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FACING AND FIXING “TOO BIG TO FAIL”

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**PARTICIPANTS:**

**Welcome:**

[MARTIN NEIL BAILY](#)  
Senior Fellow, [Economic Studies](#)

**Presentation:**

GARY H. STERN  
President, Federal Reserve Bank of Minneapolis

RON FELDMAN  
Vice President, Federal Reserve Bank of Minneapolis

**Panel Discussion:**

**Moderator:**

MARTIN NEIL BAILY  
Senior Fellow and Director, [Initiative on Business and Public Policy](#), The  
Brookings Institution

RON FELDMAN  
Vice President, Federal Reserve Bank of Minneapolis

ALAN GREENSPAN  
President, Greenspan Associates

VINCENT R. REINHART  
Resident Scholar, American Enterprise Institute

GARY H. STERN  
President, Federal Reserve Bank of Minneapolis

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## PROCEEDINGS

MR. BAILY: Good morning. Welcome to Brookings. I'm Martin Baily, and this is an event of the initiative on business and public policy here at Brookings, and we're very glad to welcome you all here. We've been very fortunate having a galaxy of economic or economist stars through Brookings lately and today is certainly no exception.

We're going to start with a presentation by Gary Stern on the book, which is going to be reissued. Now, it's not actually out yet, is it, it's – oh, it is out, sorry about that, it's out, you can buy it, *Too Big to Fail*.

So we're going to start with Gary talking about the book, then we're going to have a little Q and A with him on the subject of *Too*

*Big to Fail*, and then we're going to have a panel up here in which we're very pleased to welcome Gary's co-author, Ron Feldman, Alan Greenspan, and Vince Reinhart. So I think this shall be a very interesting discussion.

Gary Stern became President of the Federal Reserve Bank of Minneapolis in 1985 and is currently serving a term that began in 2006. Before he joined the Minneapolis Fed, Doctor Stern was a partner at a New York based economic consulting firm. He's also served on the faculty at Columbia, Washington University, and New York University. He also served in the Federal Reserve Bank of New York, where his last assignment was as manager of the Domestic Research Department. With great pleasure, Gary Stern. Thank you.

MR. STERN: Thank you very much, Martin, and good morning. It's a pleasure to be here with you all, and I want to thank Brookings both for arranging this event and for publishing a paperback version of our book, which certainly we think is timely given the circumstances we all confront.

Let me get into the substance of this right away, and be happy to take some questions before turning to the panel. Destiny did not require society to bear the cost of the current financial crisis. To at least some extent, the outcome reflects decision, implicit or explicit, to ignore warnings of the large and growing too big to fail problem, and a failure to

prepare for an address potential spillovers. While I am, as usual, speaking only for myself, there is now I think broad agreement that policy-makers underestimated the scale and scope of the too big to fail problem, and that addressing it should be among our highest priorities. From a personal point of view, this recent consensus is both gratifying and disturbing, gratifying because many initially dismissed our book, published five years ago by Brookings, as exaggerating the too big to fail problem and underestimating the value of FIDICIA in strengthening bank supervision and regulation.

In turn, I would point out that Ron and I identified virtually all key facets of the growing too big to fail problem, including the role that increased concentration and increased organizational and product complexity, as well as increased reliance on short term funding, played in creating the current too big to fail mess, and important reforms, which, if taken seriously, could have reduced the risk taking that produced the crisis.

But belated recognition of the severity of too big to fail is also disturbing, because it implies that an action raised the cost of the current financial crisis as our analysis and warnings went unheeded. Despite our warnings, important institutions, public and private alike, were unprepared. And I am quite concerned that policy-makers may double down on previous decisions. Some ideas presented in the current environment to address

too big to fail are unlikely to be effective, and if pursued, will waste valuable time and resources. In the balance of these remarks, I will principally cover three subjects, first, the nature of the too big to fail problem today, second, policies essential to addressing the problem effectively, and third, policies that, although perhaps well intentioned, are unlikely to make a material difference to too big to fail at the end of the day.

So let me start with some discussion of the current situation. As matters stand today, the risk taking of large, complex financial institutions is not constrained effectively by supervision and regulation, nor by the market place. If this situation goes uncorrected, the result will almost surely be inefficient marshalling and allocation of financial resources, serious episodes of financial instability, and lower standards of living than otherwise.

Certainly we should seek to improve and strengthen supervision and regulation where we can, but supervision and regulation is not a fully credible check on the risk taking of these firms. I will go into this issue in more detail later, and we'll simply note at this point that the recent track record in this area fails to inspire confidence. Similarly, market discipline is not now a credible check on the risk taking of these firms. Indeed, a critical plank of current policy is to assure creditors of too big to fail institutions that they will not bear losses. Given the magnitude

of the crisis, I have supported the steps taken to stabilize the financial system by extending the safety net. But I'm also acutely sensitive to the moral hazard costs of these steps and have no illusion that losses experienced by equity holders and management will somehow resurrect market discipline.

How did we arrive at such a bleak point in terms of too big to fail? Well, that's probably the subject of another book, if Ron wants to write it. But let me make just two observations; first, the crisis was made worse by the lack of preparation I just mentioned. To provide some examples, policy-makers did not create or execute an effective communication strategy regarding government intentions for uninsured creditors perceived as too big to fail, a program to systematically identify the interconnections between these large firms, or systems aimed at reducing the losses that these large firms could impose on other firms. I raise those examples, not surprisingly, because we identified those steps as critical to addressing too big to fail in the book and related analysis. Second, addressing the too big to fail problem earlier could have avoided some of the risk taking underlying the current crisis.

To be sure, many small institutions have failed as a result of the crisis in housing finance, but nevertheless, the bulk of the losses seem concentrated in the largest financial institutions. And creditors of these

firms likely expected material support, thereby, facilitating excessive risk taking by such institutions.

Policy-makers should correct problems at credit rating agencies with off balance sheet financing, mortgage disclosures and the like, but if fundamentally too big to fail induces too much risk taking, then these firms will continue to find routes to engage in it, other things equal.

Let me talk about policies to correct the problem. I've spoken and written about too big to fail concerns and policy proposals with sufficient frequency that some observers now characterize my views on the topic as boiler plate, a back handed compliment, I presume. Nonetheless, it suggests I only judiciously review the key points of the reforms we have long endorsed. The logic for our approach I think is clear. First, in order to reduce expectations of bail-outs and reestablish market discipline, policy-makers must convince uninsured creditors that they will bear losses when their financial institution gets into trouble.

A credit commitment to impose losses must be built on reforms directly reducing the incentives that lead policy-makers to bail out, that is, to provide significant protection for uninsured creditors.

The dominant motivation for bail-outs is to prevent the problems in a bank or market from threatening other banks, the financial sector, and overall economic performance. That is, policy-makers

intervene because of concerns about the magnitude and consequences of spillovers.

So the key to addressing too big to fail is to reduce the potential size and scope of the spillovers, so that policy-makers can be confident that intervention is unnecessary. What specifically should policy-makers do to achieve this outcome? To answer this question, we have taken some of the reforms proposed in the book and combined them in a program we call systemic focused supervision, which we have discussed in detail elsewhere. In general, systemic focused supervision, unlike conventional bank supervision and regulation, focuses on reduction of spillovers. It consists of three pillars, early identification, enhanced prompt corrective action, and stability related communication. Let me cover those three pillars quickly.

As we have described in detail elsewhere, early identification is a process to identify and to respond where appropriate to the material direct and indirect exposures among large financial institutions and between those institutions and capital markets.

We anticipate valuable progress simply by having central banks and other relevant supervisory agencies focus resources on and take seriously the results of failure simulation exercises, for example. Indeed, such exercises appear to have identified the precise type of issues around derivative contracts, resolution regimes, and overseas

operations that have plagued policy-makers' ability to adequately address specific too big to fail cases. In fact, it appears that the failure was not primarily an identification of potential spillovers, but rather in making corrective action a sufficiently high priority. One constructive option related to early identification would require the relevant too big to fail firms to prepare documentation of their ability to enter the functional equivalent of pre-packaged bankruptcy.

The appropriate regulatory agencies should require too big to fail firms to identify current limitations of the resolution regime they face and the spillovers that might occur if their major counterparties entered such proceedings.

Without doubt, implementing early identification will prove challenging. That said, recommendations from other knowledgeable observers suggest the task is possible and worthwhile. The G-30 recommendations, for example, would have firms continuously monitor and report on the full range of their counterparty exposures in addition to reviewing their vulnerability to a host of potential risks many related to spillovers. These reports are precisely the key supervisory inputs to early identification.

One might reasonably wonder about a plan that seems to give center stage to supervisors when I earlier noted reservations about supervision in regulation. I would point out, however, that here we are

emphasizing a role for supervision where it, in fact, has a comparative advantage. In particular, we would focus supervision on collection of private information on financial institutions, looking across institutions, and worrying about fallout that potentially affects the public, rather than asking supervisors to try to tune risk-taking to an optimal level. Other entities have neither the incentive nor the access to carry out the role we envision for supervision.

Let me move on to the second pillar, enhanced prompt corrective action. Prompt corrective action works by requiring supervisors to take specified actions against the bank as the capital falls below specific triggers. One of its principal virtues is that it relies upon rules rather than supervisory discretion.

Closing banks while they still have positive capital or, at most, a small loss can reduce spillovers in a fairly direct way. If a bank's failure does not impose large losses, by definition, it cannot directly threaten the viability of other depository institutions that have exposures to it. Thus, a prompt corrective action regime offers an important tool to manage systemic risk. However, the regime currently uses triggers that do not adequately account for future losses and gives too much discretion to bank management. We would augment the triggers with more forward looking data outside the control of bank management to address these concerns.

And finally, the third pillar, communication. The first two pillars of systemic focused supervision seek to increase market discipline by reducing the motivation policy-makers have for protecting creditors. But creditors will not know about efforts to limit spillovers, and therefore, will not change their expectations of support, and, in turn, their pricing and exposures absent explicit communication by policy-makers about these efforts.

This recommendation highlights a key attribute of our approach. It does not simply seek to limit systemic risk, but takes the next step of directly trying to address too big to fail by putting creditors at risk of loss. If we do not do this, we will not limit too big to fail.

Now, let me turn to some alternative reforms that have received attention recently, starting with reducing the size of too big to fail institutions. This proposal is straight forward, if financial institutions raise systemic concerns because of their size, make them smaller. We intend to discuss this suggestion at some length in a separate document, but suffice it to say that we have serious reservations about the ultimate effectiveness of such an approach. And I would note, in passing, that it is an idea born of desperation since it seems to admit that large, complex organizations cannot be supervised effectively.

To provide a flavor of our concerns about this proposal, consider the government's ability to keep firms small after dismantling has

occurred. There might, for example, be tremendous pressure in the direction of expansion if, in the future, the smooth resolution of the failure of a major institution required the sale of assets to other significant institutions.

Even if this situation could be avoided, these firms still could engage in behavior that increases the risk of significant spillovers. They could do so, for example, by shifting their portfolios to assets that suffer catastrophic losses only when economic conditions deteriorate dramatically, thus making themselves and the financial system vulnerable to cyclical outcomes.

The second proposal we hear a lot about today is reliance on supervision – greater reliance on supervision and regulation and/or fiduciary. The two broad approaches discussed to this point seek increased market discipline and supervisory discipline to better constrain the risk taking of large financial institutions. But some observers do not believe that policy-makers can credibly put creditors of these firms at risk of loss. And some analysts do not believe that creditors can effectively discipline these off sprawling firms even if they had an incentive to do so.

As a result, some proposals to better limit the risk taking of these – as firms perceived as too big to fail focus primarily on strengthening conventional supervisory and regulatory discipline.

Policy-makers could pursue this approach in many ways. After identifying too big to fail firms, a more rigorous supervisory and regulatory regime would be applied. The tougher approach might include, for example, higher capital requirements, requirements that the firms maintain higher levels of liquid assets, additional restrictions on the activities in which the firms engage, and a much larger presence of on-site supervisors monitoring compliance with these dictates. My concerns about this approach center on the heavy reliance on supervision and regulation, but are not a wholesale rejection of sup and reg, per se. Given the distortion to incentives caused by the explicit safety net underpinning banking, society cannot rely exclusively on market forces to provide the appropriate level of discipline to banks. We must have a system of supervision and regulation to compensate. And naturally we should learn from recent events to improve the system, a process that is now underway.

But we must recognize the important limitations of supervision and regulation and establish objectives that it can achieve. The owners of systemically important financial institutions provide incentives for firm management to take on risk, which is the source of the returns to equity holders.

Under a tougher supervision and regulation regime, these firms have no less incentive than formally to find ways of assuming risk

that generates the returns required by markets and that does not violate the letter of the restrictions they face.

By way of example, research on bank capital regimes finds ambiguous results regarding their ultimate effect, as firms can offset capital by taking on more risk. And as I noted earlier, the track record on supervision and regulation does not suggest that it entirely prevents excessive risk taking that seems excessive ex-post. True, long shots occasionally come in, and perhaps a regime dependent on conventional supervision and regulation would succeed. But it is NCAA tournament time, and we know that a 15 seed rarely beats a number two.

To pick just one example from the current episode, supervisors have been unable, once again, to prevent excessive lending to commercial real estate ventures, a well known, high risk, high return business which contributed importantly to the serious banking problems of the late 1980's and early 1990's.

I recognize that creating a new regulatory framework for a small number of very large institutions differs from supervising thousands of small banks. But I forecast the same disappointing outcome for two reasons; first, we have already applied a version of the suggested approach. Right now we have higher standards and more intensive supervision for the largest banking firms, point former Chairman Greenspan noted in a recent *Financial Times* article. Second, the failure

of supervision and regulation reflects inherent limitations. Supervisors operate in a democracy and must follow due process before taking action against firms. This means that there is an inevitable lag between identification of a problem and its ultimate correction. As previously noted, management has ample incentive to find ways around supervisory restrictions. Further, the time inconsistency problem frequently makes supervisory forbearance look attractive.

A truly draconian regulatory regime could conceivably succeed in diminishing risk taking, but only at excessive cost to credit availability and economic performance. As Ken Rogoff, a distinguished economist at Harvard who has considerable public policy experience, as well, put it, and I quote not, "if we rebuild a very status and inefficient financial sector, as I fear we will, it's hard to imagine that growth won't suffer for years."

Just as we should not rely excessively on supervision and regulation, I do not think that imposing a FIDICIA type resolution regime on systemically important non-bank financial institutions will correct as much of the too big to fail problem as some observers anticipate.

To be sure, society will be better off if policy-makers create a resolution framework more tailored to large financial institutions, in particular, one that allows operating the firms outside of a commercial bankruptcy regime once they have been deemed insolvent. And this

regime does make it easier to impose losses on uninsured creditors if that outcome is desired. But I am skeptical that regime will actually lead to greater imposition of such losses.

Indeed, we wrote our book precisely because we did not think that FIDICIA put creditors and banks viewed as too big to fail at sufficient risk of loss. We thought that when push came to shove, policy-makers would invoke the systemic risk exception and support creditors well beyond what a lease cross test would dictate.

We thought this outcome would occur because policy-makers view such support as an effective way to limit spillovers. I don't think a new resolution regime will eliminate those spillovers, or at least not the preponderance of them, and so I expect that a new regime will not, by itself, put an end to the support we have seen over the last 20 months.

Let me wrap this up. I recognize the limits of any proposal to address too big to fail. We will never avoid entirely the financial crises that lead to extraordinary government support. But that is a weak excuse for not taking steps to prepare to make that outcome as remote as we can. It is with deep regret for damage done to residents of the Red River Valley that I note the return of the flood season to the upper Midwest. Many residents have noted that the so called hundred year flood has come many more times to this part of the country than its designation implies.

And these residents have rightly focused on preparing to limit the literal spillovers when this extraordinary event becomes routine.

In contrast, policy-makers did not prepare adequately for the too big to fail flood. Indeed, they situated themselves in the flood plain, ignored the flood warning, and hoped for the best. We must now finally give highest priority to preparation and take the actions required before the next deluge. Thank you.

MR. BAILY: Can we take some questions?

MR. AINSWORTH: Thanks; my name is Rob Ainsworth with EIR. One question that comes up with these big firms, of course, is the issue of institutional corruption and the rather cozy relationship that seems to exist between the regulators and the regulated. Now, is this not something that also has to be addressed if we want to avoid these kinds of situations in the future?

MR. STERN: Well, at the risk of illustrating my naiveté, I'm not aware of the relationship you're describing. I mean it's – I would – my general characterization of the regulators is that they do their honest best with the resources they have in an environment where there is inevitably going to be difficult judgment calls to make, not only about the state of the firm in question, but the implications of how that – of whether that firm continues to exist or not, for example, the implications of that decision for

other firms, other markets in the economy as a whole. Now, maybe you have some information I'm not aware of, but that's my reaction.

MR. NISKANEN: Bill Niskanen from CATO. Gary, what about the incentive to take too much risk because it's inherent in the GSE structure, independent of size?

MR. STERN: Well, the GSEs present an interesting case from a number of perspectives. One of the interesting things about the GSEs, of course, is, that was a well recognized problem that lots of people spent a lot of time pointing out here in this town. So that was certainly not an issue about identification. I think that was a lack of – unwillingness to address the issue. And I don't know what more to be said about that. I mean the chickens did come home to roost, of course, perhaps not surprisingly, but the problems I think were generally pretty well recognized, they were just not addressed.

MR. NISKANEN: (off mic)

MR. STERN: Well, I think breaking them up is a difficult policy from a number of perspectives, I would agree with that. You know, I think as a country, we have to come to grips with, you know, home ownership has been an objective for quite some time, as best I can perceive it, I think we have to come to grips with the significance of that objective versus other things, for example, stability in the financial sector and so forth, and decide where we come out.

We can't, you know, the world is full of trade-offs, as you know, and this is perhaps another example of a difficult trade-off. We're going to have to make a decision about priorities, about objectives.

You know, if we were starting with a clean slate, it would probably be a good deal easier, but we're not, we're starting with very large and insolvent GSEs that play critical roles in the mortgage market. It's not obvious to me how you address that at this point in time. My colleague, Ron Feldman, I thought had a very clever idea for what to do with the GSEs, but this was before the crisis, and that is, give them a very explicit objective to support homeownership for low and lower middle income households. And among other things, that would have led to shrinkage, because that's a much narrower market. So I mean I think that was actually a pretty clever idea to meet the homeownership objective and also to improve safety and soundness. But I don't know how you get from where we are now to that.

MR. NISKANEN: (off mic) -- homeowner objective strictly on the budget, without trying to use regulatory authority to achieve the objective, which ultimately will end upon the budget, as it turns out.

MR. STERN: I would agree with that. Then you're making it explicit, what you're trying to do and what the costs are, I think that's right, I agree with that.

MR. SMITH: Question on the recent FASBY decision, as I understand it, to suspend mark to market, introduce a kind of automatic stabilizer in there if you hold the asset to maturity; is that a good idea, in your view?

MR. STERN: Well, in general, I am an advocate, I guess you could say, a strong advocate of mark to market accounting. It may not be perfect, but it's better than any alternative I have observed. Having said that, obviously, if you don't have functioning markets and current market prices, you do have a problem in valuing those assets, and what the best solution to that particular problem might be isn't all together clear to me.

You know, those are issues, obviously, that only arise in extraordinary times, but these are extraordinary times, and there's no escaping that. But as we like to say in Minnesota, as I just said, it takes a model to be a model, so unless you've got a better model, I think mark to market is it.

MR. SMITH: You already made the decision.

MR. STERN: Well, you know, they didn't ask my opinion.

MR. SALTZ: Russell Saltz; in the beginning of the 20<sup>th</sup> century, we implored double liability for bank shareholder equity; what are your thoughts on such a regime, and what do you think the implication would be if it was currently in place?

MR. STERN: Well, I must admit, I haven't heard that suggestion lately. You know, I guess my initial reaction is, that would clearly change the weights of the incentives in the banking world. Whether it would change it for the better is something I'd have to think longer about. And so I think I'll avoid trying to give a definitive opinion, definitive – both definitive and uneducated.

MR. BAILY: We'll take one more question and then we'll go to the panel.

MR. STERN: There's one in the back there.

MR. KENNEDY: Thank you; Len Kennedy. Of the three points you identified, early identification and enhanced prompt corrective action and communication, I'd like you to focus on the third, because it would seem to me that the very process of communicating the exposure and the risk of the unsecured creditors would create a kind of destruction of economic value in those institutions and create a kind of run or spillover problems that you're seeking to avoid with your program.

MR. STERN: Well, perhaps I should have been more explicit about this in these remarks. I was very explicit about it – we were very explicit about it in the book. It's very important that if you're going to implement these reforms, you do it in tranquil times, when markets are functioning well, and that you do it where you give people time to adjust. So you might say, for example, we are pursuing the following sets of

reforms, they will be fully in place and effective in X years, where X might be three or something, or five, whatever, I don't know that there's any magic to that. But the point is, you're not going to try to change the system in the middle of a crisis, that's something we're very explicit about in the book, that's number one, and number two, you do have to give people time to adjust. When I say people, I don't mean just the creditors, but I mean the bankers, the supervisors, and so on and so forth, everybody in the market place.

Now, as I said, we were very explicit about that in the book. I think if you do it that way, you don't have to worry about the issue you are describing. And, in fact, you want people to adjust, I mean that's the whole point. You want pricing to change, you want people to decide to diversify their exposures to a greater extent if they're concerned about large exposure to a particular institution, you want them to demand more information from various institutions if they're concerned, again, if they're concerned about the institution to which they have exposures. But all of that doesn't happen immediately, so you have to implement these things, as I said, in tranquil, well functioning times, and with some lead time so that people can adjust. Thank you.

MR. BAILY: We'll start the introduction while we're doing the mics. We're very lucky, as I said earlier, to have such a distinguished panel. Ron Feldman, who has already been introduced as the writer of

this book, or at least the co-author of this book. Ron is the Senior Vice President for Supervision, Regulation and Credit at the Federal Reserve Bank of Minneapolis.

Alan Greenspan is literally the guest that does not need any introduction. He was Chairman of the Federal Reserve and served in that position for almost 20 years, steering the fed, and indeed, the economy through a number of crises with extraordinary skill. It's a great pleasure personally to have Alan here. One of the pleasures I had of working in the administration in the 1990's was a chance to work a little with Alan.

We also welcome Vince Reinhart, a very distinguished and these days outspoken economist. He spent a number of years at the Federal Reserve, a former Director of the Federal Reserve Board's Division of Monetary Affairs, and a number of senior positions in the Division of Monetary Affairs and in international finance. He's currently at the American Enterprise Institute. Okay. So I think we're going to start with a short presentation from Vince.

MR. REINHART: I'd like to thank you for the opportunity to discuss this important book. And what I'm going to do in my brief remarks is, talk about four issues that Stern and Feldman address, why "too big to fail" is a serious problem, its cost, why it exists, and how to limit too big to fail.

Now, at one level, you can read this book, like say someone in 1939 reading Woodrow Wilson's "Fourteen Points." On one level, you can read it with regret, all about the poignancy of a path not taken, and the waste of a unavoidable accident. But before I get to F. Scott Fitzgerald on you, you could also read it in anger, as a call for action, and I'm going to interpret it in that light, talking about those main messages given our current situation. There is, however, one object of irony too big to pass, and that is, President Stern is the Chief Executive of a financial institution housed in Minneapolis that published its balance sheet just last Thursday, as of Wednesday, as of the day before, and that financial institution has assets of \$23 billion on a capital base of a half a billion. And many of that – the assets it holds are opaque and difficult to measure. So we're taking financial advice from the leader of an organization levered up 50 to one. So what I suggest we do is, listen to what Stern and Feldman say, not what they do.

What do they say? They say that too big to fail is a serious problem, that it's gotten worse, and it's fundamentally rooted in lack of policy credibility, moreover, too big to fail is a big umbrella today, covering banks and non-banks, which encompass too big to fail, too complicated to resolve, too interconnected to close, and in too many house districts to touch. Actually, I made that last one up, they didn't say that. But if the first three exist, then the fourth also does.

And so there's a political dimension to too big to fail that, once you start doing, it becomes more and more in play. Now, I'd like to stop for a minute and look at the traditional cost of too big to fail. And essentially, we've partitioned our financial industry into two parts. There's, on the left side of this, the too big to fail sector, the right, the not too big to fail sector. And what does it mean? It means that a financial institution has diminishing marginal opportunities for its various activities. Being too big to fail means that there's a protection premium in which too big to fail firms pay a lower cost of funds than not too big to fail, fairly straight forward. And what does that mean? Well, that's the movement from one to two, that risk taking is encouraged, and the scale of failure is bigger than it would be otherwise.

There's also an inefficiency, if you compare point two to point three, that is, the scale of activity in the too big to fail sector relative to the not too big to fail sector. Resources are misallocated and centers are skewed.

There's another point to emphasize, and that is, too big to fail leaves money on the table for financial institutions to get if they get bigger. That is, there's rent seeking associated with the protection premium that we allow financial institutions once they get too important to close. That means that firms will spend resources to keep their special status. Rewarding bureaucrats, a problem endemic in emerging market

economies – capitalism. Fostering a favorable public impression, both in terms of the media and our elected representatives. Trying to keep large, but also, importantly, trying to keep complicated. Many of the institutions that received aid over the last year weren't too big to fail, they were too complicated to close.

Rent seeking firms will go slowly on industry initiatives that limit risk. Why? Because it's that risk that gives them special status with the government. That means they'll go slow on efforts like netting of swaps or central clearinghouses.

Too big to fail firms, rent seeking firms, as long as that money is on the table, will weave systemically important activities into the essence of their structure. Why? Because it's those systemically important functions that they perform that give them special status, that give them funding advantages.

The clearest example is the clearing banks, the two large institutions that provide the wholesale activities for the clearing and settlement of government securities. Those institutions are too complicated and too important, too interconnected to fail, and what we found over time is, it's impossible to think about lifting just the clearing activities out of that institution. Why? It's in their interest to keep them complicated. Rent seeking firms will also resist regulation that will make closure easier. The FDIC has had a decade long problem trying to get a

uniform insured depositor list. Why are resolutions so hard? They don't know who's insured and who isn't, because there's no uniform list across banks.

The private sector can solve complicated problems if they don't threaten their too big to fail status. My favorite example would be CLS Bank, Continued Link Settlement Bank, which essentially provides multi-currency cash settlement. It's an industry-made utility to limit the four or five hour settlement risk associated with trading in currencies.

Solving that problem solved the problem for financial institutions, but didn't erode any of their special status, so they solved a complicated problem, not so with other complicated problems like the status of clearing banks, like netting, like uniform customer list. Why? Because those problems keep them in the game.

So why do policy-makers allow too big to fail? Well, in the Stern and Feldman list, we hear a fear of spillovers, which is a legitimate one, but raises the tyranny of event studies. What do I mean by that? If you let an institution fail, you have defined a 24 hour window by which your success and failure is measured. When the Treasury and the Federal Reserve let Lehman fail, the response, the reaction, the cost in markets were evident to everyone in that narrow window. When the Treasury and the Federal Reserve supported AIG, the cost of that action

was not evident just in a 24 hour window, but born over the months and over the years.

A fear of spillover importantly reflects the fact, if you don't do anything, it could be measured very quickly to your discredit; if you do the wrong thing, you'll bear a cost only over time.

Second, there's the issue of self-interest. And I agree with President Stern, I don't remember anyone offering me cozy positions because of my status as a Federal Reserve official. Supervision and regulation, those who work at the agencies take their job seriously and do the best they can. However, there is a perception because some firms have special status that those people who work in those agencies are captured by Wall Street, and that perception is costly and damaging to their effectiveness and reputation. Then third, too big to fail represents a disguised subsidy, some forms of credit, as President Stern said, housing is preferred before all else. We do lots of things in this country to subsidize housing. One of them is, allow some institutions not to fail. Now, we also in the book identify three ways to manage too big to fail, penalize policy-makers, which is basically a contractual way of doing it, make it more expensive for them, or harder in some ways to allow support to given institutions, we see it hasn't worked, impose more supervision and regulation, which is supported by Chairman Bernanke and Treasury Secretary Geithner, or foster market discipline.

And I applaud Stern and Feldman's courage to stick with the idea of fostering market discipline, which is a little out of favor right now.

I'd like to talk briefly about three more specific proposals, the first being Adam Smith, small is beautiful. It has a chapter on Scottish banking and the wealth of nations, and makes the argument by dividing the whole circulation into a great number of parts an accident, which must sometimes happens, becomes of less consequence to the public. You could make institutions smaller, you can break them up so not – individually they're not too big to fail. That's not part of the current discourse. And it's not because the evidence of scale economies and banking is overwhelming, it's just not something we're going to do, in part, because it's not just too big to fail, it's too interconnected to fail, it's too complex to fail. Some of what you do in financial institutions is just too complicated to split off into smaller bits.

Bernanke and Geithner's proposal is essentially what I call the star chamber. What do I mean by that? They want to grant the government expanded resolution authority to put a too big to fail firm into conservatorship or receivership to administer its effective orderly reorganization or wind down.

So the idea is to leave money on the table, the too big to fail premium, to allow the institutions to be complicated and have a special

status, and erect on top of the failed regulatory system that let this happen another apparatus of a special reorganization facility.

Now, I can understand that the logic of it, too big to fail, is importantly related to being too big to wind down in bankruptcy quickly. And so if you could provide that mechanism, then maybe you erode that premium. However, their solution is, again, to add another layer on top of an already complicated system. And I would note that the star chamber in Britain, which was closed in 1641, I think, was set up for a noble reason, as well, it was to try prominent people who would never be convicted in a common court. There were some people who had special status, and therefore, were not able to be dealt with in the existing flawed system, so they created a separate system, the star chamber.

The problem is, that attempt to solve a design failure in the core system by adding another layer on top leads to potential abuses. The first example of the star chamber ended badly. Why? Because it allowed the government special powers, it allowed decisions to be made in secret, it allowed the government to favor friends and punish enemies. Why are we doing the same?

Now, my preferred one is Ollie Kirk Christensen's modular solution. And for those who don't know, he's the carpenter who invented Lego building blocks, all right. The financial holding company can be made of parts that can be disconnected and reassembled at will. I would

point out that Lego is formed from the Danish words meaning play well. We want our financial institutions to play well. We want firms to be able to be put in pre-packaged bankruptcy. But the best way to assure it is that all their activities can be taken apart. Why? Because any part of the firm that is systemically important can be protected in that bankruptcy, with hair cuts in the event, and infrastructure can be developed over time to limit the parameter of just how many of those modules are systemically important, and then the rest of the firm can be turned over to the market.

If bankruptcy was a feasible option, not because of special rules for special firms, but because any firm could be put – taken apart and put into bankruptcy quickly, then we wouldn't have the too big to fail problem.

Now, to conclude, this book directs attention to the consequences of policy action, but importantly to the power of self-interest when rents are on the table. As long as we have money available in the form of a too big to fail premium, firms have an incentive to get complex, and incentive to get big, an incentive to be too interconnected, because they want to seek that premium.

It does offer market based means of amelioration, which again, today, is an act of courage, but it also reminds us of the road not taken. Where we are today didn't have to happen. Where we are in the future depends on whether we take the advice of this book.

MR. BAILY: Thank you. I'm going to turn now to Alan Greenspan, who's going to make some remarks. Do you want to stay there or go up to the podium? Good.

MR. GREENSPAN: Over the many years that Vince and I worked together, I rarely, if ever, contradicted him, so I think I shall start a new regime. It turns out that the amount of equity capital in the Federal Reserve Bank of Minneapolis is too large. And the reason it is too large is that the purpose of capital is to create a cushion against your senior debt, which means you can fail.

I know of no conceivable way in which the Federal Reserve Bank of Minneapolis can fail, and therefore, it's wasting its money on the balance sheet to have that redundant item on the right hand side of the balance sheet.

So be it, and I just want to say that having now come to Gary's side on this issue, I'd also like to just compliment him on basically being out there on an issue which did not, as I recall over the years, have any leverage at all. It had no traction in the world of economics, everyone thought it was irrelevant, and it was just spinning wheels. The one thing, incidentally, that Gary's forthright position created for the Fed was evidence that the system itself is not a monolith, and indeed, the quasi independence of the individual banks is demonstrated by the fact that Gary was taking the position which the board itself could not, and the

reason we could not is that the presumption that there is an issue of such a thing as too big to fail essentially goes against the statutes at that time of the United States government, because the classic case, of course, was Fannie and Freddie.

Fannie and Freddie were not too big to fail. How do I know? That's what the law said. On the benches when they used to be physical paper, it literally said these instruments are not protected by the full faith and credit of the United States government. That's also repeated in the statute.

Therefore, to argue that there is such a notion of too big to fail in the case of Fannie and Freddie was to essentially say that the Congress has implemented a law signed by the President of the United States which is going to be abrogated in some form or another. No official of the government, and that would include those of us in the Board of Governors, but not in the banks, essentially took the position, and indeed, I always took the position when I ended up on the Hill was that Fannie and Freddie were not too big to fail. Needless to say, my fingers were crossed behind my back. But the issue here is that you cannot have that position and still argue that the federal government has credibility. Now, what was occurring, of course, was that the financial markets were essentially saying we don't believe you, that when push comes to shove, the federal government will, indeed, guarantee the debts of Fannie and Freddie.

They were right, and they were right in a way which had a very profoundly divisive effect in the whole financial system.

I won't go through the details, I think you're all aware of them. I might just say parenthetically that my answer to the earlier question to Gary about what you would do to Fannie and Freddie is to recognize that as securitizers, that is, of actually purchasing whole mortgages and putting them into securities and reselling them was actually done in a very efficient manner.

One can argue that their implicit subsidy essentially gave them a competitive edge, which gave them effectively a monopoly in certain types of securitization, but be that as it may, they wouldn't be a systemic problem had they stayed where they originally were supposed to be, namely in securitizing mortgages and selling them off, and essentially having a balance sheet which reflected nothing more than the fact that there is float and there are certain technical problems that you need to have funding, and even if they chose to have specific holdings of full say sub prime mortgages on the affordable housing requirements. There is no conceivable way under any restricted version of what Fannie and Freddie were supposed to be that they could have ever have built up a portfolio, which was too big to fail.

Remember that the issue of Fannie and Freddie had been and continues to be not a securitization issue, but the aggregate level of its

balance sheet, which is the holding largely of mortgage backed securities, which they, themselves, issued, and they were taking advantage of a very simple manner of making money, namely, you issue the benches at a subsidized rate subsidized by the market, remember, not by Congress, and holding forms of mortgage back through other types of securities, which gives them a significant spread and a huge rate of return on equity.

They tried to defend the position that they held of holding those particular issues through every type of argument that came up, it was nonsense. There was no credible reason for them to hold securities on their balance sheets other than to exploit the implicit subsidy, which gave them huge rates of return. The affordable housing argument was nonsense, the issue of the necessity for stabilizing or supporting the mortgage market by having a portfolio made no sense to me. How do you have basically securitized mortgages which, if in the event that you need to buy additional mortgages to support the mortgage market you'd have to sell these securities and depressed the market. In other words, the arguments that they make time and time again just didn't make any sense but what made huge sense, and you had to be very un-smart not to be able to make huge money, if you had a subsidized cost of capital and the availability of investing them essentially in triple A securities and getting a guaranteed yield.

The issue there is very simple. You basically unwind the portfolios and put Fannie and Freddie back on the original job, which in fact they did rather well. They developed the securitized markets in conventional conforming mortgages, which at this point, is the only viable game in town.

To go back to do that, I think we solved that too big to fail because they're no longer big. They no longer have the large balance and you no longer have to go through the dynamic hedging for interest rate risk, which was always to me a very tricky problem with which they were dealing.

Now, as far as I'm concerned, the basic issue that we are dealing here with the Too Big to Fail is part of a much broader question. In order to maintain a viable and growing economy and growing standards of living, you have to have productivity rising and it's only through the rise of productivity output per hour that you get growing standards of living.

And the only way you get growing productivity is to have cutting edge technologies added to your capital stock and the cutting edge technologies output by hour by definition are exceedingly high, displacing the obsolescent capital which essentially much either liquidate or fail from the system.

In other words, you need this continuous refreshing of the marketplace of capital and it's only if you continuously put on innovative capital and knock out obsolescent capital, you get a rising rate of productivity growth and therefore a rising rate of standards of living.

Unless you do that, you essentially cannot get the market system to function. And what we are doing here is essentially saying that failure is an integral part of growing standards of living. If you want the market economy, which is fundamentally a competitive economy, because remember through all of the institutions and all of the history we've ever seen, it's only competition which fundamentally creates a growing economy. Nothing else has worked.

The -- economies, the Soviet system, some form of Fabian socialism; they all look on paper to be extraordinarily attractive. None of them have worked. Now I'm not arguing that the capitalist market system is without flaws. We're living through one of its problems which occur every hundred years or so. I hope it's not the hundred year flood that occurs every three years.

But in any event, the key question here is competition and any form of protectionism, which by definition, endeavors to undermine competition, undermines growing standards of living. I know no way out of that syllogism. And the result of the Too Big to Fail argument is a special case of this. In other words, one form of protectionism, and I think Vince used the term is essentially to designate certain types of institutions as Too Big to Fail.

It strikes me that when you get to the point when they are indeed of an order of magnitude, which is very difficult to deal with, you've already

let the issue go too far. The question is how do you prevent the issue of any institution becoming so large that you're fearful of the systemic problems that occur in the event that they fail. And it strikes me that the simple solution to this is basically very much along the line that Gary and Ron have been raising. Gary told me he's got his name on the book but he didn't write it. I don't quite believe that but I know the way those things work.

The issue that I think that we have to be aware of is what do we do about this. We're here and now; where do we go from here? I've argued that what we have got to do is to eliminate the competitive advantage, which is implicit in being designated as Too Big to Fail. You want designated Too Big to Fail and you knock 50 bases points off the cost of your capital right overnight. And the reason obviously is that you all of a sudden increase the market value of your securities.

But smaller institutions don't have that advantage. So the question is you cannot have a viable democratic society in which certain institutions have a competitive advantage merely by the fact that they are too large or very large. And so how do we bring them down to size? Well one way of doing it, and it's not a simple way nor do I argue that it's very easy to do, is to somehow impose costs on them.

We've got a risk based capital system, which would be very easily incremented if one wanted to do it, to make the amount that capital charge

for regulatory purposes go up with the size of the firm. Now it's easy to say; it makes sense. I tell you trying to implement it is another thing as all of these things which seem simple in the beginning, is how do you know when and what point do you have the fulcrum when in effect, capital requirements begin to rise.

The trouble is it continuously changes and there is a general presumption out there that regulators are omniscient and have all of this great incite on what to do. And the truth of the matter is I've sat around watching regulators for more than 20 years from the inside and I will tell you there are things that they can do and things that they cannot do.

What they cannot do is forecast. And the reason is none of us can forecast. I don't deny that there are always a significant number of analysts who are out there who were forecasted events X, Y, and Z correctly. There are also a lot of coin tosses who when they toss five heads in a row are told they really don't know how to toss coins. The mere probability distributions of opinions will invariably generate for strictly chance reasons; a group of people who in retrospect will look very intelligent.

If you try to identify who they are in advance, you will fail. And I will suggest to you further, that you cannot forecast a crisis. You can very readily forecast when firms are -- or the system as a whole is significantly under pricing risk. All you have to do is look at yield spreads, you know,

look at it every morning. You know that they're under priced. What you cannot do is to forecast when that under pricing of risk will all of a sudden erupt in their prices.

Remember that a financial crisis by definition is essentially a discontinuity in asset prices over a short period of time. If indeed that is what is happening, it must mean that the crisis was unanticipated because -- otherwise a full arbitrage system would have eliminated that particular crisis.

I remember vividly that leading up to the actual crisis that emerged in August of 2007, that the particular problem that was going to create the next crisis was the current account deficit which would induce a major change in the dollar value in exchange markets and create all sorts of disruption.

Everybody forecasted that was going to be the cause of the next crisis until what happened; as the dollar euro exchange rate rose from say 110 to 130, anticipating the opening up of the federal -- the current account deficit in the United States, which is indeed exactly what happened. But moving up the euro relative per dollar, more exactly the dollar down relative to all other currencies, essentially arbitrage the way the crisis and what happened it turn was that what was next in line is the crisis which was not anticipated; was as securitized sub prime mortgages erupted, as you may remember in BNP -- in August of 2007 and the whole

thing began to unwind from there because the system got shocked into disbelief as to that could conceivably happen.

What regulators cannot do is anticipate things when if we are to put a regulator out there who is supposed to fend off systemic risks. I will tell you that system will fail. They will always know when risk is under priced. It's easy; you just look at the newspapers. The issue of knowing when the crisis will happen is not possible to human beings. I do not know of anyway to do that and I don't know anyone who knows how to do that.

What regulators can do is anything which does not involve basically forecasting the future. For example, we can set capital standards and enforce them through audits, through various other means. We can, and did this at some point try to regulate commercial mortgages, loans on commercial real estate.

I don't know whether we succeeded or failed or what but it no longer exists at this particular stage. Was it Vince, or you Gary, were making that issue up? But we can -- I mean just basically you tell examiners that you cannot have commercial mortgage loans, which are very easy to identify; loans on real estate with payoffs of certain types, except under very unusual conditions.

You can do that and you can enforce that and you can create a level of capital that will solve most anything. People seem to forget that capital has not always been 10% in the banking system. Back in the

1830's it got over 50% and the reason was that that was the amount of capital that was necessary as a cushion to enable these institutions to issue demand notes and have them circulate.

Capital ratios continue to fall and they were still 20% in 1900. It was mainly falling capital ratios because the system got evermore efficient. But there's nothing sacrosanct about the 10% we've been looking at. Indeed I would argue right at this moment that it's more likely a 13 or 14% in today's market. In other words, that there is a requirement that it would be much larger.

The way to attack the Too Big to Fail issue is essentially on the capital side because if you can neutralize, for those who are currently Too Big to Fail, their competitive advantage, it takes away the incentive for bigness as a protection.

And I would just say in ending that I agree with all of the remedies that Gary was suggesting. He, I think, will be looked upon in retrospect as having had a major influence on addressing what is clearly turning out to be the most intractable problem in the next structure of financial regulation, which I will presume will emerge in the next six months or so.

Although, I wouldn't hurry about any of this because at the moment, the level that private restrictions on banking practices, the level is so tight at this stage because nobody wants to hold the liabilities of a banking

institution, but you don't have to have regulation to suppress inordinately, inappropriate lending.

We've got a long time before this thing works its way out but I should hope that the new regulatory system recognizes that any attempt to make the regulatory system sensitive to the issue of the ability of regulators to forecast will fail and we cannot afford that. Thank you.

MR. BAILY: Thank you. Thank you very much. I'm going to give the authors of the book a chance to respond and I want to just throw in a quick question of my own. Could you comment a little more -- the discussion in the book about what constitutes sort of economies of scale in banking and I'd like to get a little more clarity around that, particularly given that we do have a global economy, that New York is a financial center, an important part of financing global trade and global investment.

So what's the size of banks that we think we need to have in order to exploit those efficiencies and what -- should we make that a limit. But let me give you a chance to respond -- Ron, who's been very patient wants to maybe kick us off, not just to my question, but to any of the comments that have been made.

MR. FELDMAN: Sure; absolutely. Thanks, Martin. First, I'm always very nervous when your boss gives you credit for something in front of such a large group of people. It usually doesn't end well for the person receiving the credit. So -- point out to Gary was integral to every

part of the book and every subsequent speech that's been given since then.

I think the, sort of a technical answer, I think the literature of economies of scale for many, many years suggested that those were exploited at relatively low levels. So small banks that would be considered, you know, even tiny by today's standards were viewed as being able to get economies of scale and take advantage of it. I'm not going to pretend that I'm an expert in this area but I think the sort of modern literature suggests that even very large banks are able to still exploit something.

So I think the view that, you know, once you get above 10 billion or 15 billion and they're all gone, I don't think that's viewed by sort of cutting edge practitioners and that literature as being true anymore. But I think it gets to the core question and I think that Chairman Greenspan mentioned it about how do we prevent people from getting big. That does seem to be sort of an area where people are gravitating to.

And the specific idea of using sort of undifferentiated capital standards, I think Gary hit on at least one of our major concerns which is I think to date what we've seen is a high capital standards leads clever people at institutions who have -- seeking abilities to try to figure out how they can take on more risk than they would otherwise in a way that's not

very easy for those people who are responsible for supervision and regulation to easily prevent.

And I'll just point to example, I know Gary's never been a big fan of the Basel II effort but the underlying issue there, at least as I understand it, was that institutions were figuring out how to engage in what they call regulatory arbitrage, that is they could comply with the letter of the capital rules but they would simply figure out a way to take on more risk.

And at the end of the day that doesn't seem like it's going to be a successful way, in our view, from preventing these institutions even if they have the right amount of capital from not being riskier than they would be otherwise.

I guess as a final point I'll just mention since Vincent noted these clearing banks as being one sort of particular case of institutions that are Too Big to Fail, at least one of them, I mean they're both very large but I think the core idea is that there are specific functions that institutions can engage in that make it more likely that they're going to produce spillovers if they get in trouble.

Those institutions don't have to be big by asset size; they have to be important in the activity that they engage in. And what one would imagine could happen is if you put a limit on their size, the idea that you want to specialize in certain activities that maximize the spillover value, becomes more attractive than it is today.

So I think as Gary pointed out, I think it's an idea that's in some sense, born out of a little bit of the desperation of the movement. I'm certainly open to believing that in the long run we might need to get there, but I would prefer that we try to think about ways that directly get to the issue of spillovers as a first priority and if we need to go to plan b then I think that's where we would end up.

MR. BAILY: Gary, did you want to --

MR. STERN: Well let me just make, I think three comments here. As I listened to Alan's comments and Vincent's, and I think all of us are talking about incentives at the end of the day; trying to get the incentives right, or at least improving the incentives relative to where we are today, to address these issues. So that's the first point I would make.

The second point I would make is to follow up on something that Alan said about competition and creative destruction and resource reallocation. You know, I think one of the lessons coming out of this so called lost decade in Japan and one of the lessons coming out of the depression in the United States is a policy you don't want to pursue in the long run is trying to preserve the status quote; trying to preserve the resource allocation that existed when you got into this.

We know if we do that, from historical experience, it's going to turn out to be a very inefficient way to go with adverse consequences for limiting standards over time. And I think we know that while it may not

deepen the economic -- it's likely to prolong it. So it's important to let the resource reallocation occur as we proceed.

The final point I think I will make is whatever you might think about our proposals and whatever you might -- and even if you think there's a better alternative, most of our proposals are along the lines I suggested earlier. They're trying to improve incentives. And it seems to me whether you -- that that's worth doing, even if you think there's a better idea out there.

So I would suggest that, you know, the proposals deserve to be taken seriously because even if you think there's a better way to address Too Big to Fail and even if you think this is the hundred year flood, you still want to get the incentives right. And our proposals, I think, work in that direction.

MR. BAILY: Thank you. I'm going to open the audience but I want to recognize Doug Elliot for the first question. Doug has been writing a lot of great stuff about the -- that's on our website. So let me just ask Doug to ask the first question. Have we got a microphone please?

MR. ELLIOTT: Thank you, Martin and thank you all on the panel. President Stern, you've indicated that although you favor a future regime in which creditors might take significant haircuts in the event of a bank crisis, that you don't favor doing that now in the present emergency as it were. So I have two related questions.

First of all, is there anyone on the panel who thinks, as some commentators have suggested, that we should have the debt holders take a haircut and if none of you do, I wonder if President Stern or one of the others could just explain why you don't think that's a good idea?

MR. STERN: Well somebody else will have to address the first part of that since you've already got my views on it.

SPEAKER: I don't think it's a good idea in current circumstances largely because what we have is a credit crisis and the critical issue in this environment is to maintain a credit system in which the deep sense of insolvency is somehow lifted. As a consequence, while in that system you don't have to worry too much about the equity that are in these firms, you do have to be very careful about senior debt because it's got to be a fixed -- somewhere in the system, which seemingly is in --

If you start to haircut an individual firm, that's in difficulty, you will upend the market value of senior debt in all related types of firms, which would have a contagion effect. So in general, while in a normal non-crisis environment, I would be strongly supportive of haircuts of all sorts and indeed, taking the system through receivership has been a very effective vehicle we've had over the generations; it works.

When you get into a situation like this, which I presume is a once in a century type of event, you have to be very careful about how you deal with risk and credit instruments. And as far as I'm concerned, I don't think

we can afford the cotangent effect of haircutting even to a relatively small part without creating a much wider problem that we're going to anticipate.

When we get to the point where we can truly begin to haircut individual firms, meaning essentially they have become disassociated from the system, that's a sign that we're -- the system has improved measurably. We're not there yet.

MR. BAILY: Okay; questions.

SPEAKER: Actually, I'm here to disagree on the --

MR. BAILY: Oh, I'm sorry.

SPEAKER: -- and I've actually -- there are different forms of contagion and any time you put on the table the possibility of capital gains or losses, you'll get hurting in financial markets. So I would argue that last year the government's play book of fully protecting all debt holders and wiping out shareholders, created an incentive for speculation. You pick the next weakest antelope in the herd, you shorted its stock and you bought its debt; a self funding speculation that lead to a contagious movement in prices that were counter productive.

So I think when we finally get to closure in this, that is when we resolve a few large financial institutions to get past this, I would hope that those resolutions involve taking haircuts across all of the -- and the liabilities that -- so that you don't give either capital gains to those who --

on fully support of the government when they shouldn't have been thinking that.

MR. BAILY: Yes; let's have a question here. Could you identify yourself please?

SPEAKER: Thank you. American tax payers have bail out to banks with 300 billion dollars --

MR. BAILY: Speak up a little please.

SPEAKER: American tax payers have bail out to banks with 300 billion dollars and they have in exchange, losses; these -- assets for 20 billion. So why don't the government start buying common assets by the extent of the problem, what would be the benefits and of the problems coming with nationalization?

MR. BAILY: I'm not sure I understood that fully. Does anyone want to take --

SPEAKER: I didn't quite get that.

SPEAKER: Neither did I.

SPEAKER: The government is taking -- when they give this money to the banks, they're taking preferred assets. Why don't the government start buying real -- like nationalization to banks?

MR. BAILY: Okay. Why don't -- wouldn't it be better to nationalize the banks. I don't agree with that but let -- get comment;

anyone in the panel that wants to comment. I don't think we've got a lot of supporters of nationalization in here.

MR. STERN: I don't have a particularly insightful comment. I don't see the advantage that -- I would be careful on how you define the losses. I mean the losses in much of this was the resource misallocation that brought about the crisis, that is too many resources devoted to housing construction and other projects and so on and so forth. That's the real loss. Now we're just talking about who bares it.

The only other thing I would add to that is that obviously we have a serious recession underway and the longer that goes on you could argue that the costs are increasing to the extent that financial disruption is contributing to that. But the losses are largely the losses and the issue now is, you know, who pays for it.

MR. BAILY: Yes, Alan.

SPEAKER: The term nationalization, I fear is being thrown around in the way which has got about four or five different meanings. There is one case in which I think we would probably be forced, as far as the system is concerned, to take a failed institution into a receivership or a conservatorship with basically a problem of trying to divide the institution into a good bank and a bad bank.

The only resolutions that I've seen over the decades which has worked, is either the Resolution Trust Corporation, which worked, or

basically the Swedish Model in some form or another, both of which effectively split aside the -- toxic assets which has now become the word of choice here --

SPEAKER: Or legacy assets.

SPEAKER: -- or legacy. Neither one explains what they have in mind so it's hard to define what they are. But the problem that you have when you're trying to get a good bank, bad bank, unless it's under a single control, whether it is government, whether it is the courts, or whether it is something, it is very difficult to split the good bank from the bad bank because you can never get an agreement on the question of what the price of transfer is. And it's only under what some people would call nationalization. I often use the term but only in this restricted sense.

That tends, in my judgment, to give you a good bank and bad bank solution, which I find the most useful because it's best I can judge. The market value of a financial intermediary, which has got combined bad assets and good assets, will be less than if you split them apart because in today's market for example, the spread between the years you can get on very good loans from as a bank and the cost of capital is very wide.

I just do not understand why there are not hugely larger numbers of Denova banks that are out there because the opportunities here for just investing without having the legacy assets sitting on your books is a potentially extraordinary advantage which creates a market value for that

particular institution even if you take all of the debt and stick it in that institution, which you don't need to do and shouldn't do, because the market -- what the market will attribute to that particular institution would be far greater than the combined value of the existing institutions. So the trick is to split that apart.

-- we've had so many examples of this but as you know, corporations, not financial corporations, split off subsidiaries, recombine, or do in fact what Vince was talking about. I mean just moving pieces around, has very significantly altered the market value of the combined issue.

There's a toxic effect on risk premiere, which occur from the existence even in part of assets which can be spread around the system, around the institution. So I do think there is a very valuable advantage here if we can find ways -- not to have to do this as a last resort because what I would be talking about is what is the last resort here and the last resort is going to be a Swedish Model. And the best way of doing that is to do it in a cleaner way as we know how and I hope we don't get to that circumstance, but I think that is where we're going if we don't divert the direction of events.

MR. BAILY: Okay. Can I just pick up on that a second? You said express some surprise that we don't get new banks starting up. Doesn't that tell you that that's very hard to do? I mean a U.S. bank that

tries to go into another country for example, it typically takes over an existing bank to create a -- a retail network from scratch or even a wholesale franchise where you've got the relationships. Isn't that very difficult to do and isn't that why we don't see -- and doesn't that suggest the franchise value of existing banks?

SPEAKER: Well I can tell you if I were 60 years younger, I would become a small bank because it's not difficult. I mean getting it chartered --

MR. BAILY: Charter's not difficult, no, I agree.

SPEAKER: The issue of hiring people who know what finances -- they are out in the street looking for jobs. And the market is there, in other words, the cost of viability is not very large for an institution which has got no significant debt on its balance sheet. I think its shooting fish in a barrel.

MR. BAILY: There was a question at the back there; yes.

MR. REIGNS: Well as I think the only person in the room who's ever run a Too Big to Fail institution, I feel --

SPEAKER: Welcome; this is Frank.

MR. REIGNS: My name is Frank Reigns . I feel a little bit like the subject of an autopsy while it's still alive. The couple of points I'm going to question. First, it seems to me that my good friend, Alan's analysis of the GSE has not improved over time.

SPEAKER: Why has it changed; because you either have the facts?

MR. REIGNS: Well let me just disturb it with one fact, which is that Fannie Mae actually began with a portfolio, didn't guarantee securities for the first 50 years of its existence. And second, that its current financial problems have come largely from its guaranteed assets, not from the assets on the books, and assets that they bought from private label issuers, not from their own assets.

So there are some facts that really ought to be part of the discussion. But I think the point I would want to make here, and get your reaction to, is the discussion about supervision always seems to end with procedural matters. We will procedurally ask them to do this and reveal that and disclose this.

But it doesn't get into substantive analysis. It's very much like years ago when I was the financial advisor and got the District of Columbia the bond market for the first time. And they were very proud of their first audit and we're very happy we have this audit and we're very proud and I ask what did it say? And they said what do you mean? Well what does it say? It is your audit, it shows that it is your financial condition, but what is your condition? And that seems to me to be the problem is I listen to you and I listen to most people who have been involved in financial supervision. A fundamental unwillingness to ask what

is the condition, not just simply did they make the disclosure. So Alan's point about forecasting is certainly right.

But one can see risk even if one can't forecast it, and you can see the concentration of risk. And we saw that happen on Wall Street, we saw it happen as a result of Basel II as the capital requirements for the holding of mortgages by banks and others were reduced. That was an apply to Wall Street by the FCC and we saw it, you know, four or five years after I left Fannie Mae with Fannie Mae following others into this same area with a huge concentration of risk in one place. That concentration was highly visible, but not remarked upon by supervisors. Why is that so hard?

MR. BAILY: Yes, Alan.

SPEAKER: Frank, I think the reason it is so difficult is a fact which we're all aware of; something I mentioned before, namely that any of the number of measures are readily available to anybody who's got access to the data systems. We knew for a long period of time that risk was being under priced. We knew there were significant areas of concentration. We knew that there were all sorts of -- bombs sitting out there.

But what we've learned, unfortunately, over the years is that we can identify the issue of under pricing of risk but it could be many years before that erupts into a crisis. I mean I made my questionable remark about irrational exuberance in December of 1996, at which point I was getting a

little nervous about speculation in the stock market. The DOW went up 80% after that remark. Similarly --

MR. BAILY: They went back down again earlier this year.

SPEAKER: Mm-hmm.

MR. BAILY: Went down at 96 levels.

SPEAKER: That's correct, which would basically say that if you had purchased at that point --

MR. BAILY: Right.

SPEAKER: -- it would have taken you up to here to generate a loss. Now that is pretty formidable if I might say. But look, the question is as the former Chairman of Citi Group said, you have to keep dancing so long as the dance is going on, as long as the music is playing. And what they're saying is something regrettable.

It's that if you, when observing risk concentration or risk under pricing decide to pulling your horns, as a number of firms did, you end up after a number of years having lost significant market share to have never replenished it.

And so you were right but having to sit through a very long period when risk is under priced and everyone knows something is going to happen but not when. You've got this terribly difficult problem of making the decision as to how you compete.

And I think the very prevalent view in financial markets is that the fear of losing market share by not participating in those markets is at a level which I think has been unfortunate. There are a few small Wall Street firms who didn't participate in that. They're still small.

MR. BAILY: Do you want to comment, Gary?

MR. STERN: Yeah, I have a somewhat different reaction to your question, Frank, if I understood it fully. I mean I think if you're looking at an individual institution and you're doing standard safety and -- examination, you will probably spot those kinds of concentrations and so forth.

Although, if your -- if environment -- if you're in environment A and it's very benign, you may not appreciate what it means for the institution when you get to environment B, which is a lot less benign. But if that were the end of the story, and the problem was confined to a particular institution no matter how large, I would say no big deal.

I think where -- and this is the point of a lot of my remarks and so on and so forth, I think where we haven't appreciated the exposures and we need to is what are problems at institution X -- for its counterparties. What does it -- for the major markets in which it participates? And it's that kind of information which is certainly acquirable and certainly analyzable that I think has to be part of the kind of whatever you want to call it, supervision going forward.

So from my -- it's not the question of, you know, just how well do we understand the risks -- institution A. What are problems that that institution -- what might they portend more broadly? And then if we decide that they portend something potentially significant, then we have to take -- we have to prepare to do one of two -- one or both of two things; either take actions to change those exposures and or prepare for what we're going to do if those exposures become real world problems.

SPEAKER: Right, and I think the point of what you're saying, in addition, is that it's not very clear that supervisors are particularly good at say you cannot -- you can't hold more commercial real estate than X, Y, or Z, or knowing exactly what that level is. I think what Gary is saying is when you hear the things that are behind why we have not taken additional steps may be putting people through the normal resolution regime. There are around things like being unclear of what the insured deposits are relative to the uninsured deposits. What are the effects given to the number of subsidiaries that are overseas? What are the effects given the absence of certain rules around derivatives, et cetera? Those are about the fact that the commercial real estate concentration is large. And so I think what Gary is getting at is precisely because people don't seem to be able to figure out exactly what the right level of risk taking is. It's important to think about let's assume the institution gets in trouble for a reason that we can't really forecast and that

we're not going to really understand exactly how to pop the bubble, so to speak, and we can we do today to ensure that whatever the risk is it's taking, once it get into trouble, what are we going to be able to do about it. And I think that's not inconsistent with your point.

MR. BAILY: I feel a little sympathy with the point that Frank Reigns was making because surely one of the things that happened here is that we all underestimated the risk of residential mortgages and so, you know, the difference between having it on the books and not having it on the books that's -- risk was there either way.

And it's that which got Fannie and Freddie into trouble and the regulators, as I think he was pointing out, the Basel regulators were actually reducing the capital requirements on mortgage assets. So that's the big problem and the regulators weren't helping on that. Actually they were egging on the problem.

MR. STERN: I think both in terms of the structure of regulation and problems with incentives we've created a very high return to complicated. That is securities were complicated, balance sheets were complicated and became more opaque. So it isn't just the regulators who misunderstood the structure of balance sheets of key financial institutions. CEO's misunderstood that the nature of their exposures given the --

MR. BAILY: But Fannie and Freddie weren't terribly complicated.

MR. STERN: Fannie and Freddie I think is a different case. I mean we lost a dozen CEOs of large firms in under a year because they couldn't predict their balance sheet a couple of weeks in advance. True, it's a large shock, but it was amplified by the complexity of the securities and the opaqueness of balance sheets.

MR. BAILY: You had something you wanted to --

SPEAKER: No, I do -- I agree with Vince.

MR. BAILY: Okay; another question, here.

SPEAKER: Good morning. My name is Conleigh from -- the EIR. My question has to do with the fact that -- I think one thing that most of us are forgetting right here is that we can escape morality from economic policy, whether it's foreign policy or --

MR. BAILY: Let's get to your question quickly though please.

SPEAKER: Okay. So my question is that how long are we going to continue to lay more emphasis when you have the physical economy right now where most of the worst in the world right now is going to serve the financial or -- aggregates? It's supposed to be the other way around.

So my question is that how long are we going to continue for the physical economy because right now the emphasis has to be on productivity, increase in technology, to serve the better man? And how

long are we going to continue to have this dogmatic belief in the free trade system? We have to go back to a fair trade system which addresses the physical economy of the country.

MR. BAILY: Okay. I think we've got the question.

SPEAKER: I think my confidence in free trade is unshakeable. How's that?

MR. BAILY: Okay; question at the back then.

SPEAKER: -- coming to you, hold on.

MR. BAILY: I was actually -- the person next to you there. Yes; he's just got the microphone.

MR. HALL: Hi, Kevin Hall with -- two questions, one Thursday -- to market may get a shift. I'm wondering whether your panelists think that's going to provide clarity to the value of these assets or more confusing coming this late in the game. And when Obama gets to London, he's going to be talking about -- he's going to meet with his British counterparts who have suggested a rainy day fund of sorts and good times having banks sit aside more capital so when times get tough, they don't actually withdraw capital and amplify the problem. I'm wondering if any of your panelists would like to tackle those questions.

SPEAKER: I'll tackle the latter one just quickly. So the system, it does often refer to sort of like the Spanish kind of system where there's a lot of reserving that happens during the good times and then --

that Spanish banks as opposed to other continental institutions have had -  
- been able to withstand the crisis without a lot of capital infusion.

One thing that's in the book, one good thing about the book is that since it's a laundry list, it includes almost anything that someone could ask us about five years later.

And indeed, there is a recommendation for -- based on a proposal that Professor Mark Flannery of Florida has put forth and met a lot of academics are sort of coalescing around, which would have people issue a kind of security so they don't have to necessarily reserve in advance, but would allow them to draw upon the funds when they get in trouble.

Basically, a sort of a debt security that automatically converts over to something like equity, and we think that's actually something that is worth some time and some thought and it is, I think different from simply saying let's just raise capital standards -- typical kinds of capital standards up front. -- to market before and didn't get anywhere so let somebody else --

MR. BAILY: Okay; Alan had a comment.

MR. GREENSPAN: Yeah; I must say I agree with Jamie Dimon who's general view is let's get the capitalist levels up and keep them there. You have to distinguish in this case between regulatory and economic capital. The last thing you want to do in weak times or

recessionary times is to give the perception that a financial institution is in difficulty.

And that could be very readily engendered by nearly lowering capital or eating into capital on the grounds that the capital is excessively high at peak periods. I bet you it doesn't fly very much because falling capital will engender a significant expectation of further falls in capital and I think that is a theoretically interesting notion which I'm sure would not work in the real world. and I think that our best solution to anything is to recognize that we've been running on the rims of capital adequacy for a long time and that it's essential that we move capital up quite a good deal.

Economic capital is already up. In other words, I think the markets, without getting into detail, are saying that the 10% capital is inadequate for holders of liabilities of banks to feel comfortable. The cushion has got to be quite significantly above where it has been. And I think we've just better get it up there and have regulatory capital try to mesh as closely as it can with economic capital because when they stood diverged, then you've got regulatory arbitrage which is not a particularly desirable thing to do.

MR. BAILY: Well help me, you guys understand something here, because capital surely is the cushion so that if you take losses on your assets you've got a cushion. But here we are in a situation where we're taking losses on the assets so the capital goes down; isn't the

capital doing exactly what it's supposed to do? So if you now turn around and tell the banks oh you've got to get your capital back up to where it was, what was the point in having the capital in the first place? Am I -- I don't think I'm the only person to say this but isn't the capital a cushion? Should you expect it to go down when losses go up?

MR. GREENSPAN: I think you should -- you will expect it to go down when losses go up, but you should not have a particular regime which essentially sanctions that because I think it's the sanctioning which I find --

MR. BAILY: But if the banks have to get it back up again right away that causes the deleveraging process and the credit squeeze that we've been getting.

MR. GREENSPAN: I'm saying that if you start off with sufficiently high capital -- in other words, I would define sufficiently high capital requirements as those levels which aren't sufficiently far away from any concerns in the event of a contraction --

MR. BAILY: So it's a push -- but it's a --

MR. GREENSPAN: The issue never comes up.

MR. BAILY: The issue never comes -- did you want to add something to that?

SPEAKER: Just the Chairman's argument is essentially that the signal value associated with lowering the required capital standard -- time of stress swamps the good you do by giving them the extra space.

MR. BAILY: Okay; I had offered you a question. Yes.

MR. SHRED: Real quickly; Robert Shred of International Investor. Let's move beyond capital reserves at banks, which has been a lot of the discussion here and everywhere. There's another aspect that's changed dramatically in the last 20 years and that's the trading desk of these banks; these commercial banking institutions. Should there be a regulatory reform that either prohibits or forces more control, certainly more transparency?

I can tell you having worked for a couple of these institutions, conventional lending became known as the poor brother or cousin of these institutions because all of the action was on the currency trading desk, was on the lending to the hedge funds, was on the portfolio trading management.

So at what point have these commercial banks evolved into something that's very unlike what we traditionally thought of as banking just 20 or 30 years ago?

MR. BAILY: Anyone want to --

SPEAKER: Well, you're talking about should we repeal the repeal of -- or something like that. I, as a practical matter, I don't think we

can put the genie back in the bottle, but beyond that, I would observe that large institutions got into trouble 20 years ago, before they were actively engaged -- I mean they can do it without this is my point.

And so I don't think that's the heart of the problem today, the fact that they were able to do these activities and I don't think taking -- will fix the issue by itself either. So I wouldn't go there.

MR. BAILY: Okay; Alan.

MR. GREENSPAN: It's an interesting editorial, -- I think it's written by Jim -- a while back in which he reminisced about the issue when investment banks were partnerships and the fact of unlimited liability, which sort of raises the question about double guarantees on the deposits, or double liabilities on deposits.

It's an interesting question of whether the structure is such that it inhibits proprietary trading, which is what you're essentially raising the issue of, because what has occurred is that with the increase in technology, the differentiation between what constitutes a commercial bank, a savings bank, an investment bank, an insurance company, a hedge fund, they're morphing into a single type of risk based management system in which every single individual is trying to get above average real rates of return. And of course the system doesn't work that way.

Whatever you call them, they're doing the same thing and the issue is do you want to separate these institutions or do you want to recognize

that technology is essentially forcing financial intermediaries. If you project what's happening all into a homogeneous single model which does all of the various things and various mixes, I think it's a legitimate discussion. I'm not sure where it leads you though.

MR. BAILY: I think we are running out of time but let's take a couple more questions; yes, a question there.

MS. ANDERSON: Hi, Kate Anderson with Bloomberg News. Mr. Chairman, on the subject of derivatives you were opposed to their regulation previously. Do you still maintain that view?

MR. BAILY: Could you just repeat that question?

MS. ANDERSON: Sure. On the subject of derivatives, and this is for the Chairman, you were opposed to their regulation previously. Do you still maintain that view on derivatives?

SPEAKER: I still don't get it.

SPEAKER: Oppose regulation of derivatives.

MR. GREENSPAN: Well, I think the question that we have to confront is derivatives are a generic term which covers a vast thing from -- futures to CBS, to foreign exchange derivatives; they all are very different types of markets.

I've argued strenuously that the notion of regulating the two most important derivatives in the financial markets, foreign exchange and interest rate derivatives strikes me as contra productive because they

have been very effective over the years in transferring risk and they are working perfectly fine as far as I know right through this whole crisis. The collateral exchanges have been adequate. I think that's true, isn't it Vince?

MR. REINHART: Yeah.

MR. GREENSPAN: There's nothing wrong with them. The argument is admixing the credit to default swap market as though that's the same as the interest rate derivative. It is not. Any form of swap which does not involve putting the principal at risk is a fundamentally different instrument than one which does. By definition, the credit default swap is a principal related type of security and has very important different impacts and different problems associated with it than would be where 80% of all financial derivatives are in perfectly sensible working operations and why one would want to alter them when they're working as well as they are, is beyond me.

The credit default swap market is undergoing a major change largely because it's gotten sufficiently large; that they're able to get central clearing operations. And the result of what has been a major problem in the CDS, which the Federal Reserve Bank of New York has been working on since 2005, is to move towards something which gets away from the counterparty risk problems that have been associated with this.

And very specifically, rationalizes what is a very important problem, which has not been fully addressed yet in CDS, which is that legally, every individual who holds claim to the instrument, which is being protected, has a right in the event of default.

But when you have 10 times as many contracts as you actually have individual instruments, there's no way of doing that and what's happened is there has been a convention where they settle all of these in cash. But that's not what the law says, that's not what the contract says. This is an accident waiting to happen if somebody decides they don't want -- two or three people decide they will not accept cash; they want the instrument. Then the -- goes to court and the whole thing falls apart.

What they're doing now is they're setting up, it's actually starting just now, this central clearing operation for credit default swaps. But remember, to have a central clearing operation, you have to have a single contract, which is specified and traded by all parties.

The CBS market has got a large number of idiosyncratic contracts and that's the reason why they use the market because individual groups that want the specialized form of contract and so the counterparties make an agreement.

Those cannot be put into a central operation, central clearing operation, and there will always be these types of over the counter credit

default swaps, which in my mind are finally due and have been very useful to us.

But I think that they have to resolve this question of what the nature of the contracts are when you get multiple -- you get several multiples of open interests so to speak, beyond what the actual contract is.

So I think it's critically important not to put all derivatives into the same bag. Nobody is talking about changing the soft -- futures of contract in the Chicago border trade. It's worked for a couple of hundred -- for 150 years. You don't want to change it. That was a derivative and so are lots of other derivatives which work as well as the weak market.

Why we wish to put all derivatives in the same basket because the word that we're using to categorize them happens to be the same, is frankly beyond my --

MR. BAILY: Did you have -- other panel members want to make a comment on derivatives? Okay; we'll take the last question over there.

SPEAKER: My name is --

SPEAKER: Wait for the mic, please.

MR. CIDELMAN: Hi, my name is Jeff Cidelman. I'm not affiliated by I do volunteer assisting people going through foreclosure and one of the things that's very apparent in many of these transaction is the actual transactions themselves are fraudulent. The individual signed

documents which misrepresented facts. Now, my question is, what systems did we have in place or not have in place to detect fraud and would fraud detection -- is fraud detection one of the things that is missing; fraud detection and fraud prosecution? Is that one of the things that's missing from our financial structure that could present the next crisis?

MR. BAILY: Does anyone want to comment on fraud detection? I don't think it's particularly the subject of view.

MR. GREENSPAN: Well, I'll say something. I mean I've always argued that fraud is a major impediment to an effective competitive market system. I mean you have to accept the word of your counterparties on a whole series of issues and if you cannot do that, the system will not work. And I have always argued that the one thing that is missing in our regulatory system is inadequate prosecution of fraud. And I think that it is difficult.

I mean I think, as I think my colleagues, which we have a Federal Reserve majority here, remember well there was a major embezzlement in a -- affiliate in New York for a number of years and the best and the brightest regulators we had at the Federal Reserve Bank in New York went in twice, couldn't find it, came back out with major ratings.

Now the problem with fraud and embezzlement, they're not the same thing obviously, is that they are very difficult to detect and that we find that in most instances, on the issue of embezzlement, I don't think

that we ever find it unless there is a whistle blower because there are so many variations in which malfeasants can occur, that you can send in extraordinary, intelligent, and very effective people they won't get it. And to my knowledge, there could very well be lots of fraud and lots of embezzlement currently in the markets we don't have a clue about.

SPEAKER: Let me just add one comment. And I don't know what you're on the ground experience has been in the mortgage arena, but obviously some of the people involved in mortgage origination and mortgage brokers were unregulated and you would not -- I mean say you would not expect, if nobody's looking for it, you would not expect it to be found and you know, in that case, that may be a case where standard regulations enforced would have been helpful. But you know hind sights always 20, 20 and we can say that now. It wasn't so obvious X years ago.

MR. BAILY: Isn't it puzzling though that the people who were buying the mortgages weren't doing more to make sure that the people who were issuing them or the mortgage brokers -- why weren't -- created by the market somehow. I don't know. Vince, you had a comment.

MR. REINHART: Just in terms of the ex post characterization, to summarize President Stern's summary of this panel is it's all about incentives. We allowed incentives to get misaligned at basically every step in the mortgage process, from the fact that the

mortgage brokers compensated for making the loan, not how the loan turns out.

MR. BAILY: Why didn't the guys buying the mortgage --

MR. REINHART: But it all the way goes down to the global investor who got the phone call saying we can give you 60 basis points over triple A but it's really triple A. They should have been doing diligence and that should have worked all the way back to chain.

Part of it was incentives, misalignments, the way we compensate those traders, the way we compensated the rating agencies; part of it is also regulatory arbitrage that triple A had a special status. If you're a European banker -- and so it allowed you to get, you know, to do less work and still get a high return.

SPEAKER: Well I think Gary also had some comments initially that at least some of this risk looks like it was focused on institutions that themselves were Too Big to Fail, and so you don't want to take that too far but that might be a reason why they don't have a lot of incentive to go and take a look.

MR. BAILY: Well, a lot of people lost a lot of money even in the institutions of Too Big to Fail. Well, I just want to give our office -- do you have any last comments or otherwise I think we'll wrap up. Thank you so much everyone for coming. Thank you on the panel. For members of the press, Gary will be available in the January Room, so please wait until

that and do pick up some of the Brookings stuff on the table there. Thank  
you so much for coming.

\* \* \* \* \*

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