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**Unofficial Transcript:
President and CEO James Bullard Interviews
with Jeremy Schwartz and Jeremy Siegel on
Wharton Business Radio's "Behind the Markets"
on Sirius XM Radio
Aug. 21, 2015**

Jeremy Schwartz: This is the third time back on our program, President Bullard. Thanks again for joining us. Just read a little bit about his background, as president of the St. Louis Federal Reserve, and some of what he has called for there, because I think all of this is going to come into our conversation today, and in some form. Since he became the president in 2008, President Bullard has called for the FOMC to adopt state-contingent policy, and give greater consideration to headline inflation, rather than core inflation, when deciding policy. So this move in oil is going to be an interesting conversation, as part of that focus on headline inflation. And in the wake of the financial crisis, he supported quantitative easing and warned about the possibility of the U.S. falling into the Japanese-style deflationary trap.

But we also saw news this week, and I'm sure we'll get into this conversation, that there's a paper at the St. Louis Fed maybe questioning QE, and so I should talk to James about his colleague's thoughts there. And he's also talked about the U.S. output gap may not be as large as many estimates suggest. So he's really got a lot of really interesting thoughts on the economy, and I know, professor, you want to sort of dig into some of that to start us off here.

Jeremy Siegel: Yeah. Well, James, again, thank you for joining us.

James Bullard: Happy to be here.

Jeremy Siegel: You joined the Fed, I think it was in April 2008, just before the real fire started. You've lived through perhaps one of the most interesting times ever, being on the FOMC of the Fed, and by the way, I'm sure you've been apprised of the fact that 2014 *Economist* magazine named you the seventh most influential economist in the world, ahead of Alan Greenspan, at that point, in terms of your interpretation and pronouncements about the market. So you've given an awful lot of thought to this. Let's jump right in. You know what's going on in the markets today, and does this influence the Fed when they're going to meet on Sept. 16th and 17th? I mean, do they take the markets into account? Has this changed your view? Has this shifted the needle between a September and a December rate increase?

James Bullard: Well, you know, I've always felt like the Fed does not react directly to equity markets, or other markets. But equity markets are forward-looking. They're trying to assess the trends in the global economy, and we're also trying to assess the trends in the global economy. So in that sense, we're looking at the same things. I'm not sure I'd have exactly the same assessment as the market's having. I know there are a lot of worries about global growth, probably a lot of it coming from China. I'd probably be more sanguine than the market is today on that dimension, but do we react to developments in the global economy? Yes. Do we react to particular developments in equity markets? Not really.

Jeremy Siegel: Mm-hmm. How does what you see—and more than just the markets in the last few days, but what you're seeing in these trends. You have been generally interpreted as a supporter of a September increase. Do you still feel that way? What might change your mind? What could change your mind? And do you have any feeling for how the rest of the FOMC feels? Of course, we got those minutes on Wednesday, and we did learn a little bit about the sentiment.

James Bullard: Well, first of all, I'd stress no decision's been made. I can't speak for my colleagues; I'm not sure how they're going to react to the situation, or what their decision-making criteria will be. But I can speak for myself. I think, you know, when people talk about data dependence, then sometimes they get the idea that, "Oh, this means that the FOMC is going to react to something that happens just 24 hours before the meeting," or something like that. So I think you have to, as my mother would have said, get that right out of your head. That is not what data dependence means. There will be an assessment at the September meeting which will be mostly centered, I think, on labor market prospects, and cumulative progress in labor markets, growth prospects going forward in the U.S., and inflation in the U.S., and then some on financial stability.

So on the labor markets, I think one of the things that's driving a possible September liftoff is really very good performance of U.S. labor markets over the last two years. We've had lots of cumulative progress, lots and lots of jobs reports with 200,000-plus jobs. We're likely to get more, but even if you didn't, I mean, you've really had a lot of good things happen in U.S. labor markets. You've had unemployment get all the way down to committee estimates of the NAIRU. And so I think we're in very good shape, with respect to labor markets, and I expect, you know, more solid reports in the coming months, including the one that comes before the September meeting.

On growth, I think we've got the first half of the year now being revised up. As you guys know, the first quarter was revised up to six-tenths of a percent positive. It was previously thought to be negative. And then, you know, if you're watching the tracking forecasts for the second quarter, a lot of them are moving over 3 percent. And so if you get a 3 percent-plus for the second quarter, and about a half a percent for the first quarter, you're starting to get something close to 2 percent for the first half, which in this economy would be trend growth. So the idea that the first half was slow—

Jeremy Siegel: We're going to talk about that later, why is trend growth so low. But third quarter is not looking great. I think the early estimates are in the low 2's, and been nudged down because of quite a bit of inventory accumulation happening in second quarter. What's your interpretation there?

James Bullard: Yeah, I don't know. Our tracking still has it between 2.5 or 3, and if you think trend growth is 2 to 2.25, then you're talking about above-trend growth for the U.S., still, in the second half of the year, which will further improve labor markets. So I think on the growth side, that the outlook is relatively good. And then we can talk about inflation and financial stability as we go through the interview here.

Jeremy Siegel: Yeah. Jeremy, do you have any follow-up on this?

Jeremy Schwartz: Yeah, let me just remind our listeners, we're talking to President James Bullard of the St. Louis Federal Reserve. We've got Professor Siegel on the phone here, and I'm Jeremy Schwartz, head of research at WisdomTree. It's interesting, on the labor market front, President Bullard, you talked about, since unemployment rate's trending down. You've also talked about the labor force participation rate largely being driven by the demographic situation. And I've seen some reports out here talk about, if you just look at the working age population, and you look back from 2007 toward where you are today, that we sort of are basically half—we haven't recovered half as much as the jobs would suggest there. What's your thoughts on how demographics have played into this, versus just that working age population?

James Bullard: Yeah, if you look at labor force participation, it peaked in 2000, not 2008. It peaked in 2000, and it's been declining ever since then. And if you look at models of labor force participation, they suggest that it's mostly demographic factors that are driving this variable. And indeed, most projections of labor force participation going forward have it falling even further from where it is today, as the population continues to age, and other factors continue to move forward. So I think we're on a downward trend for labor force participation, and I'm not sure that it means all that much, from a macroeconomic perspective, especially in the cyclical sense. And because labor force participation is going to continue to trend down, I think unemployment will also continue to come down, below 5 percent, into the 4 percent range, and probably into the very low 4 percent range before we're done, over the next couple of years.

So I think people have to get ready for the idea that the unemployment decline is not over. It's going to continue in the next two years, and that next two years is going to be a very low-rate environment. So what I'm looking at, sitting here for the September decision, is that the Fed has already committed, even if we do lift off, we've already committed to a very low-rate environment, in likely a very strong labor market over the next two to three years. What does that mean for other variables, like inflation or financial stability?

Jeremy Siegel: Yeah, let me follow up on Jeremy's thing. JP Morgan had a report that could only attribute half of the decline in the participation rate from 2008 to demographics. Certainly, you're correct in saying that's a strong secular movement that will

be with us for many, many years, but there seems to be—normally in recovery, we get a much better improvement than what we have. Is it Obamacare? People can get health care without working now. Are there other factors going on that is suppressing that participation report?

James Bullard: You know, I think labor force participation has never been a cyclical macroeconomic variable. When it was increasing, it increased all the way through the '70s, the '80s, the '90s, it increased all the way through the, even the big recession in '80, '81, '82. No one said a word about it when it was on an upward trend. I don't know what they thought, it was going to continue forever, or what, but it just—

Jeremy Siegel: Most of, a lot of that was female participation—

James Bullard: Sure, you've got women coming into the labor force, which obviously had to end at some point, that trend, and other factors, but it just does not have a big cyclical component, and so I think to be sitting here today, and then say all of a sudden that there's a pretty big cyclical component, and this is going to move around, I don't think that that's a realistic way to think about how this is going to evolve going forward. This thing is going to decline, and therefore, unemployment is going to go down 4.5, 4.25, 4 percent.

Jeremy Siegel: I'd like to follow up on that. You think the low 4's is a real possibility for the unemployment by the end of this cycle?

James Bullard: Absolutely. If you look at the '90s, late '90s recession, we went actually below 4 percent, 3.8, I think. And then in the 2000s, we went down to 4.4 percent, and unless you get some big shock that sends you back into recession, that's surely what's going to happen again this time. So I don't buy these forecasts that are saying, "Oh, we're going to end at 5 percent, and then it's just going to flatten out from there." I don't think that's a realistic projection of what's going to happen.

Jeremy Siegel: But with the Fed putting the natural rate of unemployment at 5 to 5.2, you're saying that it could move appreciably below that.

James Bullard: Absolutely.

Jeremy Siegel: And that usually sets off the alarms of wage inflation and into price inflation. Would that be a real concern, then?

James Bullard: All of that is going to happen over the next two years, barring some big shock to the economy. Of course, you could always—something bad could always happen, you go back in recession. But on the baseline forecast, I would say unemployment's going to fall into the 4 percent range. This'll put—for those who like to emphasize Phillips curve dynamics, this will put upward pressure on inflation, upward pressure on the inflation component of wages.

Jeremy Siegel: And you said for those, are you including yourself as one of those, that Phillips dynamics does move in that direction?

James Bullard: You know, I've not been that big of an advocate of Phillips curve-type thinking because I think it gets overemphasized. But there is certainly a component of it, and that component will become operative as we move into the next two years.

Jeremy Siegel: So talking about inflation, of course, the Fed has said in every single statement, first of all, the progress on the labor front, and you're absolutely right, we've had tremendous progress on the labor front. Faster than, really, even the Fed and private forecasters have expected. But what about on the inflation front? In every statement, reasonable confidence that the inflation rate is moving to the 2 percent target. How could one be at all confident, seeing oil collapse before 40, commodities hitting new lows across the board. What could give you that confidence, James, on this?

James Bullard: Well, please, call me Jim.

Jeremy Siegel: Oh, Jim, OK.

James Bullard: On oil, I think—most people think that that's a supply phenomenon. You've got fracking in the U.S., huge production in the U.S. compared to where we used to be, and you've got developments in the Middle East that might bring supplies of oil back online. The big movement in oil occurred last year, a 50 percent reduction since then. It's stabilized now, it's moving somewhat lower. But really, the big move was the 50 percent decline, which I think is mostly supply-driven.

Markets tend to look at the price of oil, and they tend to think global demand is moving one way or another. And I think that might be the wrong interpretation here, where this does seem to have a lot to do with global supply of oil. So when we look at inflation, of course, this huge move, 50 percent decline or more in the price of oil, in dollar terms, is having a big impact on inflation numbers, and headline inflation numbers are around 0 percent. So normally, I don't like to move off of headline inflation, and I think in normal times I would not. But this is such a huge move in oil, that you probably have to look at some other kind of measure that gives you some idea of the underlying trend in inflation, and a couple things you can do. If you look at core CPI, it's about 1.8 percent, year over year. Cleveland median CPI, about 2.3 percent. Sticky-price CPI is put out by the Fed of Atlanta, that's 2.2 percent. So those are reasonably good numbers. You'd have to adjust them down by about three-tenths in order to make them comparable to PCE inflation. But they're around 2, no matter how you cut it.

And then on the PCE inflation side, that's personal consumption expenditures inflation, which is the preferred measure of the FOMC, you can look at the Dallas Fed trimmed mean PCE inflation rate year over year—it's about 1.7. If you look at over the last six months, which would kind of cut out a lot of the oil price movement that occurred last year, then you'd get 1.9 percent. So these are all numbers that are, they're low, a little bit below target, but they're all reasonably close. And if you pair that with the tremendous improvement in labor markets that we've seen, and the idea that oil prices will settle out at some point here, at a bottom, and maybe start gradually moving up, or just stay at the bottom,

then we would see inflation start to move back to 2 percent. So I think that that's my thinking on the inflation front for right now.

Jeremy Siegel: Let me drill in on that a little bit. The PCE core itself is only 1.3 percent above a year ago. Now, you mentioned the trimmed PCE core that's put out on by the Dallas Fed. Do you want to explain that a little more to some of our listeners?

James Bullard: Yeah, the core inflation measure, the so-called core, just throws out food and energy without regard to anything else. So it's really a '70s concept. I don't know if you should really do that. If you want to get some kind of smoothed measure of inflation, you should do something that's statistically a little bit more sophisticated. So what the trimmed mean does is it throws out the top and the bottom price movers, and just keeps the mean of what's left in the middle, and that gives you some idea about where prices are headed, as opposed to just always throwing out certain categories of goods and services. So, like I say, the year-over-year Dallas trimmed mean PCE inflation rate is about 1.7 percent. So it is below target, but it's not as far below as other types of measures. Certainly not as far as the headline measure.

Jeremy Siegel: Jim, it sounds a little—this trimmed mean—as in like, we would have won the game except for the seventh inning?

James Bullard: Well, there is a case to be made that you should just look at headline inflation, and you should just go with that.

Jeremy Siegel: And you've made that case.

James Bullard: And I have made that case, and you could say, and maybe we should say, that actual inflation, headline inflation, is a pretty volatile object, and we just have to live with that, and we have to adjust policy when that volatile object moves around. But if you do that, you have to also say, if the oil prices shot back up to \$80 or \$90 or something, of course your headline measure is going to go way over 2 percent, and are you willing to tighten policy in that circumstance?

And my sense is that the judgment of many central bankers is that they wouldn't be willing to do that. I might be willing to do that, if you're really willing to commit to that you're going to look at headline inflation, or you're going to react to headline inflation, but the truth is that most central bankers don't want to react aggressively to those kind of movements in energy prices and other commodity prices because they just think that the factors that are driving those are global factors and maybe not specific to the U.S.A.

Jeremy Schwartz: Let me reintroduce our guest, here. We're talking with President Jim Bullard of the St. Louis Federal Reserve. We have Professor Jeremy Siegel on the phone, and I'm Jeremy Schwartz, director of research at WisdomTree. President Bullard, talking about inflation, we saw one of your colleagues, Narayana Kocherlakota, who was saying he thinks we're sort of undershooting inflation, that we need to actually take more action to sort of come out and try to get us about the target. What's he missing here?

James Bullard: Well, I can't speak for Narayana, but he's certainly advocated staying at zero for longer, I think when we wanted to end the QE, he gave some public remarks about maybe maintaining the program for a while. But he's obviously not carried the day on that debate. And I think, you know, I've talked about the dangers of staying at zero too long and becoming like Japan, and entering a stagnation era, and things like that. I don't think that we're in that situation right now, and I think if we can get off zero and acknowledge the good news that we've had, generally speaking, on the U.S. economy over the last couple of years, that we'll transition to an equilibrium in which inflation will be at target, and labor markets will settle down around the natural rate of unemployment, and we'll get good growth. So, hopefully, I've got the right policy prescription here, but you can ask Narayana about his views.

Jeremy Siegel: Mm-hmm, yeah, no, he's been, yeah, one of the more dovish ones. You know, continuing, you seem—so you're quoting data in a number of these series, you seem to be confident—you are confident that we are moving towards the target, and you're not dissuaded by this recent, the pretty sharp downward move, in more than just oil, all the other commodities. I just also want to mention, I checked some of the far-out contracts, and they've also taken a dramatic turn, two and three-year oil out is now, you know, in the low 50s and it was in 90-95. So the players think that this is not something that is going to bounce back to 80 or 90. We seem to have a new look at supply and demand, and arguing for substantially lower energy prices. Is this—would this be your feeling, Jim? Or you're still saying that when you look at the other prices in the economy, you have confidence that we will approach the 2 percent target.

James Bullard: Well, I think oil probably will stay at these lower levels because of the big supply effects that I was talking about earlier. But I'm certainly not an expert on oil markets; so, you could ask some of your other guests that might know more about these markets than I do. But a good bet would be, there's been a big supply shock, and these prices will be down for a while.

But from the inflation perspective, the one-time move, which is 50 or 60 percent reduction in the price of oil, that will all fade away as we go forward, because oil will be at this lower level, and once it's been at the lower level for a year, it will fall out of all these year-over-year measures of inflation. And what you'll be left with, then, is an underlying rate of inflation in the other prices. And you know, I've quoted—let's just take the highest number that I quoted here, the Cleveland median CPI. So that would be the median price in the CPI basket. That's 2.3 percent year over year. And if you subtracted three-tenths off of that to get to the PCE inflation rate, you'd be right at your target of 2 percent. So, in this time of really volatile energy prices and commodity prices, it might be useful to look at a variety of measures of inflation, and that's one that tells us we're at target. And I know it's not the preferred measure of the FOMC, but since we're in a period where measurement is pretty difficult, it might behoove us to look at a variety of measures.

Jeremy Schwartz: Professor, I think we're going to take a short break here. We're going to come back and continue these conversations. And it's really an excellent start of this

show here we talked about sort of the oil price inflation, President Bullard's outlook here that they're not just reacting to the equity markets, and really, it's been a very good first part of the show, and when we come back, we'll continue this conversation with President Bullard on the state of the economy and his outlook for the Fed policy coming up. You've been listening to Behind the Markets on Business Radio, Sirius XM 111.

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Jeremy Schwartz: Welcome back. This is Behind the Markets, on Sirius XM 111. I'm your host, Jeremy Schwartz, director of research at WisdomTree. I'm joined by my co-host, Wharton finance Professor Jeremy Siegel, and we have a really special guest here today, President James Bullard of the St. Louis Federal Reserve, and we have him for the full hour, and so we're going to be continuing the discussion with him for this part of the program. We had a great discussion, first part, on unemployment, on inflation, all the different measures that President Bullard is looking at. For this part, or this second half, I thought we would start if off by, you know, President Bullard, you talked about the long-run federal funds rate on our program before, and do you think it's going to be part of the normal cycle. And again, referring to your unemployment outlook, you think that we're going to get down to that low 4 percent, implying that this is just a normal cycle. And so when you think about that long-run Fed policy rate, and the market still says 2 percent, you still think they're really undercounting our growth estimates here?

James Bullard: Yeah, I haven't changed my long-run fed funds rate. I've still got it at 3.75; so, I think I only changed it probably six months ago. I haven't really seen enough data to cause me to further revise it. So, I think that that's ultimately where we're headed, but the committee has said, in no uncertain terms, that we plan to go gradually, and we plan to go in a data-dependent way through the normalization process. So I think it's going to be probably a long time before we see that kind of funds rate in the U.S.

Jeremy Siegel: Let me follow up on that. I mean, there's been a lot of discussion, and we've talked about it before, the stark differences between the dot plot, which is of course, the quarterly fed funds projections FOMC puts out in its meeting and will put out a new one, obviously, in its September meeting, and what the fed funds futures market shows, which are dramatically lower.

And to just give some of our listeners a feel for this, in the last meeting, June meeting, the median estimate for the end of next year—I'll go to short-run in a moment—is 1.50 to 1.75. Right now, and of course we are in the midst of a kind of a market meltdown—it's 86 basis points on the fed funds future for December of 2016. On 2017, 2.75 to 3. That's a pretty rapid increase. And it's about one-half that, on the fed funds future, in December 2017. So I mean, what—why is there such a discrepancy here, between what the FOMC, and to be very honest—and I think you would have to admit this, the market has been closer to being right, because you guys haven't gone up as much as you had projected in the earlier years.

James Bullard: Yeah, we've talked about it before, and I am concerned about this mismatch between market expectations and committee expectations. I think, you know, this'll likely tighten up a lot more if we get started with our normalization process and, then, you know, the committee will make a second move at some point and, then, I think the market will have a better idea about what we mean, and maybe the committee itself will have a better idea about what we mean by a gradual pace of increase.

So what I've seen from the markets seems too low to justify by anything other than the U.S. economy's just going to grow very, very slowly, and labor markets won't improve any further from where they are today. I'm not sure that's a really good baseline forecast for the U.S. economy. Of course, it could happen. There are a lot of possible futures out there, but I don't think it's the best baseline forecast to have. So one thing that's going on, is we haven't raised rates in the U.S. since, almost 10 years, and you know, I think you've got a lot of traders that maybe don't—have not lived through this before and aren't sure what to expect. But I think once we get going on this, that the market expectations will probably line up better with committee expectations.

Jeremy Siegel: And you, yourself, mentioned that growth is 2 percent. Is that the new normal growth? I mean, when we had obviously most of the postwar period, 3.5 percent, even higher. And, obviously, coming off a recession, it's much higher. That slower growth, wouldn't that argue for a much lower long-run fed funds rate?

James Bullard: Yeah, and I have adjusted, because I'm down at 3.75 for the long-run value, but—

Jeremy Siegel: I convinced you to go from 4 to 3.75, Jim?

James Bullard: Yeah, I did, yeah.

Jeremy Siegel: I'm trying to convince you to go down a little further here.

James Bullard: Well, you know, I mean, why do you want me to go down further? I've already got—you've got to have 2 percent—

Jeremy Siegel: Well, I—definitely. I actually believe that—and I'm not saying you're not going to go above this when you tighten at the top of a cycle, but 2 percent I think is, 2.5 is very much going to be the new normal long-run fed funds, given the slower growth, given the higher risk aversion. I know older population, you mentioned the demographic effects, that are satisfied at interest rate—not happy, but satisfied interest rates, much lower than we ever believed. I think these are really factors that are putting the whole structure of interest rates much lower than any of us had anticipated a few years ago.

James Bullard: Well, if you did a baseline model that I like, which would be a general equilibrium, life cycle kind of model, you would say the interest rate should be equal to the growth rate, the nominal growth rate. And you would put in 2 percent for inflation, and

probably 2 percent for growth, you get 4 percent. I'm already below that, 3.75, with a flat yield curve. So I'm not sure—

Jeremy Siegel: What I would argue is that's true for the longer-run bond, and then you have a term structure of, you know, the average spread between the 10-year and the 90-day bill is about 1.75. So, yeah, I can see two-year TIPS, and 10-year nominal Treasuries, but that wouldn't argue anywhere near that high for the short end of the fed funds.

James Bullard: Yeah, OK. But we've looked at this. We like our 3.75 number.

Jeremy Siegel: OK. OK. Jeremy, do you want to add on this?

Jeremy Schwartz: Yeah, we're talking with President James Bullard, St. Louis Federal Reserve. President Bullard, there's interesting comments, and when you started us off on the program talking about you don't respond to equity markets, there seems to be a feeling, even on down days like here, that there's sort of this Fed put behind it, that you guys come out, when the markets are not reacting well, and sort of markets aren't really being driven by sort of fundamental forces, that there is this sort of Fed behind there. Do you have any further comment on how much you guys really react to the markets, and is there this baked-in protection?

James Bullard: Yeah, I don't think that—I'll speak for myself. I'm certainly not trying to react directly to equity markets, but as I said earlier, equity markets are trying to assess future prospects for the U.S. economy, for the global economy, and monetary policy is also trying to assess future prospects for the U.S. economy and for the global economy and, because of that, it sometimes looks like the two are reacting to one another, but I think they're really just reacting to their assessment of the future. And so, you know, do you want to interpret that as the Fed is reacting to equity markets? I don't think that's the right interpretation.

Jeremy Siegel: I know that the—this sort of reaction, we're talking about China, the emerging markets have suffered a dramatic meltdown here. They're already well into correction territory. That's one of the things driving down these—what's your assessment of China? First, its current growth, and how important is that for the U.S. outlook?

James Bullard: Well, anecdotal reports that I've received from businesses in the Eighth District, but around the country, that have business in China, they tend to be downbeat, relative to where they were, and I think that's probably affecting market sentiment. A lot of people are wondering whether the 7 percent growth rate is real or the actual growth rate is something less than that. And I think the devaluation and some of the recent news which has been softer out of China is making people put more weight on that kind of interpretation, that the actual growth rate might be somewhat less than the reported growth rate. But, still, it's a big economy, it's a growing economy, there's a lot going on. Whether you should really be changing equity valuations as much as people are in reaction to sort of slim data, slim amounts of data out of China, I think is kind of questionable.

Jeremy Siegel: Let me shift the subject a little bit. Bloomberg today came out with a statement by Rand Paul, saying the Fed balance sheet needs a more thorough audit. Now, I know that Rand Paul is probably not a favorite on the FOMC. I'm not wrong there. And I also believe that he's drilling way too far in certain issues. But there's some that are, I think are interesting, as I read through the statement, that I would like your comment on. He said, according to Deloitte & Touche, which conducts a conventional audit of Fed financial statements, Fed spent 6.1 billion for operating expenses, an additional 5.2 billion in interest paid to the banks. That's, of course, the interest on excess reserves, which has, you know, been pegged at 25 basis points. Now, he makes a case that the Constitution says that no money should be drawn from the Treasury but in consequence of appropriations made by Congress. I think he's ignoring the fact that Congress actually gave you the right to pay interest on these deposits. So, you're not going above and beyond and usurping rights that belong to Congress. But the interesting point is if you increase in September or December, whenever that is, the Fed has been pretty clear that that is going to be associated with a like increase on the interest on reserves. Is that also your understanding, Jim?

James Bullard: Absolutely. The interest on excess reserves, Former Chairman Bernanke emphasized many times, is the lynchpin of our normalization strategy, and so it's a very important rate, from the point of view of implementing monetary policy in an era of exceptionally high reserves.

Jeremy Siegel: And so that would mean, so if we have 5.2 billion now, as he stated right on there, if the Fed goes forward on an interest increase, consequenting a doubling of its payments to the banks of an annual weight of over \$10 billion. I mean, is this a deserved—I mean, this is a good chunk of money. And when we look forward, and as we talked about the dot plot, looking forward into 2016, with, well, you know, rates that the FOMC thinks are going to 1.50, now you're talking about huge amounts of money. What—can you give us some flavor, has the Fed discussed that they're going to raise it 25 at every increase? Are they eventually going to open a gap? How will that work?

James Bullard: Well, the committee has talked about its normalization strategy and, in a nutshell, I think it's very clear what the committee wants to do when it's time and the appropriate time to raise rates. We'll raise the interest on excess reserves 25 basis points, most likely. The so-called reverse repo program will also, that rate will come up 25 basis points, but it will be 25 basis points below the interest rate on excess reserves, and then the federal funds rate will trade in between those two rates, and the official policy rate will be the federal funds rate, but these three rates will work in tandem, to implement monetary policy while we have such a big balance sheet. So, that is clearly the intention, and one of the things that would have to happen when we make a decision to lift off is we're going to sort of test that theory and see if that really works. I do think it'll work, and there's been a lot of preparation for that; so, I do think it'll work.

Let me just mention with Senator Paul, you know, he's a tough critic of the Fed, but I appreciate his asking lots of tough questions and challenging us on what we're doing, and I think that's, you know, absolutely part of the democracy, and part of the important role of a

person in the Senate, or in any leading public position like that, so I think he's playing his role exactly right. And I think this issue about our plans to pay interest on reserves is one that should definitely be vetted because that, as you described it, that's exactly what we plan to do. We plan to raise the interest rate on excess reserves. The amount of reserves in the system is going to be big, and it's going to mean fairly large payments to the largest banks in the U.S. and to some foreign banks. And if Congress is not comfortable with that, they should definitely tell us right now, because that is something that would need to—we would need to change our exit strategy dramatically if we cannot rely on the interest on excess reserves as being a tool of monetary policy.

Now, for your listeners, and maybe for you guys too, you might remember that the Fed could not pay interest on reserves for years and years, decades. This was—

Jeremy Siegel: Until 2008, that's right, it was prohibited.

James Bullard: Until 2008, and then when we could pay interest on reserves, of course, interest rates were extremely low. And so now what you're talking about, is you're describing it, you're talking about an era, possibly of rising rates, going forward, this is going to mean we're making payments to these large financial institutions because they're holding all the reserves, or a lot of the reserves. So I think it's actually a great issue for Senator Paul to bring up, and you know, I think, if we're all comfortable with this, including all the senators and administration and everybody, then we can go ahead. If we're not, then we need to change strategy right about now on how we would do our normalization.

Jeremy Siegel: Right, and in fact, as we just said, if the Fed dot plot and the median, 1.50 to 1.75 just holds for the end of next year, that would be over 30 billion. And of course, if the long run holds, we're talking about 60, 70, 80 billion. That's huge. I mean, that is something that I think would raise a lot of eyebrows.

James Bullard: So you're preaching to the choir. I'm one that has brought this up as an issue, as a potential, you know, issue that maybe has political ramifications, because I'm not sure that everyone really completely realizes what's on schedule to happen here. And we need political support, from both sides of the aisle, that they're comfortable with this. If they're not, then we need to re-evaluate how we're going to do our exit.

There are other ways to do exit, and I've talked about them, probably with you guys. One way to do exit would be to shrink the balance sheet first and raise interest rates later. That was actually my preferred approach, but Chairman Bernanke in particular did not want to go that route. He wanted to raise rates first and shrink the balance sheet later, and that actually carried the day, and that's what the committee's planning to do. So, I actually think Senator Paul's bringing up a great point, and it's a great thing to debate.

Jeremy Siegel: And, then, also, I mean, another possibility is raising reserve requirements to absorb some of those excess reserves. I mean, they haven't been changed in 35 years, and they're virtually zero now, I mean, except on demand deposits. There's nothing on time deposit or anything else. That would at least absorb some of those reserves that

would obviously flee if you opened up a gap between the two. By the way, I appreciate your comments about paying attention to this issue, but I do believe you are on the record of not supporting his call for a special audit on the Fed. Am I correct there?

James Bullard: The Audit the Fed Bill is designed to remove the exemption on direct audits of monetary policy decisions. And what I've been concerned about, and Chair Yellen and Chair Bernanke as well, that this would open up a Pandora's box of political interference with the Fed. Because, really, what you're saying is, you know, suppose we make some decision in September, and some senator or member of Congress is upset with our decision, and now the GAO comes over and interviews everybody and asks for all kinds of papers behind that decision. That is a way to hassle the Fed over decision-making on monetary policy, and I don't think it would lead to good outcomes for long-run monetary policy.

Policy's debated every day, anyway, and we try to be as transparent as we can, which I'm doing right now by being on your radio program, but to have that kind of political beating up on the Fed I don't think is a good idea. Senator Paul often talks about other things that could be audited around the Fed, but most of those things are already audited. So, the Audit the Fed Bill is really about removing the monetary policy exemption.

Jeremy Siegel: I know Jeremy—

James Bullard: Which was put in, that was put in by the Congress, intentionally put in by the Congress in the 1970s.

Jeremy Siegel: I know Jeremy mentioned earlier, your vice president Stephen Williamson recently has written an article where I see it quoted much more skeptical about whether QE worked. Now, I remember you being an early supporter of QE, but am I right, you were not a supporter of that third, final round of QE? Are you as skeptical as your VP about these special programs and whether they worked or not?

James Bullard: Yeah, I looked at Steve's article, and I recommend it to you and all your listeners. I think he was writing about a conference in honor of Michael Bordo, who's an economic historian. And, so, he wrote about a lot of the papers there and, then, tangentially, it talked about current policy topics and evaluation of policy during the crisis and its aftermath. And I thought he said a lot of things that are very defensible, from an academic point of view, because what the Fed did was a lot of experimental policies, including forward guidance and quantitative easing. And what he said was, "Gee, I don't see these kinds of policies having a lot of theoretical support, or a lot of empirical support, that is, when you look at the data and try to evaluate them." And that's true, from an academic perspective, but for us on the FOMC, we had to try to do something whether it had support or not. We had to try to be inventive with policy because the policy rate had already hit zero.

So, these are things that'll be debated in the academic literature for a long time and, hopefully, we'll learn a lot from it, and we'll be able to design better policies in the future. As far as what I've said on QE, I have said that I think it's the best choice among a set of bad choices when you're at the zero bound on nominal interest rates. So, your main tool has been

taken away. The economy's still struggling, you have to think about what you can do, and I think QE's probably the best you can do. That's why I advocated it for the U.S. I opposed the third round when it was introduced, but that was more a timing issue. It wasn't a question of efficacy of the QE program. I also proposed that the European Central Bank undertake QE in the summer of 2013, which they eventually followed through on in January of 2015. So I have been one that has advocated that QE's the best in a bad set of options, when you're at the zero bound.

Jeremy Siegel: You want to follow up?

Jeremy Schwartz: We've only got a—

Jeremy Siegel: Few minutes left.

Jeremy Schwartz: Not even that. We probably have one final thought here, with 30 seconds left, President Bullard. Very interesting news here, talking about the interest rates on excess reserves. I think that's perhaps one of the most breaking news parts of this conversation, that if they do really want to change policies, they got to act fast. There's not a lot of time to change that policy. Any closing thoughts, last 20 seconds?

James Bullard: Well, it's been a great conversation. I would stress that no decision has been made by the FOMC. I'm not sure how my colleagues will come into the meeting. We'll find out. But I think there has been a lot of cumulative progress on labor markets, and I think you can probably look through the decline in oil, and we'll have to assess everything all together once we get to the meeting and make a decision at that point.

Jeremy Schwartz: Well, thank you so much, again, for joining us here on Behind the Markets on Sirius XM 111. I'm Jeremy Schwartz. It's been an excellent conversation with President James Bullard of the St. Louis Federal Reserve, and we thank you again for joining us.

(END OF RECORDING)