The Economic Club of New York

Breakfast Series

Lael Brainard, Governor
Federal Reserve System

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Introduction

Chairman Terry J. Lundgren

As a continuation of our Breakfast Series, I'm pleased to introduce our guest speaker this morning, Federal Reserve Governor, Lael Brainard. Governor Brainard took office as a member of the Board of Governors of the Federal Reserve System on June 16, 2014 to fill an unexpired term ending January 31, 2026.

Prior to her appointment to the board, she served as Under Secretary of the U.S. Department of Treasury from 2010 to 2013 and Counselor to the Secretary of the Treasury in 2009. During this time, she was the U.S. Representative of the G-20 Finance Deputies and G-7 Deputies and was a member of the Financial Stability Board. She received the Alexander Hamilton Award for her service.

From 2001 to 2008, Governor Brainard was Vice President and Founding Director of the Global Economy and Development Program and held the Bernard Schwartz Chair at the Brookings Institute, where she built a new research program to address global economic challenges. She served as the Deputy National Economic Adviser and Deputy Assistant to President Clinton. She also served as President Clinton's Personal Representative to G-7 and G-8. From 1990 to 1996, the Governor was an Associate Professor of Applied Economics at MIT's Sloan School of Management. She has published numerous articles on a variety of economic subjects, is the editor or co-editor of several books as well. Previously, she worked for McKinsey & Company.

She received her B.A. with university honors from Wesleyan University in 1983 and an M.S. and PhD in economics from Harvard University, where she was awarded the National Science Foundation Fellowship. She also was a White House Fellow.

After we hear from the Governor, we will take questions. I'll moderate those questions. And, as always, we look forward to your participation. And for the record, this is on the record, and we do have press in the back of the room. And with that, I'll turn it over to Governor Brainard. (Applause)

Lael Brainard, Governor

Federal Reserve System

Well, it's great to be here. And I really appreciate the kind introduction, Terry, and the kind invitation from Barbara and Terry as well. Overall, the U.S. economy remains on solid footing, against the backdrop of the first synchronized global growth we've seen in some time and accommodative financial conditions. The benign outlook is clouded somewhat by uncertainties surrounding government funding and the fiscal outlook, and geostrategic risk has risen. While the heartbreaking human toll exacted by Hurricane Harvey is already all too clear, it will take some time to assess the macroeconomic impact.

The labor market continues to bring more Americans off the sidelines and back into productive employment, which is very welcome. In contrast, there's a notable disconnect between signs that the economy is in the neighborhood of full employment and a string of below-expected inflation ratings, especially since inflation has come in substantially and stubbornly below target for five years now. With normalization of the federal funds rate underway and the start of gradual balance sheet normalization widely anticipated, I want to take some time to assess the path of the federal funds rate that will best support a sustainable move in inflation to our 2% goal.

So, let me start by reviewing the outlook. The welcome, we have seen one welcome development in the noteworthy pickup in business investment this year compared with last year. Investment in equipment and intellectual property has risen at an annual rate of 6% so far after remaining roughly flat last year. And oil drilling had rebounded this year after dropping sharply last year, although Hurricane Harvey creates some uncertainty about the coming months. Following lackluster consumer spending in the first quarter, growth in personal consumption expenditures bounced back strongly in the second quarter, and recent readings on retail sales suggest another solid increase this quarter.

The likely economic effects of Hurricane Harvey, of course, raise uncertainties about the outlook going forward. Based on past experiences, it appears likely that the hurricane will have a notable effect on GDP in the current quarter with output likely to rebound by the end of the year. According to the Department of Energy, between 20 and 30% of the nation's oil refining capacity was shut down at the peak last week, as was about 50% of petrochemical production. Some oil production has also been disrupted. And, of course, we've already seen upward pressure on gasoline prices. Based on previous hurricanes, the increase in gasoline prices should be short-lived, but that will depend on the extent of damage to refining capacity.

Turning to our dual mandate, the labor market has continued to improve. According to last Friday's report, over the last three months, non-farm payrolls have increased at about the same average monthly pace as last year. And the unemployment rate has been roughly flat for the past several months at 4.4%, which is a ½ percentage point lower than at the same time last year. The employment-to-population ratio for prime-age workers, which is a more complete picture, has also improved over the past year, although it's still 2 percentage points below its pre-crisis peak.

Earlier this year, many observers saw the prospect of fiscal stimulus as presenting the possibility of a substantial boost in domestic demand. Since then, however, many commentators have downgraded their assessments of the extent and timing of fiscal stimulus, and I have to say, I've revised my outlook as well.

That said, we are seeing synchronized global economic growth for the first time in many years as foreign economies such as Canada, the euro area, and China are posting robust GDP growth. And this improvement has been reflected here at home in dollar depreciation, higher earnings and stock prices, tighter risk spreads, and an increase in net exports, which made a small positive contribution in the first half of this year after holding down GDP growth over the past several years.

Despite this benign picture for the overall economy and continued labor market improvements, core PCE inflation slowed by almost ½ percentage point relative to the pace a year ago. Indeed, both overall and core inflation were only 1.4% for the year through July, well short of the FOMC's objective.

So, to what extent does it make sense to look through these recent low inflation readings as transitory? It does appear that temporary factors, such as discounted cell phone plans, are pushing down inflation to some extent this year, just as other temporary factors. For instance, prescription drug prices likely boosted inflation last year. Going forward, we should also see a temporary boost to headline inflation due to Harvey's effect on gasoline prices as I noted earlier. Temporary factors, by their very nature, have little implication for the underlying trend in inflation. But temporary factors cannot explain the five straight years that we've seen in which inflation fell short of our target despite a sharp improvement in resource utilization.

So let's put this in perspective perhaps by comparing inflation in the past few years with the last time the economy was in the neighborhood of full employment just before the financial crisis. Unemployment averaged roughly 5% over the past three years, just as it did over the three years ending in early 2000. Despite the similarity, core inflation averaged 2.2% from 2004 to 2007, notably higher than the comparable three-year inflation rate today of 1.5%. The fact that the period from 2004 to 2007 had inflation around target with similar unemployment rates cast some doubt on the likelihood that resource utilization is the primary explanation for today's lower inflation. Similarly, a 12-quarter average is typically a long enough time that temporary factors should not be the dominant difference.

One key factor that does differentiate the two periods is the decline in import prices in recent years, reflecting the dollar's surge, especially in 2015. By contrast, in the 2004 to 2007 period, non-oil import prices increased at roughly a 2% annual rate and therefore were somewhat neutral on inflation. Nonetheless, while the decline in non-oil import prices likely accounts for some of the weakness in inflation over the past few years, these prices have begun rising again in the last year and inflation remains notably low. So if import prices, resource utilization, and transitory factors together don't provide a completely satisfactory account, why has inflation been so much lower in the past few years than it was previously? In many of the models economists use to analyze inflation, a key feature is underlying or trend inflation, which is believed to anchor the rate of inflation over a fairly long horizon. Underlying inflation can be thought of as the slow-moving trend that exerts a strong pull on wage and price setting and is related to longer-run inflation expectations. There's no single highly reliable measure of underlying trend inflation or longer-run inflation expectations. Nonetheless, a variety of measures suggest underlying trend inflation may currently be lower than it was before the crisis, contributing to the ongoing shortfall from our objective.

For instance, let's start with time-series models. One model that's been used by a variety of researchers suggests that underlying trend inflation may have moved down by perhaps as much as ½ percentage point over the past decade. Market-based measures of inflation compensation suggest a similar decline in expectations. Comparing the three-year period ending in the second quarter of this year with the three-year period just before the financial crisis, 10-year ahead inflation compensation based on TIPS yields is 3/4 percentage point lower. Survey-based measures of inflation expectations are also lower. The Michigan survey measure of median household expectations of inflation over the next five to ten years suggest a 1/4 percentage point downward shift, and that is similar to the five-year, five-year forward CPI forecast from the Survey of Professional Forecasters.

So why might underlying inflation expectations have moved down since the financial crisis? One simple explanation may be that households and firms have experienced a prolonged period of inflation below our objective and that may be affecting their perception of underlying inflation. A related explanation may be the greater proximity to the effective lower bound due to a lower neutral rate of interest currently. By constraining the policy space or the conventional policy space available to offset adverse developments, the low neutral rate could increase the likely frequency of periods below trend inflation and, therefore, lead to lower expectations.

So, given this recent disconnect between robust employment and weak inflation readings, how should the FOMC achieve its dual-mandate goals? Some might determine that preemptive tightening is appropriate on the grounds that monetary policy notoriously operates with long lags, and inflation will inevitably accelerate because of the Phillips curve as the labor market continues to tighten. However, in today's economy, there are reasons to worry the Phillips curve will not prove very reliable in boosting inflation because the Phillips curve appears to be flatter today than previously. Since 2012, inflation has changed relatively little as the unemployment rate has fallen from 8.2% to 4.4%. This flatness is also apparent in a number of advanced foreign economies. Given a relatively flat Phillips curve, it should take, or it could take a considerable undershooting of the natural rate of unemployment to achieve our inflation objective if we rely on this relationship with resource utilization alone.

For all of these reasons, achieving our inflation target on a sustainable basis is likely to require a firming in longer-run inflation expectations – that is, in the underlying trend. The key question in my mind is how to achieve such an improvement in longer-run inflation expectations to a level that will allow us to sustainably achieve our target. The persistent failure to meet our objective should push us to think broadly about both diagnoses and solutions. The academic literature suggests a variety of prescriptions for preventing a lower neutral rate of interest from eroding longer-run inflation expectations. One feature that's common to many of those proposals is that the persistence of the shortfall in inflation from our objective should be one of the considerations in setting monetary policy.

That brings me to the implications for monetary policy. A key upcoming decision for the

Committee is when to commence balance sheet normalization. I consider normalization of the federal funds rate to be well under way, the criterion for commencing balance sheet normalization. The approaching change to our reinvestment policy has been clearly communicated and is well anticipated.

In principle, the FOMC could use both the balance sheet and the federal funds rate as active tools for setting monetary policy. However, I view the federal funds rate as the preferred active tool. Its effect on financial conditions and the economy has been more extensively tested and is far better understood. As a result, once we set in motion the change in balance sheet policy, as long as the economy evolves broadly as expected, we should allow the balance sheet to run off in the background at the gradual pace that was announced. We would primarily look to ongoing adjustments in the federal funds rate to calibrate the stance of monetary policy as those economic conditions evolve.

Once balance sheet normalization is under way, I'll be looking closely at the evolution of inflation before making a determination about further adjustments to the federal funds rate. Because we've been falling short of our inflation objective, not just in the past year, but over a longer period as well, we should be cautious about tightening policy further until we're confident that inflation is on track to achieve our target.

Unless we expect inflation to move quickly back to our target – or there are indications that the short-run neutral rate of interest has moved up further – a variety of estimates suggest we could approach neutral without too many additional rate increases. Many forecasters assume the neutral rate of interest is very low currently, and that it is likely to be low relative to historical norms in the longer run. The Laubach-Williams model current suggests an estimate of the longer-run neutral funds rate that is actually slightly below zero. And in the most recent Summary of Economic Projections, the median longer-run nominal federal funds rate is about 3%, which implies the long-run real federal funds rate would be only 1% under those estimates, lower than its average in the previous decades of around 2 ½%.

Those estimates suggest that the neutral rate of interest is likely to rise only modestly in the medium term. It's worth remembering, in addition, that the Federal Reserve's balance sheet policy may reinforce this tendency over the next several years. A recent study suggests balance sheet runoff could boost the level of the term premium on the 10-year Treasury yield by about 40 basis points over the first few years. Typical rules of thumb suggest that such an increase in term premiums would imply a decrease in the short-run neutral rate of interest.

Although, of course, the FOMC expects to begin normalizing its balance sheet relatively soon, several foreign central banks are continuing purchases of longer-term assets. Because these longer-term government securities in the major economies are close substitutes, this will likely continue to exert some countervailing pressure on U.S. longer-term interest rates. But with growth abroad strengthening, there are indications that it may not be too long before central banks in several major economies could also begin normalizing monetary policy, ending their net purchases, and eventually beginning to reduce their balance sheets. As this happens, the current downward pressure on longer-term interest rates from foreign spillovers will begin to abate.

For these reasons, my current expectation is that the short-run neutral rate of interest may not rise much over the medium term. But this is an open question and it bears monitoring. To the extent that the neutral rate remains low relative to its historical value, there’s a high premium on guiding inflation back up to target in order to retain space to buffer adverse shocks with conventional policy. In this regard, it’s important to be clear that we would be comfortable with inflation moving modestly above our target for a time as it’s implied by the symmetric language in the Committee’s Longer-Run Policy Statement.

Finally, it’s worth considering the possible implications of a sustained period of low neutral rates and low unemployment for financial imbalances. Historically, extended periods with very low unemployment tend to be associated with below-average spreads of expected returns on risky assets over safe interest rates. Although, to some extent, low premiums, low risk premiums and rising asset valuations may be consistent with strong fundamentals, such as low default rates, and strong corporate earnings, there have also been times when a strong economy and low unemployment have led to overvaluation of asset prices, underpricing of risk, and growing financial imbalances.

So, in today's environment, I think it's extremely important to be vigilant to the signs that asset valuations appear to be elevated, especially in areas such as in commercial real estate and corporate bonds, as well as to the exceptionally low levels of expected volatility. Nonetheless, there are few signs of a dangerous buildup of leverage or of maturity transformation, which is due, in no small measure, to the improvements in capital, liquidity, and risk management made by the financial institutions at the core of our system, which are associated with post-crisis financial reforms, as well as with money market reform and the greater transparency in the derivatives markets.

So, to sum up, much rides on the evolution of inflation going forward. If, as many forecasters assume, the current shortfall of inflation from our 2% objective indeed proves transitory, further gradual increases in the federal funds rate would be warranted, perhaps along the lines of the median projection from the most recent Summary of Economic Projections. But, to the extent that the recent low readings for inflation may be driven by depressed underlying inflation, this would imply a more persistent shortfall from our objective, which would argue for moving more gradually. We should have substantially more data in hand in the coming months that will help us make that assessment. So that concludes my remarks, and I'm happy to take questions. (Applause)

QUESTION AND ANSWER PERIOD

CHAIRMAN TERRY J. LUNDGREN: Thank you Governor. We'll take questions. Brooke, do you have a question? We want to throw it out to our fellows first.

I just was saying, thank you, Terry, but I'll defer to the group.

CHAIRMAN TERRY J. LUNDGREN: Okay, thanks very much. Well, let me ask the first question just about unemployment. It is very low of course, but it did pick up during the last reporting cycle with fewer jobs added than expected. Any concerns about that as we move forward?

GOVERNOR LAEL BRAINARD: So I would anticipate that we will see some effects, in particular from Hurricane Harvey, in the payrolls reports. But we expect those to be, or at least I expect those to be somewhat short-lived. Overall, the labor market picture, I think, is a very positive one. We're continuing to see margins of slack diminishing. And so in the last report, even though unemployment did tick up a small amount, we also saw some welcome improvements in part-time, for economic reasons, coming down. We've seen discouraged workers coming back in to the workforce. So it does suggest that there may still be some margins of slack as does the still low level of overall employment-to-population ratio for prime-age workers, which really controls for some of the demographic shifts, which is still a noticeable 2%

below where it was before the crisis.

CHAIRMAN TERRY J. LUNDGREN: Okay. Sure, let's start from the back.

QUESTION: First of all, I appreciate your remarks very much. The inputs to inflation of labor and capital seem to be offset more and more by technology. And when you look at, for example, the Big Three automakers, their revenues are identical to the revenues of the FANG stocks, but the FANG stocks represent one-tenth of the employees of the Big Three companies and represent 50 times more their market cap. So the question I have is, is the ability to measure inflation in the context of a technological disruptive period such that you can't really measure the deflationary effects going on from the internet and other technological innovations going on?

GOVERNOR LAEL BRAINARD: So I think the question that you raise about do we fully understand the impact of technological innovation on how inflation is measured and really what those measures represent, is a very important question. I think there's a lot of discussions, a lot of research going on in this area at the moment. It's certainly the case that the mechanisms we have, or that the BLS uses, for instance, for undertaking quality adjustments as products change over time or when new products are introduced, that there are some complicated measurement issues there. And so this is an area that bears close watching. It may well be impacting, for instance, our measured productivity. There may be a difference between what we're measuring in terms of productivity and what the underlying rate of productivity growth actually is. It's not clear whether those differences are greater now than they may have been, for instance, you know, in the late 90s when we also saw a big surge of technological innovation. But the relationship between innovation, technological innovation, wage setting, and inflation, I think, is one that we need to continue to pay very close attention to.

QUESTION: Yes, thank you. My question is regarding the normalization of the balance sheet. Academics, researchers, and even on occasion, Federal Reserve Banks have blogged that the growth in the Fed balance sheet has exacerbated income inequality in the United States. And, first of all, I'd like to ask, while income inequality is not one of your dual mandates, do you consider that? And do you agree or disagree with that assertion, or that, those pieces of research? And secondly, as you are, as the Federal Reserve has indicated that it will lead the balance sheet normalization with the mortgage side of the balance sheet, and do you have any concerns that by doing so, you may be limiting housing finance availability for the middle class?

GOVERNOR LAEL BRAINARD: So the questions about income and wealth inequality in the U.S. and how do they figure into policymakers' thinking, clearly, at least in my own mind, I pay very close attention to the trends in income distribution, in part because I think they matter for the robustness and the resilience of our economy, because they matter for who is receiving the bulk of the income, and their likelihood of spending that may be quite different. So it does matter as we think about the overall resilience of the economy. It certainly mattered going into the crisis, where the financial health and stability of households at the lower end of the income distribution mattered for the overall stability of the system. Do I think, have I seen evidence that the balance sheet may in some respect be contributing to that? I think these are very longstanding trends and those trends long pre-date the use of unconventional monetary policy in the U.S., the asset purchases. And they, I believe, have much deeper causes. This goes back to some of the technological questions that were asked earlier. And the sets of policies that are appropriate to address them are really well outside the realm of the Federal Reserve's tools or the specific objectives that Congress has set us. With regard to the balance sheet normalization plans that the FOMC has agreed, as you know, the balance sheet runoff has specific caps that are set separately for Treasuries and for MBS. In my own view, those are set and increase over time gradually and in a way that should be well anticipated and that will give ample space for private markets to be able to fund those securities going forward. So I think that the plans that were announced took into consideration a number of important characteristics and do carefully and gradually and predictively allow the balance sheet to run off in a way that should really be well anticipated and well managed by the markets.

QUESTION: Thank you, Terry. Governor, thank you for sharing your insights with us, and also thank you for your longstanding service. Coming out of Jackson Hole, Bal Das from BGD Holdings, coming out of Jackson Hole and you just echoed it also right now, that when you look at the reforms that were put in place in the aftermath of the financial crisis, whether it was capital liquidity, risk management, debtor reduced market, transparency, or money market reforms, overall they have contributed – this is the finding coming out of Jackson Hole and you repeated it – toward the sustained economic growth that we are seeing. I'm curious if, within the Federal Reserve, you have also done any studies that you could speak to in terms of the hampering effect or the dampening effect on the animal spirits which is a structural component of powering risk taking and growth. I'd be curious if any studies have been done to the counter-factual, not to what you are speaking to. Thank you so much for your thoughts.

GOVERNOR LAEL BRAINARD: Yes, so thank you. I think that there's been a lot of work done, both by policy researchers as well as academic researchers, both focused on the U.S. only as well as on the international financial system asking the question as to whether asking the largest, most systemic, most complex institutions to hold more robust capital buffers, to stress-test those capital buffers, to better risk weight the assets that they're holding those buffers against, to better manage their liquidity and to better risk manage, whether that may in some respects impede the flow of credit to the economy. Now, animal spirits is a somewhat different question, although I think we've seen very robust readings, certainly of confidence of consumers and more broadly. With regard to credit, you know, if you look in the U.S. economy, credit is flowing. Credit is really very available. In all of our surveys that we've undertaken recently, you would be hard-pressed to find cases where credit is not readily available to qualified borrowers. And standards, in some cases, have been tightened, but in those instances I think we had foreseen a bit of a deterioration in underwriting standards for instance in CRE. So, my sense is that for the institutions at the core of the system, their ability to lend has actually been supported by the rigorous reforms they've undertaken. Now, I think there are some institutions who, the community banks or smaller banks in particular, who by virtue of the way that the statute is written, got caught up in some of the reforms that perhaps are not necessary or useful for their particular business models. And, there, you know, I think there is a scope for statutory changes. And here I'm thinking about __ or incentive comp or stress-testing depending on what the size and the complexity of that institution is. So, do I think there are also ways that we could right-size those regulations? Absolutely. And that it would allow smaller financial institutions, supervised institutions in particular, to be more active in lending. So, I hope that there will be an opportunity to make some of those changes.

QUESTION: Thank you for a very interesting talk, particularly on inflation, most of your comments. I hadn't heard that much on inflation from a Fed person for a long time. We've had about 20 years of experience now with inflation-indexed bonds. And one of the principal arguments in bringing them out, not the only one, that they've been modestly useful in asset management, but also the information content, the wisdom of the market would show us where inflation was headed. And could you comment on how you appraise the usefulness of that asset class?

GOVERNOR LAEL BRAINARD: So I can't appraise it from an investor's point of view, but I can say that when we are trying to gauge inflation expectations and we're looking at market-based measures, that asset class proves extremely important because we look at the difference between inflation, Treasury yields, and non-inflation index to try to get a sense of what kind of probabilities the markets are placing on inflation coming in above target, inflation coming in below target over different horizons. And we also look at other market-based measures, but that is one of the key measures that we look at. And, of course, there are different liquidity characteristics in those markets. And so, you know, it's not a straight read on expectations. I don't take it as such. I don't think any of us do. But it is one useful indicator along with a host of other indicators, some survey-based, some model-based, that does help us gauge whether in fact there may be some change in inflation expectations. And certainly based on those markets, it does appear, in fact, that market participants are putting a somewhat lower probability on high inflation outcomes and a somewhat greater probability on low inflation outcomes and it suggests that, in fact, there has been a noticeable change in inflation expectations, a decline since the pre-crisis period. And it's certainly something that I've focused on over the last few years.

QUESTION: Thank you very much. Where do you stand on the debate in the FOMC currently on financial conditions? It seems to me that wanting to wait for inflation to be in the rearview mirror runs the risk of running a monetary policy that is very accommodative for maybe longer than necessary and in the meantime boosts asset prices to levels that might be of concern. So wouldn't you agree, like the one participant mentioned in the last minutes, that continuing to hike, as per the dots, would strike the right balance between achieving the inflation mandate and guarding off against risks from too-loose financial conditions.

GOVERNOR LAEL BRAINARD: So, I think financial conditions are an extremely important consideration for all of us as we look at the appropriate path of monetary policy. In particular when financial conditions ease, that contributes to a stronger economy, may well contribute to a more robust outlook for inflation. And so it's certainly something that materially factors into the outlook. The separate question is whether we should be undertaking monetary policy to target financial conditions. And there, I think you can also see in previous minutes of FOMC discussions that there's been quite a bit of discussion, robust discussion, where the minutes will suggest that people generally, in the Committee, believe that we have other tools that are our first line of defense against a buildup of financial imbalances and that the tools that we have in the wake of the crisis are much, much more robust than we had going into the crisis. Moreover, we have a much more systematic and rigorous quarterly review of potential financial imbalances, potential financial stability concerns, so that the Board, which is responsible for most of those non-monetary policy tools and the FOMC in turn now have regular and systematic looks at financial stability. So, while it is something that I think is a concern and I have noted in previous remarks that in the past two episodes when unemployment reached very low levels, it was, in fact, financial imbalances that were the primary concern rather than accelerating inflation. Again, though, we have generally taken the view that monetary policy should not be the first line of defense and that's why the robust macro-prudential tools that we have as a result of Dodd-Frank and tools such as the counter-cyclical buffer, which is now a tool that is also out there that we can use, have been so important to our ability to focus monetary policy on the dual mandate.

QUESTION: First of all, very humbly, thank you also for your service. I had two questions if that's okay, the first revolving around the balance sheet. When, and if, the announcement comes, how do you view further announcements of the reduction versus FOMC hiking interest rates. So, if the reduction is, for example, X, and then it's done a second time, at what point would you revisit then hiking the fed funds rate? And the second question was, you mentioned the 40 basis points of term premium, I was just curious how, if there's a certain quantity or how you guys thinking about that? If, for example, after the first announcement, is that viewed as, let's say a five basis point tightening? Just any color that you're comfortable sharing.

GOVERNOR LAEL BRAINARD: So I think the first important thing to just say is that the plans that were agreed by the FOMC essentially lay out a path for the balance sheet on both types of securities that is once it is initiated, it essentially can be thought of as going on auto-pilot, that it's completely laid out, that it is capped. And, of course, there's complete transparency around the SOMA portfolio so that market participants will be able to correctly anticipate exactly how that balance sheet runoff will proceed. Now there was, and again let me just say my own view is that we know so much about how the federal funds rate works. We have decades of experience, tons of empirical estimates, and really most of the estimates that we have regarding asset purchases are very recent and were in the midst of a large protracted period of, you know, economic challenges so that it does not provide as much predictability to the public. So that my preferred instrument, my preferred active instrument, I think this is consistent with the plans that were laid out by the FOMC, would be to use the federal funds rate and to calibrate that to economic conditions as they evolve. Now, of course, there is some consideration in those plans, and it certainly would be true of my own thinking, that if the economy were to evolve very differently, if we were to see large adverse developments, at that juncture there may be some reason to slow or change the balance sheet runoff policy. But that would be under very different circumstances. So that was your first question. Was there a second question? Oh, so the term premium, yes, so the one thing I would say is those estimates too, they're out in the public domain. They are primarily based on event studies during periods of asset purchases. Whether those estimates are the appropriate, you know, sort of neighborhood magnitudes during a period of runoff, I think is an open question. They give us some sense of what we might expect to see in terms of the term premium, but I think it's fair to say, at least in my mind, that those estimates come from a sufficiently different period that I don't know. And I will be watching very carefully – I'm sure everyone else will be as well – to see whether the effects differ materially enough that it may have implications for how to think about the federal funds rate path. But at least going into it, those are some of the, at least most well understood, estimates that are out there.

QUESTION: I also thank you for joining us this morning. I'm Nili Gilbert, co-founder and portfolio manager at Matarin Capital. You have a great deal of expertise in the fields of globalization and trade, not only from your academic research, but also as a practitioner, for example, your time in the Treasury. I wonder how would proposed or existing changes in U.S. trade policy arising from the rise of populism affect the way that you are thinking about achieving your goals as a Fed Governor, whether for example its impact on the labor market, impact on the dollar, how those things could drive inflation or other effects?

GOVERNOR LAEL BRAINARD: So, I would say that generally to the extent that, you know, there are big policies that are, you know, being enacted, of any sort, we would want to take into account to the extent one could estimate the impact on our dual mandate, that would obviously be a conditioning factor in how we think about the appropriate path of policy. From where I sit today, you know, the economy actually looks, as I said earlier, growth is continuing, trade flows have actually improved a bit, net exports are making a positive, small positive contribution for the first time in several years. And so, you know, now there could be some disruptions associated with Harvey, but generally speaking, the policy environment that we're taking into account has some fiscal uncertainty about it, but really those, some geostrategic uncertainty, but those would be the main sources of uncertainty as I think about the policy arena, and that the implications for monetary policy, you know, if we were to see different kinds of policy shifts, in the future obviously those are ones that I would take into account at that time.

QUESTION: My thanks also for joining us. You've mentioned several times the happy condition of growth occurring elsewhere in the world simultaneously. Could you say a bit more about how durable you see those external sources of growth as well as the risks that are drawn to your attention?

GOVERNOR LAEL BRAINARD: Yes, so what we have seen is after several years of the IMF and others having to mark down global growth forecasts, what we have recently seen is actually the IMF and others marking up global growth forecasts. And this is on the back of stronger growth in several of our major economies around the world, around the same time. So, obviously the euro area activity and labor market readings have come in so much stronger than anticipated, and that's very welcome. Japan has recently come in a bit stronger, Canada, and then China. Now, of course, there are risks to those outlooks, but I, a year ago, would have said that a major downside risk to our outlook really came from abroad, and I would say today that balance of risk has really shifted. In China, in the medium term, I think there are risks associated with the trajectory of growth. We've seen a rapid buildup of corporate debt in particular. We've seen some house price increases in areas. And we, I think, would anticipate that the underlying trend growth rate is going to come down over time and how the authorities manage to deal with those financial imbalances while also converging on a sustainable growth path is something that I think could be a risk for the medium term. We know that we have some changes in the relationship between Britain and the EU that are being discussed and so that has some medium-term risks to the global outlook as well. And, as I said earlier, there's some geostrategic risks out there. But the core growth outlook has improved really quite notably over the last two years in a way that I think now is contributing positively to the U.S. economy which is extremely welcome.

QUESTION: Thank you. My question is to pull back from the micro and to ask you what you think the role of monetary policy should be 8 ½ years into an economic expansion. And you've laid out a scenario where perhaps the suppressed rate of inflation is a global phenomenon, perhaps outside the direct impact of the Fed and that the preferred policy tool is the Fed funds rate. So my question is: when is it appropriate for the Fed to perhaps shift its focus from trying to fine-tune the rate of inflation to building in protection or building in enough room for monetary policy to have a real impact on the economy the next time it falls into a recession?

GOVERNOR LAEL BRAINARD: So I think it's a very tricky question to ask if, in fact, the neutral rate has come down and is likely to remain low for some time. And, as I said, earlier, I think there are a variety of reasons to believe that it is low currently and that it's likely to remain low for some time. In those circumstances, the room for maneuver above our effective lower bound using conventional policy is inherently limited. And so, you know, as a monetary policymaker, you know, you've got a very clear objective of achieving sustainably the dual mandate, full employment and 2% inflation on a sustainable basis. And so that is the guidepost for our policy. Now, it's actually more important than ever that we get to that symmetric 2% inflation goal if, in fact, the neutral rate is lower because that gives us as much room as we are going likely – future monetary policymakers – are likely to have in terms of being able to buffer adverse shocks above the effective lower bound. So I think the real underlying question is, you know, if we are, in fact, in a low neutral rate environment and are likely to be for some time, achieving that 2% goal is more important than ever, and the question is, you know, how do we get from here to there? So that's really been the focus of my thinking recently and over a longer horizon as well.

QUESTION: Governor Brainard, do you see a trend or at least an increased likelihood of lessening in international regulatory cooperation among the G-20 countries going forward and a trend toward each country wanting more capital in its borders and each country going it alone?

GOVERNOR LAEL BRAINARD: So I certainly think, you know, putting on my old hat when I was responsible at the Treasury Department for negotiating some of the international agreements that led to more harmonization, I certainly think it's in America's interest that we do level the playing field to the greatest extent possible and level up that playing field internationally. You know, we learned, in the crisis, we've learned through several crises right now that we are not immune to financial instability abroad, particularly in some of the larger financial jurisdictions. We've seen that in the last few years when concerns about banks that may not have had sufficient capital reverberated into our financial markets at a time when our banks were actually building capital and looking a lot healthier. So, it matters to our financial resilience and the health of our economy that financial institutions abroad are just as, you know, just as risk-tested, just as well-capitalized, husbanding their liquidity just as carefully as U.S. institutions are. It's simply, it seems to me simply self-interest to make sure that the world is working together around a set of, you know, sort of similar regulations that look a lot like the ones we have here.

QUESTION: Thank you very much. Let's go back to the international, if it's okay. I worry about how much growth internationally, and especially look at Europe for example, is really due to so much central bank liquidity versus fundamental issues. So, for example, in Europe we all know that there's still, and I realize the IMF came out with their, you know, more positive reports, but we all know that the real structural reforms have not really been fully implemented. NPLs are very high still in many of those countries. And I worry, in particular, about the emerging economies, where one of the reasons they were not impacted negatively during the most previous crisis was because they had really revised their debt management strategies – largely, you know, local currency as opposed to U.S. dollar currency, as well as extending the duration and so on. But we have seen more laterally because of the rates, they have really, have increased – not only on the corporate level but also at the government level – U.S.-denominated debt again. So I worry (a) have the fundamental structural issues been resolved, and (b) what's going to happen with all these emerging economies who now have lots of U.S. dollar-denominated debt as normalization occurs, as the dollar, you know, increases again, is this all setting up for sort of an unhappy ending?

GOVERNOR LAEL BRAINARD: So the kinds of risks that you pointed to, I think are ones that, you know, have been highlighted by some of the financial stability reports that international organizations have done. It's certainly something that we think a lot about – potential financial spillovers into the U.S. market and try to figure out where those risks may come from. There is a risk in environments such as this that you could see behavior that does lead to financial imbalances and there's a risk that you could see complacency that leads to a slowing down of structural reforms. Obviously, you know, we think that the reverse is preferable and that's why here in the U.S. again, you know, we put in place a number of difficult structural reforms in the financial system. That process was a difficult and challenging process, but now that we're on the other side of it, I think we can feel somewhat more confident that there are guardrails and risk buffers in the economy that should serve us well. And I would hope that other countries move forward on the same kinds of structural reforms so that we also would see less risks abroad. So, I think that is our last question. Thank you so much. It was nice to see everybody. (Applause)

CHAIRMAN TERRY J. LUNDGREN: Thank you, Governor. That was terrific, particularly the Q&A. And it's clear to, I think, all of us that you're going to play an important role for many years to come in Washington, so we look forward to welcoming you back to the Economic Club of New York again in the future. Thank you. So, just a reminder to the group, we have plenty of activities coming up. Beginning tomorrow, we have the Chairman of the National Association of Manufacturers and also Chairman, he just happens to be Chairman and CEO of Emerson Electric. His name is David Farr. So he'll be talking about jobs in the manufacturing sector. Then in October, October 5th, we have Henry Kaufman. He's got a new book, *Tectonic Shifts in Financial Markets.* He'll be talking about that. The 17th of October, we have the CEO of CVS, lots going on in that business that's quite transformational. And then a very busy November. Jan Smets, who is the Governor of the National Bank of Belgium, Bill Dudley, we know, our former Chairman of the Club, and Chairman and CEO of the New York Federal Reserve Bank. We have Ginni Rometty, who is the Chairman and CEO of IBM, Doug McMillon, President and CEO of Walmart, Randall Stephenson, Chairman and CEO of AT&T. So a big lineup. And then in December we have Henry Kissinger, one of our members of course. And Henry will be talking to us in December. So a very good lineup. Hope you all have a great return to work today and thanks for being here. Bye bye. (Applause)