result of a policy failure by the Federal Reserve in the aftermath of 1929. There was a massive monetary contraction, which was responsible for the severity of the economic downturn. In the future, central banks should commit themselves to providing additional liquidity in such a case.

Both these sets of lessons have been applied, consistently and quite successfully, not just to deal with the financial turmoil of 2007-8, but through the whole of the second half of the twentieth century. Stock market panics in 1987, or 1998, or 2000-1, were treated with the infusion of liquidity. The fact that these anti-crisis measures were applied in many countries after 2007 also explains why the fallout is milder than it might have been.
2007-8 brought a new challenge, in that it repeated a Great Depression story that is quite different from 1929. In the summer of 1931, a series of bank panics emanated from central Europe and spread financial contagion, to Great Britain and then to the U.S. and France and the whole world. This financial turmoil was decisive in turning a bad recession (from which the U.S. was already clearly recovering in the spring of 1931) into The Great Depression.

Finding a way out of the damage was very tough in the 1930s and is just as difficult now. Unlike in the case of a 1929-type challenge, there are no obvious macro-economic answers to financial distress. The answers, if they exist, lie in the slow and painful cleaning up of balance sheets; and in designing an incentive system that compels banks to operate less dangerously and to take fewer risks.

A 1931-type event requires micro-economic restructuring, not macro-economic stimulus and liquidity provision. It cannot be simply imposed from above by an all-wise planner but requires many businesses and individuals to change their outlook and behavior. The improvement of regulation and supervision, while a good idea, is better suited to avoiding future crises than dealing with the consequences of a catastrophe that has already occurred.

The consequence of the long academic and popular discussion of 1929 is that people have come to the expectation that there must be easy answers. But the collapse of Lehman Brothers and the threat of global financial turmoil was a 1931-like event, the failure of a large financial institution.
There is an additional reason that the aftermath of Lehman looks highly reminiscent of the world of depression economics. The international economy spreads economic problems very quickly. Austrian and German bank collapses would not have knocked the whole world from recession into depression if those countries had simply been isolated or self-contained economies. But they had built their economies on borrowed money in the second half of the 1920s, with the chief sources of the funds lying in America. The analogy of that dependence is the way in which money from emerging economies, mostly in Asia, flowed into the U.S. in the 2000s, and an apparent economic miracle was based on the Chinese willingness to lend. The bank collapses in 1931, and in September 2008, have shaken the confidence of the international creditor: in the 1930s, the United States; today China.

As in the Great Depression, the attention focuses on the big states and their policy responses. This is especially true of the now classic answers to a "1929" problem. Smaller countries find it harder to apply Keynesian fiscal policies, or to pursue autonomous monetary policies. Some countries, like Greece or Ireland, have already reached or exceeded the limits for fiscal activism; and there is – as in the 1930s – a threat of countries going bankrupt. Europe has been mesmerized by the Greek trauma, and Greeks are reminding their fellow Europeans of the ancient Greek reform under Solon of the Seisachteia or unburdening of debt.

From the perspective of the United States, debate has been distorted by unreasonable fears that something like the Greek tragedy could hit America. That is unrealistic. But even the default of an agglomeration of smaller countries would end
any hope of an open international economy and inaugurate an age of financial nationalism.

In today’s world of over-extended government finance, all governments will not run into market limitations on their ability to finance themselves at the same time. In this respect, there is a parallel with banks, where the crisis has strengthened some well-managed or well-connected institutions while weakening others. Stronger governments too will find it easy to refinance their debt, even when (as in Germany today) they are producing new debt at record levels, or when (as in Japan today) their new debt exceeds tax revenue.

But the market will focus on the cases that are problematic. The difficulties will be greatest in smaller countries. In the 1930s, small size turned sovereign debt problems into profound political vulnerability. Especially in central and eastern Europe, states were sucked into a dependence on their big German neighbor which, though itself also bankrupt, would extend credit for trading operations.

Large countries by contrast have a substantial amount of power, even when they accumulate large amounts of debt. In the Latin American debt crisis of the 1980s, a 1930s tag of John Maynard Keynes was repeated again and again: if I owe the bank a hundred pounds, I have a problem, but if I owe the bank a hundred million pounds, the bank has the problem. The big debtors will be able to force through particular deals.

One of the most striking developments of the era of economic and financial stability and dynamism over the last twenty years was that more and more countries were able to borrow internationally in their own currency. For most of the nineteenth
and twentieth century, this had been the privilege of a relatively small number of core countries, in particular Britain and the United States. Over the past decade, big emerging market economies have been able to use the new sophistication of financial markets and have issued their own debt. That process is likely to continue, and to generate advantages for the big players.

In the recently finished era of financial globalization, in the twenty year period since the collapse of Soviet communism, the most dynamic and richest states were generally small open economies: Singapore, Taiwan, Chile, New Zealand, and in Europe the former communist states of Central Europe, Ireland, Austria, and Switzerland. In the world after the financial crisis, the center of economic gravity has shifted to really large agglomerations of power. There has been an obsession with the BRICs (Brazil, Russia, India, China) as new giants. The continuation of the crisis will turn them into Big Really Imperial Countries. Power politics will be really powerful.

Other areas of policy will become more politicized. In particular, monetary policy has become much more uncertain in the wake of the financial crisis. Over the past twenty years, we had become very confident about our ability to get monetary policy right. Good monetary policy, made by central banks whose independence was legally guaranteed, provided a framework in which good economic choices could be made and assets allocated efficiently. The end of inflation and “the great moderation” were quite fundamental for the liberalization of large parts of the world, for increased confidence, increased trade, and increased prosperity.
There was an analogous era to the past twenty years of globalization in the early
twentieth century. In the first case, one hundred years ago, confidence was
underpinned by gold; in the more recent globalization, it depended upon the power of
the human intellect to solve a policy problem.

After the collapse of the fixed exchange rate regime in the early 1970s, the
previous golden anchor of monetary policy disappeared. By the middle of the 1970s,
some central banks began to argue formally for a replacement of fixed exchange rates
as an anchor for stability by a targeting system for the growth of money. This vision,
popularized as monetarism, was responsible for some great successes in stabilizing
expectations and putting a lid on inflation, notably in Germany after the middle of the
1970s, and in the United States after 1979.

Monetarism in its purest form rapidly ran into the difficulty that it was hard to
find the right measure of the money supply. Since banks in practice create money by
extending credit, which is then deposited in other banks and used as a basis for the
extension of further credit, financial innovation means constant uncertainty about what
precisely is money and about how its supply can be measured. In addition, the
monetary authorities had no control over the velocity of circulation.

The disillusion with monetary policy produced a new interest in targeting
inflation rather than monetary growth. In some cases, inflation targeting grew out of
an intellectual conviction that it represented a superior way of dealing with the problem
of inflationary expectations. New Zealand in 1990 and Canada in 1991 adopted this
approach. Some more spectacular conversions to inflation targeting occurred in the
aftermath of currency crises, as previously fixed exchange rates disintegrated and policy-makers looked for an alternative tool to achieve stability. In October 1992, the U.K. adopted an inflation target after the British pound was forced out of the European Monetary System’s exchange rate mechanism.

But it was never an obvious concept. In 2003 Ben Bernanke, then a Governor of the Federal Reserve, stated in a speech that many Americans considered inflation targeting “foreign, impenetrable, and possibly slightly subversive.” But now it looks even more problematical.

One of the most intense theoretical disputes over recent years was the extent to which central banks should attempt to correct or limit asset prices bubbles when there was no corresponding rise in the general level of inflation. Many Europeans tried to argue in recent years for the inclusion of some element to take asset price developments into account, while this approach was largely resisted by American policy-makers and academics.

The problem is that asset prices and consumer price inflation may move in quite different directions, as they did for much of the 2000s, and that following both would produce inconsistent policy recommendations. The recovery in stock markets since April 2009, coupled with a stability of consumer prices, raises exactly the same question of whether we are in a new bubble.

Devising a formula to derive a rule on monetary policy would involve a nearly impossible exercise in weighting both factors. As a result, central banks run the risk of
no longer appearing to follow a clearly formulated policy guideline, and they might well lose credibility.

After the financial crisis we have become wiser; but all we know is that making monetary policy is more complex. There is no obvious right answer, given by a simple rule. As a result it is also more politicized.

For a model of what might happen more generally, it is worth looking at the experience of the UK, one of the first inflation targeters. The Bank of England’s Monetary Policy Committee has often been presented as a pioneer of the transparency of the new way of making monetary policy. But from a very early stage the transparency that resulted from the early publication of minutes, and of the record of who voted for and against a proposal, led to a public identification of members of the Committee as hawks or doves. Doves in particular had a substantial and appreciative audience, as the business community generally thinks that it gets a nice kick out of lower interest rates. The problematic issues confronting monetary policy have led to a new degree of politicization. Ex-MPC member David Blanchflower’s Enid Blyton\(^\text{12}\)-like depiction of the process as a “courageous three” fighting a pusillanimous “feeble six” increases the public sensitivity to the arguments and feelings of the MPC.

If it is clear who will vote for which measure, there will be an increased demand for a public debate about who should be chosen: why not an election of the MPC, since it is in practice a monetary government? In Europe, a similar debate about the political accountability of European central banks has been simmering since long before the

\(^{12}\) Enid Blyton was a famous 20\(^{\text{th}}\) century British children’s book author who wrote popular series about adventurous children such as the “Famous Five” and the “Secret Seven.”
European Central Bank was even established. In the United States, the Federal Reserve has become the subject of acute controversy. Tensions between the advocates of different policy solutions will lead to a demand for greater political say.

This exercise looks like a dramatic repeat of the interwar story, and points to a final lesson from the Great Depression era. Then too, central banks were blamed when their policy framework (at that time the gold standard) disintegrated. A major platform of the British or French left as a consequence became the nationalization of the central bank: i.e. the introduction of political accountability. The intellectual shift towards central bank independence, which characterized the late twentieth century, was only possible on the assumption that there was a clear rule or principle that the central bank should follow. When that rule or principle became muddied, and discretion in policy making returned, the case for central bank independence began to look more problematical. The pendulum is swinging back, toward a nationalized Bank of England, a more accountable Federal Reserve, and an ECB that answers to the people of Europe.

There is no evidence that such a pendulum swing would lead to better monetary policy, but the demand for more accountable monetary policy may become irresistible. That new monetary policy would become the tool of the new power politics that we have seen. The big countries and big economic regions will be tempted to play with competitive reflations and competitive devaluations. In that way, our optimism about really having learned the lessons from the 1930s may turn out to be misplaced.

In every aspect, life is becoming much more politicized. In that politicized world, the very strong and the very powerful are the winners. And in that kind of world
for the others, life becomes more difficult, more uncertain, and more vulnerable. That's why I am worried.