Christopher Waller:

It's helping the FOMC continue its efforts to lower inflation to our 2% goal by further tightening monetary policy. A potential downside of a tight labor market is if labor costs which heavily influence inflation grow so fast that they slow progress towards our FOMC's 2% objective. Wages and other measures of compensation accelerated as inflation surged in the second half of '21 and wage growth remained high in 2022. But as overall inflation has begun to moderate in recent months, so we have some measures of growth in wages in other compensation. For example, the 12-month increase in average hourly earnings hit a recent peak of 5.6% in March which is when the Fed began raising interest rate and has been falling gradually over 2022, reaching an annual rate of 4.6% in December. The 3-month annualized change in average hourly earnings, 4.1% is running below the 12-month rate and is thus a signal of ongoing moderation and wage growth in the labor market.

These are encouraging signs but we need to see continued improvement across various measures of labor costs because additional moderation is needed to bring inflation down to our 2% goal and because of significant escalation and wage growth could drive up longer range inflation expectations. Those longer range expectations have been fairly stable through this period of very high inflation and we want it to stay that way because escalating inflation expectations could drive inflation higher.

Now, let me turn to the outlook for inflation. Last week's report on the consumer price index showed that inflation continued to moderate in December which was very welcome news. So first, I'm going to spell out why this was such good news and then I'm going to turn around and explain why I'm still cautious about the inflation outlook and supportive of continued monetary policy tightening.

Overall, inflation... Excuse me. Overall, headline inflation fell a 10th of a percent month over month in December, the first monthly drop since May 2020. The 12-month change in inflation peaked at 9% in June and has fallen every month since to 6.5% in December. A big factor in the monthly decline in headline inflation in December was a significant drop in energy prices which more than offset an increase in food prices. The FOMC targets headline inflation because food and energy are considerable expenses for most people but they are more volatile than other components of the index and by factoring them out, core inflation can provide a picture of where inflation is headed. Here also, we are seeing some progress.

Yearly core inflation was down in December to 5.7% from 6% in November and a peak of 6.6% in September. Over the past three months, core CPI inflation has run an annualized average rate of 3.1%, a noticeable drop from earlier in 2022. Another encouraging sign is that higher inflation was less concentrated. The share of categories of different goods and services with inflation over 3% has declined in the past several months from almost three-fourths of all goods and services in early 2022 to less than half in December. That's good news because it indicates broader inflationary pressure across the economy is easing.

Now, despite the good news. Here's why I'm cautious about these latest results and why I'm not ready yet to substantially alter my outlook for inflation. Month over month, core CPI inflation actually ticked up in December from November and it's pretty much where it was in October and where it was in March of last year when we began raising interest rates. So although inflation measured over 12 months has been falling, December's reading year over year is close to where it was a year ago. Core inflation, year over year in January '22, was about 6% and it was 5.7% in December last month.

It's basically been moving sideways for a year. So while it's possible to take a month or three months of data and paint a rosy picture, I caution against doing so. The shorter the trend, the larger the grain of salt when swallowing a story about the future. Back in 2021, we saw three consecutive months of relatively low readings of core inflation before it exploded in our face. We do not want to head fake like we were in 2021. I'll be looking for recent improvement in headline and core inflation and continue.

Wages, as I indicated earlier, another stream of data that we'll all be watching for evidence of continued progress to help ease overall inflation. Though recent hourly earnings data are positive development, I need to see more evidence of wage moderation to sustainable levels. The federal reserve of Atlanta's wage growth tracker has been running higher lately and has moderated less. The employment cost index for December won't be out until the end of this month. Over time, we need to see wages grow more in line with productivity growth plus two percentage points consistent with our FOMC inflation target.

So those are the reason I'm just cautious about the recent good news but it is good news. We've made progress in lowering inflation. Six months ago when inflation was escalating and economic output had flattened, I argued that a soft landing was still possible, that it was quite plausible to make progress on inflation without seriously damaging the labor market. So far, we've managed to do so and I remain optimistic that this progress can continue.

I believe that monetary policy should continue to tighten but using a comparison I employed in a speech a couple of months ago, the view from the cockpit of a plane is very different at 30,000 feet than when it's close to the ground. When the FOMC began raising the federal funds rate last spring from near zero, that's the ground, it made sense to move quickly and rapidly upwards. But after front-loading monetary policy with many unprecedented 75 basis point hikes in the federal funds rate target, by early December, I believe the policy stance was slightly restrictive and I supported a decision by the committee to hike by another 50 basis points.

To return to the airplane image, after climbing steeply and using monetary policy to significantly raise rates throughout the economy, it was apparent to me that it was time to slow but not halt the rate of ascent. In keeping with this logic and based on the data in hand at this moment, there appears to be little turbulence ahead so I currently favor a 25 basis point increase at the FOMC's next meeting at the end of this month.

Beyond that, we still have a considerable way to go to our 2% goal and I expect to continue tightening policy past this meeting. Okay. I think that's probably enough for me so there'll be plenty of time for you to ask questions. So thank you again to the Council for Foreign Relations and the opportunity to be here today.

Thanks.

Steve:

Thanks.

Thanks for agreeing to sit and answer some questions.

Christopher Waller:

Sure.

Steve:

Thank to the Council of Foreign Relations for having me do these and to my good friend there, Richard Haas, who keeps inviting me to do these things. It's funny how time is all of a sudden, the guy you've known for years, you suddenly know for decades so Richard's been a great person to know over the years.

Governor, let me start off with this. The market has looked at all of the data that you just laid out there and it's come to a very different conclusion about where rates ought to be and what you ought to do at the Federal Reserve. The gap between the market and the Fed for the end of 2020 is 70 basis points

which is towards the high side of where you guys were concerned with that gap back in July. So there's really two questions that come off of it. What do you think explains the different attitude of the market towards the same data that you just laid out and secondly, is that a problem for the Fed in the execution monetary policy?

Christopher Waller:

So if you look at the market's perception of the terminal rate, it's not far from where we think it is so it's not the peak. That's maybe a hike difference. That's not a big deal to be absolutely honest. But as Steve mentioned, the market has a much more rapid decline in the policy rate this year than we project. Excuse me. I think that's driven by one key thing. The market has a very optimistic view that inflation is just going to melt away. The immaculate disinflation is going to occur. Inflation's just going to come down very rapidly and once that happens, there's no reason for the Fed to keep policy rates high and they'll start cutting rates.

We have a different view. Inflation is not going to just miraculously melt away. It's going to be a slower, harder slog to get inflation down and therefore, we have to keep rates higher for longer and not start cutting rates by the end of the year. The other issue that we have to deal with, that the markets know, is we have, from a risk management point of view, we have to ensure that inflation doesn't take back off and that means we're going to have to keep rates higher for longer than we normally would say we would do from a Taylor Rule or some policy rule because of a risk management side.

It's worse for us to have inflation take back off and then have to start raising rates again than to just keep them there until we are fully convinced that inflation comes down. So I think that's really the big difference is just the markets have a very different path for expected inflation than we do.

Steve:

Does it make monetary policy tougher in that lower rates or essentially in easing of financial conditions than you're trying to tighten them?

Christopher Waller:

Yeah. I mean this is the thing. It's hard to talk people out of their forecast. If they believe that's what the forecast is and they're going to bet their money, it's very hard for me to get them to change the view.

Steve:

Do you have to respond by making rates even higher than they otherwise would be if the market doesn't respond?

Christopher Waller:

Well, we'll see how the data comes in. I mean, if this loosening conditions makes things looser in the sense that growth takes off, employment doesn't loosen, and inflation starts taking off again, then yeah, it's going to require us to do a lot more.

Steve:

Are you at all humbled in your certainty about the trajectory of inflation by what happened a year ago in that the Fed was all decided that inflation was going to be transitory and it was going to go away and most of the Fed members ended up being wrong about that? What's the chance that you're wrong again this time?

Christopher Waller:

Yeah. I mean-

Steve:

Why should the markets be any more confident in your outlook on inflation?

Christopher Waller:

Yeah. Everybody that does forecasting should be humble by definition because you're mostly always going to be wrong but we go do it anyway, right? We know we're going to be wrong but we have the guts to go out and make our prediction. 2022 really was... It was a humbling experience. I mean, it clearly was. When you sat in April or May of 2021 and you saw this inflation, you said, "What's causing it?" Every possible explanation was a transitory effect.

I mean, the logic of it. It's just the logic just led you to say this can't persist for very long. It's going to unwind, it's going to rattle, the demand's going away, the supply stuff's going to go away, and inflation will come right back down. That story held from April until September of 2021. Inflation was, monthly, coming down. It looked transitory and then October, November, December of 2021, it just exploded. So once that happened, we had to quickly change pace and say, "Look, this story, this belief, it's just not there." So it was a mistake, we corrected it. And so, that's the thing is we don't really want to make that mistake again.

Steve:

But what was the mistake? Was the mistake being too locked into your view or was the mistake that you were simply low in terms of your trajectory on inflation?

Christopher Waller:

So I've made these comments before. The mistake, in my mind, that we made was we bet the farm on the transitory story. Any risk management model, you would've said, "What if it doesn't go away? What should you be doing to get ready for that event if it doesn't go away?"

Steve:

But when I look at the projections of Fed officials right now, 17 of 19 above 5%, 2 are at 4.90% right now, aren't you betting the farm on inflation only falling slowly now? Aren't you doing the same betting on the farm, just on the other side this time?

Christopher Waller:

Yeah, but the beauty is it's a lot easier to go down, right? I tell you, if I'm wrong on this, I am going to be a happy man. If the inflation comes down much more rapidly than I think, that's fantastic. I will have no problem saying, "I was wrong," because it's good for the economy. It's not about me being right. It's what I think is good. But again, from the risk management side, I have to protect against that it stays up or takes back off. That's what I have to protect against. The markets don't have to protect against that.

Steve:

Did I hear you or read your comments correctly that you think you ought to go a quarter at the next meeting and then a quarter a second time and would that be the end of it as far as you're concerned?

Christopher Waller:

Depends on the data. Ever since September, I've stopped really giving very long forward guidance and just said, "Whatever the data tells me is what I'm going to do," and right now-

Steve:

But the next quarter you think is pretty much what you're going to do, it sounds like it from your speech.

Christopher Waller:

Well, we'll see what happens. I mean, if inflation starts popping back up again, rate hikes are not going to stop.

Steve:

So that brings me to my next question here which is you said you were a happy man, it's like what does it take to make Governor Waller happy? You made a-

Christopher Waller:

Inflation going like that.

Steve:

Well, here's the thing. You spoke-

Christopher Waller:

And unemployment staying right there.

Steve:

In Wizard of Oz, Dorothy wants to get back to Kansas, right?

Christopher Waller:

This is a first.

Steve:

But they keep moving the goalposts on her, right? They keep making her do new things and more things. You in November said that one month's worth of inflation wasn't enough.

Christopher Waller:

Exactly.

Steve:

And that was October's inflation.

Christopher Waller:

Yep.

Steve:

Then you got November inflation, that's two. Then you got December inflation, that's three. In all three cases, inflation came down and that's still not enough.

Christopher Waller:

Well-

Steve:

With Dorothy trying to get back to the Kansas, you keep moving the goalposts.

Christopher Waller:

Well, that's the beauty. By the March meeting, we'll get two more and then you got five and that'll give you a much clearer idea. But I just gave you an example in 2021 where we had basically five months of this thing coming down and then, it shot up and exploded in our face so we have five months-

Steve:

So what's it going to take, Governor Waller? What's it going to take in order to make you feel like enough is enough already?

Christopher Waller:

Yeah. Like I said, if you see inflation continuing on this path, we know that shelter cost and owner equivalent rent, those are going to start coming down 4, 5, 6 months. So we know that's coming off. If wages start continuing to moderate to where wages are going up consistent with productivity growth and inflation, that's a good sign. So all of these things, Chair Powell has pointed out that services are very heavily labor dependent so wages are a critical factor for pass through. Again, if we continue to see wage data softening more consistent as inflation comes down as well, that just makes our job a lot easier.

Steve:

Let me ask you to comment on some of the recent news. There were an announcement this morning of pretty substantial tech layoffs at Alphabet, 6% of the workforce. There has been layoffs at Microsoft. How do you process that right now? Do you fear that there's going to be a surge in joblessness, a surge in unemployment?

Christopher Waller:

So a couple things on this is all these layoffs you're hearing in the tech sector aren't showing up in any important way in the data. I mean, when we look at the JOLTS data which gives you involuntary separation rates, they haven't moved in a year. So there's a lot of noise and attention to this but it's not having big aggregate effects. The other point I always try to make out, for two years, the rest of the economy was tech starved. They couldn't get enough tech workers. So guess what? Now, there's a bunch of tech workers available for the rest of the economy to hire to get the stuff done they needed to get done. So I think there's going to be a fair bit of re-allocation of tech talent unlike maybe some other sector. We've just seen a tech starved economy for the last two years and now, some of that's loosening up from the tech companies and can move somewhere else.

Steve:

When you look at the jobless claims numbers, 190,000 this week, below 200,000, continuing claims not going up. First thing I look at when the jobs number come out is not even the headline number, I look at duration of unemployment. That seems to still be going down. Is it your sense at all that these workers are losing their jobs and picking up jobs real quickly right after that?

Christopher Waller:

Oh yeah. No, this is a common thing. I even know in my own family, a relative lost their job and the tech sector had three offers in a week. Never even going to show up in the data as being unemployed.

Steve:

You could argue that this is a great time for workers right now and that it's a time when capital or the share of GDP will be reallocated to workers from what is a very high profit margin. Why does the Fed want to stand in the way of that?

Christopher Waller:

So I'm all for workers getting real wage growth. That's fantastic. The concern is when wages grow above inflation and productivity, if your real wage growth is growing too much, the next thing that happens, your firm gets rid of your job. So yeah, the real wages are going up and employment starts crashing. This is the concern with too much wage growth. People keep saying this, "You guys are trying to hurt American workers." No, I'm not. I just don't want wages to go up so much that firms start saying, "I don't need you and I'm going to fire you." I want you to keep your job. That's what I want.

So that's more the concern is getting the right wage growth to where firms don't start laying off workers because labor's just too expensive. Now, when you look at real wage growth, income growth over the wage distribution, lower income workers did very well the last two years. I mean, very significant real wage gains. The ones that tended to get hurt were more of the upper income groups but they have more longer term relationship with firms. These things can be made up more over time.

Steve:

We've seen this story before, Chris, in the sense that firms tend to hoard labor and then all of a sudden they shed it, right? Is that you can get the situation where the job market looks really good and all of a sudden it doesn't. Is that a concern of yours that companies are holding onto workers even if they don't need them and at some point, they're going to have to draw the line and let them go?

Christopher Waller:

Yeah. We always had this line in St. Louis is the unemployment rate never goes up slowly. It goes up fast and it goes up a lot and it's exactly this kind of idea. This time, I actually honestly believe it's just going to be different. We are not facing a labor market we've ever seen, at least in my professional lifetime, where there's still 1.6, 1.7 job openings for everybody looking for a job.

Steve:

You believe that data because some people think maybe it's-

Christopher Waller:

Well, I certainly believe in the sense that every time I talk to firms, it's exactly the story I hear. They're trying to find workers, they can't find them, and when they get somebody, they're not going to let them go. I mean, I just hear this anecdotally over and over and over and over so it's consistent with that data.

Steve:

Talk a bit about inflation. Would somebody help me out with time? I don't have a clock so I don't... We're going to turn the questions from the audience in just a little bit. Five more minutes? Okay. As in television, I'll take seven and it'll be perfect. Yesterday the... I'm sorry. On Wednesday, the Beige Book said that many retailers are basically having increased difficulty passing along costs. Are consumers doing a job now in terms of helping the Fed with inflation and making it more difficult for companies to pass along price increases?

Christopher Waller:

Yeah. I'm hearing the same anecdotes. I was up in Boston yesterday talking to firms and that was exactly one of the things I've heard that customers are suddenly much more price conscious than they were the last two years. That's going to be a combination of things which is their incomes are stretched. Certainly, food and energy... Energy's helped but food is still very high and these are the necessities. Rent is still high for most people, so they're having to be much more price conscious on the non-food, non-rent part of their lives, and they're starting to think, "I am going to go look."

If you sit there and the place you normally buy stuff from raises their price a lot, your first thought usually is, "Hey, your price is too high compared to what I could get it somewhere else," so you start looking somewhere else. But when everybody's raising their prices and they all have the same reason for raising, you just stop looking and you just pay it and move on. So I think we're back to the part where people are more willing to start searching around and it starts taking away pricing power from firms and they're starting to feel it.

Steve:

Is that going to help both the service sector and the goods sector?

Christopher Waller:

Yep, as soon as you take off some of the pricing pressure. Again, that's the same thing because if wages don't moderate for, particularly service firms, they're stuck. They don't have a lot of other ways, margins to cut costs and a lot of service industries, profit margins aren't that high. So this is why we want to keep wage growth consistent with our 2% target and productivity growth.

Steve:

Talk about your 2% target. Yesterday, Governor Brainard said that 3-month annualized PCE inflation's running at 2.3%.

Christopher Waller:

What was that?

Steve:

2.3%. She said 3-month annualized inflation and she said core inflation PCE is running at 3.1%. That's darn close to your target, isn't it?

Christopher Waller:

That'd be great if it keeps up. That's why I said I'd be a happy man if this continues. This is-

Steve:

But it's not enough, 3-month annualized and 6-month annualized, that 2.3% is not enough to just-

Christopher Waller:

Well, we know a lot of that is just driven by energy.

Steve:

Yeah. But that was energy that brought it up, right?

Christopher Waller:

And brought it back down. But if you look at core services, that's throwing out food and energy, that's 6%. Annualized January and then again, still in December. That was my point. So core, even at the 3-month is still over three.

Steve:

All right. I'm stubborn but I'm not stupid so I'll just... Let's move on to see if we have questions. The gentleman right over here please.

Christopher Waller:

Here she comes.

Speaker 3:

A great deal of the reporting of inflation emphasizes a year over year rate but isn't that really misleading? It has as much to do with current inflation as with the inflation of a year ago. Wouldn't it be much better to put the emphasis on the latest month versus the preceding month on a seasonally adjusted basis or the latest three months versus the preceding three months on a seasonally adjusted basis? After all, this is how we report on GDP growth.

Christopher Waller:

Yeah. No-

Steve:

He is not a plant-

Christopher Waller:

No, no, no. That's fine. But we look at both of those. I cited both numbers in my speech today which is what I was trying to point out with the speech. If you look at year over year, January 2022 and year over

year December 2022, it's basically 6%. Nothing really improved over 2022 taking out all the past base effects and everything else. So the last three months have been a big surprise but we know that with monthly data, these things can go like that. I gave you an example. In 2021, we saw five months of declining monthly data and then it exploded and it was before the Ukraine war and all that. It's not about energy and war, it was October of 2021. So that's where you just can't put a lot of weight on just a few months. You need to see it go longer. But I agree, what you're pointing on is exactly what we're looking at and paying attention to.

Steve:

Michelle? Michelle Carissa Cabrera.

Michelle Carissa Cabrera:

Thank you, Steve. Thanks so much for doing this. Just as you seem incredibly committed to making sure that you reduce inflation by hiking rates enough. In Japan, they seem very intent on keeping their rates as low as possible. They have that one little adjustment and then surprised everybody this week. Can you give us any insight into why it is that they're just holding their hand on the spring, so to speak, even as they get 4% inflation? I know it's very tough for you to talk about foreign monetary policy but if they ever do start to really move aggressively on their interest rates, it will impact your interest rates and could be dramatic.

Christopher Waller:

Yeah. We usually just don't comment on another central bank's policies. I mean, the only thing I would just say is that from the Japanese point of view, they've dealt with deflation and zero for 20 years so they get this temporary run up. If they're thinking it's really transitory, then they don't want to let their foot off the gas. That's the only thing I would say. But in general, whether it stays, whether it goes, whether they let up, that's something they have to decide.

Steve:

But could you comment on this idea? Both yields in Japan are higher and the ECB has become more aggressive and rates are higher there. Does that help the Fed in its job in that looks like at least the ECB is doing more of a job fighting inflation?

Christopher Waller:

Yeah. I mean, the thing with the central banks, there's a lot of talk about central bank policy spillovers but we've all moved to different paces. We got out... Bank of England moved first and we got going and then the ECB was behind us but now they're taking off. So these things are all helping and I've been arguing recently that because of the timing of when we moved, it's not like we're all moving exactly the same time and creating this amplification in policy. Because we're staggered when we did it, the spillovers tend to be smaller. So when we were moving first, the dollar went way up and now, everybody else started raising rates and the dollar is coming back down. I mean, that's perfectly expected when you look at the timing of when policy tightened.

Steve:

I have to ask you one more question. It was on my list. Just give me a second here. Back in November, Chris, you said that rates were barely restrictive. In that time, inflation has come down and rates have come up.

Christopher Waller:

Yep.

Steve:

So what now an adjective would you use to describe rates right now?

Christopher Waller:

Well, if you were to look at very short term forecast out, they're restrictive. I mean, when you get close to 5% and inflation forecasted out is 3% to 3.5%, you're talking about real rates of 1.5% to maybe 2%. Those are restrictive real rates.

Steve:

So is it-

Christopher Waller:

So looking forward, you can't use existing and you got to look forward and the market's view of inflation is, as you said, it's looking like 2.5% to 3% by the end of the year. So in that case, a 4.85% And inflation's at 3%, that's a 2% real forward looking rate.

Steve:

Is that sufficiently restrictive?

Christopher Waller:

By most models, I would say that's probably pretty close.

Steve:

Okay. You have a question from the web there. Sorry. I could use maybe one from the Zoom call.

Hold on one second.

Speaker 5:

We'll take our next question from Grace Gu.

Steve:

Who's speaking?

Grace Gu:

Hey.

Steve:

Oh.

Grace Gu:

This is from the web. Dr. Waller, if you can hear me okay, thank you for coming here. Appreciate your leadership at the Fed. I always think of you as one of the voice of reason and today, you did not disappoint us. So my question is the following, financial market is quite confident that by mid-year we are going to see 3.5% core PCE which is currently the Fed projection for end of the year. By that definition, financial market is quite confident that you will start cutting rates in the second half of the year by about 50 basis points. So I would like to understand your thought of what type of criterias would you be looking for to start cutting rates? Thank you.

Christopher Waller:

Well, like I said, if the market's views of inflation come true, this very rapid disinflation, that's great news. I mean, I'm happy for that. Like I said, my concern is we have to guard against, in six months it looks great, everything's rosy and then something takes off and then we would have to start raising rates again if we were thinking about starting to cut.

That's the thing we can't do. So this risk management idea where we have to guard against the upside risk of inflation jumping up ties us to staying higher for longer than maybe the markets would typically want you to do. So that's the best explanation I can say. We got to wait and see through the summer how inflation is going and if the markets are right and inflation's coming down and wages, everything are falling into line, that's great news. I got no problem saying, "We should think about changing policy."

Steve:

Let's take one more in-house here then we'll go to the Zoom again. In the back there.

James Tish:

Hi, my name is James Tish. So raising rates isn't always for free. The more you raise rates, the more opportunity there is, in my opinion, for some sort of calamity to happen. Think something like long-term capital could happen in the markets and it could happen in the economy. So my question is since for the past several months inflation really does seem to be under control, why is your position nonetheless let's continue raising and why not say instead, "Let's take a pause for two or three months."? When you talk about looking at data, I would argue you're looking at data points and you're looking at one data point at a time which is hardly data. I consider three or four months to be data. So why not say to the market, "We're going to take a pause, we're going to see what the data shows, and after three or four months, then we'll decide whether to continue raising or whether to stand pat or whether to go down in rates."?

Christopher Waller:

Look, I would say if you look at the SEP, we're talking about maybe 75 more basis points of hikes to get to the terminal point. That means you're going to pause at some point in the first half of the year if it just carried straight out and you hit exactly your target. So the argument is just whether you should pause after three months of data or pause after six months of data. From the risk management side, I'm going to lean towards I need six months of data and not just three.

Steve:

Can I add to that question?

Christopher Waller:

Sure.

Steve:

Where do you put recession risk in all that?

Christopher Waller:

Like I said, I've been fairly optimistic about the soft landing story and so far, it seems to be holding up but there's always a recession risk. I mean, I'm on the... Everybody thinks we're going to have a recession and I think we can just slow growth and it will achieve the same thing, we don't necessarily have to go into recession. Even those I talked to say it's a recession, I don't hear anybody thinking it's going to be severe. It's going to be mild and pretty short-lived. So that's the good news about all this is we can bring inflation down and the worse it happens is you have a mild, short recession. That's not too bad.

Steve:

Let's take a Zoom call and then we'll do one more in-house here.

Speaker 5:

We'll take our next question from Jay Bacaw.

Steve:

Jay.

Jay Bacaw:

Thank you for taking the time to speak with us. This is Jay Bacaw from Morgan Stanley. The focus is clearly on the policy rate but in the same way that you have two mandates, you have two tools as well. How do you think about the usage of the balance sheet versus policy rate and in the future, if the data got to the point that you felt it were appropriate to cut the policy rate, how would you think about the reduction of the balance sheet in that time? Can they work in opposite directions? Thank you.

Christopher Waller:

Yeah. I think the balance sheet's just running in the background. The biggest effects from the balance sheet runoff is when you do the announcement. When we made the announcement, we basically said, "Here's what we're going to run off. Here's roughly the time period that it's going to be," because you give some idea where the terminal point would be and once you do that, the markets fully have priced it in right off the bat.

So all the interest rate effects from balance sheet tightening happen right away and now, all you're doing is fulfilling those beliefs. I mean, you're not really doing anything. All the pricing occurred right away. So that's how I think a balance sheet tightening is all you're doing is fulfilling the expectations that you were going to follow this path and that was going to have this effect on interest rates back when we started and we're just carrying that out. It's just a credibility kind of mechanism.

Now, our biggest concern with the balance sheet is just how far we want to shrink reserves. We're in this ample reserves regime. We don't know exactly what the least amount of reserves. We got shocked

by that in 2019. So most likely what we do is we continue to shrink the balance sheet, reserves come down, we'll start slowing down as we approach maybe reserves being 10% to 11% of GDP and then we'll feel our way around to see where we should stop. But the issue about whether you're going to cut rates and shrink the balance sheet, like I said, all those price effects have already occurred. You're not contradicting what you're doing if you cut policy rates.

Steve:

So you could imagine cutting policy rates and [inaudible 00:35:41] the balance sheet?

Christopher Waller:

Yeah, because all those price effects have already been priced. You're not really adding anything by actually doing it.

Steve:

I think I got this idea from you, I don't know how many months ago, but it's an opportunity in time to ask it again. You posited this notion of a, I guess I call it a binding level of reduction in the balance sheet, in that there's froth at the top and you get rid of some of that in the balance sheet, it has almost no effect on the economy. But at some point, the reduction becomes binding. Where is that level do you think right now and does that also explain why there hasn't been added pressure in financial markets or added pressure in the economy because you've not reached a binding level of reduction in the balance sheet?

Christopher Waller:

So I made this point that we have this standing reverse repo facility and every day, firms are handing us over $2 trillion of liquidity that they don't need. They give us reserves, we give them securities. They don't need the cash. $2 trillion a day. So I've made this argument, it sounds like you should be able to take $2 trillion out and nobody will miss it because they're already trying to give it back and get rid of it.

Now, at some point as reserves are draining out, it'll come out of the banks and then the banks, if they need reserves, it's sitting over there on RP being handed over by money market mutual funds. They're going to have to go compete to get those funds back. The rule of thumb we have is, my rule of thumb, is that in January of 2019 when reserves were about 8% to 9% of GDP, everything was working fine. So I would use that as a benchmark, when reserves get to about 8% or 9%, there's a lot of arguments that it actually has to be higher than that now. Banks have grown bigger than the economy has so it might be more like 11% to 12% is the target for where reserves have to go. But like I said, we'll start slowing down probably before we get there and then-

Steve:

Where are you now? Is it 9 trillion of 21-

Christopher Waller:

Right off the top of my head, I don't know-

Steve:

It's 9 divided by 21 is what it is, that's where you-

Christopher Waller:

Whatever reserves are-

Steve:

Of nominal GDP. Yeah. Okay.

Christopher Waller:

Yeah.

Steve:

It's reserves, right? Okay. There's another question in-house here. Did you?

Speaker 9:

Yeah.

Steve:

Right here.

Speaker 10:

Thanks. I have two if I might. One, just quickly following up on the online question, there were a couple estimates by different governors over the past couple months of the rate equivalent impact of QT. I believe last fall, Governor Daly estimated 75 to 150 basis point range of impact. And then, Governor Brainard the other day said 50 to 75. If you have a specific view, what is it? Given those are two pretty different ranges and the Fed is thinking about cumulative impact of policy rate plus QT on overall restriction, what does that then imply for the terminal rate? Step one.

Second question is just around going a little bit deeper on data dependency. There's obviously a ton of alternative data, real-time data series on the economy that paint a different picture than the headline rates that have significantly lagged components. So maybe just going forward from a methodological standpoint, is there really a reason for the Fed to be driven by legacy determined non-technological advanced data points versus what's currently ascertainable with modern tools in the economy?

Christopher Waller:

So on the first point, I mean, there's been some Fed research that goes back a number of years and these numbers are really rough, don't bet money on them. But the rule of thumb was about for every trillion of QT, it's about the equivalent of reducing rates 25 basis points. So if you're going to shrink your balance sheet by $2 trillion, then you're somewhere in that 50% ballpark and if it's 2.5, maybe a little above 50 basis points.

Going back to what I said about the announcement, when Governor Brainard gave a speech back right before we made the announcement of QT and she gave pretty much the details of what was going to happen, 10-year rates jumped 35 basis points on her speech. That's one and a half hikes which not a bad estimate of where the market thinks this is equivalent to doing one and a half hikes. So it's somewhere in that ballpark. But like I said, if you take her speech, it was priced in and it's been there ever since. They already know what it's going to be. It's been priced in that 35 basis, 40 basis points. It's already

there. And so, all we're doing is confirming the promises we made about how our balance sheet would run off.

In terms of the data, this is a great point. I mean, we use a lot of real-time data, all sorts of different stuff. I was just up in Boston yesterday talking to the Billion Price Project people about what they're seeing daily in terms of prices and what's interesting is you do get some insight ahead of time but it's amazing how consistent it is with more of the legacy data. So you're getting maybe a little lead time on it but it's not like it's wildly different from what you're going to get when you get the actual BLS data.

Steve:

I want to ask. We've been talking a lot of short-term, medium-term questions. I want to ask a long-term question, Governor Waller. The pace of early retirement is still accelerated, hasn't really stopped according to a speech that Chair Powell gave. Immigration levels are backup but we still have this huge deficit of immigrants that have not come into the country over a period of time that even comes before the pandemic. Fertility rates are lower and science has advanced but not enabled women to give birth to 25 year old working age people. In that, the dirty little secret of economics is all you need is two numbers to figure out the growth rate which is productivity and hours worked or population growth. We don't know what's going to happen to productivity but doesn't it look like the labor force growth is going to be something that's going to be damaged permanently over a period of time such that potential growth of the United States is actually lower than it had been estimated before?

Christopher Waller:

Yeah. So this is a long-time standard. If you're just going to look at GDP growth, population or labor force growth input is a factor. Now, if you adjust for GDP growth per capita or per worker, then that gets netted out and you're just left with productivity. So you have to be careful when you look at these growth numbers because if you're adjusting it actually per person, then this gets washed out but it's true. I mean, if you have fewer workers coming in, you're going to have less output and less growth. It's just the nature of the beast.

Steve:

What does that mean for monetary policy? All things being equal, shouldn't it mean a lower, long run neutral rate?

Christopher Waller:

Yeah. That's exactly the implication.

Steve:

Okay. And then-

Christopher Waller:

From any economic model I've ever seen, that's-

Steve:

All right. See, I'm good dancing on the regular theoretical stuff. Here's the next one though. Short term though, doesn't it mean that you have further to go in that you are further above that lower potential right now?

Christopher Waller:

Yeah. I mean, the things you're describing we're going to see out in 20 years lower fertility rates. So that's not going to happen now, that's going to happen way out in the future. So for what I'm going to do in the next two years, this has no impact.

Steve:

But it does in the sense that you don't have the workforce to get back to the economy you had, do you?

Christopher Waller:

The... Excuse me. I thought you were talking about population growth going on.

Steve:

Yeah. No, no, but that's true too in that we've lost workers in the pandemic, retirement has been early, and we don't have the immigrants so the workforce right now is lower than it was before.

Christopher Waller:

Yeah, and in some sense that's a negative and a benefit. I mean, the negative part is, yeah, firms can't hire the workers they need. The benefit's going to be is as we keep tightening, they're not going to let people go. So I don't think you'll see big jumps in unemployment in these kind of things. So for the existing workers, you're going to get through a very severe tightening period and maybe your job market still looks pretty good.

Steve:

We have another question on Zoom? Awesome.

Speaker 5:

We'll take the next question from Tony Padilla.

Tony Padilla:

Yes. Good afternoon, Dr. Waller. Tony Padilla here, a CFR member and also I'm a former Navy supply chain officer. My question relates to any linkage between inflation and supply chains. To what extent have the supply chain challenges that we've experienced in the last two years influenced or contributed to inflationary pressures? Was increased consumer demand the predominant cause of our supply chain challenges or the other way around? Have supply chain disruptions helped to contribute to high inflation? Any insights are appreciated. Thank you.

Christopher Waller:

Yeah. So on supply chain disruptions, there's a couple things to keep in mind. One is, if you take about the following example, if you have a huge surge in demand for something that overwhelms the productive capacity, that's not a supply shock, that's a demand shock that overwhelm capacity. Too often, people think of this as like, "Oh, it's a supply shock. It had nothing to do with demand," but if 50 of us walked into a restaurant that can only seat 20 people and they run out of food, it's not a supply shock. It's supply being overwhelmed by capacity.

In that situation, two things have to happen. Demand has to come back down and capacity has to improve. So that is what we've been seeing and certainly in goods for the last number of periods. Demand for goods has been falling, capacity has improved so a lot of the stuff we saw with goods that wasn't... I don't really want to call that a supply shock. There was really a demand driven capacity and then it got hit, it just drove up capacity constraints. Bigger problems with things like silicon chips where they just couldn't produce them, the demand was there, they couldn't produce them, they couldn't get them there, period. If demand hadn't changed, they still couldn't produce enough.

So what we've seen in the last few months, we have seen dramatic changes in supply chain costs. Just look at in oceanic transportation shipping rates, they skyrocketed and they're right back to where they were pre-pandemic. So all that decline in shipping costs is now being passed through in the form of lower cost to firms, it's showing up in lower prices. That'll all put some downward pressure and prices as we go. Our job as the Fed is to try to pull back on the demand side to put downward pressure on demand. So how much of this is demand and how much is supplying, no one's really going to know but both things have been big contributors to the inflation we saw.

Steve:

Let's do one in here.

Speaker 12:

Thank you so much. A number of governments around the world are experimenting with central bank digital currencies. I know that the Federal Reserve has not made a decision about whether or not to pursue a central bank digital currency. I'm curious what some of the concerns that the Federal Reserve is considering as they decide whether or not to do that. Thank you.

Christopher Waller:

Yeah. I'm not a fan of it as every... If anybody follows this is aware of. I've asked a couple of basic questions with this which is what is the major market failure in the payment system that requires the Federal Reserve to step in and fix this problem and it's only the Federal Reserve that can fix this problem? I haven't had anybody explain that to me yet why we need, for that reason, why we need a central bank digital currency.

The other thing is with a central bank digital currency, the way it's going to be enacted mainly through an account base, which is you get an account at the Fed, there's lots of legal issues with that, by the way, whether we can give you an account if you wanted to. But the issue is then, for a hundred... Since the Fed was founded, we were given the responsibility to provide a safe and efficient payment system and the model we picked was we let the banks be the front facing part of the payment system and we sit in the background and we just make sure the money clears across all the different banks.

A central bank digital currency is basically the Fed is going to step front and center and interact more directly with the customer than they have done for the last and I want to know what has changed that is now the appropriate business model for the Fed to think about. I haven't heard any good answers to that.

Steve:

What if I told you $3 ATM fees and 3-day waits for checks to clear?

Christopher Waller:

That's the private sector's job and that's called competition.

Steve:

Yeah, but it's not there-

Christopher Waller:

I'm not the form of competition you want.

Steve:

But it's not there. Why haven't they arbitraged away ATM fees and why do you still wait two days for a check-

Christopher Waller:

That is going to change. By the way, this is changing. I mean, we have real-time payments coming in. This is all being developed so if you want to go through a real-time payment, you'll get your money in two seconds.

Steve:

I'm ready for that. Is there one more question on the web? Let's do that then.

Speaker 5:

We'll take our next question from Krishna Guha.

Krishna Guha:

Thanks very much Steve and Governor Waller. Very much enjoyed your feedback. I wanted to raise the question of policy time lags. So as you, I know are fully aware, there is a interesting debate about how long it takes for the monetary policy actions taken today to have their maximum impact on the real side of the economy growth and activity and also on inflation. That seems to be very pertinent to the question of where exactly we are in terms of the balance of risk going forward and the appropriate conduct of policy strategy. So can you walk us through how you personally are thinking about the question of lags right now?

Christopher Waller:

Yeah. So the famous long and variable lags that Milton Friedman put forth in the 1960s, you have to remember this was a world in which when the Fed did something, they never told anybody. It was not public. There was no statement. There was no nothing. The markets had to go figure out that the Fed was in there doing something. So in that world, policy takes a while because nobody knows you're really doing anything and if no one knows you're really doing anything, it's not going to have an impact.

So the old idea was lags take 12 to 18 months. That's not how we do things anymore. We start telling people in advance when we're going to start doing things. We started signaling rate hikes last December starting in March long before they started. So when do you want to think of a rate hike having impact when we started signaling it or when you actually did it? That's the problem with the old Friedman view of the world about lags versus the way things tend to work now.

The other thing that's very clear is that it varies by the transmission mechanism for monetary policies. So I was down in Australia in November. In Australia, they have adjustable rate mortgages and by adjustable, I mean when rates go up, your mortgage payment goes up immediately. It doesn't wait a year or two years, it goes up that month. Now, if you think about that type of rate environment, as soon as you raise rates, you have immediately impacted the cash flow of every household. There's no long and variable lag there.

So it really is going to hinge on what the structures are, how debt is affected by the interest rates, how cash flows and payments, and that's going to vary by country. So I don't think there's a straight answer for like... It's always 12 months to 18 months. I think it's much shorter now myself. I think it tends to be 9 to 12 months. So I think we're seeing a lot of the impact for monetary policy coming through in the next quarter. I hope that helps, Krishna.

Steve:

I don't know if you wanted to follow up because I have a follow-up which is also in Milton Friedman's time, you didn't have zero interest rates for a period of time before. You had that period of time. Corporations were smart, at least most of them were, they termed out their debt. So when you look at the restructuring and refinance schedules, this is not a big year for it, especially if corporate debt high yield and investment rate 24 and 25, either for commercial real estate even as well as corporate bonds and high yield. Does that mean that the legs are longer in that case, in the sense that companies termed out their debt and so you're not having an impact on the real economy because that debt is not restructuring or refinancing this year?

Christopher Waller:

Yeah. I mean, that argument applies no matter what the rates are. You're just saying if the rates are going to go up and I think they're going to go up, I lock in my financing now. That's true whether it's at 2% or 0%. You lock in now before rates start going up. I thought you were going to go a different way which is in a way that kind of benefit is as we raise rates and put downward pressure on total demand, you're not going to create a lot of financial distress which is a benefit.

I mean, it's a benefit that everybody could absorb this and not have huge problems. It's like with the housing market. If a lot of your house is equity financed and housing prices come down, it's not going to cause a housing crisis. So these are good things to have this. So I'm not too worried about the long and variable lag from that in the sense of unless you think these firms should go out of business and they're going to be hanging around longer than they should, that's not my view but-

Steve:

Right. Governor Waller, I think it's terrific you sit and take these tough questions for the time you did. I really appreciate it.

Christopher Waller:

Thanks, Steve. I really appreciate it.

Steve:

Please join me in thanking Governor Waller.