THE BROOKINGS INSTITUTION

FINANCIAL STABILITY:
A CONVERSATION WITH LAEL BRAINARD

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Keynote Address:

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P R O C E E D I N G S

MR. KOHN: It's my great pleasure to welcome back to Brookings Governor Lael Brainard. Lael was a senior fellow here from 2001 to 2009. The last three years, I guess, you were vice president and director of the Global Economy and Development Program and co-authored a number of articles with other Brookings scholars.

Lael received her Ph.D. at Harvard, so that makes her one of the few central bankers that wasn't a Stan Fischer student, but after serving as a White House fellow, she did teach at MIT, so you were subject to the influence. She worked for McKinsey and did all that before she was 35 years old.

She was at the Clinton White House working on international economic issues, including the Asian financial crisis in the late '90s. After a time here at Brookings, she was Treasury Undersecretary for International Affairs in the Obama administration, where among other things she was the center of the U.S. response to the euro crisis. And she joined the Board of Governors in 2014, just this year, in June.

So she is well qualified by her background, as well as her current position, to speak on the Fed's approach to financial stability, which is the subject of her talk today and it's a subject of immense importance and a great deal of debate, so I'll be anxious to hear what you have to say, Lael. Welcome. (Applause)

MS. BRAINARD: Well, it's a pleasure to be here at Brookings. And I want to thank David Wessel and Don Kohn, in particular, and just say there are such a great group of people here at Brookings on these issues, including also Martin Baily and Louise Shiner and Doug Elliott, so it's good to be here.

The founding statute of the Federal Reserve makes no explicit mention of financial stability, but, of course, the Federal Reserve was created in response to a severe financial panic and safeguarding financial stability is deeply engrained in the mission and the culture of the Federal Reserve Board.

Today, financial stability is more important than ever to the work of the Federal Reserve. While I think it's generally viewed as the agency with the broadest sightlines across the economy and some important stability tools, as well as a critical first responder when a crisis hits, the Fed actually faces some important limitations.

It's predominantly a supervisor of banks and bank holding companies in a financial system with dominant capital markets. Regulatory authority is fragmented and no U.S. agency yet has access to complete data regarding activities across the financial system. Recognizing these limitations, the Federal Reserve will need to actively utilize the tools under its authority, which means placing a strong emphasis on structural resilience in the largest and most complex institutions, while strengthening less-tested time varying tools to lean against the buildup of risks, and, in some circumstances, looking to the unique capacity of monetary policy to act across the financial system. It will also need to cooperate closely with other regulatory agencies.

Our work is proceeding in four pillars, which are in varying stages of advancement. The first pillar is surveillance of the possible risks that could threaten financial stability. Each quarter the staff undertakes a systematic assessment of key financial vulnerabilities, including asset evaluations and risk appetite, leverage, maturity transformation, and interconnectedness in the financial system, along with borrowing by households and businesses, which both research and historical case studies suggest provide important warning signals.

Over time our surveillance will benefit as the Office of Financial Research makes progress in facilitating the exchange of information, previously siloed among the independent regulators, and as international impediments are overcome.

The research that informs this work by helping to identify financial patterns likely to be associated with rising risks of crisis continues to grow. But its predictive power is still limited and it remains difficult ahead of time to identify credit booms that are likely to cause severe damage, such as the subprime crisis here for those that do not, such as the tech boom. Therefore, the regular systematic surveillance of financial developments is buttressed by three other valuable types of analysis.

First, we use the detailed bank examinations and loan reviews that are the regular work of our supervisors to assess emerging risky practices. These reviews helped identify deteriorating underwriting standards in the leverage loan market, for instance.

Second, we undertake periodic analysis of the potential system-wide consequences of shocks that are particularly salient, such as a sharp rise in the level or volatility of interest rates. And, finally, when there is a close brush with specific risk events we closely study the behavior of markets and institutions for insights into possible structural vulnerabilities and assess possible policy actions.

Of course, the ultimate work of our surveillance is to build resilience and counter risks early enough to prevent the disruption to financial stability that could damage the real economy.

So, in that arena, let me briefly discuss three dimensions of our macro-prudential policies. First, I'd say we are relatively far advanced and compare favorably to other jurisdictions in implementing a framework of new, through the cycle safeguards that substantially strengthens structural resilience across a number of dimensions. It's forward-looking in assessing risks; it is exclusively macro-prudential in design so that the large, complex institutions internalized risks not only to their own safety and soundness, but to the stability of the system as a whole. And it requires large, complex institutions to build robust capital and liquidity buffers to withstand severe stress.

The core of that framework is the requirement of a very substantial stack of common equity to absorb shocks and provide incentives against excessive risk taking. The new framework imposes belts and suspenders by requiring a simple non-risk adjusted ceiling on leverage, as well as two sets of risk-based capital standards. One derived from internal models, and a second based on standardized, supervisory risk weights.

Beyond that, the largest, most complex firms will face an additional common equity requirement that reflects the risk they pose to the system and an additional layer of loss absorbency on top of that to provide adequate support to operating subsidiaries in resolution. They're also required to maintain substantial buffers of high-quality liquid assets calibrated to their funding needs and likely run risk in stress conditions.

Regular stress tests of both capital and liquidity at our largest banking firms provide a key bulwark in the new supervisory architecture by providing a forward-looking assessment that takes into account correlations among risks. These stress tests are powerful tools for building resilience in our largest banking firms, but they do have some limitations. For instance, while the severity of the stresses can be varied from year to year, it's difficult to introduce entirely new scenarios each year to target specific sector risks without also introducing excessive complexity.

And while banks are required to build buffers that are calibrated for the riskiness of their assets and exposures, the proportion of capital required doesn't vary systematically to counter the cyclicality that arises through elevated asset evaluations and other channels.

Progress is less advanced in developing tools to counter the buildup of excesses. Here we can learn from financial authorities in other countries, some of whom have more recent experience with a broader set of macro-prudential tools. The Federal Reserve is working to implement a countercyclical capital buffer. The classic case for this tool is to lean against a dangerous acceleration of credit growth at a time when the degree of monetary tightening that would be needed to slow it down would be inconsistent with underlying conditions in the real economy.

The Federal Reserve and the other U.S. banking agencies issued a final rule to implement the new Basel III countercyclical capital buffer for U.S. banking firms last year. Starting in 2016 and phasing in through 2019, the U.S. banking agencies could require the largest, most complex U.S. banking firms to hold additional capital in amounts up to 2.5 percent of their risk weighted assets, if it's warranted by rising risks. We're currently considering how best to implement this buffer, perhaps looking to indicators related to credit growth, leverage, and other signs of financial imbalances to provide guidance on when to implement and when to deactivate the buffer.

While the countercyclical capital buffer will be useful in building additional resilience near the height of the cycle, it may prove to be less effective in leaning against credit growth since, as a credit boom progresses, there's greater potential for capital to be relatively cheap, asset evaluations to be inflated and risk weights to be incorrect. Moreover, the countercyclical capital buffer only applies to a subset of the U.S. banking system and is designed to act with a one-year lag. It also cannot be used efficiently to target specific asset classes that appear frothy, a challenge that I next turn to.

We are exploring tools that can be varied over the cycle to target specific sectors, while recognizing we will have limited authorities relative to some foreign regulators in operating on the borrowing side and beyond the regulatory perimeter of the banking system.

Property booms are perhaps the most common macro-prudential challenge that's confronted financial authorities in advanced economies over the years. Some foreign regulators have the authority to promulgate countercyclical rules that target activity in a specific sector. For instance, Swiss authorities activated in 2013 a countercyclical capital buffer that added 1 percentage point of required capital for direct and indirect mortgage-backed positions secured by Swiss residential property, and then increased that amount to 2 percentage points in 2014.

In the U.S., there's a more limited set of authorities. Most commonly, as we've seen with leveraged lending, the banking regulators acting together can use the tools of supervisory guidance and intensive supervision to discourage banks from taking on additional risks on safety and soundness grounds. Moreover, the annual supervisory stress test can be tailored to increase the severity of losses in specific portfolios of loans, or in the market shock.

However, these authorities fall short of direct restrictions in a particular sector. While the supervisory actions usually flow from micro-prudential concerns about safety and soundness of individual institutions, Section 165 of the Dodd-Frank Act provides the Federal Reserve could restrict the activities of banks with assets greater than $50 billion or designated non-bank systemically important financial institutions to prevent or mitigate risks to the financial stability of the Unites States, which provides potential macro-prudential authority.

In addition, we have authority under the Securities and Exchange Act of 1934 to set initial and variation margin requirements for repurchase agreements and securities financing transactions, which applies across the financial system. This authority was used to curb perceived excesses in the equity markets through the mid-1970s, but it was seen as a limited success and it hasn't been used in such a manner since.

There's some interest in exploring whether imposing minimum margin requirements on additional form of securities credit might be able to prevent margins from compressing during booms and likewise help mitigate destabilizing procyclical margin increases at times of stress, reducing the associated fire sales in short-term wholesale funding markets.

For purposes of comparison it's instructive to examine how central banks in other countries have dealt with housing booms in recent years, including through borrower-side restrictions. Financial authorities in the United Kingdom, Sweden, Switzerland, and New Zealand have confronted rapidly rising residential housing prices in macroeconomic environments and there were compelling reasons not to use the policy rate as the first line of defense.

They responded by imposing restrictions on borrowers, through loan-to-value or debt-to-income limits. In some cases, in concert with disincentives to lenders and, in many cases, in an escalating pattern. Indeed, restrictions on borrowing are among the most common macro-prudential tools and, according to some research, among the most effective. Of course, this is not a problem we face today. If anything, the most pressing problem facing U.S. housing authorities is to restore vitality to the single-family housing market.

However, if in the future we were to confront a mortgage credit-fueled housing boom, the banking agencies could perhaps impose higher risk weights on mortgage loans with particular characteristics, either directly or through expectations for the stress test. But this approach would require upwards of a year to adjust, would be narrow in its scope of application, and may prove ineffective at times when bank regulatory capital is comfortably in excess of the required thresholds.

In some cases, foreign central banks have acted in concert with other financial authorities to address the buildup of risks. Of course, in the American context, the Federal Reserve's work in embedded in a large web of efforts by independent regulatory agencies. It's vitally important that the bank and market regulators actively share their assessments of risks and develop joint macro-prudential efforts to address risks that stretch across our regulatory perimeters. Realistically, however, these efforts will need to navigate differences in the agency's mandates, authorities, and government structure.

As an example, the Consumer Financial Protection Bureau has authority to adjust the definition of qualifying mortgages, which affects mortgage credit at all lenders, whether inside or outside the regulatory perimeter. But it's worth noting that the CFPB operates primarily under a consumer protection mandate, while the ultimate consequences of a mortgage credit boom have in the past proved quite costly for families, the danger to consumers in the initial stages of such a boom may be too unclear to warrant timely action.

Recognition of the limits to our macro-prudential framework brings us to a consideration of monetary policy, perhaps the most powerful tool, but also relatively blunt. Monetary policy is the only tool available to the Federal Reserve that has far-reaching impacts on private credit creation across the entire financial system, and one of the few tools that can be changed rapidly. While recognizing its powerful effects, there are good reasons to view monetary policy as a second line of defense and as a complement to rather than an alternative to the macro-prudential toolkit.

Indeed, in many circumstances, standard monetary policy and financial stability considerations will actually reinforce each other. Nevertheless, there may be times when standard monetary policy and financial stability considerations conflict. In several recent instances, foreign economies have faced some tension between labor market slack and shortfalls in inflation relative to the Central Bank's target on the one hand, and financial stability concerns associated with rapidly rising real estate prices on the other hand.

In the United Kingdom, policymakers put in place a range of macro-prudential measures to limit the buildup of risks in the housing market and, partly as a result, the housing market appears to be cooling somewhat. Nonetheless, UK policymakers have acknowledged the potential for monetary policy adjustments in the pursuit of financial stability. And the Bank of England's 2013 forward guidance had a specific financial stability knockout clause.

If, in the future, the Unites States were to face a similar dilemma where financial imbalances are growing against a backdrop of below par economic conditions, the Federal Reserve might more readily consider adjusting monetary policy for financial stability purposes than some foreign peers because our regulatory perimeter is narrower, the capital markets are larger, and the macro-prudential toolkit is less extensive. Even under those circumstance, however, it's important to be circumspect about the role of monetary policy, recognizing that the necessary adjustments could have broad consequences. For example, a tightening in monetary policy sufficient to limit strong credit growth could depress employment and potentially trigger a sharp correction in financial markets.

These limitations should lead us to be circumspect about the expectations placed on monetary policy for financial stability purposes. But it's equally important to acknowledge the potential utility of monetary policy for addressing risks to financial stability in the economy and to actively expand our work on the appropriate role of financial stability in the monetary policy framework.

So, in summary, while the Federal Reserve has an inherent responsibility for financial stability, it has an incomplete set of authorities and a limited regulatory perimeter in a system with large capital markets and a fragmented regulatory structure. The Federal Reserve will, therefore, need to utilize actively the tools under our authority which place particular emphasis on building structural resilience through tougher through-the-cycle standards, along with broad countercyclical measures to limit the buildup and potential consequences of risks to financial stability while exploring the design of time-varying sector specific tools, and at times looking to monetary policy as a powerful tool that, unlike any other, operates across the entire financial system. Thank you. (Applause)

MR. WESSEL: Governor Brainard, thank you very much. I appreciate your remarks and especially the brevity of them. I've learned that usually central bankers try to fill up all of the allotted time so no one can ask them any question.

MS. BRAINARD: I will learn. (Laughter)

MR. WESSEL: Not too quickly, I hope. I'm David Wessel. I'm director of the Hutchins Center on Fiscal and Monetary Policy here. And although he didn't introduce himself, Don Kohn is the Robert Kerr senior fellow in economics. And in addition to being a former vice chairman of the Federal Reserve Board, is currently serving on the Financial Policy Committee of the Bank of England.

But, Governor Brainard, let me start by asking you about something you said at the end of your speech about how, given the nature of our economy and the limits on the Fed's macro-prudential powers, you said that compared to some of our peers, the Fed may have to consider raising interest rates more readily than some other central banks that have more power. And I'm wondering whether you think that means that the U.S. needs to give the authorities more macro-prudential tools? If so, which tools and, importantly, who should control them, the Fed or somebody else?

MS. BRAINARD: So I think right now we are implementing a greatly expanded set of authorities under the Dodd-Frank Act and we really are extremely actively engaged in that work. I think it's too early to say -- to make a judgment about the adequacy of that toolkit, but I do think it's instructive to compare the tools that we have under our authority with tools that have been used to confront the kinds of macro-prudential challenges that are most common, in particular property booms, and to see what alternative authorities we might be able to use to get at the same results and where we need to rely on other regulators and to work closely with them. And that's a very important imperative in our system because of the fragmentation of the regulatory architecture.

So I think it's really too early to make a judgment, but I think we're also very actively engaged on the financial stability agenda because it is so important. And we will be looking to see whether we can get close to where we need to be, in terms of with the other regulators addressing risks to financial stability through our macro-prudential toolkit and leave for a later day a discussion of how that toolkit might need to be adjusted.

MR. WESSEL: You mention the long list of tools that you do have, from stress testing, countercyclical buffers, et cetera. Do you think that if these tools had existed a decade ago, to what extent would they have been helpful in preventing what we just went through in the subprime market and the housing market in general?

MS. BRAINARD: Well, there is no question that it would have been helpful to have in place the very rigorous, horizontal, forward-looking, stress-testing machinery that we have in place today. There is no question that if we had had tougher capital requirements, tougher leverage ratio, much more supervisory expectations around the management of liquidity, much more attentiveness to risks of excessive reliance, or instance, on short-term wholesale funding. There's no question we would have been in a better place than we were going through the crisis.

MR. WESSEL: Would it have been enough to avoid the crisis?

MS. BRAINARD: So, I think that's a question that I don't feel has a very clear answer, but there is no question that our system would have been vastly more resilient and, of course, if we had had Title II authority, we would also have been in a much better --

MR. WESSEL: To be able to take over the non-bank institutions, like Lehman or Barrett?

MS. BRAINARD: Title II authority to enable the orderly liquidation or the orderly resolution of distressed institutions. I think we would have been, again, in a much more resilient position to withstand the kind of shocks that we saw in 2007, 2008, and 2009.

MR. WESSEL: Don, Governor Brainard mentioned, somewhat diplomatically, that we have a rather strange set of financial regulators. She talked about the need to have coordination and how they have different missions, and different governance structures. You've had some experience with an alternative form, so you've now done this on both sides of the Atlantic. What can we learn from the British experiment and how bad is ours?

MR. KOHN: I think we have quite a bit to learn and we have problems coordinating across these regulators, as Lael mentioned. In the UK, there are three basic regulator supervisory authorities -- or two supervisory authorities and a macro-prudential authority.

So there's the Financial Conduct Authority, which embodies the consumer interface and some of the SEC interface between the markets and corporations, and the public disclosure and things like that. There's the Prudential Regulatory Authority, which does all the micro-prudential -- all the regulation supervision of individual banks, and insurance companies, and the important investment banks, all in that thing. And then this committee I serve on is the Financial Policy Committee which has the obligation, the duty, the goal of protecting the stability of the entire financial system. So, not paying attention to individual institutions, but is the capital level high enough, for example?

And sitting on our Financial Policy Committee are the heads of the FCA and the heads of the PRA. So we find that we reach a consensus on recommendations to the FCA and the PRA. They're sitting right there, they agree with them, they have boards they need to consult with, but in general -- in fact, in every case so far -- when we've made a recommendation, it's been followed up immediately and implemented immediately. So I think it works.

There are many fewer regulators, everyone is bought onto the financial stability mandate of the Financial Policy Committee and is willing to structure their regulation of their individual institutions to be consistent with that. I think it works considerably better, at least on paper. We'll have to see after another 5 or 10 years, but.

MR. WESSEL: What do you see as the shortcomings of our approach?

MR. KOHN: So I think this, as the Governor pointed out, this coordination across a lot of institutions, a lot of regulatory bodies, and also, as she highlighted with respect to the Consumer Protection Bureau, they don't have an explicit financial stability mandate. And neither does, I think, the SEC have an explicit financial -- or the CFTC -- an explicit financial stability mandate.

Their chairs are on the Financial Stability Oversight Council, but the whole agency hasn't necessarily got the same legislative direction. And I think it would be very helpful, actually, and supportive of Governor Brainard's suggestion about consumer regulation using that in a macro-prudential way if, for example, the CFPB had a financial stability mandate, in addition to their consumer protection mandate. You might be able to use those tools in a more proactive macro-prudential way.

MR. WESSEL: Governor Brainard, as you pointed out, there may be things we can learn from abroad and you mentioned a number of countries that have more macro-prudential tools than we have. I want to ask you a little bit about whether we learned anything from the example of the Swedish Richtbank, which decided because of financial stability concerns to raise interest rates and it doesn't seem to have worked out very well. And I think it illustrates the tradeoff, how difficult it is to know how to avoid sending the economy into a down-spin because you're so worried about financial stability, which. of course. the Fed had some experiences with in the '20s.

Did we learn anything there? Does that make you at all nervous about the prospect of using rates some day to burst a bubble?

MS. BRAINARD: So we do have this rich set of experiences, just in recent years, across several countries -- Sweden, Switzerland, New Zealand, the UK -- where they have faced this tradeoff, this dilemma. And I think what we learn from that is if you have -- if the financial authorities have a richer set of macro-prudential tools that allow them to impose time-varying, sector-specific restrictions -- and, again, the research suggests that having that ability on the borrower's side can be quite powerful as well as on the lending side -- that it does take some of the burden off of monetary policy to do all the work.

And what we have seen in the case that you cited, as well as the other cases, when the financial authorities were able to deploy macro-prudential tools that directly targeted the boom in residential real estate. And in many cases, I think the case that you cited, this was an authority that they had to get and it was working across different agencies' authorities. It really did make a material difference in their ability to target the particular source of financial stability risk without having broader implications for the real economy.

MR. KOHN: Let me understand. I'm trying to imagine the -- you've been in Washington a long time. I'm trying to imagine the politics of this that someday, some collection of federal regulators decide they're going to make it harder for people to get mortgages. I mean, realistically, can you imagine that happening in a country which has so long prized homeownership as, you know, the essential ticket to the middle class?

MS. BRAINARD: Well, again, I think that, you know, we have to be realistic about the environment that we're working in and also clear about what tools we have been given by Congress that we can use to address any risk to financial stability. But as you point out, it often comes in the form of housing booms.

And so under those circumstances, you know, we do have tools that we can use, and I think I talked about them a little bit earlier. We can put more emphasis in the stress test on losses in that area. We can change risk weights to emphasize the potential macro-prudential implications of continuing rises in asset valuations. But I do think we have to be very realistic about working on the borrower's side. And for that reason, again, it puts greater emphasis on very substantial structural resilience. It puts a little bit more burden on monetary policy.

MR. KOHN: I think I was actually -- in the United Kingdom, as you mentioned, we, the Financial Policy Committee, made recommendations to the FCA, the conduct authority and the prudential regulatory authority, to restrict or put some limits on lending for mortgages when it looked like housing prices were rising very rapidly, and in particular high loan-to-income debt was growing very rapidly or there was a risk that it would grow very rapidly. So we told the FCA, the conduct authority, that banks should test the ability of households to pay the interest on a floating rate loan against a rising rate of interest that was an increase that was bigger than was built into the yield curve. So make that test tougher over the next five years when someone's getting a loan.

And we said to the banking regulatory authorities -- and almost all the mortgages are made through the banks, so it's easier that way -- that the loan -- they had to limit the high loan-to-income loans that they were making to 15 percent.

I was pleasantly surprised, actually, at how little negative reaction there was to those actions. I think there are two things about that.

One is everybody could see that house prices were rising rapidly and they were concerned about even first-time homebuyers being priced out of the market. And we specifically said our actions weren't aimed at dampening house prices. They were aimed at building or preventing a deterioration in resilience, but I think folks could see that there was a problem developing.

And the second point is we presented this, and it was more of an insurance policy, so we're not stopping a lot of things that are happening right now, but we were trying to prevent a deterioration in credit quality. And people accepted that even though it would have a greater impact on households that were just starting out with housing, but they could see the financial stability effects and there was --

MR. WESSEL: Do you think the same thing would be true here?

MR. KOHN: I think there'd be probably more fussing, but that doesn't mean that it can't be sold. And we've just come through a horrible cycle --

MR. WESSEL: Right.

MR. KOHN: -- of huge price increases and then people being foreclosed on. So if the policies were presented as we're preventing a repeat of this really very tragic situation that occurred in the U.S., and where it could be presented credibly as that, I think there would be reasonably good acceptance. That doesn't mean everybody would accept it, but I think people would understand.

MR. WESSEL: Governor Brainard, when you talk a little about the surveillance you're doing in the current period, and I want to ask you two questions about that. One is George Osborne, the chancellor of the exchequer, once expressed concern that the previous administration of the Bank of England aimed for the stability of the graveyard. You could do too much here. Do you have any hesitation that this long list of stress tests and this risk weight requirement and that one and Basel III and the SIFI surcharge and all that is constraining credit now and is hurting the economy today?

MS. BRAINARD: Well, I think just two things. If you look at surveys on credit availability, we've seen a substantial improvement in credit availability with pockets of exceptions. So I still worry that, you know, many households really cannot get access to mortgage credit. Underwriting standards there are extremely tough and relative to previous kind of historic averages, not pre-crisis, it's much more difficult for some households to get access to mortgages. But generally speaking, I think credit conditions in the overall economy are quite favorable.

And the second thing I would say is, you know, we need to have a very clearly differentiated, tiered approach to regulation. Our regulations are very clearly targeted to risks to the system. And those institutions that are large, that are complex, that have big trading activities, that are big relative to the market, that are internationally very active, those institutions have different, materially different, expectations than regional banking organizations or community banks, which are actively in the market providing credit right now. And I think that differentiation is absolutely appropriate; that, you know, what we learn from the crisis is those large institutions need to carry materially greater capital, need to have much deeper liquidity buffers because their business model is much riskier and the potential damage from a misstep and from a failure is so much more sweeping.

And so I don't worry. I think we can get that differentiation increasingly right over time. But obviously, you know, we're in early stages for some of the implementation. And so this will be an ongoing process of implementing and assessing and adjusting, but, again, with a view towards very strongly differentiating that the very strong through-the-cycle standards are targeted at the institutions that pose the greatest risk to the system.

MR. WESSEL: So there's been some concern that there's less liquidity in the bond market, for instance, because of all these new rules and that that contributed to the flash crash on October 15th. Do you have a view on whether that's a problem?

MS. BRAINARD: So what we are doing, I would say, for instances like October 15th, for every moment where you see some stress in any of the financial markets, you know, we are carefully monitoring and going back and doing very detailed analysis of the data to understand whether, in fact, there may be some structural vulnerabilities which may be associated with new regulations. They may be associated with technology, with new kinds of trading and higher frequency trading.

So we are looking at possible areas that could pose -- that could prove to be a structural vulnerability. It impedes orderly adjustment and I think, you know, with a really open mind as to what might be causing that, but a very clear deep-dive analysis to try to understand it. And if there's something to be fixed, then working with other regulators to address it.

MR. WESSEL: Now, as you know, there are people who warn that when we have a long period of very low interest rates we're inevitably building up financial imbalances that will lead to the next bubble. When you look across the horizon, how concerned are you that the monetary policy that the Fed is pursuing is planting the seeds of the next crisis?

MS. BRAINARD: So I think our financial stability assessments are intended really to be able to pick up where we might see valuation pressures rising, if, in fact, they may be broadening, where you might see that compounded by maturity mismatches or rising leverage. And so to the extent that you are seeing a reach for real behavior, our financial stability work is intended to look very carefully at that and to try to see whether this is something that poses the need for policy action. And then to the extent there's need for policy action, can you take care of it through targeted supervisory guidance as I was discussing earlier or do you need a broader policy response?

With regard to the monetary accommodation, obviously we've been through a grinding, slow, difficult recovery following the most damaging financial crisis I think we've ever seen. And what we have -- you know, what has been supported by the accommodation has been a very rapid deleveraging. I think you look relative to any other economy that deleveraging, particularly for our household sector, has proceeded more quickly here. Credit is returning. We've seen some very important improvement in the labor market, although there's still some signs of slack. We're not there yet on inflation, so we're monitoring that very closely. But the conditions in the real economy have required that kind of support and so, you know, we're carefully balancing those considerations as we proceed.

MR. WESSEL: Don, before I turn to the audience, do you want to -- you can either given an answer to a question I haven't asked or you can pose a question to Governor Brainard that she may or may not answer.

MR. KOHN: No, I think you've done a good job of questioning, David. Just I think a comment on the last subject. One of the very beneficial aspects of the stress tests are that you can ask yourself what would happen if some of the asset values to -- or you can ask the banking system what would happen if some of these asset values changed very quickly? How would you fare? What would your capital be? And then how would you survive such a thing?

So, for example, in the UK, we did a UK finish to the European Union stress test and the results haven't been published, but the scenario was and the two stresses that we worried about were a sharp decline in house prices, so we stressed the banks against a 35 percent decrease in house prices, and a sharp increase in interest rates worried about the interest rate risks they might have. So we will see and we will be publishing shortly the results of that, but I think that's a good example of how you can use the stress tests to see whether at least the banking system is resilient to some of these sharp changes in asset values that might occur.

MR. WESSEL: Right. I'll turn to the audience. We have some mics. I'm going to ask you to say who you are and remember that questions end with a question mark.

Why don't we start here, the gentleman here on the aisle? Why don't I take a couple and then we'll -- in the middle, raise your hand again.

MR. PRIVITERA: Thank you, David. Alex Privitera with AICGS. Governor, I want to go back to the differentiation that you made between small banks and big banks and, obviously, your focus at the Fed is primarily on big banks. But looking across jurisdictions, you know, some of the sources of instability, for instance in Europe, you know, if I think about the example of Spain, for instance, it was primarily small banks that were exposed to a certain market segment that basically triggered what happened in

Spain.

And I wonder whether monetary policy, especially at the zero lower-bound, basically also inflicts some pain on those credit institutions that have a very simplified business model, primarily small banks, therefore, that rely on interest payments much more than bigger banks. And how do you resolve this tension between easy monetary policies going forward and the business models of banks themselves, small and big ones?

MR. WESSEL: Let's take another one. Doug Elliott here.

MR. ELLIOTT: Thank you. It's Doug Elliott from Brookings. And I'm a fan of cyclical macro-prudential policy, but I think, Governor, you'd probably accept that there's tremendous uncertainty at this point about when to take actions, which set of tools to use when you do take the action, and how to calibrate the degree to which you move the various levers that you have. How does that uncertainty change the way that the Fed and other authorities should choose what they do and how they frame it for the public?

MR. WESSEL: Okay, so you can pick which one you want to answer first, but you're going to have to answer them both. (Laughter)

MS. BRAINARD: You're tougher on me than you are on him.

MR. WESSEL: He's a former. He gets easier treatment.

MS. BRAINARD: I'm a former, too. (Laughter) So let me go backwards.

So it is very much the case that we haven't used a countercyclical buffer before. We are humble about the state of the art in terms of how do you identify a potentially damaging boom and how big a reaction when in the cycle. I think we also have to look historically and realize there have been many episodes where authorities have been reluctant to take action until too late. And so to the extent we can build in automaticity and a framework that has some automaticity to it, obviously that's a good thing. But to the extent that the research doesn't give you, you know, lots of clarity about exactly what indicators at exactly what level you want to trigger, that works against building in the kind of automaticity that would otherwise be desirable.

So I think the net result of that is, first of all, you know, that we probably have to put more time and energy into this arena because it is new, it is untested, and we have to try to make sure that those tools really are ready to go when they're needed. But we also, I think, realistically, put greater emphasis as a result on building structural resilience using our through-the-cycle safeguards and, in particular, on those institutions whose distress or failure really could have the broadest damaging impacts across the economy.

So that gets to the second question. You know, we are actually supervisor of small institutions as well as large bank holding companies, as I'm sure you know. And that gives us, I think, invaluable insights into what is going on at our smallest financial institutions as well as our largest financial institutions. And thereto, you know, our supervision is emphasizing stronger, better capital. It doesn't have the same surcharges that are required of the large institutions. It doesn't require of the smaller institutions any of the machinery that would be excessively costly from a compliance perspective relative to the benefits to society because these small institutions don't pose the same large risks.

But we do have a lot of ability to look at their health and resilience. Net interest margins are very important to their bottom lines, and so we're very aware of that. And I think what we see there is a sector that's actually strengthening and becoming healthier and more resilient.

We saw a lot of failures in the crisis, so there's some consolidation there. But, you know, we are trying to tailor our supervision to support the small community bank business model.

MR. KOHN: Let me add something on the counter -- David?

MR. WESSEL: Yeah, sure, and, Perry, why don't you take -- yeah, please.

SPEAKER: So I'm already, as a member of the Financial Policy, have voted on a countercyclical capital buffer which we set at zero through September and off to vote again on Monday, but without advertising what that might be. But it is hard. We have a set of indicators, just to reinforce what the governor said, we have a set of indicators. We have published a plan about how we might use them, but they are just a starting place to think about this.

I do think the uncertainty that Doug pointed out points me to being a little proactive on this. We want to get the countercyclical, I would want to have the countercyclical capital buffer high enough that when an adverse event occurs it can be released and the markets would be comfortable with that and the markets wouldn't be putting a higher thing on there.

So I think there's a little premium on being a little bit forward-leaning with this capital buffer, but it is true that I think everybody is kind of getting --

MR. WESSEL: So you had to decide when is there a little bit too much credit going out and you're starting to get too close to what looks like some kind of peak --

MR. KOHN: Or too much leverage either among the lenders or among the borrowers, too much credit going out? And that certainly hadn't occurred in the United Kingdom. The credit growth has been very slow and capital's building up, et cetera. But we have about 30 indicators or so that we're looking at, looking at particular sectors, because we have authority for sectorial capital requirements, as well, particularly for residential and non-residential (inaudible).

MR. WESSEL: And, Governor Brainard, the Fed not yet at that point. You haven't yet had to decide whether to impose them. You're still coming up with a system?

MS. BRAINARD: So actually we've put out the rule last year and we've made clear what the maximum could be. And the next step will be to put out the sets of indicators --

MR. WESSEL: I see.

MS. BRAINARD: -- that would trigger activation and, you know, some more detail on what would trigger activation and what would trigger deactivation. If I'm not mistaken, though, we differ from the UK in that at each of their quarterly meetings they actually take a vote on this. That's not something that is at least built into our statute.

MR. WESSEL: In the back?

MR. KEHOE: Hi. It's John Kehoe here from the Australian Financial Review. Governor, if there is more periodic volatility in the bond markets such as we saw on the October 15 flash crash in the Treasury market because of less market makers, potentially because of new regulations that have been brought in, to what extent is that actually as much of a concern to the Fed given that a lot of the institutions holding these securities now are not actually the taxpayer-backed banks that the Fed regulates?

MS. BRAINARD: Should I answer that?

MR. WESSEL: Yeah.

MS. BRAINARD: So, of course, you know, we're very actively monitoring instances of heightened volatility. And as you know, that was coming off a period of historically unusually low volatility, but we do think that it's important to understand what the sources of that potential volatility are. Again, is it a change in market structure? Is it a change associated with technology? And market participants are going to also have to adjust their expectations, you know, if, in fact, there have been some changes in technology or market structure that are likely to affect on an ongoing basis the way markets adjust.

MR. WESSEL: I think what he was asking was does it matter to you who holds the Treasuries, whether it's a bank or some non-regulated deposit insurance thing, and my sense is your answer to that is you're concerned about the Treasury market no matter who owns them.

MS. BRAINARD: Well, I think we're concerned about volatility that's unusually -- spikes in volatility in a whole variety of different markets and what the underlying mechanisms for adjustment are.

MR. WESSEL: I think there was another one back there? Ari, I think? No. Here's one here on the aisle.

Oh, I'm sorry, go ahead. We'll take both those and we'll see where we are.

MR. AMAN: Okay, thank you. I had a quick question to follow up on --

MR. WESSEL: Can you identify yourself, please?

MR. AMAN: Oh, sorry. My name's Joe Aman and I work in asset management. And I just had a quick question to follow up on the point regarding the ability to kind of regulate and monitor sector-level risk.

So there's been a lot of discussion about the credit and real estate sectors. I was wondering if any consideration's been given to the equity market and how those derivatives and environment of (inaudible) increasing repurchasing or kind of increasing relative to the notional size of the underlying equity market and if there's any macro-prudential regulation around that.

MR. WESSEL: Okay. And then in the aisle here, Ari.

MR. SNYDER: Dave Snyder, Property Casualty Insurers Association of America. Earlier this fall, Governor Tarullo, before a Senate committee, basically commented that traditional insurance doesn't generally give rise to systemic risk and insurance companies tend to be countercyclical in their activities. So my question is sort of how would you apply some of the notions that you've talked about to insurance companies and kind of what's your view in looking at that sector? Thank you.

MS. BRAINARD: So I think I'll go backwards on this one, as well. So, as you know, the Fed inherited some responsibility for supervision at the holding company level, both through the thrift holding companies that now oversees, but also since FSOC -- the Financial Stability Oversight Council -- has designated some primarily insurance groups as systemic. We have, I think, a pretty good sort of analysis that differentiates the insurance business model very clearly from a banking business model. And I think, you know, our preference, of course, would be to be able to do that holding company level supervision with a very clear ability to differentiate the kinds of capital requirements that would be required. Insurance companies have different kinds of stress tests that they've traditionally seen as kind of the industry standard.

We, at the moment, I think that would be the very strong inclination certainly of myself and some other members of the board. What we have to sort of navigate is that we have some requirements, particularly the Collins amendment, under Dodd-Frank which would constrain the way we impose capital requirements. And so, you know, Congress has been active on this and I think there's reason to be hopeful that they could move legislation that would permit us to treat traditional insurance appropriately in terms of the right capital model.

MR. WESSEL: The other one was about derivatives and whether that --

MS. BRAINARD: Yeah, so, again, I think to the extent we have the data, we look across markets and we're really looking for stress across the financial system because it does have potentially important systemic consequences. There are a variety of tools in the equity space that are also quite relevant, like the global margin requirements or the margins that we are exploring under our authority. But you're right that we are not implementing a particular macro-prudential policy instrument at the moment in that space.

MR. WESSEL: You mentioned in your speech a number of times the phrase "regulatory perimeter." And isn't there a risk here that you'll make the institutions on which you focus stronger, but the risk won't leave the system and more of it will go to the shadow banking system where we have less transparency and maybe less capital? And how do you think about that tradeoff?

MS. BRAINARD: So we think very actively about that tradeoff. We are trying to get as much data and insights into the non-regulated part of the financial system as we can. And obviously the Office of Financial Research was instituted under Dodd-Frank to help facilitate the exchange of information between some of the agencies. You have to remember that, you know, we don't have access to some of the data that other regulators collect at the moment, and so we're trying to navigate that. But we're very kind of vigilant and we want to increase our ability to do, at minimum, surveillance of the shadow banking system.

Does that lead us to be less rigorous in overseeing the institutions that are under our supervision? Absolutely not. So we have to and should and are committed to very rigorously supervising the institutions that are under our authority.

MR. WESSEL: Don, do you want to have the last work on that or anything else?

MR. KOHN: I agree with everything Governor Brainard said there. (Laughter)

One advantage maybe that we have is dealing -- this goes back to the first question you asked -- dealing with many fewer authorities. So we have, on occasion, gone to the Financial Conduct Authority, for example, and asked them to collect additional data on institutions, like hedge funds and other investment funds, on which their data collection is not as complete as you might want.

For example, an example just in the last six months was on interest rate risk. So we can test the banks and the Prudential Regulatory Authority has oversight over insurance companies, so they can look at those. But there is a regulatory perimeter in the UK, as well, but the FCA seems to be able to get information. We can ask them and they're very receptive to getting that information.

We are required by law every year to send a report to the chancellor about the regulatory perimeter and whether we think there are additional authorities required. So that's a very, I think, useful discipline to make us think about what the effects of this.

Now, the non-bank financial sector in the UK, particularly for UK credits, is not nearly as well developed as it is here in the U.S., but it could and we'll have to watch that.

MR. WESSEL: I think I just want to follow up on one thing you said before. So you mean that after all we've been through and all of Dodd-Frank and all of FSOC, there's still issues about whether the Fed can see data that other agencies collect and vice versa?

MS. BRAINARD: Yeah, so this is taking some time. And, you know, again, I think just to be kind of more detailed about how we work with other regulators, we work with the market regulators, with the other banking agencies every day. We cooperate in terms of joint supervision, assessments of risks. It's not only the kind of episodic interactions through the FSOC, but the FSOC, of course, is very important, as well. But there are legal impediments to sharing some information that we've encountered with some of the market regulators, for instance. And it is a big piece of the work at the OFR is to try to develop Memoranda of Understanding or other legal mechanisms that allow some of that information, which you have to remember is supervisory confidential, a lot of that information, to be shared among the regulators.

But, yes, that's a very important impediment. We're actively working with others to overcome it, but we have not overcome it.

MR. WESSEL: Okay, with that, Governor Brainard's remarks, which are somewhat -- the longer version is on her website and the video of this conversation will be on our website, but please join me in thanking her for her time. (Applause)

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