Let me first thank you for inviting me to speak to you on this critical topic. Too little attention has been given to the question of what kind of a financial system we want to have as we emerge from this crisis. The decisions we make today on how to rescue it inevitably will shape the financial system of tomorrow.

As we think about what kind of financial system we would like, we should begin by recognizing the failures of our existing system.

A good financial system manages risk and allocates capital, with the intent of increasing the overall efficiency of the economy; it does this with low transaction costs. However, we have a financial system which created risk and misallocated capital, with high transaction costs. While capital was being misallocated to homes beyond people’s ability to pay and in places where homes were not needed, too little capital was being deployed to new start-ups, to create and expand small and medium size enterprises, which are the bases of a dynamic economy.

A small part of our financial system, the venture capital firms, is responsible for a large part of our economy’s economic growth. While our big banks have not been at the center of this dynamic growth, they have been at the center of this tempest; they have created risk to our country, without any offsetting rewards—though to be sure those in the industry have been rewarded well.

Other parts of our financial system have done a good job—community banks, credit unions and local banks—in supplying consumers, small and medium sized enterprises with the finance they need.

But we should also be aware of the inadequacies of our financial system—beyond the failures in risk management and capital allocation that led to this crisis. Our financial system discovered that there was money at the bottom of the pyramid and made a concerted effort to make sure that they money did not remain there. They engaged in predatory lending; it is ironic that they were hoisted by their own petard in the sub-prime mortgages. (As an aside, preventing banks from becoming too big to fail, and intense regulation of these too big to fail institutions, is not the only thing that is needed. We need a Financial Product Safety Commission to assess which financial products are safe for use by consumers—and for what purposes. But this Commission will help in addressing the problems of the too big to fail banks as well. It will take risk out of the
system; these banks will not be able to buy up big packages of financial products that have a high risk of non-payment. We need strong regulation at the bottom of the pyramid to complement the strong regulation at the top that I describe below.)

In some developing countries, modern banking services have been extended to even the poor in remote villages; by contrast, the poor in our inner cities are still using check cashing services which charge exorbitant fees. Modern technology should have resulted in a low-cost electronic payments system. Our system entails exploitive fees.

Thus, as we go about repairing—and bailing out—our financial system, we must keep in mind the kind of system we want to have going forward. We should not want to go back to the world as it was before the crisis. Nor can we.

We had too big of a financial sector. In the post-crisis era, the financial sector as a whole will shrink. Do we want it all to shrink proportionately? Or do we want to strengthen those parts that have done well, forcing most of the cutbacks on the too-big-to-fail institutions that have held a gun at our head and demanded the payment of hundreds of billions of dollars, lest the whole economy fails? There is no good case for making the smaller, competitive, community-oriented institutions take the brunt of the downsizing, as opposed to the bloated, ungovernable, and predatory institutions that were at the center of the crisis.

I believe that one of the key problems comes from our allowing certain institutions to grow to be too big to fail—or, at the very least, very expensive to save. Some of them have demonstrated that they are too large to be managed. As Edward Liddy put it, “When I answered the call for help and joined AIG in September 2008, one thing quickly became apparent: The company's overall structure is too complex, too unwieldy and too opaque for its component businesses to be well managed as one entity.”

And yet, the response to the crisis has led to a consolidation of the big banks, increasing the risk of surviving banks becoming “too big to fail.” The Congressional Oversight Panel has made it clear that some of the too-large-to-fail banks have been the recipients of huge subsidies under TARP. As I am sure you are aware, in the first set of TARP transactions, the largest subsidies, both in amounts and in percentage, went to Citigroup, Inc. and AIG. The value of the subsidy in the second Citigroup bail-out was estimated to be 50% of the $20 billion they received. AIG’s subsidy was estimated to be 63% of the $40 billion they received. Back of the envelope calculations suggest that the more recent Citigroup subsidy may have been even larger.

There are other large subsidies implicit or explicit in government guarantees for newly issued bonds. Still other subsidies are hidden within the FDIC, when insurance premiums do not accord with actuarial risks. I and many others fear that the Public Private Partnerships will result in the banks being overpaid for some of their risky

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mortgages; it is again a hidden subsidy tilting the playing field—in favor of the banks that were most engaged in excessively risky practices and that are in the best position to exploit a flawed bail-out program. As I pointed out in my New York Times op-ed\textsuperscript{2}, in spite of the rhetoric, this is not about price discovery of the assets as a result of problems of liquidity. What is being priced is an option on the asset, and the value of these options can be much, much larger than the actuarial value of the asset itself, with the difference being paid either by depositors (through FDIC insurance premiums)—and thus potentially, by a massive transfer from our good banks to our bad banks—or by taxpayers, if that proves too onerous, as well it might. Nor is it an ordinary partnership—the private sector gets 50\% of the profits, though it puts up only 8\% of the money, and yet the government is left bearing the brunt of the losses.

We should recognize that there is no free lunch, and the basic laws of conservation of matter apply in economics as they do in physics. There have been real losses, as loans were made on the basis of a housing bubble. The bubble has now broken, and no expressions of confidence are going to change that. Moving losses from the banks’ balance sheets to the taxpayers or FDIC—even when done in a non-transparent way—does not make them go away. Indeed, because of the adverse incentive effects of the structure of the program, the losses may be increased. Adverse selection and winners’ curse problems may further increase the costs to the taxpayers and depositors. Professor Jeffrey Sachs\textsuperscript{3} and others have written about the large opportunities for gaming the system. I illustrated this in my New York Times article by showing that an asset with a 50-50 chance of either being worth 0 or $200—so whose actuarial value is $100—could be purchased by the so-called Partnership at a price of $150 and still yield a handsome profit for the private partner. Had I had space, I would have gone on to illustrate an even worse possibility: the bank (or a surrogate of the bank, such as a hedge fund associate) becomes the “partner” with the government and pays $300 for the asset. In doing so, it converts a risky asset worth, on average, $100, into a safe asset—it receives net $284 in both the good and bad outcomes. The government (TARP, FDIC) bears an expected loss of $184. With so much money being thrown around, we should expect problems.

We need a transparent accounting of the potential losses, based on realistic and worst case scenarios of declines in real estate prices—not based on rosy scenarios suggesting that there will be no declines. Congress should demand a full risk analysis of the potential losses, not just from the TARP program but also from the other actions taken in response to this crisis: the increased coverage of deposit insurance; the guarantee of money markets (which acts as a subsidy to banks through its indirect impact on the commercial paper market); guarantees for bank fixed obligations; the value to the banks of the bail-outs of AIG, Fannie Mae, and Freddie Mac (the banks benefited indirectly as holders of Fannie and Freddie paper and as counterparties in AIG derivative swaps); the subsidies received as a result of the overpaying in the settling of AIG credit default swaps; and the variety of actions taken by the Fed. The Credit Reform Act made it clear that government should not provide guarantees and loans without taking into account an


estimate of the losses. This is an important initiative in enhancing transparency in
government, and it should apply equally to government agencies, like the FDIC and the
Fed. Playing by the rules would have required such an accounting. This Committee
should, in addition, ask the CBO for a full analysis of potential losses.

In short, our bail-outs run the risk of transferring large amounts of money, often in non-
transparent ways, to those banks that did the worse job in risk management—hardly
principles on which normal market economics is based. Among these are some of the
too-big-to-fail banks. In effect, the government is tilting the playing field—towards the
losers, worsening the tilt that is always there simply from the implicit guarantees
associated with being too big to fail. As I argue below, some of these subsidies may be
an inevitable consequence of these banks’ too big to fail status, but much of it is not. It
has been a matter of policy choice.

The non-transparent way we have been bailing out the banks will almost surely increase
the total cost to the economy and to the taxpayer. We have confused two different
principles: bailing out the banks and bailing out the bankers, their shareholders, and
(possibly) certain categories of bondholders. We could have saved the banks but not the
shareholders at a much lower cost than the amount spent. To put it another way, we have
confused financial restructuring of an institution with the collapse of the institution.
Even an institution which is too big to fail is not too big to be financially restructured.

Inevitably, when an institution fails, there are effects on other institutions. Some of these
may need help. Some may themselves be systemically significant. But it is often,
perhaps usually, far cheaper to target money where it is needed than to rely on trickle
down economics. As one looks at the recipients of the largesse given to AIG, relatively
little of the money went to institutions that were systemically significant to the U.S., and
at least the largest such recipient has claimed that it would not have failed, even had it not
received the money. To be sure, it did not turn down the gift.

The way we have conducted the bail-outs has almost surely added to both the budgetary
costs and the real economic costs, both those that are being encountered today, and those
costs which we will bear in the future.

Regrettably, some of the discussion of regulatory reform has skirted the main issues.
There is talk about the need for comprehensive oversight, bringing in the hedge funds.
We should remember that the core problems were not with hedge funds; they were with
regulations and regulatory enforcement of our big commercial and investment banks.
This is what has to be fixed.

Being too big to fail creates perverse incentives for excessive risk taking. The taxpayer
bears the loss, while the bondholders, shareholders, and managers get the reward. It also
distorts the marketplace in another way: as we have noted, there are hidden subsidies
(which have been increased in the current crisis), for instance in deposit insurance, in the
government-provided explicit guarantees to newly issued bonds, and in the implicit
guarantees to bondholders and shareholders associated with the bail-outs. (Even if the
FDIC bears the cost, it does not stay there; ultimately, it gets borne by market participants. Unless a strict “polluter pays” principle is adopted, the costs will be shifted in part to other financial institutions, with consequent distortions to the financial sector.)

What we have seen has long been predicted by economists. The first lesson of economics is that incentives matter. When there are perverse incentives, there are perverse outcomes—unless we constrain behavior. We should not have been surprised with what has happened.

Furthermore, this is neither the first failure of our big banks, nor the first bail-out. Their failures to judge creditworthiness have been repeated—in Mexico, in East Asia, in Latin America, in Russia. The only novel aspect of this is that it is the first major bail-out at the expense of the U.S. taxpayer since the S&L debacle. In these bail-outs, there was much discussion of the problem of moral hazard. With each bail-out, it became worse.

With the bail-out of AIG, we have officially announced that any institution which is systemically significant will be bailed out.

We could have reduced the extent of moral hazard had we made an obvious distinction in the subsequent bail-outs between bailing out the banks and bailing out the bankers, their shareholders, and their bondholders. The decisions of both the Obama and Bush Administrations to extend unnecessarily the corporate safety net have meant not only that incentives are more distorted but also that our national debt will be massively larger than it otherwise would have been. Going forward, I think it is imperative that Congress narrow the breadth of this new corporate welfare state. It is people that we should be protecting, not corporations. But even were we to correct what I view to be these grievous mistakes, the problem of too-big-to-fail institutions remains.

There are but too solutions: breaking up the institutions or regulating them heavily. For reasons that I will make clear, we need to do both.

The only justification for allowing these huge institutions to continue is that there are significant economies of scope or scale that otherwise would be lost. I have seen no evidence to that effect. Indeed, as I have suggested, these big banks are not responsible for whatever dynamism there is in the American economy. The touted synergies of bringing together various parts of the financial industry have been a phantasm; more apparent are the conflicts of interest—evidenced so clearly in the Worldcom and Enron scandals earlier this decade. In short, we have little to lose, and much to gain, by breaking up these behemoths, which are not just too big to fail but also too big to save and too big to manage.

Thus, we need to begin now the admittedly gargantuan task of breaking out their commingled activities—insurance companies, investment banking, anything that is not absolutely essential. There needs to be a very heavy burden of proof to show that the economies of scope and scale are large and cannot be achieved in any other way, to justify forcing the public to bear the risk and the market to bear the inevitable distortions.

Almost inevitably, the complexity of much proprietary capital market activity, and the perceived need for confidentiality of such activities, limits transparency for investors and creditors alike….In practice, any approach must recognize that the extent of such risks, potential volatility, and the conflicts of interests will be difficult to measure and control. Experience demonstrates that under stress, capital and credit resources will be diverted to cover losses, weakening protection of client interests. Complex and unavoidable conflicts of interest among clients and investors can be acute. Moreover, to the extent that these proprietary activities are carried out by firms supervised by government and protected from the full force of potential failure there is a strong element of unfair competition with “free-standing” institutions…[And] is it really possible, with all the complexities, risks, and potential conflicts, that even the most dedicated board of directors and top management can understand and maintain control over such a diverse and complex mix of activities.

We know that there will be pressures, over time, to soften any regulatory regime. We know that these too-large-to-fail banks also have enormous resources to lobby Congress to deregulate. We have seen it, and we are now suffering as a consequence. This was not an unforeseeable accident. It was predictable and predicted. Accordingly, I think it would be far better to break up these too-big-to-fail institutions and strongly restrict the activities in which they can be engaged than to try to control them.

In short, we need to admit that those that predicted dire consequences to come from the repeal of the Glass-Steagall Act were correct. They warned about conflicts of interest, the increase in concentration of the banking system, with increasing risks of too-big-to-fail institutions—and increasing systemic risk as a result. They warned about the consequences of transferring the investment banking culture to the commercial banks, who are entrusted with the management of the payment system and ordinary individuals’ savings—insured by the government. The critics suggested that the benefits from economies of scope and scale were exaggerated, and, if present at all, these were almost surely outweighed by the costs. As painful as it may be, we need to revisit these questions. Depression-era regulations may not be appropriate for the twenty-first century, but what was needed was not stripping away regulations but adapting the regulatory system to the new realities, e.g. the enhanced risk posed by derivatives and securitization.

The process of breaking them up may be slow; there may be political resistance—even if the shareholders have not done well, their officers have, and their political contributions have not gone unnoticed. Hence, our regulatory structure must be prepared to deal with any financial institutions that are too big to fail. We cannot allow them to undertake the one-sided bets they have been making. There must be strong restrictions on the kinds of risk-taking positions that they can undertake. None should be allowed to have any off-balance sheet activities. They should not be allowed to have employee (and especially
managerial) incentive structures that encourage excessive risk-taking and short-sighted behavior. We should limit credit default swaps and certain other derivatives to exchange traded transactions and to situations where there is an “insurable risk.” We should limit leverage, and capital adequacy standards should adjust to, say, the expansion of portfolios. Elsewhere, Elizabeth Warren has put forth a convincing case for a Financial Products Safety Commission. One of the tasks of such a Commission would be to identify which financial products were safe enough to be held or issued by the too-big-to-fail financial institutions. This is the comprehensive regulatory agenda that I have outlined in previous testimony. More than oversight is needed; what is needed are strong restrictions on what they can do.

Too big to fail banks should be forced to return to the boring business of doing conventional banking, leaving tasks of risk taking or management to others. There are plenty of other institutions (not depository institutions but smaller, more aggressive companies that are not so big that their failure would bring the entire economy down) that are able to take on risk. Such a reform would increase the efficiency of the economy, because as noted, in current institutional arrangements, the playing field is tilted against stand-alone institutions because of the implicit subsidy given to the too-big-to-fail institutions.

Too-big-to-fail banks are of particular concern because of the added problems of insured depositors. (Too-big-to-fail insurance companies should face corresponding restrictions, e.g. they should be limited to selling conventional insurance products, with well defined actuarial risks.)

The restrictions on their activities may yield low returns—but that is as it should be: the high returns that they earned in the past were the result of risk taken at the expense of American taxpayers. A basic law in economics is that there is no free lunch; higher than normal returns come with risk—and these too-big-to-fail institutions are not the ones that should be undertaking this risk. There are plenty of other institutions in our society to fill the role.

We should, at this point, recognize that for these too-big-to-fail institutions, we taxpayers are a peculiar implicit owner: we share in any (tax reported) profits (they are often clever not only in accounting and regulatory arbitrage but also in tax arbitrage), but we bear a disproportionate share of the losses. However, we have little control over what they do. Given our implicit stake, we should demand the highest standards of corporate governance, including full expensing of stock options.

What I am arguing for is a variant of what is sometimes called the Public Utility Model. The too-big-to-fail banks should be put at the center of a new electronic payment system that will use modern technology to provide a twenty-first century payment system (at low costs) for America. They should not be allowed to engage in the predatory credit card practices that have become commonplace. We should have a twenty-first century

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efficient and fair credit system to correspond to our twenty-first century electronic payment mechanism. The too-big-to-fail banks should also be required to provide banking services to underserved communities—and at prices and terms that are competitive, reflecting actual costs.

Nor does it make sense, as we have been doing, to force those banks that have been performing the job of real-banking to pay for the losses of the too-big-to-fail banks. It is neither equitable nor efficient. With bonds guaranteed by the FDIC, we are, in effect, forcing all depositors, including those in good banks, to bear at the very least some of the risk and costs associated with the mistakes of our banks that are too big to fail. They should bear this cost, e.g. in the form of a special tax imposed on profits, dividend distributions, bonuses, and interest payments on bonds. (If we can make a credible commitment not to bail out bondholders—demonstrated by allowing the current bondholders to take a haircut—the latter should be exempted. Given our current policy stance, they should not be.)

In environmental economics there is the basic principle of the polluter pays. Those who pollute must pay the cost of clean-up. It is a matter of efficiency and equity. The too-big-to-fail institutions have contributed to the pollution of the global economy with toxic mortgages; they should now pay for the cost of clean-up.

One of the disturbing aspects of the recent bail-outs is the absence of a clear set of criteria—and a seeming inconsistency in practice. Ten years ago, many argued that it was appropriate for the government to take a key role in the bail-out of Long Term Capital Management, a hedge fund, because it was too big to fail—this after claims had been made that no hedge fund was large enough to pose systemic risk.

The list of those that received AIG money includes many who did not pose systemic risk to the U.S., suggesting that it may have been far cheaper to target money to those that posed systemic risk; certainly, such a policy could have been designed to ensure a far higher expected return to Treasury than the strategy chosen.

Before a crisis, every financial institution will claim that it does not pose systemic risk; in a crisis, almost all (and those that would be affected by a collapse) will make such claims. Recognizing this, we must take a precautionary approach: a systemically significant firm is any whose failure, alone or in conjunction with other firms following similar investment strategies, would lead to a cascade of effects significant enough to justify government intervention.

If those in the financial market continue to insist, as they have been, that allowing any major bank to go under would lead to a cascade of effects simply because of fears that it might induce among bondholders, the reach of institutions that fall within the rubric of “too-big-to-fail” needs to be greatly broadened. One cannot have it both ways: claim that we need only to regulate tightly the largest institutions that are too big to fail, and claim at the same time that a bankruptcy of any large institution would lead to a cascade of effects through market expectations. If the taxpayer is told he must pony up billions of
dollars because allowing bondholder interests, or even shareholder interests, to be diminished as they would under normal rules of a market economy, then the net of strong regulation has to be correspondingly wide.

We should recognize too that systemic significance is not only related to the size of the firm itself but also to its interconnectedness with the rest of the economy, and that a firm which is not systemically significant could easily turn into one. Even a small firm may be systemically significant. It was only a small part of AIG that was responsible for posing systemic risk. It might have done so as a stand-alone institution. Hence, we will have to impose analogous restrictions, perhaps slightly softened, on any financial institution that could turn into a too-big-to-fail institution. This is one of the reasons that regulation and oversight have to be comprehensive. (The mathematics of ascertaining systemic importance is complicated, but today, with adequate reporting requirements, we have the tools to do a far better job than in the past.)

One of the quandaries we face going forward is that any restrictions on the banking system will encourage the development of a shadow-banking system. This is another reason why any regulatory system has to be comprehensive and flexible—flexible in extending the net of tight regulation to any new institutions or markets that represent systemic risk. However, there should be no flexibility in relaxing the net of regulation in response, perhaps, to some mistaken belief that markets are self-regulating (as we did during the past quarter century) on old institutions that continue to pose systemic risk.

Even if we regulate our too-big-to-fail institutions reasonably well, some of them will fail. Of course, if we don’t regulate them well—as we have not—failures will be more frequent. How we handle these failures is important. If we continue on the current path, it will increase the risk of moral hazard and will encourage excessive risk taking. We need to have a clear rule book, and we need to play by the rules. We know that in the next crisis, financial markets will again point a gun at our head, threatening the end of the world unless there is a massive bail-out. Never again, however, should we confuse bailing out the banks with bailing out the bankers and their shareholders.

I applaud the Administration in their efforts to get stronger resolution powers. An appropriately designed system, fairly implemented, might enable government to take prompt corrective action—before a calamity is on us—and, by forcing shareholders and bondholders to absorb the losses before imposing burdens either on taxpayers or the FDIC, might mitigate problems of moral hazard.

Not only would such a system improve incentives, it might also address one of the concerns that is leading to such demoralization of the public—the appearance of selective enforcement of rules, of double standards, of some institutions and sectors being treated in a preferential way, perhaps not uncoincidentally, related to campaign contributions.

We should recognize that, in a sense, the too-big-to-fail institutions have succeeded in managing their risk well—but not in the way advertised. A relatively small investment in campaign contributions (the combined campaign contributions of U.S. financial,
insurance, and real-estate firms has been estimated at around $5 billion over the past decade) has succeeded in transferring losses to the public, estimated well in excess of a trillion dollars.

There will be those who argue that this regulatory regime will stifle innovation. However, a disproportionate part of the innovations in our financial system have been aimed at tax, regulatory, and accounting arbitrage. They did not produce innovations which would have helped our economy manage some critical risks better—like the risk of home ownership. In fact, their innovations made things worse. I believe that a well-designed regulatory system, along the lines I’ve mentioned, will be more competitive and more innovative—with more of the innovative effort directed at innovations which will enhance the productivity of our firms and the well-being, including the economic security, of our citizens.