The Economic Club of New York

448th Meeting
108th Year

The Honorable William C. Dudley
President and Chief Executive Officer
Federal Reserve Bank of New York

November 12, 2015

New York City

Questioners: Peter Blair Henry, Dean
The Leonard Stern School of Business, NYU

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Introduction

Abby Joseph Cohen, Presiding Officer

Ladies and gentlemen, welcome to the 448th meeting of the Economic Club of New York in this, our 108th year. I'm Abby Joseph Cohen, Vice Chair of the Club and Senior Investment Strategist of Goldman Sachs. The Economic Club of New York is the nation's leading nonpartisan forum for economic policy speeches. More than 1,000 guest speakers have appeared before this club since our founding in 1907. These speakers have established a strong tradition of excellence. I would like to recognize and thank the 229 members of our Centennial Society. These club members have made an extraordinary contribution to ensure the financial stability of the club into its second century. Their names are listed in your program and on our website. And we, of course, invite you to consider joining them. We would also like to welcome the students who are here today from Brooklyn College and Manhattan College and, of course, acknowledge the generosity of our members who have made this possible.

Today, we are delighted to welcome back as a speaker the current chair of the Economic Club of New York, William C. Dudley. Mr. Dudley became the 10th President and Chief Executive Officer of the Federal Reserve Bank of New York in January 2009. He serves as Vice Chairman and a permanent member of the Federal Open Market Committee, the group responsible for formulating the nation's monetary policy. Previously, Bill served as Executive Vice President of the Markets Group at the New York Fed where he also managed the System Open Market

Account for the FOMC. The Markets Group oversees domestic open market and foreign exchange trading operations and the provisions of account services to foreign central banks.

Prior to joining the New York Federal Reserve in 2007, Mr. Dudley was a partner and managing director at Goldman Sachs and Company and was the firm's chief economist, chief U.S. economist, for a decade. Prior to joining Goldman Sachs in 1986, he was Vice President at the former Morgan Guaranty Trust Company and he began his career as an economist at the Federal Reserve Board in Washington, D.C. in 1981. Mr. Dudley received his doctorate in Economics from the University of California, Berkeley. Bill, we look forward to hearing your remarks about the economic outlook and what this means for monetary policy. Mr. President and Mr. Chairman, the floor is yours. (Applause)

The Honorable William C. Dudley
President and Chief Executive Officer
Federal Reserve Bank of New York

Thank you Abby. So it's a pleasure to have the opportunity to speak here at the Economic Club of New York, and I'm just thrilled at how many people have turned out today. As the current chair of the club, I'm admittedly biased, but this is a great venue to have the opportunity to share my thoughts about the U.S. economic outlook and the implications for monetary policy. As always, what I have to say reflects my own views and not necessarily those of the FOMC or the

Federal Reserve System. Now before I start, I want to be clear about one specific issue I will not address today. That is whether or not I expect the monetary policy normalization process to commence at the next FOMC meeting in December. Let me just say that my view will depend on how incoming data broadly defined influences my assessments of the prospects for further improvement in the U.S. labor market and my confidence that inflation will return to the FOMC's 2% objective over the medium term.

With that caveat out of the way, so how do I assess the U.S. economic outlook? On balance, I believe we've been making progress towards our goals, recognizing that a few issues still cloud the outlook. Most noteworthy is the fact that inflation continues to run well below our 2% objective. With respect to the economic growth outlook, the softness in third quarter real GDP, which according to its initial estimate rose at a 1.5% annualized pace, and the weakness of the manufacturing sector, have raised concerns that the U.S. economy may be losing some forward momentum.

Sharp reductions in oil and gas drilling activity and a loss of international competitiveness associated with the dollar's appreciation over the past year have restrained factory output. Judging from historical experience, the impact of the dollar strength has the potential to be protracted so that the trade sector probably will continue to be a drag on growth in 2016. Thus, the manufacturing sector is likely to continue to lag behind the rest of the economy.

But these negatives need to be set against the many positive aspects of the economic outlook. In particular, domestic demand continues to grow at a solid pace as increases in consumer spending, housing, and business fixed investment all contributed to the third quarter's 2.9% rise in real domestic final sales. A large decline in the pace of inventory accumulation was the main reason why real GDP growth faltered in the third quarter. Because the contribution to growth from inventory investment can be quite volatile on a quarter to quarter basis, the growth in real final sales which I just cited probably provides a better sense of the state of economic activity than does the GDP figure.

Moreover, when one digs deeper the fundamentals supporting domestic demand look quite sturdy. For example, consumer spending has been well supported by real income gains and rising household net worth. Household balance sheets do not appear over-extended. The household debt service burden is low and the household savings rate is not particularly low relative to household net worth, and household credit growth has been slow.

Housing fundamentals are solid as well. Decent payroll gains have supported household formation over the past year and mortgage rates remain low. Housing prices are rising and the constraint on growth in terms of residential investment now appears to be more on the supply side as building contractors struggle to mobilize the resources needed to build more homes. The National Association of Home Builders index rose in October to the highest level since late 2005. While the housing indicators will likely continue to be volatile on a month to month basis,

I expect the gradual improvement in the housing sector to continue.

Also, the international outlook appears to be less problematic than it did just a few months ago. Although substantial questions remain about the Chinese growth outlook and the consequences of lower commodity prices from major commodity-exporting countries, we have seen two important positive developments. First, the Chinese transition to a more balanced growth path appears to be underway with stronger consumption and less emphasis on investment. And the Chinese authorities have a range of tools available to support their economy during this transition.

Second, despite the intense strain placed on many emerging market economies caused by the substantial deterioration in recent years in their terms of trade, this stress does not appear to have led the type of financial system breakage that might lead to widespread contagion and large capital flow reversals. In fact, in recent weeks we've seen the opposite. Emerging market equity markets have recovered substantial ground and many countries' currencies have stabilized.

It's also important that the forward momentum in the job market persists. The August and September employment reports raise some concerns that the United States labor market might be faltering. Those concerns should be at least partially put to rest given the strength of the October payroll employment report recognizing that the employment news can also be volatile on a month to month basis. Most noteworthy to me were the strong payroll gains we got in October

and the solid 0.3% rise in aggregate hours worked. Over the past three months, payroll gains have now averaged 187,000 a month. That's not much below the average payroll growth of 213,000 a month we saw during the first half of the year.

We are much closer to our goal of maximum sustainable employment than at the start of the year. The civilian unemployment rate is 5%, not much above the level generally viewed as consistent with full employment. For example, in the September FOMC Summary of Economic Projections, the median estimate of the longer run unemployment rate was 4.9%. And broader measures of unemployment such as indicators that include people that are working part-time for economic reasons and discouraged workers who have left the labor market that still want a job, they've also shown substantial improvement over the past year.

Now discerning the degree of slack remaining in the labor market does become more difficult if the margin of unused and underutilized labor resources shrinks. My own assessment is that some margin still remains. I reach that conclusion for two reasons. First, broader measures of unemployment are still high relative to what you would expect them to be given a 5% civilian unemployment rate. Part-time workers and discouraged workers remain a potential source of additional labor, and the labor market participation rate seems low even when you adjust for demographic factors. If the normal historical relationship between the broader U-6 measure of employment – that's the measure that includes part-time workers that want a full-time job and discouraged workers – and the narrower U-3 measures which exclude those workers, if that

relationship were to reassert itself, this would imply about an additional quarter to a half percentage point of labor market slack in my assessment.

Second, we still have not seen compelling evidence that a tightening labor market is leading to more rapid labor compensation gains. Although average hourly earnings rose more quickly in October, pushing the year-over-year pace up to 2.5%, this indicator can be volatile on a month-to-month basis. And most importantly, it has not been borne out by some other important measures of labor compensation. For example, over the past year the Employment Cost Index for private sector worker compensation has risen 1.9%, remaining within the narrow range of recent years. This is important because my assessment of what constitutes maximum sustainable or full employment depends in large part on how a tighter labor market translates into compensation gains.

At the same time, one needs to be cautious about interpreting compensation trends in the current environment. It is possible that factors such as a very low headline inflation rate and weak productivity growth are holding down what workers receive in compensation. Therefore, because of such factors, compensation growth may not provide a particularly reliable signal about whether we are, in fact, approaching full employment.

So to sum up on the growth side, the economy looks to be in decent shape and is likely to continue to grow at a slightly above-trend pace. Spare labor resources are shrinking. But there's

still some risk that the growth pace could slow as the trade sector acts as a drag on economic activity.

On the inflation side of the ledger, I have greater concerns because we continue to fall substantially short of our inflation objective of 2% for the personal consumption expenditure deflator. Over the past year, the PCE deflator has risen only 0.2%, held down by lower import prices and falling energy prices. And the core PCE deflator, which excludes the more volatile food and energy components, has risen at a 1.3% rate.

There's also some evidence that suggests that inflation expectations are under downward pressure. In particular, some survey measures of long-term inflation expectations are at the low end of the ranges that we've seen in recent years. For example, the University of Michigan median measure of inflation expectations at a five-to-ten-year horizon fell last month to 2.5%. That's the lowest level since September 2002. Similarly, the New York Fed's three-year medium inflation expectation measure from our Survey of Consumer Expectations is currently at 2.8%, down from 3% a year ago. The good news, however, is that these declines are very modest in magnitude. Thus, I would still judge that inflation expectations remain well anchored based on these survey measures.

Similarly, measures of inflation compensation based on the interest rate between nominal Treasury securities and Treasury inflation-protected securities or TIPS, have fallen sharply over

the past year. For example, the Board of Governors' 5-year 5-year forward measure, in other words, what inflation compensation would be five to ten years from now, currently stands at around 1.8%, down about 40 basis points from a year ago.

However, I put even less weight on this development than on the survey evidence for two reasons. First, a decline in these forward inflation compensation measures has been highly correlated with the fall in oil prices, a pattern that's hard to explain given we're talking about inflation five years forward. Second, a careful analysis of the factors behind the decline in inflation compensation suggests that changes in liquidity risk premium and what investors are willing to pay for inflation protection account for most of the decline rather than the decline reflecting a change in inflation expectations. Still, we do need to monitor closely inflation compensation while recognizing that sorting out the allocation of the decline in inflation compensation across these three factors – one, the liquidity risk premium, two, the price of inflation protection, and three, inflation expectations – is admittedly difficult. Also, the conclusions reached in such models are sensitive to how these models are constructed.

Regardless of how much signal one takes from these recent data, decline in inflation expectations below levels consistent with our 2% inflation objective would be problematic because inflation expectations are an important influence on actual inflation. Businesses, for example, make decisions about the size of annual wage increases based in part on their expectations of future inflation. And, households base their spending decisions in part on how fast they expect their

incomes to rise, and inflation expectations play a role in that process. Lower inflation expectations also raise the level of real interest rates, all else equal, and that can undercut the power of monetary policy to support economic activity. This is particularly relevant at the zero lower bound for interest rates.

Now, if the economy continues to grow at an above-trend pace, then I think worries about inflation remaining too low should begin to recede. After all, headline inflation on a year-over-year basis is likely to rise early next year, as much as the past year's decline in energy prices falls out of the year-over-year inflation calculations. Also, some of the factors holding down headline and core inflation are likely to be transitory. Energy prices will not go down forever. And as the dollar stabilizes, import prices will also stop falling. In addition, despite these factors that are weighing on core inflation, the recent trend of core inflation has actually been very steady with a 12-month change in the core PCE deflator in a tight range between 1.2% and 1.7% since the beginning of 2013. This suggests to me that core inflation should rise once these transitory factors dissipate. Finally, I take some signal from the fact that the spread between core services inflation and core goods inflation is wider than normal. Core services likely better reflect the underlying trend. Our core goods prices are more sensitive to external factors such as the drop in commodity prices and the weakness in import prices.

So what does this imply for monetary policy and the likely timing and pace of monetary policy normalization? As you may be able to infer from my earlier remarks, I think it's quite possible

that the conditions that the committee has established to begin to normalize monetary policy could soon be satisfied. In particular, I'll be evaluating the incoming information to see if it confirms my expectation that growth will be sufficient to further tighten the U.S. labor market.

After lift-off commences, I expect the pace of tightening will be quite gradual. In part, that's because monetary policy is not as stimulative as the low level of the federal funds rate might suggest. There is strong evidence that the short-term neutral real interest rates – let's call that rate r* – is currently quite low, certainly below the rate that has historically applied on a longer term basis. A wide range of models suggest that short run real r* is currently around 0%, far below its historical longer-run level that is estimated to be about 2%. This benchmark neutral rate needs to be compared to the actual real federal funds rate, the federal funds rate adjusted for inflation. If we measure the latter by subtracting the core PCE inflation rate from the nominal federal funds rate, the actual real federal funds rate today is slightly below -1%. So the gap is between slightly below -% and 0 – not a particularly large gap. Thus, current short-term interest rates are not far below their neutral counterparts and that suggests that the current monetary policy stance is not exceptionally stimulative.

The notion that r* is currently very low is also, I think, evident by more casual empiricism. Simply ask yourself the following question: If r* were close to its long-run historical value of 2%, would we expect to see the economy growing at only slightly above its potential growth rate? The fact that the economy is growing slowly despite a low federal funds rate and a very

large Federal Reserve balance sheet suggests that monetary policy currently is not providing that much stimulus to the economy. In other words, the gap between r* and the federal funds rate is relatively narrow.

So this leads to an obvious question. Why is r* depressed and how is it likely to evolve in the future? In my view, several short-term factors are restraining r*. First, the short-run r* is low because the foreign exchange value of the dollar has risen, reflecting both the fact that foreign economies are growing slowly as well as an expectation that monetary policies of the U.S. versus other major economies will continue to diverge for some time. If foreign demand were to pick up and the dollar were to weaken, then r* would likely rise over time as the persistent drag from the trade sector lessened.

Second, short-run r* is low because of the hangover from the financial crisis. For example, mortgage credibility for households with low FICO scores is still very limited compared to what we saw prior to the housing boom. This is constraining these households' ability to purchase housing and that in turn is holding back the pace of residential investment. Also, because the searing experience of the Great Recession has likely caused households and businesses to be more cautious in terms of their savings and investment decisions, this has also pulled down the short-run value of r*. Some of these factors should fade over time, gradually pushing up short-run r* towards its longer-run value.

At the same time, there are some longer-run factors that are likely to keep r* below its long-run historical average far into the future. In particular, potential real GDP growth in the U.S. appears to have declined in recent years – held down by slower productivity growth and demographic factors that are causing the workforce to grow much more slowly. This is the main reason why I have cut my estimate of the longer-run federal funds rate in recent years. And I'm not alone. In the FOMC's September Summary of Economic Projections, the median projection for the long-run federal funds rate was 3.5%. That's a half percentage point below the level in the SEP just two years ago.

So my discussion about short-run r* and long-run r* does have implications for how I think about monetary policy. The likelihood that we face a situation where the short-run r* is depressed, the economy is growing only slightly at an above-trend pace, and inflation is too low relative to our objectives, suggests that we need to think carefully whether the time is right to begin to normalize monetary policy. Additionally, the likelihood that the long-run r* is lower than it's been historically, suggests that after lift-off the upward trajectory of the short-term rates is likely to be quite shallow.

Another factor that weighs on the timing and pace of normalization is risk management. What are the relative costs of going too early versus going too late? As I see it, there are risks on both sides, and I think this explains why reasonable people can differ as to the appropriate path for the policy rate. So first, let's consider the risk of going too quickly. First, we could just be too

optimistic about our growth and inflation forecasts. Second, we could be right about our forecasts, but the rise in short-term rates could provoke an outsized tightening in financial conditions. And this might cause the economy's forward momentum to slow more than we desire or anticipate. In either case, the economy would not be growing fast enough to put increased pressure on resources. In such circumstances, underlying inflation might not rise and inflation expectations could become unanchored to the downside. Consequently, not only might the FOMC be forced to reverse course and ease monetary policy, but the efficacy of additional stimulus measures could be attenuated by the fall in inflation expectations. Avoiding a Japanese-like experience in which inflation expectations have been unanchored to the downside should be an important consideration in the conduct of monetary policy.

On the other side, there are several risks of delaying the start of lift-off and normalizing more slowly. The first one is the unemployment could fall to an unsustainably low level that is not consistent with our long-run price stability objectives. Monetary policy works with long and variable lags, so overheating is a risk. If overheating did occur, the FOMC might need to tighten monetary policy more aggressively in order to keep inflation from significantly overshooting this 2% objective. In such circumstances, the risk of recession would probably climb significantly. In the past, it's been very difficult for the Federal Reserve to engineer a soft landing for an economy when it's had to tighten policy aggressively in order to keep inflation in check. Historically, once the unemployment rate rises above a small threshold of 0.3 to 0.4 percentage points, the next stop has always been a full-blown recession. I would very much want to avoid

such an outcome. A long-lived economic expansion is always desirable, but I think it's especially so in the aftermath of a financial crisis and the Great Recession.

The second risk of delaying lift-off and normalizing more slowly is that the low level of the federal funds rate may be distorting financial markets and increasing financial stability risks. I don't think this has yet occurred to any significant degree but it is a real risk that we should continue to monitor closely.

I see the risks right now of moving too quickly versus move too slowly as nearly balanced. The weight that one puts on each undoubtedly influences one's views on when the time will be right to begin to normalize policy and the appropriate short-term rate trajectory thereafter.

Finally, in conclusion, a few words about the importance of financial conditions in thinking about the future path of short-term interest rates. Monetary policy does not work directly on the economy, but instead works through its effects on financial conditions. By financial conditions, I mean all those financial factors that weigh on spending, saving and borrowing decisions. Financial conditions include the level of the stock market, the level of short- and long-term interest rates, the size of credit spreads, the foreign exchange value of the dollar and factors that weigh on the availability of credit. If the linkage between financial conditions and the short-term interest rate controlled by the Fed were stable and predictable, then there would be no need to also monitor financial conditions. But the linkage is not stable and predictable. Sometimes

financial conditions loosen or tighten in response to economic developments totally independent of our monetary policy decisions. At other times, the response of financial conditions can be much larger or smaller than anticipated for a given change in interest rates.

So several examples will help me make these points. During 2004 to 2007, the FOMC raised the federal funds rate 17 meetings in a row, lifting the federal funds rate to 5.25% from a starting point of 1%. Yet, during this period, financial conditions eased. This is evidenced by the fact that the stock market rose, bond yields fell, credit availability – especially to housing – eased. In hindsight, perhaps monetary policy should have been tightened more aggressively. In contrast, during the fall of 2008, financial conditions tightened substantially even as the FOMC was aggressively cutting short-term rates. Again, in hindsight, perhaps monetary policy should have been eased more aggressively.

So how financial conditions evolve and how markets respond to our actions are important in influencing the economic outlook, and we need to take that into consideration in our monetary policy decision-making. When we begin to normalize monetary policy, will we provoke another "taper tantrum," or will market participants be as relaxed as they were when we actually did taper the rate of asset purchases in 2014? If financial conditions were to tighten more than expected when we began to normalize policy, then I expect we would go more slowly. In contrast, if financial conditions did not respond at all, or eased, then I suspect we would go more quickly, all else equal.

Also, I don't think there's a particular set of financial conditions that we should target. After all, the linkage between financial conditions and the economy is variable and the economic outlook is influenced by much more than just financial conditions. Thus, I have no target in mind for the U.S. equity market or other indicators of U.S. financial conditions. But I do care about how financial conditions evolve when the changes are sufficiently large or persistent enough so they are likely to weigh on the economic outlook. In that case, financial conditions need to be taken into consideration in the design and conduct of monetary policy.

It's been a pleasure to speak here today. I hope my comments have made it clear that monetary policy decision-making is difficult when the margins of excess capacity narrow, but inflation remains below our objectives. The world is highly complex and there is much we don't know about how the economy will evolve in the future. As a Fed policymaker, I strive to be clear in my communications. But I can't tell you today precisely what I'd favor doing in the future, because that future remains uncertain. Thank you very much for your kind attention. (Applause)

QUESTION AND ANSWER PERIOD

PRESIDING OFFICER ABBY JOSEPH COHEN: I thought that was clear. Bill, thank you very much. Two members of the Economic Club of New York have been selected to ask questions of our speaker. Both of them are trained and highly regarded economists. These individuals are Peter Blair Henry, Dean of the Leonard Stern School of Business at NYU and a trustee of the

Economic Club, and Peter Orszag, Vice Chairman of Corporate and Investment Banking at Citigroup. Peter Orszag, the first question is yours.

PETER ORSZAG: Thank you very much. President Dudley, one of the arguments that critics of moving sooner rather than later make is that there is growing evidence that short-term fluctuations in the economy affect the long term, the so-called hysteresis effects. You did not mention that in your risk management pros and cons. So are those critics wrong in exaggerating the effects of hysteresis? Is that something that should not be taken into account in Fed policy? Or is it already incorporated into your judgment that the risks are appropriately roughly balanced at this point?

THE HONORABLE WILLIAM C. DUDLEY: I would say, speaking for myself, they're incorporated in my judgment. I've talked about the issue of hysteresis in the past in other speeches. Hysteresis is the idea that if people are out of employment for a long period of time – one example of this is people are not employed for a long period of time – they start to lose their job skills and it becomes more difficult for them to be employed in the future. So if you can run the economy a little hot and push the unemployment rate a little bit below what you think is sustainable in the long run, you might actually be able to pull those workers back into the workforce which is good for them, of course, but it's also good because it actually expands the productive capacity of the economy if you haven't run the economy, and pull them back into the workforce. So I think hysteresis is a very, you know, my own view is hysteresis is a valid

argument. The important part, though, is not push that too far. If you push the unemployment rate sufficiently below the unemployment rate level that's sustainable over the long run, then you're going to overshoot your inflation objective, then you're going to have to tighten monetary policy aggressively. And if you have a recession, those same people that you're trying to benefit by bringing them back into the labor market are going to suffer. They're probably going to be the ones that suffer most of the consequences of that recession. So it's a balancing act I think.

PETER BLAIR HENRY: Bill, thank you for your remarks. You described the risks as being nearly balanced and the international outlook as being less problematic than it's been. But if you actually look at the IMF's world growth forecasts, the growth forecast for the world is now down to 3.1% from 3.4% earlier in the year. And, in fact, the forecast for world growth is actually, the actual world growth has been down every year in the last five years from the forecasts in the early part of the year. And on top of that, the forecast in the second half of the year has always been lower than the forecast in the first half of the year. So my question to you is should the Fed, in thinking about the future path of monetary policy, be thinking more about the international outlook than it has in the past, not as a matter of being sympathetic to the plight of emerging market economies, but as a matter of economic imperative? What should we think about the feedback effects on our economy?

THE HONORABLE WILLIAM C. DUDLEY: Well, I think we absolutely should be thinking about the international outlook in terms of how it weighs on the U.S. economy and our outlook. I

think, speaking for myself, one reason why I was concerned back in August and early September was it looked like developments in China and the weakness of commodity prices were going to lead to quite a bit of financial market turbulence that could potentially deflect the international economy to a significantly lower growth rate. The good news is that turbulence has sort of subsided. And I would say the economic news that we've gotten from abroad has generally been, you know, probably, you know, okay, over the last couple months. The important thing is we're actually; it looks like we're also seeing a bit of an inflection point in terms of the level of growth outlook. So I completely agree with you, Peter, that we've been persistently lowering our growth outlook, but it looks like the third quarter for the international economy is going to be stronger than the second quarter. And that's actually a pretty important thing because before that it was always out of forecast. We were always just about to arrive at the inflection point and then the inflection point would never arrive. But now it looks like we actually do see an inflection point with the third quarter global economy picking up a bit. So I think that, you know, this is still an area of uncertainty in the outlook. What I meant to sort of imply in my remarks was it remains an area of uncertainty, but it looks a little bit better than it did a few months ago.

PETER ORSZAG: President Dudley, over the past several months I think it would be fair to say there's been a significant amount of uncertainty surrounding the Fed's intentions and future policy moves. And I was wondering whether this experience has caused you to rethink the benefits of forward guidance. And in particular, as rates normalize the evidence suggests that perhaps around the zero bound there's some benefit, but the longer term experience, for example,

in New Zealand, raises significant questions, especially about data-dependent forward guidance, but about the topic in general. Has this experience caused you to rethink that, the benefits of that policy?

THE HONORABLE WILLIAM C. DUDLEY: Well, I mean my personal view, and I think you probably share this, Peter, is that forward guidance is really a very powerful tool when you're strapped at the zero lower bound and you have other, it's one of the ways you can actually affect the shape of the yield curve and push down bond yields. But when you obviously get closer to lift-off and the issue is when you're actually going to lift off, I think the forward guidance becomes much less useful. Also I would argue, at least for myself, when we actually raise interest rates – I'm not planning to be a practitioner of forward guidance in the future – I view it as a very useful tool when we're at the zero lower bound, but I don't think it's a particularly useful tool in other environments, speaking for myself.

PETER BLAIR HENRY: Bill, in your remarks it's quite clear that you have the point of view that the growth rate of potential output has come down some from where we were in the past. My question for you is, is it inevitable that we're going to have lower potential output growth in the future? Or are there structural things that we should be doing in the U.S. economy? I'm asking you to take off your monetary policy hat a little bit now and talk about the real side of the economy. Are there things that we can be doing to actually change the trajectory of our potential output? Or is this something we just have to accept, is having lower growth in the future?

THE HONORABLE WILLIAM C. DUDLEY: Well, there are two components, right, of potential growth. One, how fast is the labor force growing, and two, what's happening to productivity growth? You know demographically, it's our destiny, so we can't really do much in terms of influencing the growth rate of the labor force unless we change immigration policy. So we do have a lever there. We could be more liberal in terms of immigration policy and that would raise the growth rate of the labor force. But let's assume that that's not going to happen. Then it's really about productivity growth. And there are a lot of things that we can do about productivity growth. We can make sure that we have a better workforce. We can make sure that we have an appropriate set of regulatory policies. We can make sure that we have good job retraining. We can make sure we have a good infrastructure and we invest in projects with a highly positive return on investment. So we, you know, we do have some control over what productivity growth is going to do in the future. The hard part for economists is it's very, very hard to forecast productivity growth. We don't really understand why productivity growth picked up so much, you know, in the mid-90s. Maybe the internet and technology was a factor but it was really hard to know how long was that going to last and what was it going to be followed by. I made a bet a number of years ago with a colleague at Goldman Sachs that productivity growth was 2.5%. He had the upside for the next ten years and I had the downside. Now I'm winning that bet but I'm actually unhappy about that because it would be a heck of a lot better if we were still growing at that very rapid productivity growth rate. So I think, you know, government policy plays a role. And I think what it really underscores is there are limits to what monetary policy can do to influence the macro-environment. We can stabilize the labor market. We can try

to get inflation to hit our 2% goal. But we don't have a lot of tools in place other than that that can actually lift the productivity of the economy and that's really for the Congress and the administration, state legislatures, and governors to work on.

PETER ORSZAG: President Dudley, the House version of the highway legislation includes a provision that would "pay for" that legislation by drawing on the Fed's capital. Chairman Bernanke, former Chairman Bernanke has been highly critical of that proposal. I just wondered whether you shared his criticism.

THE HONORABLE WILLIAM C. DUDLEY: I think it's really for Congress to decide how they fund their various programs. If they want to fund it that way, that's their prerogative. So I don't have a view that, I don't think that the Fed needs a particular X amount of capital to be able to carry out this monetary policy. So if our capital base was a little bit smaller or a little bit larger, I don't think it has any consequence, any significant consequences for our ability to perform our mission. That's the critical thing. If I thought that somehow taking away the capital from the Fed would somehow impede the ability of the Federal Reserve to perform their monetary policy to achieve our dual mandate objectives, then of course I would object to it, but I don't see that.

PETER BLAIR HENRY: Bill, in thinking about one of the factors that you mentioned in driving long-term growth being investment, one of the things that we know from the current recovery is

that business-fixed investment still has not recovered as a fraction of GDP to pre-crisis levels. I was wondering about your views, sitting at the New York Fed, as to why business investment hasn't recovered as strongly as we might like. And in particular, as you think about the fact that, you mentioned China transitioning to sort of a new equilibrium in terms of its growth model, we're in the midst of a transition as well, sort of moving to sort of a new regulatory environment. To what extent is our transition to a new regulatory environment, in your point of view, is that part of the slowdown in fixed investment? Or are there other factors at work that we should be more concerned about?

THE HONORABLE WILLIAM C. DUDLEY: I don't have a really strong view, Peter, about why investment spending has been sort of slow. I mean part of it is that economic growth has been slow. You know I view investment spending as really sort of a function of how strong the other demand is. And then that weighs into the pressure on capacity utilization and resources and that leads to higher investment. Where I would say that investment spending does seem sort of soft to me is the fact that cash flows have been very strong in business balance sheets. You know access to capital is very easy. So it's been a little weaker than I would have expected in light of those variables. But I don't have a really good explanation for it. I would really be hesitant to cast it on the lot of regulatory, you know, policy. I think, you know, we did go through a very searing experience in the Great Recession and, you know, just like the Great Depression weight on our parents' and grandparents' minds for many, many years, it wouldn't surprise me at all if the Great Recession has continued to weigh on businesses. Another aspect of it is small business

formation. You know before the financial crisis, small businesses, real small startup companies typically were funded by borrowing against their homes, borrowing money from their families, or borrowing against their credit cards. Well, it's harder to borrow against your home. Credit cards have, you know, underwriting standards have been tightened up. So I guess you still have your family members. So it's been difficult for small businesses to start up and I think that also has been a factor.

PETER ORSZAG: So if I could come back just for a second to your perspective that the risks are nearly balanced at this point, you had highlighted the concern that on the inflation front we are well below the Fed's target but that there were several temporary factors that might be ephemeral and that would, as they come off, put the inflation numbers back in approximately the right range from the Fed's perspective. Again to your critics, I think the argument would be, well, why don't you wait and see if those temporary factors actually do erode in the way that you suggest. We are far below the inflation target. So what exactly and clearly is the argument against waiting and then moving 50 basis points if you need to if those temporary factors do evolve the way you think they will.

THE HONORABLE WILLIAM C. DUDLEY: Well, you could do it that way, Peter, but I think it would increase the risk of a hard landing on the other side. And I think by going slowly and gradually, the risk that the financial markets will react in some very aggressive way that tightens financial conditions in a way that is undesirable would be very much diminished. Also a

monetary policy works where there are long and variable lags and so it's not as if after the first tightening of interest rates policy will be tight. It'll still be quite accommodative. So it's still providing quite, it will still be providing quite a bit of support to the economy. So I think it's, I don't think, personally I don't favor waiting until I start to see the whites of inflation's eyes. You know, I think that if you look back at the experience of the late 60s and the 70s, you know, waiting too long and just saying I'm just going to stay here until I actually see an inflation problem, that can be quite problematic because when that happens inflation expectations can become unanchored to the upside. And then it's very, very difficult to put that genie back in the bottle again. And we've made tremendous progress over the last 15, 20 years in getting inflation expectations well anchored, close to 2%. I think risking that would be very dangerous and so that's not something I want to take a big risk about.

PETER BLAIR HENRY: Bill, in other remarks you've made, not ___, but in prior speeches, you've made the case for greater ethics in financial markets as a key underpinning of our market system. Not as a nice to have, but as an imperative for actually driving long-term economic growth. I wonder if you would be kind enough to share the crux of that argument with us and to what extent you think that this is an important part of the long-run potential output growth picture.

THE HONORABLE WILLIAM C. DUDLEY: Well, first of all, I think banks are special in the sense that they perform a special public service and for that they get advantages like the fact that

they get deposit insurance. And so I think it's very important to recognize that there's sort of a quid pro quo in terms of the support that they're given. And one thing that should be something that we demand is that they're run in a very highly ethical fashion. And I think the financial crisis and its aftermath showed pretty clearly that there were lot of bad things happening in the financial industry and that those things need to be addressed. You know we've been trying to take a lead at the Federal Reserve Bank of New York in terms of pointing out that this is a serious problem. And I'm pleased to see that a lot of leaders in the industry understand this as well. This is a big deal. If the financial industry doesn't get it right, who knows what's going to happen in terms of how the regulatory structure is going to evolve in the future. One thing I heard, Peter, that you'll, I think, find interesting is we talk to a number of business deans a couple of months ago. And we were talking about ethics and culture in terms of the curriculum at business schools, and in that conversation one thing that came up that I found incredibly disturbing which was a number of people there from the academic community said that people who think of themselves as highly ethical and people of high integrity were deciding not to go into the financial business because of their concerns that it was not up to their standards. That's not a really good place to be. So as long as we have that self-selection out of the financial industry by people that view themselves as highly ethical and high integrity, that tells you that we have a problem. So there's still quite a bit of work to do on this front.

PETER ORSZAG: President Dudley, one of the comments that have been made in, for lack of a better term political silly season, is that the Fed has been acting the way it has not for the reasons

that you delineated in this document, but rather because it's being political. I just wondered whether you cared to respond to that critique.

THE HONORABLE WILLIAM C. DUDLEY: I can only speak for myself. No way. Next question. (Laughter) No, seriously, I mean our job is to do what's right for the country. We have very clear dual mandate objectives established by Congress and we should be assessed against that. There's nothing in there that talks about the political cycle. There's nothing in there that talks about elections. So we're going to do what we think is appropriate for monetary policy with no eye on the political season whatsoever. And I think if you go back through history, for a very long time, I think it's very hard to find any evidence that the Fed has sort of pulled their punches because of the electoral cycle and we're certainly not going to do it this time.

PETER BLAIR HENRY: I'd be remiss not to ask you something about exchange rates. So the dollar has been very strong clearly. And the risks of an even stronger dollar have repercussions for the international economy which then have repercussions for our external sector which has become a much more important part of our economy. Could you just share a few thoughts about the relative risks of a stronger versus a weaker dollar?

THE HONORABLE WILLIAM C. DUDLEY: Well, clearly the dollar is part of financial conditions and so if the dollar were to appreciate from here, that would be a factor tightening financial conditions and so that would have to be considered in terms of how we conduct

monetary policy. But I very much leave it to the Treasury sector just to talk about whether the current level of the dollar is appropriate or not and what the appropriate level of the dollar might be in the future. You know clearly it's one factor that we have to take into consideration in terms of how we think about the outlook. And as I noted in my speech, if the dollar were firmer, everything else equal, then that would probably lead to more trade drag and that would probably make us go a little slower, everything else equal. But it's just one facet of financial conditions so it's not like we're focused on the dollar exclusively relative to the broad set of financial conditions which include the equity market, credit spreads level, short- and long-term interest rates, just to name a few other factors. So I don't think we should overemphasize the dollar, it's just one of many aspects of financial conditions. The one reason why it's probably a little bit more noteworthy today than maybe it has been in the past is because the dollar has appreciated quite a bit over the last year. And we know that the lags between the dollar's movements and its effect on trade tend to be pretty long-lived and persistent and that's why I would expect in 2016 the dollar's strength over the past year will probably continue to weigh on U.S. trade and that'll be a source of drag in terms of economic growth. And so that's something that's factored into my economic outlook. If the dollar changes, then those changes in the dollar will be factored in my outlook in the future. So we'll see how things go.

ABBY JOSEPH COHEN: Last question.

PETER ORSZAG: Okay, sure. One of the factors that you found comforting on the international

front was the changes in China towards a perhaps less crisis, more gradual move to a longer term growth rate that might be slower but still positive, significantly positive. I'm just wondering if you could elaborate a bit more on what gives you confidence that we're through the troubled period with regard to the Chinese economy especially given that the economy is shifting towards services and the quality of the data on services is just more noisy.

THE HONORABLE WILLIAM C. DUDLEY: So I mean I think that, you know, I think it's legitimate to still have concerns about the Chinese economy. I mean the Chinese economy is pretty opaque in terms of understanding what's happening in a real time basis. The thing that I was trying to address in my speech is that the Chinese have talked about, for some time, reorienting economic growth away from investment towards consumption. And the recent economic data supports that that transition has begun. In fact, the data we got yesterday was supportive of that – the factory sector a little bit on the soft side, retail sales quite strong. So the fact that the transition is underway makes me feel more comfortable than just to talk about this future transition that we're going to try to make. So the fact that I actually see it underway makes me more positive about the outlook. I think the other thing, as I said in the speech, that makes me more positive about China is they do have a lot of tools to use to address the economy. They can ease fiscal policy. They can stimulate investment. They can cut reserve requirements, lower short-term interest rates, and they've been doing a number of these things. But there's still a capacity for them to do more. So, you know, when I worry about, mostly about a hard landing in an economy is when there's no tools capacity left or you're dependent on foreign capital that

could go out the door. I don't think either of those things really apply to China so I think they still have their destiny in their hands and so that's why, you know, I still have some concerns, but I think things look a little bit better than they did a few months ago.

If I can just take the floor one more minute and then I'll go to you. I'm now putting on my Chairman of the Economic Club of New York hat. First of all, I want to note that we have a new president that's going to be coming into the Economic Club of New York. She's already on staff. She's learning about how this all works and she'll be starting full-time replacing Jan Hopkins on January 1. So, Barbara, if you could just stand up and be acknowledged please. (Applause) She is, you know, we did a very elaborate search process which Abby so gratefully ran, and it was terrific. And I want to thank you, Abby, for doing that. And we arrived at Barbara as the right choice. It was unanimous which is always a nice place to land. But before I turn the mike back to Abby, I want to acknowledge Jan Hopkins, the outgoing-President of the Economic Club of New York. (Applause) She is stepping down after being president of the Economic Club of New York for eight years. And I can tell you, she's been an absolutely exemplary president. So, people always say, well, give me some metrics. We actually do have metrics. During her stewardship, the membership of the club has gone up by roughly two-thirds, the number of events per year have gone from four to fifteen to twenty per year, and the financial assets that support the club financially have gone up more than four-fold. So there are your metrics, but it also shows in terms of how she's done this. Running the Economic Club of New York is not easy. You have to have tremendous attention to detail. You have to have the managerial skill of running a small

group on a day-to-day basis. And you have to have the ability to deal with people with very big egos and big staffs to boot. So Jan has been a valued partner in my time as chair of the club. She's been collegial, collaborative, and when I needed to be prodded, she's been prodding too. So I have very much enjoyed working with you. Join me in thanking her and wishing her the best of success in her future. Come up and get these flowers. (Applause)

JAN HOPKINS: Thank you all, and particularly the chairmen – Andrew whom I served for two years, and Bill, and all of you. Thank you. And I'm not leaving New York so I'll be around.

ABBY JOSEPH COHEN: I know I speak for everyone on the board and for the people in this room, Jan, to say it's been an absolute delight. And thank you for everything that you've done for us. After that, everything's an anti-climax. Let me begin by thanking again Mr. Dudley, Peter, and Peter, for what I believe was a very thought-provoking and content-rich presentation today, and make a few announcements. First, our next event, and Jan will be here then as well, will take place next week on November 18 right here at the Marriott. Ben Bernanke, the former chair of the Board of Governors of the Federal Reserve System, will discuss his new book, *The Courage to Act*, and he will do that along with Professor Alan Blinder, Professor at Princeton University and many of you know that Alan is a former vice chair of the Federal Reserve. On December, the 4th, Mario Draghi, the President of the European Central Bank, will address the club. And let me just say thank you all for being here today. Please make sure you make reservations for these upcoming events. And now, enjoy your lunch. Thank you. (Applause)