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WHAT HAPPENS WHEN A BIG DOMESTIC BANK FAILS?

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P R O C E E D I N G S

MR. KLEIN: Good afternoon. (Laughter) My name is still Aaron Klein. I'm still a Fellow in Economic Studies and Policy Director on the Center for Regulation of Markets and it is still a rainy Wednesday afternoon and you all are still in the room. So, thank you for choosing to spend your time with us discussing what I think is a very important issue precisely because it is not a topical issue, which is what to do and whether we are prepared to -- and have incorporated the lessons from the prior recession on what to do should a domestic, but still large, not giant, not one of these globally systemically important financial institutions, but a large and important domestic institution run into trouble.

I want to talk about it now and I am so thrilled that we're joined by and to receive the wisdom from many of our speakers. Now, when everything looks fine, and I'm going to start by asking everybody here to kind of introduce the topic, a question which was what was the first year in American history in which not a single bank failed? The answer to that question may surprise you. It was not until 2005 that America experienced a calendar year without a single bank failure. In fact, from the period of 2004 to 2007 for 32 months, not a single bank failed. It was the longest period like that in American history featuring not one, but two years without a single bank failure.

At the time, I can recall many bank regulators talking about what a successful job we'd been and how wonderful the banking system in the United States was, as evidenced by no bank failures. I think all of us in the room can appreciate the 2005 and 2006 were not the apex of safety and stability in the U.S. financial system. It remained that way, in fact, 2000 after the great crisis between 2013 and 2017, a small, but a decent number of banks failed every year. I'd define this as less than 25. 2018, however, marked only the third year in American history, where not a single financial institution failed. And there has been one failure so far in 2019 of a bank. I won't get into the exact root causes of failure, but it was just one and it seemed like it was tremendous amounts of fraud.

And so it is, I think, precisely during the period in which all institutions are seemingly doing well together, that it's important to consider. Are we prepared for a scenario in which many institutions, particularly some that are sizable or not. And I can think of no better person to lead us in that

conversation than Martin Greenberg. Marty has been at the FDIC board serving as chairman, vice chairman, currently a member of the board for 14 years now. Prior to that, Marty was involved in every major piece of financial services legislation that occurred for a generation going back to and through the cleanup of the last set, great wave of bank failures in the savings and loan crisis. It spawned the reforms of FDIC and FIRIA (phonetic), which ultimately reshaped the agency upon which now he serves.

Prior to that, Marty's distinguished experience in the United States Senate and the Congress. He is a graduate of North Western and a Fellow Princetonian. And Marty's career and his public service both in Washington and through the FIDC fundamentally globally where he's headed and served on multiple agencies to help spread the importance and value of deposit insurance and financial services resolution capability and authority in a global context really embodies the Princeton motto of a service of this nation and the service of all nations. So, join me in welcoming Marty both to Brookings and thinking Marty fruit's fantastic work so far at the FDIC as we hear from him what we ought to be thinking about, about the potential problems in the resolution of a large domestic financial institution. Thank you, Marty. (Applause)

MR. GRUENBERG: Oh, I should quit while I'm ahead, I think is -- Aaron, thank you for that very generous introduction. And there is a certain symmetry I have to confess, if not déjà vu because I did join the board of the FDIC in August of 2005 and the FDIC had, at that time, gone through in the longest period in its history with a bank failure -- without a bank failure. And when I was seeking the nomination to the board back then, this is true, somebody asked me, well, why do you want to go to the FDIC? Nothing's happening in the banking industry. You'll be bored over there. You won't have anything to do. And I said, at the time, I don't really need a financial crisis to be interested in banking regulation and all things being equal, I would just as soon not have a crisis occur if I have the privilege of serving on the board of the FDIC and that was August of 2005. And then 2006, we really had the first inklings of problems in the mortgage market. 2007 we had a full-scale meltdown of the mortgage market in the United States; in 2008, we were in the midst of veneer catastrophic collapse of our financial system, followed by the most severe recession since World War II.

And I must say there is a certain sense of déjà vu when Aaron referenced and we did not have a bank failure in the United States in 2018. In fact, we went through an 18-month period without a bank failure until a small institution in Texas failed earlier this year. So, you would think the lack of bank failures would be a reassuring sign. I must say for me it's, it's as much of a red flag as anything else, particularly at this late stage of an economic recovery with the buildup of underlying risks in the financial sector and the possibility of a downturn at some point.

I couldn't resist referencing that with Aaron's introduction, but certainly the subject I want to talk about today is relevant to all of that. So, let me begin by thanking Aaron and the Brookings Center on Regulation and Markets for inviting me here today. The subject I'd like to discuss, the resolution of large regional banks in the United States as Aaron pointed out, has received relatively little attention during the 10 years since the financial crisis of 2008, 2009. Most of the attention appropriately has been on the challenges posed by the resolution of global systemically important banks is so called G-SIBs. However, regional banks, which for the purposes of today's discussion I'll categorize as banks with assets between $50 and $500 billion pose very significant resolution challenges to the FDIC that are quite distinct from those posed by the so-called G-SIBs and quite distinct from the smaller community banks.

Their size, complexity, reliance on market funding and uninsured deposits would present very substantial risks in resolution with potential systemic consequences. So, I view today's program as an opportunity to have a public discussion about the risks and challenges presented by the resolution of large regional banks. Now, in order to establish a common baseline of understanding for our discussion, I'll begin with a brief description of the FDIC's resolution process under the Federal Deposit Insurance Act just to set the framework. I'll then discuss the distinct and underappreciated challenges posed by the resolution of regional banks. And finally, I'll conclude with an overview of the actions taken by the FDIC today to address these challenges.

So, let me begin just with the nuts and bolts of the FDIC's resolution process under the Federal Deposit Insurance Act. Now, under the FDI Act, the FDIC has the exclusive authority to act as the receiver or the liquidating agent for failed federally insured depository institutions. Now, as the FDIC's

resolution handbook describes, when a bank fails, the chartering authority typically revokes the bank's charter and appoints the FDIC as receiver. They basically hand the failed institution over to us.

The chartering authority is the Office of the Controller of the Currency, the OCC for nationally chartered banks and the state banking regulator for the state-chartered institutions. Now, prior to failure, the chartering authority notifies the FDIC that the bank is in trouble. Of course, a supervisory process that may already be underway to avert the failure of the institution, but for the purpose of the discussion today, we're going to assume that the bank will fail. Since the passage of the Federal Deposit Insurance Corporation Improvement Act of 1991, for those of you in this business that's FDICIA, the FDIC has been required to choose the resolution method as a matter of law that's least costly to the FDIC's Deposit Insurance Fund. This is a so-called least cost test.

Now, as a general matter, the FDIC has two options for the resolution of a failed bank. First, the FDIC can sell some or most of the assets of the failed institution to a healthy acquiring bank, which would generally assume all the deposits or only the insured deposits of the failed bank along with some or most of the remaining liabilities. This is generally called, and I'd like you to remember this term, a purchase and assumption transaction. It'll figure into the later discussion. PNA, purchase and assumption -- those assets and liabilities not included in the transaction remain behind in the receivership administered by the FDIC.

Now, second term I want you to remember a special type of purchase and assumption transaction that is used when additional time is needed to market a failed bank is a bridge bank -- purchase and assumption in bridge bank. Although a bridge bank is not commonly used, it has particular application to the resolution of a large regional bank. So, I'm going to come back to that as well. A bridge bank is a bank chartered by the OCC and temporarily owned and operated by the FDIC to "to bridge the time" between the date of failure of the institution and the date of sale to another acquiring bank. A bridge bank is established only if it is projected to be the least costly resolution alternative for the Deposit Insurance Fund and before establishing a bridge bank, a cost analysis has to show at the franchise value of the bank, of the failed bank is greater than the marginal cost of operating that bridge institution that's

being less costly than a payout of insured deposits. And this is where it becomes relevant, particularly to the regional institution. A bridge bank may be utilized when a troubled bank fails suddenly, generally, because of liquidity issues, preventing timely marketing of the institution.

When the failed bank is too complex for potential bidders to conduct due diligence in the normal timeframe to submit a bid that accurately captures the franchise value of the failed institution or both. These are the reasons the bridge bank option has particular applicability to large regional banks. And I'll come back to these points on complexity in liquidity. If the FDIC does not receive any acceptable bids for a purchase and assumption transaction, or the bridge bank is not the least costly option, then the FDIC will execute what's called an insured deposit payout, which is the second option available to us in resolution.

In an insured deposit payout, the insured deposits are paid in full and all assets and the remaining liabilities of the failed bank go into an FDIC receivership for liquidation. So, since 2007, the onset of the financial crisis, the FDIC has served as receiver for over 525 banks. Only nine of these failed banks had assets over 10 billion. Nine of the 525, the overwhelming majority, over 98 percent had assets under 10 billion. It tells you which banks have failed during this crisis and post-crisis period.

Approximately 95 percent of resolutions conducted by the FDIC since 2007 involve purchase and assumption transactions generally involving a single acquire. Assuming nearly all of the failing banks' liabilities. This resolution approach, particularly applicable to community banks, is generally the least disruptive, both to the depositors and the local community and the easiest for the FDIC to execute. Only 25 banks since 2007 were resolved through insured deposit payouts reflecting the general availability of acquirers for purchase and assumption transactions for these smaller institutions, which were the overwhelming majority of banks that failed during and after the crisis.

In only three resolutions since 2007 was a bridge bank utilized and only one of those three cases involved in institution with assets over $10 billion. And this really leads into the discussion of the challenges posed by the failure of a large regional bank and why it is really quite distinctive from the community bank resolutions, which were really the overwhelming number of resolutions done by the FDIC

in this post-crisis period.

So, let's talk about regional large bank resolution. As of the second quarter of this year, there were 39 banks in the United States with total assets between $50 and $500 billion. Collectively, those banks hold about $6 trillion in assets or nearly 33 percent of banking industry assets. So, they are a big portion of the banking industry in the United States. They hold $4.3 trillion of deposits, or about 31 percent of total deposits and those deposits are held in 189 million deposit accounts. Now, of those deposits, 1.8 trillion, approximately 43 percent are uninsured. That's based on both the average and the median, but the average and the median are right around 43 percent.

These uninsured deposits typically would include business payroll accounts; deposits from large not-for-profit institutions; and individuals with large balances such as retirees. The size of these institutions by definition limits the universe of banks with the capability to acquire them if they fail. I mean, this is pretty self-evident. The criteria used by the FDIC to select potential bidders include assets size, capital level, regulatory ratings, geographic location, and minority-owned status. Even a $50 billion bank would be a substantial acquisition for a very large bank to absorb. At the top of the scale at 500 billion likely only global systemically important bank, one of the G-sibs would have the capacity to make such an acquisition. So, we are talking about a limited universe of potential acquirers and remember the purchase and assumption, traditional purchase assumption transactions, which are 95 percent of the crisis and post crisis resolution are dependent on an available acquirer.

Given the limited number of banks with the capability to acquire a failed regional bank through a traditional purchase and assumption transaction, there is a significant possibility, if not probability, that the FDIC would have to establish a bridge bank to manage the orderly failure of such an institution. And managing a failed regional bank through a bridge bank is a very different ballgame than when you have an acquirer and would pose a number of challenges to the FDIC. Some of these challenges would also apply in the PNA, purchase and assumption transaction, but certainly apply in two at bridge bank.

First, and let me just walk through these. Even though regional banks generally don't

have the extensive international operations and diversified non-bank business lines that characterize the global institutions, the G-SIBs, many of these regional banks nevertheless, have large branch networks; substantial IT systems; and, millions of account holders. Is complexity certainly as compared to the smaller community banks would make the management of a bridge bank a very significant operational challenge for the FDIC. As somebody who sat on the board, I'm going to come back to this during the crisis, take my word for it.

Second, regional banks rely to a greater extent on credit sensitive market funding and smaller banks. They're this more susceptible to a rapid failure caused by a lack of liquidity greatly complicating in orderly resolution. Third, the sheer volume of accounts held by these institutions would pose a large challenge to the FDIC to make a rapid determination over the famous weekend after failure of the institution as to which accounts were insured and which accounts were not. And believe me, that matters.

As or the second quarter of 2019, these regional banks had an average of 4.8 million deposit accounts with 27.4 million deposit accounts at the institution at the top of this range. A rapid determination and payment of insured accounts is essential for an orderly resolution. Fourth, unlike the global institutions which are required to maintain a minimum amount of long-term unsecured debt to absorb losses in the event of failure, regional banks are not subject to such a requirement. As a result, there is significant variability in the holdings of unsecured debt by regional banks.

On average, these banks hold 3.9 billion in long-term unsecured debt, which is about 2.5 percent of total assets. While five of these banks hold long-term unsecure debt of 4.5 percent or more of total assets, eight report no long-term unsecured debt. So, depending on the institution, a buffer of unsecured debt to absorb losses in resolution might, or might not be available. And finally, the heavy reliance of these institutions on uninsured deposits would pose a very significant resolution challenge. As I mentioned, the most recent call report data indicate that on average about 43 percent of the deposits at regional banks with assets between 50 and 500 million are uninsured. Although the FDIC's resolution experience indicates that call report data generally overstate the volume of uninsured deposits to some

degree, it is nonetheless clear that regional banks have a heavy reliance on uninsured deposits for funding.

In a resolution where there is no acquiring institution and possibly little or no unsecured debt to absorb losses, it is likely that the least cost test would require that uninsured depositors take losses. Given the heavy reliance of regional banks on an insured deposits, uninsured depositors' taking losses at a failed regional bank could have knock on consequences for other regional banks, particularly in a stressed economic environment. So, we have two examples from the financial crisis that illustrate pretty clearly the risks I've just talked about.

One is Washington Mutual Bank and the other is IndyMac Bank. And let me walk through those two examples because they pretty well illustrate what I've been talking about now. Washington Mutual with over $300 billion in assets at the time of its failure in September 2008 was the largest thrift institution in the United States at the time, and the sixth largest insured depository institution. Its failure was the largest in the history of the FDIC. Several factors made it possible for Washington Mutual to fail with no loss to the Deposit Insurance Fund and no loss imposed on its $45 billion of uninsured deposits, which was approximately 24 percent of its total deposits at the time.

First, there was an acquirer for Washington Mutual, with the capacity to assume all the assets and all of the deposits, both insured and uninsured of the failed institution through a traditional purchase and assumption transaction. Second, not only did the acquirer have the capacity to undertake the transaction, but because it had attempted to acquire Washington Mutual on an open institution basis, meaning before it failed prior to the failure, the acquirer had already done the due diligence necessary to enable it to in it to act quickly when Washington Mutual finally failed. This is really a critical point and third, Washington Mutual had a substantial volume of unsecured debt, $13.8 billion of unsecured debt; 4.5 percent of its total assets which was available to absorb losses in resolution. I got to tell you the word luck does come to mind here because there was nothing, nothing inevitable about this. This loss absorbing capacity was essential to meeting the least cost test and for uninsured depositors to avoid taking a loss.

If these factors had not been in place at the time of Washington Mutual' s failure, the FDIC likely would have had to establish a bridge bank and take over the operation of the failed institution. The failure of Washington Mutual in that scenario would have wiped out the Deposit Insurance Fund and uninsured depositors would likely have had to take a loss in order to meet the least cost test. Given the stress, economic and financial environment in September of 2008 those of you who are in that around, remember September of 2008 when Washington Mutual failed imposing a loss on $45 billion of uninsured deposits. At that moment could have had a significantly destabilizing effect.

The only way to avoid that outcome would have been for the FDIC to exercise the systemic risk exception available under the Federal Deposit Insurance Act in order to set aside the least cost test. That needless to say, would have been a very difficult judgment to make and illustrates the potential systemic risk associated with the failure of a large regional institution. Now, the risks of our regional bank resolution are illustrated further by the failure that occurred in July of 2008 of IndyMac, which was a $30 billion threat, so indie back was 30 billion. Washington Mutual was 300 billion.

When IndyMac failed, there was no viable acquirer and D max franchise value was pretty much zero and it had no unsecured debt. The FDIC had to establish a bridge bank, impose a loss on $2.6 billion of uninsured deposits, which was about 14 percent of the total deposits of IndyMac at the time, and then manage the failed institution over a nine-month period during which the failed institution was partially wound down and eventually sold. The lack of public familiarity with the failure of an institution of even this size was enough to cause a local reaction in lines around the institution on the Monday after failure. IndyMac turned out to be the most costly failure in the history of the FDIC resulting in a $12.4 billion loss to the Deposit Insurance Fund.

So, look, the lesson here is it's pretty clear. A $300 billion bank could fail without cost to the Deposit Insurance Fund and no losses to uninsured depositors. So, long as there was a viable acquire who could undertake an all deposit purchase and assumption transaction and unsecured debt available to absorb losses. However, a $30 billion institution, which had no unsecure debt and for which there was no viable acquirer resulted in the largest loss to the Deposit Insurance Fund in the FDIC's

history; losses to uninsured depositors, and frankly, some reaction in the local community. So, anyone who thinks that the failure of a regional bank is like a failure of a community bank is not paying attention. We have real world experience. That was very tough. And frankly enlightening.

Now, since the financial crisis, the FDIC has undertaken a number of initiatives to enhance its ability to manage the orderly failure of a regional bank, including through a bridge bank if necessary, which is a probable -- a possible, if not likely, scenario for one of these institutions. Since 2011 the FDIC has by rule required banks with assets over $50 billion to prepare resolution plans for the insured depository institution for the bank as a compliment to the holding company resolution plan that's required under title one of the Dodd Frank Act. And these IDI plans are really quite important, particularly in the case of the regional banks. The preamble to the 2011 rule stated the purpose of this requirement. The rule requires a limited number of the largest insured depository institutions to provide the FDIC with essential information concerning their structure, operations, business practices, financial responsibilities, and risk exposures.

The rule requires these institutions to develop and submit detailed plans demonstrating how such insured depository institutions could be resolved in an orderly and timely manner in the event of receivership. So, first resolution plans for the IDIs. Second, in 2014 the federal banking agencies adopted a rule implementing a quantitative liquidity coverage ratio. A company subject to the rule was required to maintain an amount of high-quality liquid assets that is no less than a hundred percent of its total net cash outflows over a perspective 30-day calendar period. This rule applies to bank holding companies and insured depository institutions with $250 billion or more in total assets.

The Federal Reserve also adopted a modified liquidity coverage ratio standard based on a 21-calendar day stress scenario that applied to bank holding companies with total consolidated assets between a hundred and 250 billion. This rule like the resolution plan rule was based on the experience from the financial crisis that the liquidity failure of a large banking organization can occur fast, very quickly. High quality liquid assets sufficient to provide a 30-day runway before failure for institutions with assets over 250 billion and a 21-day runway for institutions with assets between a hundred and 250 billion

were important requirements from the FDIC's perspective given the risks associated with the failure of institutions of that size and the value of the FDIC to having an assured minimum time of preparation before the failure of such institutions. When they talk about a runway of 30 or 21 days, where do you think that runway leads to? It leads to the FDIC. So, from the FDIC's standpoint, having at least a little bit of breathing room before one of these institutions comes down is pretty important.

Now, finally, in November of 2016 the FDIC adopted a rule requiring institutions with over 2 million deposit accounts to improve the quality of their deposit data and make changes to their information systems so that the FDIC could make a rapid and accurate deposit insurance determination to facilitate the prompt payment of FDIC insured deposits when large depository institutions fail. This is job one for the FDIC, making good uninsured deposits. As the preamble to that rule pointed out, and I quote, prompt payment of deposit insurance maintains public confidence in the FDIC, the banking system and overall financial stability. The rule applies to 23 of the 39 institutions between -- with assets between 50 and 500 billion.

Now, I want you to read this other quote to you, the preamble to that two 2016 rule stated, the broad policy concern that led to its adoption consistent with the resolution plan and liquidity coverage ratio rulemakings and this is the quote, "While the likelihood of any particular covered institutions' failure may be low at a given point in time, history suggests that the financial condition of institutions that are perceived to be in good health can deteriorate quickly and with little notice. In 2008 and 2009 several large insured depository institutions failed including IndyMac bank and Washington Mutual Bank." You can see the impact those experiences had on the FDIC. "In general, very large IDIs, Insured Depository Institutions, rely on credits sensitive funding more than smaller IDIs do, which makes them more likely to suffer a rapid liquidity failure." That was from the preamble to the 2016 rule. In addition to these rulemakings, the FDIC has been focused internally on planning for the resolution of a large regional bank because of the risks I've just talked about.

Now, if I may say based on the work done an area where additional rulemaking might be prudent to facilitate the orderly failure of a large regional bank would be an unsecured debt requirement to

assure a comparable measure of loss absorbing resources in resolution for these institutions. As I indicated, there is wide variability in regard to this among the regional banks. Now, unfortunately, instead of further measures to strengthen the FDIC's capabilities, there have recently been a number of measures finalized or proposed that would weaken or remove the requirements of these rulemakings. And for the record, I thought I should state them.

In July of this year, the FDIC approved to final rule to allow banks with 2 million or more deposits to delay from 2020 to 2021 their compliance with their requirement to improve their data and reconfigure their systems to support the FDIC's ability to make rapid deposit insurance determinations in the event of failure. This additional year extended the original three-year compliance period in the 2016 rule which took effect in April of '17. The final rule also weakened the compliance requirements that have been established to assure effective implementation of the rule. In April of this year, the FDIC issued an advanced notice of proposed rulemaking that while identifying the risks associated with large bank failure, nevertheless, seeks comment on a number of proposals that would weaken the current resolution plan requirements for insured depository institutions. For example, alternatives put forward for comment in this advanced notice of proposed rulemaking would reduce the resolution plan content requirements for these largest insured depositories, reduce the frequency of resolution plan submissions, and eliminate the IDI plan altogether for the smaller insurance depository institutions about $50 billion in assets.

Now, just yesterday, the FDIC board voted on two final rules. The board adopted a joint final rule with the Federal Reserve that would eliminate the Dodd Frank Act Title I resolution plan requirements at the holding company level with one exception for institutions with assets between a hundred and $250 billion and it would require the submission of such plans for institutions with assets between 250 and 500 billion just once every three years with the full plan required every six years, rather than every year as is now the case.

And in a separate joint final rule with the Fed and the OCC, the FDIC board approved yesterday eliminating with one exception, the liquidity coverage ratio for banking organizations with assets between $100 and $250 billion and leaving in place liquidity coverage ratio for banks with assets

between 250 and 500 billion. That would only be 85 percent of the current requirement. Given the risks associated with the failure of large regional banks, these measures, frankly, are unwarranted and misguided. They only increased the challenges posed by the resolution of these institutions and the potential for disorderly failure and they disregard the lessons of the financial crisis.

So, in conclusion, I want to again thank Brookings for the opportunity today to draw attention to the challenges posed by the failure of a large regional bank. As I indicated, I have been increasingly concerned that the attention that's been given to the failure of the global banks since the financial crisis, while entirely appropriate, may have obscured the risks associated with the failure of a large regional bank and permitted an unjustified sense of confidence to develop that the failure of such an institution would not be challenging. I believe the experience during the crisis of large regional bank failures such as Washington Mutual or even a smaller $30 billion institutions such as IndyMac illustrates the very real risks a regional bank failure would present.

Going forward, I believe that attention to this issue should be a top priority for the FDIC, the other federal state bank regulatory agencies, and for the banking industry. Thank you all very much. (Applause)

MR. KLEIN: Thank you very much. In preparing for a set of questions in your speech. I was going through what some of your fellow regulators have said about this and Federal Reserve Vice Chairman for Banking Supervision, Governor Quarrels said the following, I'd like your reaction to it or maybe we may know your reaction, which is he said, "Most firms with total assets between 100 and 250 billion do not pose a high degree of resolve ability risk, especially if they're less complex and less interconnected." That doesn't quite jive with what I just heard.

MR. GRUENBERG: Yeah. Can you all hear me? When I talk about in a justified sense of confidence in regard to the failure of one of these regional banks, I would think candidly, that comment would fall in that category. And it's not theoretical or hypothetical. We had real experiences and they were scary. Washington Mutual was scary. We caught a break. We caught several breaks with Washington Mutual. It could have been another inflection. It was bad. It could have been another

inflection point for the conference -- for that crisis if it had gone another way. And IndyMac was a really a huge challenge for the FDIC in every way. And that was a $30 billion institution, not a $300 billion institution. If we had to do for Washington Mutual what we had to do for IndyMac, it would have been a real, I was going to say challenge, a real problem. And so, if I have one point to make today, it's don't take it for granted. You cannot take, in some sense we -- if I may say, we handled all these hundreds of bank failures during and after the crisis, we being the FDIC, with little or no incident and I worry a little bit that we've lulled people into a false sense of security.

The almost all of those banks that failed were, small, relatively small community banks under 10 billion. If we had to deal with a large regional bank failure with some of the complexities I've talked about, it's a very different set of challenges with a far more significant set of risks associated with it. It's not that these risks are insuperable, but they need to be the focus of a lot of attention and planning and additional, as I've mentioned, resources and capabilities for the FDIC.

MR. KLEIN: So, let's get into that a little bit because you kind of paint a little bit of a hobbsy (phonetic) in choice, so to speak, that you can either have a failure in a bridge bank, like with what happened with IndyMac, which was at only a $30 billion institution, the costliest resolution in American history. You can get lucky and have a purchase and assumption that saves the Deposit Insurance Fund, but a corollary of that, that you kind of mentioned in your speech, but didn't delve into is, well, then the big get bigger, particularly when you talk about the upper end of the spectrum. That increases concentration in the system and ultimately can't be replicated ad infinitum.

MR. GRUENBERG: Well, frankly, that's why I put such emphasis in the discussion on the bridge bank as a tool here for the resolution. Because I think, when we're dealing with one, two, three, $400 billion institutions, the FDIC can't assume that we're going to have an acquirer. If anything, for planning purposes, we really have to assume a bridge bank scenario. And so the issue here is to get better and more capable at managing an orderly failure of a financial institution utilizing a bridge bank.

I think that is the core challenge for the FDIC. And I think we have that capability. I think we've taken steps post-crisis. The resolution plans I believe are critical. The liquidity coverage ratio is an

important liquidity buffer. The ability to make the insured deposit determination and getting these institutions to develop the technological capability to deliver the information in a timely way to the FDIC to in order to do that, those are really critically important measures to facilitate in orderly failure if one of these institutions using a bridge bank if necessary.

And I think we need to give some careful thought to this unsecured debt issues since it played such an important role during the crisis. So, I would hope the choice is not a hobbsy in one. I would hope the choice is a manageable one, but we got to work at it. It needs to be a top priority and we have to certainly preserve the measures that we've taken to strengthen that capacity post crisis. And we may have to consider additional connections.

MR. KLEIN: So, I want to turn to the audience because there's some real experts in the room, but I want also dig in a little bit on the resolution plan, which is frequently called the living wills. Kind of a catchy turn of phrase and some people make the argument that a living will is like your will. It's really important to do it the first time. It's somewhat, it's important to do after major life events, but you don't need to update your will every year if nothing big has changed. And that seems to be somewhat of the logic behind the rules that as you described, change the time horizon on living wills. So, how would you respond to that argument that you don't need to update your will on an annual basis? Why should they update it?

MR. GRUENBERG: Okay. There's room for some accommodation here. I think our experience with the living wills suggest, going from an annual to a bi-annual every two years submission would be pretty reasonable from the standpoint of the bank's preparing the resolution plans and the standpoint of the agency's reviewing them. I do think for the institutions and the $250 to $500 billion category, going to a three-year cycle with a full plan every six years, I mean to me that attenuates this process to an extreme and a full plan every six years starts raising a question as to how meaningful and relevant the plan will be.

And look for institutions between a hundred billion and 250. The Title I holding company resolution plan requirement has been discontinued with one exception. And those plans, those hundred

to $250 billion institutions are big banks and those plans have a lot of (inaudible).

MR. KLEIN: So, let's also, one of the things that flagged in your speech, you talked about the complexity of IT systems and sometimes I think we think that when we see an institution of that size, it's always been of that size, but the secret in American banking is we used to have 16,000 banks. Most of -- many of the institutions in that have grown through acquisition and organic growth over decades, which leads to some of the increased complexities in underlying systems below. If you had a $70 billion institution today and it grew through a combination of organic growth and acquisition, how big could it grow until it has to create a living will and for how long would that last going forward? Because the ones that were originally captured from one to 250 at least had one before that requirement was removed. What does the outlook look like going forward in that context?

MR. GRUENBERG: Let me tell you, a $50 billion bank are pretty big bank already and already pretty complicated with some substantial IT systems, large numbers of deposits. And I would not take for granted the orderly failure of -- and the universe of potential acquirers at the $50, $60, or $70 billion level is pretty limited as well. So, we require plans at the bank level, at the insured depository institution level from 50 billion on up. I would not want to give those plans up. I think those plans have value and they enhance the FDIC's ability to manage the orderly failure of these institutions. I do not think the cost is enormous for the institutions involved. And the downside risk based on experience is, can be very high.

MR. KLEIN: I know we could talk all day about this, but let's open up the conversation to folks in the audience. And please be brief and identify yourself and ask a question. Go right in.

MR. ROLAND: Neil Roland, MLX news. For those of us who are the opposite of experts, can you use some brush strokes to depict please the scenario that would ensue or could ensue with a bank failure, particularly if these institutions are not so interconnected as Vice Chairman Quarles suggests?

MR. GRUENBERG: Well, we have the real-world example of Washington Mutual and the real-world example of IndyMac and had Washington Mutual failed, Washington Mutual did fail, but we had

an acquirer that made an all deposit acquisition, meaning, all of the depositors insured and uninsured were passed along to Washington Mutual and no one took a loss. It was $45 billion of uninsured depositors. If in September of 2008, Washington Mutual had not been acquired and we would have had to, we being the FDIC, would have had to take over Washington Mutual ourselves and own and operate for a period of time. A couple of things; and uninsured depositors would likely have taken losses.

The millions of uninsured depositors at other banks, I don't want to get carried away, but they might have taken notice that insured depositors at Washington Mutual were taking losses. And in September of 2008, where they insured? Were they positive their institution wouldn't get into trouble and might not that have affected their actions in regard to their deposit accounts?

If the FDIC had to assume the operational responsibility for that $300 billion thrift institution with a large branch network that was national in scope that would have been a heck of an operational challenge for the FDIC. There were a lot of knock on risks that the failure of a large regional bank could have posed to the financial system. Certainly in that scenario and even outside of an extreme crisis scenario the inner bank relationships of these large regional institutions as well as the reliance on uninsured depositors are significant risk factors.

So, all I'm saying is these are not your local community banks. These are large, pretty complex institutions with very large numbers of deposit accounts.

MR. KLEIN: So, I think we have time for one more question, Burt.

QUESTIONER: Thank you. Thank you, Marty, for your remarks. You talked about what the potential consequences were of Washington Mutual or WAMU's situation. But I'm wondering when we take a look at even a smaller situation, I think of first frontier in Greeley, Colorado was liquidated in 2014 had some serious economic effects. Are we possibly at a point where we need to be realistic as a nation and politically about what the downsides are of liquidating a large bank in specifically trying to impose losses on uninsured depositors? And are we possibly at a point where the Federal government just basically asks us, throw up a chance and say if there is a financial crisis, if there's a large financial institution in trouble, we have to protect, the Federal government has to protect all of the liabilities of that

bank and not just insured deposits?

MR. GRUENBERG: Well, look, that's obviously the deposit insurance coverage is a statutory standard established by the Congress. So, in some sense, the question you're asking, if I may say is a bit above my pay grade. The coverage was as significantly increased during the crisis and made permanent from a $100,000 to $250,000, which was a very substantial increase and reduced the number of uninsured depositors. It's a tough policy call as to whether the notion of large depositors not being protected is designed to ensure a measure of deposit or discipline in terms of placing deposits at institutions. That's a long-held value that really goes back to the creation of the FDIC in 1933.

So, I'm not going to suggest that we should have unlimited deposit insurance in the United States, but we clearly need to be very conscious of the risks involved when you're dealing with the failure of institutions with the large amount of uninsured deposits because it does present a risk.

MR. KLEIN: Great. I'll add code of the increase in that deposit insurance, I mean, it wasn't a well, in my opinion, a deeply articulated in debated moment. It occurred for those who may recall after the first proposal of what is known as TARP was voted down in the House before the second version was brought back. So, the original proposal for TARP, which was voted down, did not contain that. It was only after the crisis metastasized after the vote that then that was added by Congress functionally to get more votes because you weren't going to pass any piece of legislation without the votes. Join me in thanking Marty for his (Applause).

MR. GRUENBERG: My pleasure. Thank you.

MR. KLEIN: We'll start. Let's call up the panel. Has everybody takes -- come on up and take your seats and Victoria Guida is going to lead our conversation. Many of you know Victoria because you see her in your inbox when you read Morning Money in the morning. You see her bylines and quotes, you see her presence on Twitter. I was recently talking with one leading policy expert in financial services, who called her simply the best reporter he's seen out there in the world today in financial regulation. So, it's our great privilege to welcome you to the Brookings stage and I'll let you introduce the great panelists. Thank you for joining us.

MS. GUIDA: Thank you so much for that kind introduction. And thank you and thanks to Brookings for hosting this event. I have three people here with me who have more than enough direct experience to dig into the issues raised by Director Gruenberg. I'm going to give very abridged versions of their resumes because I'm sure most of you are familiar with their work. Next to me is, Sir Paul Tucker who was a deputy governor of the Bank of England from 2003 -- I'm sorry, 2009 to 2013. And now he chairs the Systemic Risk Council. Next, we have Jim Wigand who experienced the FDIC bank resolution process up close and personal as head of the FDIC's office of complex financial institutions. And last, but not least, we have Kieran Fallon, who is a Senior Deputy General Counsel at PNC and he spent many years as associate general counsel at the Fed.

So, I'm going to take up most of the time here, but I'll reserve some time for questions at the end. So I want to start with last week the Fed moved to ease some regulations on a lot of the institutions that we're talking about. Banks bigger than $100 billion in assets, but not designated as important to the global financial system. So, where I want to just start is, Paul, I know the Systemic Risk Council has raised some concerns about what that proposal might mean. So, my question is do you think that this will affect the likelihood of some of these institutions failing?

MR. TUCKER: It will. So, I think the Fed has made a mistake. What they've done is they've reduced equity requirements for some banks, reduced liquidity requirements for some banks. But then as Marty Gruenberg said, they have relaxed resolution planning requirements for a number of regional banks and have abolished resolution requirements for banking groups with total assets of between $100 billion and $250 billion.

You've framed the question, Victoria, in terms of does this increase the likelihood of failure? But I want to answer it in terms of yes, a bit, but also has it affected the capacity of the authorities to cope with failure when it occurs? And that is the single, in this area, that is the single most important question. I think that completely abolishing resolution planning for banking groups between $100 billion and $250 billion is a decision that no reasonable regulator could reach. And I am -- for those of you that are lawyers, I'm using a test in English administrative law and that's a gentler test than the hard look test

that is applied here. I think the FDIC has it in its power to remedy this if rather than following the same calls for the resolution of insured depository institutions, IF it changes calls and actually is Director Gruenberg add the possibility of this. The SRC has said has positively propose this actually requires regional banks to issue bonds, so that after the equity is exhausted, the losses need to go somewhere.

That's the approach taken in Europe. This business of requiring so-called bail-in bonds to be issued only by G-SIBS. That's a U.S. thing and it's a U.S. thing that flows from the fact that Dodd Frank had to be passed by the autumn of fall of 2010 and that was only two years after the (inaudible) of the crisis and thinking hadn't developed by then.

So, yes, I think a big mistake has been made. A mistake that no reasonable regulator could take. And in one part of it, which is that's quite a big thing. That's quite a criticism. I want to make that absolutely clear. But I think this can be remedied and should be remedied and I hope will be remedied by the FDIC. The other thing I'd say is that one of the things that surprises me, I've been on both sides of the Atlantic, but certainly here is, that office holders don't have the sense of fear, which certainly gripped their predecessors only a few years ago. And I'm genuinely surprised about that, that sense of, Oh my God has passed so very quickly, and this is not in the interest of the American people.

MS. GUIDA: Yeah.

MR. KLEIN: So we'll just go down a line here. I echo Paul's comments that the probability of failure has increased and that's because when capital ultimately is the cushion that absorbs any potential loss that one of the financial institutions will take as a result of either a macroeconomic event, or just the fault of the institution's management and idiosyncratic characteristics of its own portfolio.

It's capital is what absorbs loss and any decrease in that will increase the probability of failure, however, that has to be balanced against the fundamental economics of the capital structure and the marketplace associated with the risk profile of the institution. So, ultimately this is and has been debated for years, if not decades, as to how to balance those two factors. And the way you framed the question, Victoria, which way is that, yes, the probability willing for increase, but the question is how does that balance against the risk?

Well, there are other components, I mean, liquidity is certainly one which Marty alluded to in his comments that the runaway to a failure is increased timewise. If an institution has sufficient liquidity to keep its operations going, and if that timeframe is compressed, that one rate is compressed, then to Paul's comment about the regulator's capacity to deal with the problem becomes more…

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…more difficult. So, liquidity in the resolution context doesn't necessarily change the probability of failure, but it does influence it. But really it has a more material impact on how failure comes about or how it facilitates the ability of regulators or other persons to deal with the failure. And so that that is an important component of liquidity.

And then with respect to resolution planning it's a little surprising that an aspect of human behavior is kind of not been discussed or really brought to fore about this. And that is, with respect to the process itself, the planning process itself, at the institutions who put together the plans a really high degree of resources had been dedicated over the past seven years in that effort. And the people who work on those plans have the institutions took the exercise very seriously and had a great cooperation ultimately by others within the organization to put together a very strong planning process and a robust product that the regulators in turn would review.

As you extend, basically, when those due dates come about, the natural tendency will be to remove resources and the people who work on that will be directed to other work streams and the organization itself will just by its very nature of not having to focus on it, not focus on it. And ultimately the question is how much has that process been baked into business as usual processes elsewhere outside of the resolution planning stream, such that resolution is taken into account as any type of changes in the structure or market footprint operations, acquisition plans, cross-jurisdictional activity. The list is endless, but ultimately is, how much has that been baked into the process so that, in fact, the institution is going to be able to actually have a resolution I capability to deal with the resolution, or the regulators have the capability to deal with a resolution in the event that it actually were to fail.

And so that is really something that's been missed. The timeframe people think, "Oh, the

product just becomes stale." Well, it's actually a larger issue than the product becoming stale.

MS. GUIDA: Right. Yeah. And Kiernan, I want to bring you in on this too, and I'm also curious your response to Director Gruenberg's proposal and Paul brought it up here too about this idea of requiring (inaudible) debt for more than just the mega banks, this, this T lack (phonetic) proposal. So, your response to some of the points they brought up and what do you think about that?

MR. FALLON: Sure. So, I think theoretically you have to agree to the extent capital levels are reduced. It does increase the probability of default, but I think it's a matter of degree. I think the proposals that were recently finalized by the agencies don't really gut what were the core capital liquidity requirements that were enacted after Dodd Frank. I think all would emit, including my organization that capital and liquidity levels were far too low before the crisis. They've been substantially increased after the crisis. And I think these recent rulemakings fine tune those requirements to some extent.

If you take a look at the at least the Federal Reserve's estimates on this, their estimates were that the capital changes that were recently adopted would alter capital only about 60 basis points in terms of risk weighted assets. And in terms of high-quality liquid assets, the liquidity requirements, the changes would only reduce those requirements by about 2 percent. For institutions that have more than a hundred billion dollars in assets, those organizations would also still continue to be subject to the Federal Reserve's Section 165 Liquidity Stress Test requirements. So, for many organizations, those requirements are themselves your binding liquidity restraints. So, for those organizations, these modifications really wouldn't alter the amount of high quality liquid assets they retained in order to make sure that they have adequate liquidity in terms of a crisis.

With respect to resolution planning, resolution planning is important. And as Jim said, organization's subject to those rules after Dodd Frank and those institutions IndyMac and WAMU and Nat City who we acquired in the crisis, didn't, weren't required to have resolution plans. That was a very fundamental changes that was put in place by Dodd-Frank. Our organization, I can't speak for everyone, but I don't, I assume have invested substantial resources in that. We've gone through several iterations

of our resolution plan with feedback from the Fed and the FDIC as appropriate.

They had largely reached steady state. That's not to say that there wouldn't be material changes in our organization going forward, or at some point the credit cycle is going to return. I agree with what Marty said, when things look really good are the times that you should be concerned. Credit cycles come and go and woe are the bankers that always think, housing prices go up and your corporate customers are not going to not going to fail. We've seen this show before. We'll see it again. Resolution plans are really important.

I do think the, the agencies still have the flexibility to request a resolution plan in case the circumstances changed. So, that three and six-year timeframe that are generally within the rule for filing, at least for a triannual filer like, PNC, a full and targeted plan aren't hardwired in the sense that they can't be changed. The agencies can change those timing, that timing if it's appropriate, if economic circumstances change and institutions actually have an obligation to update their plans if they do go undergo and material merger acquisition, or something else that would fundamentally change your resolution strategy.

So, all in all, I think, is the balance there right? You'll have to see how things play out. I mean, if indeed situations get worse and the regulators don't exercise their authority perhaps for particular institutions to accelerate those resolution plans then, I think, I would, I would agree that would be a concern, but it's too early to say that yet.

MS. GUIDA: I kind of want to ask a more provocative question. I mean, given what we were just hearing about Washington Mutual and basically how the stars aligned when it came to dealing with the failure of that institution -- I think I'm going to pick on Jim for this one, are any large regional banks too big to fail?

MR. WIGAND: It's a very good question. And I think the answer is one of looking at the context of failure, circumstances of failure. There was even a debate when Washington Mutual failed as to whether or not its failure would be systemic. And the systemic element of that was not the fact that uninsured depositors might be taking a hiccup. We looked at that issue and we're concerned about such

a large number. So, that was kind of a clear case. If uninsured depositors took a haircut, there would be a contagion effect in the midst of a financial panic associated with that because others would look at their financial institutions saying, I'm not going to take a risk. I'm going to withdraw all my money. You would have runs. Ultimately, that's what caused Washington Mutual to fail was a run on its deposits. That's what -- well, that was the immediate precipitating event. Obviously, it had capital issues fundamentally.

But any large regional bank or regional bank if it were a standalone failure and in the midst of a healthy, a very healthy economy, a very stable financial system depending on its degree of integration with the rest of the financial system and cross-jurisdictional issues, so, already, I'm starting to building things, might be able to fail without being called too big to fail. But if you're in the midst of a financial panic and it appears that uninsured depositors would have to take haircuts and bond holders might have unexpected losses. And the key word there is unexpected because I think with the T lack requirements associated with the G-SIBs, there is now an expectation that that will be low a loft bearing debt class. But I'm not sure to the extent that type of thinking has filtered down into the tiers underneath the G-SIB level. There might be cause of concern about what a deep stabilizing effect the failure might have on the financial system. So, it's a difficult question to ask, but it is very, very concerning that they certainly could. Put it that way.

MS. GUIDA: Seems like Paul has some thoughts.

MR. TUCKER: So, my answer to your question, is there is absolutely no need for these institutions to be too big to fail. But if the Fed and the FDIC remain where they are, they could end up being too big to fail. So, the answer to you asked earlier, what could go wrong if one of these things, so this bridge bank thing, it's a euphemism. It's temporary nationalization while the FDIC, or in my country, the Bank of England looks for a plan. And then the question is, when someone doesn't buy it from you, where do you put the losses after equity, After bonds? Do you put the losses on uninsured depositors?

If you do, the grave risk would be that the uninsured depositors of other regional banks would say, this is, you mentioned no interconnections. This is, you don't have to have direct interconnections. You just have to have similarity of structure. I'm an uninsured deposit or have this

regional bank. I just had my deposit haircut has to 50 percent or whatever. That's going to be in the newspapers. People will take their uninsured depositors uninsured deposits out of other regional banks and so you would get contagion through the regional bank world.

And in those circumstances, people that were elected policymakers, they would suddenly start thinking about how to rescue these institutions with taxpayers' money. This is unnecessary so they could end up being too big or politically toxic to allow it to fail. That's unnecessary. If ahead of those uninsured deposits, depositors, there are some bond holders who can be whacked. But as Jim said, that would need to be understood. The other thing that can happen is say that I believe and say that actually God's told me this is true, that actually the FDIC is magnificent at resolving small community banks, which it absolutely is, but also that it has credible plans for Goldman Sachs and JP Morgan and in my country, Barclay's and HSBC, and say that's true. But that actually a medium sized regional bank comes along and fails and it's complete mess. And the FDIC and Fed are revealed as not having a plan. No one out there, no one normal, is going to believe in the credibility of the resolution plans for JP Morgan and Goldman Sachs.

Even if that perception, even if that inference is false, it will be the inference that people -- that would withdraw. This is why I say it's a terrible mistake. If you don't have a plan, don't quit planning. And they have not at the moment got a credible plan. And I would not say that. I would not say that unless I had given the matter a great deal of thought and truly believed it. And I may be wrong. And actually I hope to God, I am wrong, but at the moment I do not believe they have a plan. And so I can't for the life of me understand why they've quit at planning and actually, the FDIC hasn't quite got that far for IDIs and I hope it won't.

MR. FALLON: Well, just to clarify, who doesn't have a plan because we have a plan? We'd been required to have a resolution plan which has been reviewed by the Fed, the FDIC and determined to be credible.

MR. TUCKER: So, how would you be resolved? Describe the plan to me.

MR. FALLON: I -- there's a public section of the plan and there's a confidential section.

MR. TUCKER: Oh, it's PNA.

MR. FALLON: No, I --

MR. TUCKER: It isn't bail-in.

MR. FALLON: I do agree with Marty that for a large regional bank a bridge bank option, which is permissible under the FDI Act would probably be a more likely resolution scenario for a large, certainly for a large regional then it would be for a community bank. And I certainly agree that there are challenges that would be presented by any large regional bank failure. That is beyond dispute. I mean it is, PNC's $400 billion in assets. We're not -- we're far from the G-SIB territory, but let's face it, that's a lot of assets. We're a large bank. Do we think we've presented credible options for the Fed and the FDIC? And I'll say mostly for the FDIC because within our organization, 97 percent of it is in the insured depository institution or bank. That actually reduces the complexity of our organization and reduces the amount we have to rely upon marketing.

We're primarily deposit funded within the institution. We've presented different ways to where we think that the FDIC could resolve us through a bridge bank. I agree that the opportunities for an additional, for a single acquirer to make an acquisition is reduced. The larger the size the institution gets. And you'd be faced with decisions that you wouldn't want to be faced with in terms of particularly if it was a U.S. institution that was going to be making that acquisition. Do you want the large to get larger?

There might be a possibility for a foreign institution to come in that doesn't have much of a U.S. presence, but the range of options does get in our (phonetic).

MR. TUCKER: Yeah.

MR. FALLON: So, institutions like ours we come up with different strategies that can be used to break the institution up through smaller transactions, through partial sales to different bitters in order to maximize the value of the organization. So, the FDIC can meet its least cost test requirement while still resolving the institution in an orderly way. Is it perfect? Probably not. Has it been tested? No. Thank goodness.

I do think when I was at the Fed and, and Marty was at the FDIC and you were as well,

the agencies ran simulations about how you would run a resolution. I would strongly support the continuation of that. And to the extent the industry can help the FDIC improve and understand how to make one of these resolutions work. I think we're all in favor of that.

MR. WIGAND: So I was going to just sort of add on to some comments that both Paul and Kieran had been making here, and actually, Marty alluded to it too. I mean, the FDIC got really lucky with Washington Mutual because of the fact that one, the regulators were willing to allow large institutions to get larger. Even though there was a certain -- it wasn't something that was a desire, but they were willing to do it given the facts of what was occurring back in the fall of 2008. But we haven't spoken about this. The market was willing to make that acquisition that there were acquirers were willing to do it.

Given the litigation and the contingent liabilities associated with the acquisitions that took place during the financial crisis. And you start with Bear Stearns and the acquisitions JP Morgan made of Bear Stearns, which wasn't a depository institution, but nonetheless, it put on its balance sheet a significant amount of contingent liability risk associated with the mortgages and the operations of what Morgan, what Bear Stearns had. I think there's going to be, unless memories of these boards are very short, there'll be a great reluctance to be willing to make that type of acquisition in the future without a significant indemnification from the government. And that would then require a high degree of political tolerance in order to deal with the value of providing that indemnification. And I'm not even going to speculate as to whether or not that would be possible.

So, a PNA is from both the regulatory perspective and probably from the market perspective, not really an option. So, that takes us to the bridge bank option. And when we think of bridge bank, we should think of that in the terms of operational feasibility. And there are a whole host of issues, Kiernan associated, alluded to them; Marty's alluded to them. There are many operational issues associated with a bridge bank. But they, you can struggle through them. You might be able to operate a bridge bank without significant knock on or contagion effects. But the capital structure ultimately is going to dictate whether or not the market is going to have a severe reaction because ultimately where the losses go and who bears those losses will define how the market reacts and the expectation versus

reality is a component of that.

So, if there is an expectation that you're going to bear loss, then the market reaction is significantly less than if you were not expecting a loss. And all of a sudden out of the blue you say, "Ah, geez, look at this, my uninsured deposit, I've received a 50 percent haircut. And it might be because the characteristics, the profile of that particular bank that failed was such that there's no way you could torture the least cost tests to make it work to basically convey the uninsured deposits in a transaction.

So, yeah, the capital structure is a very key component of this. And I do think what saved the FDIC and quite frankly, uninsured depositors from running at particularly the mid-size, large midsize banks and even the larger banks to some extent was the fact that no uninsured depositor suffered a loss when Washington Mutual was resolved. And that was only feasible because of that $13.8 billion of loss absorbing debt that buffered basically the equity loss and the deposit class of creditors.

MS. GUIDA: Yeah. So, so jumping off this idea of whether or not there's a bigger fish, right. And whether there's a bigger bank that can take over the failed institution, one thing I'm sort of curious about is, obviously one of the major trends in the banking industry is mergers and acquisitions and the number of banks is shrinking. And so you're ending up with a smaller number of institutions that are getting progressively larger. And one of the effects of the recent regulatory moves could be to allow some of the larger regionals to get a little bigger. And so I'm curious whether this just makes all of the problems that we're talking about even more complicated to have banks, for example, the proposed merger between BB&T and SunTrust that will wind up being one of the biggest banks in the country. So, is this a trend that's good to have maybe like a smaller number of institutions to focus on, or does that just make everything even worse?

MR. FALLON: I'll head off. I think the combination of SunTrust in and BB&T is driven by a couple of factors. One is, the need for scale for technology and cyber these days. I think if you actually look at what SunTrust and BB&T indicated is, the market is developing, consumers want digital products. They expect everything to be on your cell phone. They don't want to go to the branches anymore. That takes a lot of investments. That requires some scale. So, I think that is a main driver behind that. I do

think, I'm not saying you want to see those regionals become com G-SIBs, which would then create additional problems. But if you look at the deposit gathering over the last several years, the largest banks, the largest and most complex banks have been growing deposits at a rate of about 20 percent, between 2013 and 2017 smaller banks had been growing deposits at a much lower rate. So you're seeing greater concentration just through natural growth and you see some of the G-SIBs now I'm expanding into new markets where they haven't been before.

JP Morgan and Chase have announced plans to open 70 branches here in the D.C. area. You've got Bank of America that's moving into regional markets that they weren't. So, the question is, do you want some counterbalance there and how is that going to be an effective counterbalance? I think having a strong regional bank presence, a number and diversity of regional banks that have both the scale to compete with those largest and most complex institutions in terms of deposit gathering, technology, consumer facing platforms and cybersecurity, I think is a good thing. I don't think we're going to see mergers that would form a new G-SIB. I don't think the regulators, even this set of regulators would be open to that kind of combination.

MR. GRUENBERG: Yeah, I think an important element of the question really deals with the technological changes that are occurring in financial intermediation. And I've heard and I assume that it is the factual that one of the reasons why large financial institutions have been successful in organic growth is because of the technology platforms they offer customers. And therefore, those technology platforms are, in fact, because they have the money, these large institutions have the money to invest in them and to offer them to customers are in fact a driving force of not organic growth. And if that is the case, then, this is a trend that's just going to happen. And I think Aaron started off in his very early conversation that we had 16,000 depository institutions. I don't recall, Aaron, if you had mentioned how many we have now, but it's under 5,000.

So over the course of my career I have just like Aaron had said, I've witnessed, actually I think it was more than 16,000 when I first started institutions. But there are other countries where the number of financial institutions, at least large banks, and then you have the equivalents of the credit

unions or the like, the large banks are very few relatively speaking. Canada basically has five, some say six large financial institutions and it appears to have managed that process fine. But consolidation is going to happen. And the question then becomes, does that consolidation actually result in because of the other elements of regulation? Does that result in higher risk of a failure or a cost to the Deposit Insurance Fund or society generally, from one of those failing? And that's where all these other regulations into play.

MR. TUCKER: I think the fragmented banking system is better. On technology, it seems to me if you look back over the last 250 years or so in banking, that the really important shifts in technology that affected banking have been collective shifts. So, the check and the clearinghouse, or the retail end, ATMs, or the chips system, one of the things that's happening so far, we're only a few years into this technological change is that most of the lot of the cutting edge technology seems to be within private institutions. My prediction would be that actually this will end up being public. It seems like public good type things than private goods. But who knows, maybe it'd be different this time round, but I think it's a -- it should be a matter of regret that some of the G-SIBs on both sides of the Atlantic and now even bigger.

MS. GUIDA: I want to get to audience questions, but I have one sort of final question that I feel like comes up a lot when people talk about the large institutions that weren't G-SIBs that failed during the financial crisis. People talk about how they were sort of -- IndyMac was a threat that was just mortgages, right? And now you have large regionals that are much more diversified and that should make them stronger from a business perspective. So, starting with Paul, we can just go down the line. Do you buy that argument? Do you think that they're less likely to fail because they're more than diversified?

MR. TUCKER: Because they're diversified? Yeah, but you might need to, I mean, the classic case of diversification in the crisis is geographical diversification. It's HSBC, yet almost nobody loses more in the subprime market than Household Finance, which was owned by HSBC. HSBC didn't post, I think even a single quarter's loss. And that's because of profits from elsewhere in the world. Yes,

diversification is good, but the whole economy can take a downturn and this is not a backhanded way of saying and therefore, the regional should become international and global. I think they should do what they are good at, but they are a bit less diversified and therefore, other things being equal need a bit more equity that are a bit less systemic and therefore, need a bit less equity and not one of these things should be taken into account.

But the idea that if you get into real estate as well as mortgages or just consumer lending, that means you've suddenly got diversification that can protect you from a downturn in the economy. That's not right.

MR. GRUENBERG: Yeah and diversification is overall a plus, especially if it's true diversification and you aren't dealing with asset types or business lines that have a correlation with one another. And you're sort of alluding diversification when in fact there really isn't. And that might occur unfortunately with regional banks because they tend to do business in a more constrained footprint if for those of you who were called the crisis of the late '80s, early '90s here in the U.S. it was really a series of rolling recessions, geographic rolling recessions that started in the Texas, Oklahoma, Louisiana, the oil industry. And those institutions were the first to show a high degree of distress and it occurred in real estate, it occurred in corporate lending, small business lending, you name it. And it's because basically the whole economy and it's a little like what Paul is saying, he was alluding to on a national level or international level, but with a regional, it takes place at a smaller footprint.

So, yeah, I think that has to be balanced against the, once again, the capital structure, which is really important because one reason why IndyMac had such high losses is so much of its capital structure was secured funding and that secured funding was fully protected, which meant that the unsecured funding associated with IndyMac, which included the deposit class, had to bear high degree of loss. And so, the capital structure is very important to that. So, you can't look at diversification without thinking of the capital structure of the bank, really.

MR. FALLON: Yeah. So, I'd have to agree. I think most regional banks today are more diversified, particularly on the product line than IndyMac and WAMU who were really highly concentrated

in residential mortgage. But I don't think people should take any serious comfort from them in the sense that everybody always seeks to prevent the last crisis. The next one is probably not going to be residential mortgage. There's a high degree of corporate leverage in the market today, so it's probably going to be a corporate led recession.

So, there will be a turn in the credit cycle that will put stress on bank balance sheets. I think we're better capitalized, have better liquidity and are more prepared for that than we were in the past. But you got to be vigilant every day.

MS. GUIDA: So I think I can fit in two questions. I'll just get them back-to-back. Oh, I'm sorry. Great. We have plenty of time for all your questions. (Laughter)

QUESTIONER: Yeah, that's good.

MR. WIGAND: Good mistake.

MS. GUIDA: So, introduce yourself.

MR. TUCKER: It's not switched on.

MR. KLEIN: Okay. Yeah, we can hear you.

MR. TUCKER: But the people watching can't.

QUESTIONER: Hello.

MR. KLEIN: Hello.

QUESTIONER: I'm (inaudible), I'm a grad student from Johns Hopkins studying risk management. And my first -- my question is, I'm trying to get a better understanding of are we heading towards another recession in like in the coming years? And what are the, in your expert opinion, what would you say some of the indicators which are maybe pointing towards something like that happening in the near future? Thank you.

MS. GUIDA: Yeah.

MR. TUCKER: So, so the unconditional, a long-term average probability of a recession in any 12-month period is as I'm looking across the former Vice Chair Kern about 15 percent, something like that, I think. So, recessions happen they sometimes happen after credit booms, but they can happen

for other reasons as well. Like the trade thing. And I think the most important thing at the moment, is not when the next recession will come, but the monetary policymakers have a lot less ammunition to fight the next recession than domes (phonetic) in my generation did because we started off both here and in the U.K. and continental Europe with interest rates at around five. So, we took them down to zero pretty quickly which pushed real interest rates negative and then we expanded our balance sheets. But, of course, the Central Banks have already bought a lot.

So, there's this big debate going on in town over the next few days about will people make greater use of fiscal policy, that bump, particularly in this country, that bumps into, but hold on, Congress finds it hard to reach decisions quickly. And may reach its decisions so slowly that you no longer need fiscal stimulus. And then you get into a very difficult debate about whether, well, can Central Banks do slightly more fiscal things, which are we going too far away from the subject of this? But that bothers me greatly because we don't elect our central bankers.

So, I think the question that you're interested in, for what it's worth, in my former world, there's hardly a bigger issue and people don't have the answer.

MS. GUIDA: Well, and are there any dynamics out there in the economy right now that pose particular risks to regional banks in particular?

MR. TUCKER: Well, if you landed from say 20 years ago into today, you think, "Wow, unemployment's that low and participation in the labor force is that high. And we've had that, this many years of uninterrupted growth. We're kind of view one." I don't mean that in a moral sense we're never due a recession, but leverage going up and all sorts of markets, asset prices are pretty high equity is a pretty high. I don't know, maybe this will be sustained for a while. Actually for what it's worth, Victoria, I ended up thinking it's none of these early warning systems worked terribly well, which is why I ended up thinking it's preparing, whether it's macroeconomic stimulus or resolution policy, it's how you respond when it happens because you know it will. And that having a policy regime, you shouldn't have your policy regime based too much on, we'll be really good at spotting it next time because I don't -- I hope that, but I don't believe it.

MR. GRUENBERG: Yeah. I absolutely (inaudible) Paul's point, I have no idea when the next recession is going to hit. But there will be one at some point. And the question is how prepared are regulators and the industry to withstand it and mitigate the effects of it? The regulatory tools, that toolbox certainly has fewer tools in it now than it did before the last crisis. So, that's problematic. Are the regulators smart enough to work around it and will there be political will to change that? Who knows? That sort of question.

MS. GUIDA: What is the answer to the question?

MR. WIGANG: But, I think the key issue for resolution planning purposes is, will there be enough capital at the institutions, the G-SIBs, for example, the bailable (phonetic), the T lack capital such that it serves as a ready source to recapitalize the institutions almost by definition a recession results in depository institutions needing recapitalization. And that either comes from the private sector or the public sector.

And if it comes from the private sector, is it going to be available? And that was the problem in the last recession was that it wasn't available because during a period of recession, capital gets to be extremely expensive. And as a result, it's generally unavailable. And as a result it has to come from the public sector. And the question is, will it be available at the public sector? In what form or what take? And that was tarp or a portion of tarp and that's sort of an open issue.

MR. FALLON: So, generally, agree, I'll diverge a little bit from Jim's comments in the sense that well a recession is inevitable at some point and whether that's six months, 12 months, 24 months, you're a guest is as good as mine. I wouldn't necessarily jump to the conclusion that the next recession will require any large institution to go through the resolution process. I think capital and liquidity is much higher within the system today than it was before the crisis. The quality of capital is far superior.

I think we have something that we didn't discuss here, which is really one the main benefits, key post-crisis reforms was stress testing, which all in major institutions do in the United States and in England. We stress our balance sheets now to see what would happen if we face a great recession. Will the next recession be a great recession or something like that? Hopefully not. I do worry

though, and I'll echo Paul's comments here that even with a more shallow recession, I do worry that we're less capable to respond today. I think the economies both in the U.S. and in the global economy are weaker today than they were going into the last recession. I think fiscal policy, particularly in the U.S. may not be as available as it was in the last, in the Great Recession. We are already printing over $1 trillion deficits and that's while the economy is booming and unemployment is at an all-time low. So, you could see there being less flexibility on the fiscal side in the U.S. to counteract what will eventually be a recession.

MR. TUCKER: Why don't two or three?

MS. GUIDA: Okay. Yeah.

MR. EALEY: Thank you. Burt Ealey a banking consultant. I have a question with regards to the resolution plans that had been talked about. To what extent have the regulators tried to put together the resolution plans for let's say the 10 or 20 largest banking companies, to see how they might interact during a downturn to in turn, try to identify situations where too many resolution plans call for the same course of action, which almost guarantees a collective failure of the resolution plans.

MS. GUIDA: Well, we can take another question too. Up here in the green tie.

MR. GOLIC: Thank you, Carl Golic. You mentioned going back 250 years. I just, I can offer a point of contrast 18 to 37 and as a reference, Andrew Jackson's farewell address of that year, there's several thousand words about banking and money. He'd paid off the federal debt to zero. And the money was constitutional gold and silver coin, which there was a quantity that permanently circulated. And so there was stability, also constantly more money being brought into circulation through the free coinage of gold and silver. So, the Federal Reserve was brought into existence 1907, or 1913 because of the panic of 1907 promising to end the cyclical period of crises. Do we maybe need to consider going back to a constitutional monetary unit with wireless technology? Of course, allowing the velocity of gold or silver to be transferred --

MR. TUCKER: (inaudible) just 24 years before the Civil War.

MS. GUIDA: I think we'll take one. In the brown jacket and the blue shirt.

MR. BROWN: Stuart Brown, Warren Capital. So, in the last 18 months, we had one croak bank and a runway and I'm just wondering how many croaking aircraft are landing on that runway and is the number increasing, or where does it stand? Banks that are not dead, but perhaps running into trouble.

I'm also wondering if FDIC is as robust as it was before. We've got a president who's not especially great at building up our institutions. And I'm also wondering if stuff like the choking repo market and Goldman choking on Lyft and Uber and we were our canaries.

MS. GUIDA: All right, a lot there. Do you want to start?

MR. FALLON: Yeah, I don't know where to start. The regulators keep a Brahman (phonetic) bank list. I don't know how many problem banks there are right now. Thank you.

MR. BROWN: Yeah. Okay.

MR. FALLON: So, in the overall scheme of things, a relatively small number. And the one takeaway though I would want to leave you with is that that's a rearview -- that's looking the rearview mirror and I can't emphasize that strongly enough. Now, Marty alluded to his comments about no failures in 2005 and 2006. But the reality is all supervisory regulatory reports, when you look at something like a problem bank report that's looking in the rearview mirror because those are examinations were done a while ago.

And so you're dealing with a timing issue and then also you're dealing with the unforeseen issue. And I think that's actually become a more material problem right now. I think we've done a great job of learning from our mistakes and learn that we're not going to repeat the mistakes, but it's those unforeseen issues that we really haven't thought about. A little bit like today's discussion, we focus on a G-SIB resolution. We really haven't focused on this class of institutions as cohort and yet it very well could be a risk. And so, that I think ultimately is really what needed we need to be concerned about.

MR. TUCKER: So, to the question about what if a number of G-SIBs fail together, if one believes that the bail and SP thing is a really great resolution strategy, which I certainly believe it is, but I

would. You want to make sure that these bail-in bonds aren't held by the banks, aren't held by money institutions and if they're held by insurance companies and pension funds, that they're subject to concentration limits. You wouldn't want to say CalPERS to be owning all of the bail-in bonds issued by all the big American banks. And I, something that I said when I was responsible that kind of G-20 level for this and I don't think has happened enough is bail-in policy isn't just the bank supervisors and bank resolvers. It needs to involve, I've implied insurance regulators and to the extent they exist, pension fund regulators, but also securities regulators. If they had a problem because (inaudible) households invested a lot in bank bonds. And all of this is foreseeable and can be addressed, but it hasn't so far.

On the repo market point, I think part of what was going on was holding of reserves by some of the big banks. This is quite concerning. This is 2007 was harder to navigate because of holding of reserves by a few banks here, a few banks in London, a few banks in continental Europe. I think they, I mean, frankly I think that the mess doesn't reflect very well on that bit of the authorities, but they've got time to come up with a better system and I think they think they can and I think they need to.

When you hit these crises, you need great resolution plans; you need a money market that works; you need effectively monetary policy system. And there's a degree of urgency about this because going back to the earlier question, we didn't know when this recession will come and only that it will.

MS. GUIDA: Yeah, I think we're out of time, but I really appreciate everyone for being here. I enjoyed the discussion. Hopefully, you all did as well. (Applause)

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