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A CONVERSATION WITH FEDERAL RESERVE GOVERNOR CHRISTOPHER WALLER
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David Wessel Good morning. I'm David Wessel, director of the Hutchins Center on Fiscal and Monetary Policy at the Brookings Institution. I'm very pleased today to welcome Fed Governor Christopher Waller to our virtual stage. For those of you who aren't in Washington, we've had our first significant snowfall in two years. And even though where Governor Waller comes from in Minnesota, this would be a normal day, in Washington, the city's paralyzed. But we had a lot of practice in virtual events during Covid. And I'm very pleased that we've been able to do this one today. Governor Waller was named to the Federal Reserve Board by President Trump, and he served since the end of 2020. He took that post after 11 years at the Federal Reserve Bank of Saint Louis, where he was the research director. I'm going to turn the podium over to Governor Waller has some remarks to make, and then he'll join me afterwards for a conversation. So welcome, Governor Waller.

Christopher Waller Well, thank you, David, and thank you to Brookings for the opportunity to speak to you today. In the second half of 2023, I gave a series of speeches about the apparent conflict between the strength of economic activity in the third quarter and continued progress toward the Federal Open Market Committee 2% inflation goal. I said then that something's got to give. Either activity needs to moderate or progress on lowering inflation is going to stop. By late November the latest economic data left me encouraged that there were signs of moderating economic activity in the fourth quarter, but inflation was still too high. A of today the data has come in even better. Real gross domestic product is expected to have grown between 1 and 2% in the fourth quarter, unemployment is still below 4%, and core personal consumption expenditure inflation or PCE inflation has been running close to 2% for the last six months. For a macro economist, this is almost as good as it gets.

But will it last? Time will tell whether inflation can can be sustained on its recent path and allow us to conclude that we have achieved the FOMC price stability goal. Time will tell if this will happen while the labor market still performs above expectations. The data we have received in the last few months is allowing the committee to consider cutting the policy rate in 2024. However, concerns about the sustainability of these data trends requires changes in the path of policy to be carefully calibrated and not rushed. In the end, I'm feeling more confident that the economy can continue along its current trajectory.

Let me start with the data on economic activity that has brought me to this view. And then I'll talk about the labor market, financial conditions and inflation. I'll conclude with what I think the implications are from all that for monetary policy. Now first economic activity has moderated. After averaging an annualized 3% over the first three quarters of 2023 and 5% in the third quarter growth in real GDP appears to have slowed appreciably in the fourth quarter. The average of private sector forecasts, summarized by the Blue Chip survey estimates that estimates that real GDP grew 1.5% in the final three months of 2023. The Atlanta Fed's GDP now model, based on data in hand, currently stands at 2.2%.

An important part of that moderation comes from business investment and government spending, both of which slow showed rapid growth earlier in 2023 that didn't appear sustainable. Consumer spending also accounted for much of the surprising strength in GDP growth earlier in the year. But here the slowdown so far appears more tentative. Factors such as high interest rates, a depletion of excess savings and a pickup in credit card usage all portend slower growth ahead. But it is unclear how much of that slowing has already occurred. Since consumer spending accounts for more than two thirds of GDP, this component of demand is obviously critical for the outlook. We'll find out more about consumer spending tomorrow from the report on December's retail sales.

Turning into the labor market. Over the course of 2023, there have been increases in labor supply amid slowing demand for labor, and I expect this to continue to bring the labor market into better balance. Some have seen the latest jobs report as in conflict with this story. So let me explain why I don't see it that way. The short version is that I see surprises that a December jobs report is largely noise against a trend of ongoing moderation that supports progress towards 2% inflation. The unemployment rate in December held steady at 3.7%, while employers added 216,000 jobs, which was more than expected and an increase from 173,000 created in November and 105,000 created in October. Well, that looks like a modest acceleration in job creation. I remind myself that revisions to monthly payrolls have been downward for most of 2023. From the first to third estimate, employment gains were revised down in nine of the last ten job reports. Given this recent history of revisions, there's a good chance that December will be revised down as well.

Furthermore, with growth expectations moderating over coming quarters, employment gains are likely to slow. We can see that this is already happening if we look at progress over the previous quarters. Average monthly payroll gains over the fourth quarter were 165,000, a step down from the 221,000 average in the third quarter and 257,000 in the first half of 2023.

So this data shows an improving balance between labor supply and demand. Likewise, an uptick in wage growth last month should be viewed over a longer time horizon. Average hourly earnings rose 0.4% in December, as they did in November, and the three and 12 month increases ticked up. But over the course of the fourth quarter, wages rose less than they did in the third quarter. And over the past several quarters, I see a moderation in wage increases across various measures of labor compensation that I expect will be consistent with ongoing progress toward 2% inflation. And though there was a drop in labor force participation in December, the fourth quarter average is higher than it was in 2022. These are all signs that the labor market continues to come in to better balance.

Meanwhile, data on job openings indicates ongoing moderation in labor demand. Now job openings played a prominent role in my thinking over the last two years about how restrictive monetary policy aimed at bringing down inflation will impact labor demand and unemployment. Now one can think of total labor demand as being the sum of the workers currently employed and the number of workers that firms want to hire. The latter is best measured by posted job vacancies. If labor demand declines, the question is will employment bear the brunt of the reduction in demand or will vacancies absorb the impact? Traditional Phillips curve analysis assumes that employment would bear the brunt, and as a result, unemployment would rise significantly from a tightening of monetary policy. History has shown that this is not an unreasonable assumption, particularly when the job vacancy rate is below 4.5%. But in the spring of 2022, the vacancy rate peaked around 7.5% with nearly 12 million job vacancies, and there were still about 6 million unemployed workers. It just seemed counterintuitive to me that with that many job openings and so few people looking for work, that the first thing a firm would do when labor demand soften would be to lay off workers. My economic instinct was that this time things would be different and that vacancies would absorb the decline in labor demand, while employment and unemployment change very relatively low. But instinct isn't enough sometimes. One needs an economic model to verify your instinct, and good data analysis is needed to quantify the theoretical impact.

This is what I provided in a speech I gave in May of 2022, with the help of Andrew Figueira. In that speech, we described a textbook labor search model to derive a

Beveridge curve, which is the theoretical relationship between job vacancies and the unemployment rate. To quantify the effects of restrictive monetary policy on employment. We use standard empirical methods to calibrate the theoretical model. We showed that, if restrictive monetary policy could lower the vacancy rate from seven and a half to 4.5%, be a significant decline in job vacancies. There would be relatively small increase in the unemployment rate from 3.7% to 4.2%. So based on this analysis, we argued that as long as the involuntary job separation rate did not rise, restrictive monetary policy would allow the FOMC to bring inflation down without a significant increase in the unemployment rate. This seemed like a very plausible assumption, given the incredibly high vacancy rate and darth of workers looking for jobs. Our predictions contradicted standard Phillips curve analysis and historical precedent, but we were in unprecedented times in 2022.

It's been nearly two years since I gave that speech. How was our prediction? Fair. Data received since then have supported our argument. Since March of 2022, the FOMC raised the policy rate over 500 basis points and core inflation. Core PCE inflation has fallen substantially, especially when measured over the last six months. During this dramatic tightening of policy, the job vacancy rate fell from around 7.5% to 5.2%, which brought the ratio of job vacancies to the number of unemployed people to a touch below 1.4, down from the peak of two and not far from their pre-pandemic level of 1.2. The involuntary job separation rate has remained essentially unchanged at 1% since April 2022. Meanwhile, the unemployment rate while bouncing around a bit is the same as it was in March of 2022. 3.7%, which is even lower than we predicted.

Now, we argued this couldn't go on forever. We showed in our research that if the vacancy rate continued to fall below 4.5%, there would be a significant increase in the unemployment rate. So from now on, the setting of policy needs to proceed with more caution to avoid over tightening. But to me, this episode shows that good theory combined with good data analysis can lead to good policy outcomes, even if the predictions challenge conventional wisdom.

Moving on from the labor market. Another important factor affecting economic activity and progress towards the FOMC is economic objectives if financial conditions and I wanted to get my view of where they stand. There has been a lot of focus on tightening financial conditions in the fall and then easing of those conditions more recently.

My view continues to be that on that financial conditions remain restricted and continue to have the desired effect of being a drag on economic activity to put downward pressure on inflation. Now recall that the ten year Treasury yield peaked in mid-October, around 5% at the time of the jump up in measured economic activity in the third quarter. Shortly after a very strong jobs report for September. At that point, FOMC participants still expected another rate hike in 2023. But then the data started cooling off. The FOMC December summary of economic projections indicated no more hikes, and the ten year Treasury yield fell to around 4%, which is roughly where it was just after the FOMC last rate hike in July. And remember that in July the widespread view was the financial conditions were pretty tight. So I consider this to still be true today, and that judgment is supported by current readings of financial conditions indices, which capture a broader set of financial variable.

So let's talk about what the data on economic activity, the labor market and financial conditions mean for progress towards 2% inflation. The backdrop is that we made a lot of progress on inflation in 2023. The 12 month percent change in total PCE inflation. The FOMC preferred measure for our target fell from 5.3% in January to 2.6% in November. The latest month of data. Factoring out volatile energy and food prices. Core inflation is a

better guide to where inflation is going, and core PCE inflation fell from 5% in January to 3.2% in November, with inflation declining over the course of the year I like to look at three and six month measures to have a better understanding of the current level of inflation.

As I noted earlier, a six month change in cornflake has been hovering close to a 2% annual rate, as has the three month measure. Gain on inflation for December, was released last week for the CPI and Producer Price Index. CPI inflation for both total and core rose 0.3% for the month. Producer Price index or PPI inflation numbers reported a continued decline in those prices. Some of the PPI data feed into December PC inflation and private sector forecasts suggest that the monthly core PCE reading will be again around 0.2%. If those forecasts hold true, then core PC inflation in December will remain close to 2% when measured on a 3 or 6 month basis.

Now PCE inflation of 2% is our goal. But that goal cannot be achieved for just a moment in time. It must be sustained at a level of 2%. As I said earlier, based on economic activity and the cooling of the labor market, I am becoming more confident that we are within striking distance of achieving a sustainable level of 2% PCE inflation. I think we are close. But I will need more information in the coming months confirming or conceivably challenging the notion that inflation is moving down sustainably toward our inflation goal.

So this brings me to the implications for monetary policy. The progress I have noted on inflation, combined with the data in hand on economic and financial conditions, and my outlook has made me more confident than I have been since 2021 that inflation is on a path to 2%. While the emphasis of policy since that time has been on pushing down inflation. Given the current strength of the labor market, the FOMC's focus now is likely to be more balanced. Keeping inflation on a 2% path while also keeping unemployment near its maximum level.

Today, I view the risks to our employment and inflation mandates as being closely balanced. I will be watching for sustained progress on inflation and modest cooling in the labor market that doesn't harm the economy. I believe policy is set properly. It is restrictive and should continue to put downward pressure on demand to allow us to continue to see moderate inflation readings. So, as I said, I believe we're on the right track to achieve 2% inflation.

As long as inflation doesn't rebound and stay elevated, I believe the FOMC will be able to lower the target range for the federal funds rate this year. This view is consistent with the FOMC economic projections in December, in which the median projection was for 325 basis point cuts in 2024. Now clearly the timing of cuts and the actual number of cuts in 24 will depend on the incoming data. Risks that would delay or dampen my expectation for cuts this year are that economic activity that seems to have moderate in the fourth quarter of 2023 does not play out with the balance of supply and demand in the labor market, which improved over 2023, stops improving or reverses. And that the gains on moderating inflation evaporate. One piece of data I will be watching closely is the scheduled revisions to CPI inflation due next month.

Recall that a year ago, when it looked like inflation was coming down quickly, the annual update to the seasonal factors erased those gains. In mid-February we will get the January CPI report and revisions for 2023, potentially changing the picture on inflation. My hope is that revisions confirm the progress we have seen. But good policy is based on data and not on hope. When the time is right to begin lowering rates. I believe it can and should be lowered methodically and carefully. In many previous cycles, which began after shocks to

the economy either threatened or caused a recession. The FOMC cut rates reactively and did so quickly and often by large amounts. This cycle, however, with economic activity and labor markets in good shape and inflation coming down gradually to 2%. I see no reason to move as quickly or cut as rapidly has in the past. The healthy state of the economy provides the flexibility to lower the nominal policy rate, to keep the real policy rate an appropriate level of tightness. But I will end by repeating that the timing and number of rate cuts will be driven by the incoming data. Thank you.

David Wessel Thank you, governor. Governor Waller. Let me pick up where you left off. You said then you've basically described a soft landing scenario. So congratulations on that. If you can pull it off. We have a fed funds rate that's between five and a quarter and 5.5%. And as you point out, inflation is approaching your 2% goal. So why move slowly and gradually? Why talk about three quarter point moves on the fed funds rate. Won't that leave financial conditions restrictive and risk the over tightening that you warned against.

Christopher Waller Well, as I said, the key thing is the economy is doing well. It's giving us the flexibility to move carefully and methodically. So we can kind of watch the fed, see how the data comes and see if progress is being sustained. I mean, the worst thing we'd have is it all reverses and we've already started to cut. So we really want to see evidence that this progress, this trend we're seeing in the real data and the inflation data continues. I believe it will. We have to see that before we can start making decisions. And as I said, we can slowly calibrate the real rate cut down. If we think we need to move it faster, we could move it faster, depending on what the data says. But the key is we have the flexibility that we can be methodical and careful. That's where my point was. In earlier times, a recession would hit some bad negative shock and the FOMC had to move fast and buy a lot. That's not the situation we're facing right now. So we can take our time to make sure we do this right.

David Wessel And how will you decide when it's time to pull the trigger on the first rate cut? What are you thinking?

Christopher Waller Well, that'll be up to the committee to decide when they think they've seen enough progress. And there may be disagreements about whether we need more. We've seen enough, but that's what the committee will talk about this as we go forward. So, you know, I'll just leave it at that.

David Wessel I see, I see. So, let me ask you a little bit about the the relative merits of cutting early but gradually versus waiting longer and cutting more quickly. You make the point that you don't want to go too soon, because inflation might turn out to be more virulent. But isn't there a risk if you go too slowly, given the likes of monetary policy that we could end up over tightening? And how do you guard against that?

Christopher Waller Well, that is one of the risks that I mentioned. I think we're all very aware of it, Chair Powell even talked about it in his press conference in December that we're in this unusual place where we can actually lower the policy rate, not because there's a shock or the economy is in a recession, but we can sort of bring it down to keep the real policy rate at the right level of tightness to maintain our inflation goals, but not damage the economy in any serious way. So I wouldn't want to start until we were thoroughly, we were all relatively convinced that inflation was sustainably near our 2% target. It'll bounce around with any monthly data. We have to be ready for that and look through some of them when we think we're there, and it'll stay there. Then we can start saying, okay, it's time, one time to cut, and then we can start thinking how fast we want to

cut or how often, or what the pace is or how big the cut. Those are all things we can determine once we decide to move. There's no real radical reason that we have to bring real policy rate down from 3% to 50 basis points in one meeting. We don't have to do that. We can take our time and and see how it all works.

David Wessel One of the issues when you look at the underlying inflation data, is that rents have been pretty sticky, stickier than a lot of us anticipated. Do you think you need to see rents come down, the housing shelter index come down, or is there a risk that you or can you not? Can you look through that and say it's going to come down and we don't need to wait to see that materialize?

Christopher Waller Yeah. I mean, we've been talking about this since the end of 2022. That rent inflation, for all the signals we were given, rent inflation was going to come down. It's just taking a while to show up in the official CPI data for exactly the reasons we all know. Things tend to reset every 12 months. You have to wait till this all kind of works its way through. But most of the data we're seeing on new leases, are showing rents have come down quite a bit. Or down now a more reasonable rate, you know, increases. So we all think it's all going to be there. But at the end of the day, I have never been a big fan of focusing on one component of the price index. You know, one time one's out, then this one's down. It's just we take them all together food and energy. The only ones I kind of like to toss out because they're not necessarily good guides. But I don't like getting into used cars or rents. We can look at it and say, you know, but when we add them all up, that's what matters. So I don't want to get overly focused on one particular price and say, until I see that one coming down, we can't do anything.

David Wessel But it sounds to me like your best forecast, given the available data, is that inflation has come down. It's not just some transitory fluke, and that you'd be surprised if inflation reared its ugly head. You think we're going in the right direction? Am I reading you correctly?

Christopher Waller I think so. I mean, one of the, you know, one of the concerns we have, there's been a lot of talk that a lot of the drop in inflation over the last six months has all been supply side correction. Well, once those things correct, those tailwinds are gone. So that'll tell us something about whether demand is still low, you know, just being lowered enough to kind of keep inflation on that path or once goods prices, other things, bottom out. Whether we'll see a rebound above 2% in a meaningful and sustained way. Those are the kind of things we want to be careful about before we think about making the first rate cut.

David Wessel So it sounds like you'd rather err on the side of waiting too long and going too soon.

Christopher Waller Yeah. What too long means is that one meeting is at six. I don't know what waiting too long means, but, you know, in the grand scheme of things, whether it's six weeks later. It's kind of hard to believe that's going to have a huge impact on the state of the economy.

David Wessel So let me ask you a little bit about the balance sheet. Reserves are now at $3.5 trillion. The overnight reverse repurchase facility has gone from well over 2 trillion to about 600 billion. How are you thinking about the balance sheet? How will you decide when you've reached that nirvana of ample reserves? And how close are we to that?

Christopher Waller Yeah. So starting back in 2021, I was watching what was happening at the IRP and what I was arguing at the time was that we were doing QE, we we're putting reserves in the system. The banks, for leverage reasons, didn't want this on their balance sheet, told their corporate customers, get it out of our banks. They had to put it somewhere. They go to money market mutual funds who say, what are we supposed to do with it? There's a shortage of treasury bills. Oh, there's the ON RRP. Let's give it right back to the fed. That got up to $2 trillion, little over 2 trillion. So I interpret that as that's $2 trillion worth of liquidity in the system that nobody needs or wants. So logic to me saying we could pull at least 2 trillion out before we had to get serious about worrying about the level of reserves. And so far, we pulled out somewhere in the neighborhood of, I think, one and a half, one four. I don't know the exact number, but $1.5 trillion and everything's fine. So that kind of perspective seems again to be borne out. Where we actually end up, I've made this argument many times now, but given the pace, if you look back to January 2019 reserves, there was no on ON RRP, but reserves to uh, nominal GDP was about 8%. Our banks are bigger. There may be some other reasons you might want slightly more, but figure maybe 10 to 11% would be a reasonable number. So as the ON RRP starts draining and we can start looking at reserves, we'll start slowing down and start approaching these numbers with a lot more caution to see how things play out. And we'll get a better sense of where that is. But I've been kind of using this number say roughly 10 to 11% of GDP is or as an approximate end point for draining reserves out of the system.

David Wessel So if you expect they are going to help, are you do expect the ON RRP to basically go to zero and then you'll know that that's.

Christopher Waller No reason for it to have anything. Yeah. In my view it was basically a safety net originally designed to help put a floor in the fed funds rate. Because of this weirdness the last two years between Treasury bill rates and ON RRP rate, everybody just parked money there instead. There's nothing fundamental about money being in that facility that it matters. So we really prefer to have anything in the banking system, in reserves, as long as there aren't problems with leverage ratios or anything else for the banks. But we can then see how the draining of the reserves kind of works, and we'll be careful about how we do all that.

David Wessel So do you expect to slow the pace of tapering in the next few months?

Christopher Waller I would say sometime this year will be a reasonable thing to start thinking about it. I mean, I don't think I'm speaking out of school, but, I mean, it's been coming close to two years since we first announced tapering. And I think when we did these numbers that it made sense that sometime in 24 you would start thinking about tapering the pace to get back. Now, personally, I don't think we need to taper the pace of MBS. We're not even hitting the cap. So I personally don't really want to keep MBS on my balance sheet as much. So I'm all in favor of letting MBS kind of just continue to run off at the current pace. But treasuries, we can start tapering that back and get reserve to where we want them. One other point to make now, everybody likes to go back to September 2019 and say, all of a sudden you didn't have enough reserves, and there was a bunch of kerfuffle in the financial markets. We have a standing repo facility now that we didn't have in place. So if we start seeing reserves getting tighter and tighter, we may start seeing a lot of activity coming to the standing repo facility. And that'll be a good signal for us that, hey, we're getting to that point. So again, that's a tool we didn't have back in 2019 that we do to help relieve kind of pressure on demand for reserves.

David Wessel Right. So just to explain that to people who may not be familiar with the explosion of facilities under your leadership at the board. You're complicit in this. So basically,m if the banks are worried that they don't have enough reserves, they can take their treasuries and bring them to the fed at the standing repo facility and get something which is essentially cash subsidy.

One of the things I've wondered about is that on one hand, there's got to be a sense among many monetary policy policymakers, that we don't want the Fed's balance sheet to be too big. We don't want the fed to be too big a force in the economy. That's what leads you to to begin to do quantitative tightening. On the other hand, we've put demands on the banks to hold more reserves with these liquidity rules and this sort of worry that, you know, how do we protect ourselves against instability? How do you balance those? And aren't those somewhat in tension, those two goals?

Christopher Waller Yeah. I mean, I made an argument for probably ten years. There's no economic theory that tells you how big a Central Bank's balance sheet should be. I know of no theory that tells you. You have Switzerland where, it's basically 100% of GDP or some number like that. So there's no real theory. And from a point of view of the reserves, I love a floor system because, as Milton Friedman once said, you want to put enough liquidity in the system that you satiate the system. So there's no scarcity or shortage. And I always like to use a little example. If you were the government, you could provide clear, clean drinking water at zero marginal cost. Why would you make it scarce? You wouldn't. You put in whatever the market needs in that. And really we're putting in reserves taking treasuries. It's not like we're taking out commercial loans or car loans or anything. We're just taking treasuries and there's a lot of treasuries. And so it's not like there's a shortage of treasuries in the world per se. But that's kind of how I look at it. There's no real theory about it. We need to put it in. I love to follow the Friedman rule and make reserves abundant enough that there's no scarcity. The banks in the system have what they need. That's just good economic efficiency.

David Wessel So why struggle to get to ample? Why not just stick with abundant reserves?

Christopher Waller You could. And I mean, I had a paper a few years ago where I looked at a floor system and the problem with a large balance sheet is kind of what we're running into now. You potentially have a situation where your payments on interest on reserves is above your earnings. Now, there's nothing that affects our operating on monetary policy whatsoever. But the optics and at the title of the paper I had with some unpleasant fiscal arithmetic. The optics of this are just bad. It has nothing to do with monetary policy at all. Effective. Just nothing. But it just kind of looks bad that you're not turning over any senior revenue to the Treasury, and you're delaying when you'll start doing it. And for that reason, you may want to think about not keeping your balance sheet too big. But that's really one of the few reasons for doing it. There's a misperception that we're taking real resources out of the economy for lending by banks and car loans and construction. None of that's going on. We're just taking on treasuries.

David Wessel Hmm. Governor Waller, you voted against the recent proposal to increase capital that big banks are required to set aside. There's been a lot of criticism of that and lots of comments. And I think you've indicated that you're hoping that there will be a compromise that you can support. So where are we in that process? Do you think we're getting to a bank capital proposal with which you're comfortable?

Christopher Waller Well, yeah, I voted not to put this out because I saw what I thought were some very major problems. First of all, the original intent of this thing was to harmonize regulation across the world, and it was not happening. European banks, UK banks were not going to carry through. We decided to go ahead. That's not harmonizing anything. The original intent, I believe, was not to have a big increase in capital, but that is what's happening. We're basically going to impinge on capital market functioning, both in terms of product services and pricing. I don't understand why we'd want to do that in a way that it's not seriously showing any threats. I've made a big deal about operational risk, which is more than half of the increase in the way it's calculated made absolutely no sense to me whatsoever. It should be restricted. So there's lots of reasons why I was opposed to it and voted not to send this thing out. And I think the blowback we've seen from the banking industry and the Hill has shown that this is not necessarily a good rule, proposed rule, as it stands now. So it's got to have a major overhaul, in my view, to get a reasonable product in, you know, possibly even just taking it back and starting over. I believe there's a lot of work that could be done. Jay has said we want to have products that go out with broad support of the board. That may be possible if enough major things get redone, that we could get a broad support for it. But it's got to have a lot of work. And like I said, it might even be best to just pull it back and then work on this and then put it back out at a later date.

David Wessel So where are we in the process? Are you talking about changes that might make it possible for you to support it?

Christopher Waller I believe there's discussions going on and we're taking feedback from the industry today, I think is a closing of a comment period on the proposed rulemaking. We'll take all that into account. We're talking to other agencies. We're talking among ourselves here at the board about how could we do something. So there is stuff going on that is working. And we'll see in the end what ends up happening.

David Wessel Another regulatory issue that I was asked to raise with you is the Reg II the where the fed is proposed reducing the cut, the stake in when someone uses a debit card. And of course, the merchants love this. They want a smaller cut in the bank, so it's going to be a problem. Have you thought about that? And where do you stand on that one?

Christopher Waller Yeah. I mean, this is one of those things, I wish Congress had never given us the responsibility for doing it.

David Wessel Yeah.

Christopher Waller So, you know, with anything that's now our job. I take a very narrow, legalistic view. Congress told us to set this interchange fee based on the cost of these transactions. We had a method we did when we first did it. We hadn't changed it in roughly almost 14 years, even though there's been tremendous technological change over the last decade. And so, there was a decision to look at it. Collect data from the banks. Get a sense of where their true cost are and then based on the same methodology, the same approach, same criteria that we did before. Pick that number and put it out there. And that's what we did. I mean, I don't want to pick winners and losers. There's no fun in having to do any of that. But Congress told us to do it and we kind of just did it again, like we did roughly 14 years or whatever the exact number of years was. So I just try to keep a very focused, narrow legal view that Congress did. And we're following that to the T.

David Wessel A couple of questions have come in while we've been talking. One of them, which is a good one I should have thought of is, to what extent do you think that the crisis in the Red Sea, the shipping costs and rate going up, could be a problem in controlling inflation? How big a risk is that to the outlook?

Christopher Waller You know that there are alternative routes to routing stuff. It doesn't have to go through the Red Sea. So, you know, now you're just talking about substitution about where are you going to go and how are you going to do it? So in that sense, there could be some one time level effects in shipping rates that get passed through, but I don't see it potentially being a big, big impact on certainly global or U.S. inflation unless this thing spirals into something much more severe than it appears that it is right now.

David Wessel Hmm. Another question was what your view is about, what role did fiscal policy played in causing the inflation that you've been working so hard to restrain? How big an issue was fiscal policy and how big an issue is fiscal policy now, as you try and calibrate the right pace of monetary easing?

Christopher Waller Well, just from a, it's just a simple macroeconomics point of view. If you're going to increase the spending in the debt by $6 trillion in a matter of two years, and then say that has no effect on demand, that seems just impossible to me. It isn't the only thing that contributed to the inflation, but it certainly has had to have had an impact. The reason I say that is, you know, people have been talking a lot about, oh, all the last six months shows this was all supply, all supply, all supply. Well, if these are temporary supply shocks, when they unwind, the price level should go back down to where it was. It's not. Go to Fred. Pull up CPI. Take the log. Look at that thing. The level of inflation is permanently higher. That doesn't happen with supply shocks. That comes from demand. And this was a permanent increase in demand and permanent increase in debt. So I think there clearly was in fact a fairly...

David Wessel A permament increase in the price level, you mean not in the pace of inflation.

Christopher Waller Yes, yes, yes, price level.

David Wessel Right. But Do you think that fiscal policy is continuing to put upward pressure on prices now?

Christopher Waller I you know, when it comes to fiscal policy our kind of rule has always been we don't, you know, Congress does what it wants. And then we take that as given and set policy. So. That's it. That's all I do. So it's up to Congress to decide what they want to do, and then I'll.

David Wessel No, but I take that. But taking fiscal policy is given now. Do you feel that that's putting upward pressure on demand and making it harder for you to keep inflation from rising?

Christopher Waller Well, most of the spending, the last fiscal policy, the last year or so has been more on longer term.

David Wessel Right.

Christopher Waller You know, investment, manufacturing, renewable energy, all that stuff. Those things are more spread out over a decade. So yeah, there's going to be some impact, but it's probably not that big, particularly for consumer retail goods and things like that. That's not what any of the spending the last year or so.

David Wessel Right, right. You might say the fiscal spending was transitory, if that's a word you're allowed to use.

Christopher Waller Yeah. Your level effects. These are not permanent changes in trend inflation though they might have had some. But again all these things are stretched out over ten years of spending. So any given year has a small impact.

David Wessel Let me ask you to elaborate a little more on the comments you made about wages. You said that, you see a moderation of wage increases across various measures of labor compensation that you expect will be consistent with progress towards 2% inflation. So do the pace of wage increases have to slow in order for you to reach your goal? Or is this a period of catch up or how do we know what wage increases are consistent with 2% inflation?

Christopher Waller Well, the standard economic answer you come out of, if from theory is, nominal wage growth should be equal to productivity growth plus expected inflation. That would be the nominal wage growth. So if inflation is 2% productivity growth which is average basically 1.5% for the last 15 plus years, you're at 3.5% nominal wage growth. So when we often say wage growth needs to be consistent with our goal, we mean also that's consistent with productivity. So at 4% you're a little high but you're not that high. So you can come down. But it's not like when it's 7 or 8% in productivity is more than half percent. Right now we're seeing a little boom in productivity, which you also could support it for a while temporarily. We'll see whether that productivity boom continues. I sure hope it does. But you know, if you look back since the pandemic started, productivity growth, spend 1.5% just exactly what it was in previous decade. So we'll have to see a lot more before. But that's kind of the rule of thumb I think most economists have for what nominal wage growth should be productivity growth plus expected inflation.

David Wessel So recognizing that predicting productivity growth into the future is difficult. Are you optimistic that whatever's going on, whether it's more efficiency in the economy or, or something, will allow us to enjoy somewhat faster pace of productivity growth over the next several years?

Christopher Waller Yeah. I mean, we really would love to see progress, that productivity growth is the heart and soul of raising living standards for people over a decade. That is what does it. Now back in the 90s, we had a big productivity boom, but we all knew it was because we finally incorporated computers, PCs, everything into the system. When I look out right now and think, what would it be that's causing this big boom in productivity to be sustained? It can't be AI that just started. Usually these innovations take a decade to filter all through the entire economy before they show up. Now maybe there's ways that firms have done stuff coming out of the pandemic that are still being used, that are efficient. Just the way we're doing this speech just would not have been done prior to 2020. Restaurant services, manufacturing, everybody figured this out. Shortage of labor firms had to think about other ways with capital to produce. They're not gonna unwind any of that once they do it. So there could be some things that lead to sustained productivity growth for a while. But other than that, I don't really see exactly what it would be. AI could be very promising, but to show up in the aggregate data that's down the road.

David Wessel One thing that a lot of economists have focused on a lot is the long run equilibrium interest rate, so-called R star. And the view is that if you could discern, R star, you know, if the fed funds rate is above that, that's restrictive and vice versa if it's below that. A, you find that a useful concept. And B, do you have any sense of where whether we're going to go back to a low R star world.

Christopher Waller Yeah, I mean I think it is a useful concept because if we think about simple things like Taylor Rules, there's some equilibrium real rate. So you know where your terminal, you know, your neutral policy rate is. You got to have some estimate of what this real rate is. The real rate you want to think about is something that's a close substitute for reserves or which is what the rate we control. It has to be some very safe, liquid government debt instrument. It is not physical capital. It is not equities. Rate of return on physical capital for the last 40 years has been roughly 7%. And it doesn't move. And there are some good academic work out there that has shown this. What you've seen as the real return on safe, liquid government debt declined for 40 years, from about 4% down to roughly a half a percent to zero. So there's something special about government debt and that has driven this sort of long run decline. And there could be lots of, and I've talked about it, there could be lots of factors that could explain that decline. Then you have to think, what is it that suddenly is going to cause it to reverse and go up? If it's demographics, why is demographics going to suddenly change now? Productivity. If it's productivity, it's got to affect a real return to capital. We can't just affect R star and we're not seeing that, you know, many moving those things together. One thing I have kind of argued for a long time, I think there has been sort of a shortage of safe, liquid government debt in the world, a shortage of safe assets. And that would drive up the price and drive down the yield of those assets. But for that to happen, the trend growth of demand has to outpace the trend growth of supply to keep that real rate going down. If that reverses, you can suddenly see R star go up. So that's why I think I have and some other people have been concerned that the outlook for fiscal policy, whatever it is, it could have the implication if it starts rising faster than the demand for these products, you might see some drop in the price and increase in the real return on these assets. To me, that's one thing that could happen.

David Wessel And do you find this useful guide to think about where you want rates to go or not?

Christopher Waller I do. I mean, you have to kind of figure out something. You know, unless you just to do what are called right first difference rules and Taylor rules where you don't need to think about this thing and you say, hey, the economy looks like we're at target. Just whatever rate you're at, just stop there. I mean, there's some argument for that we don't really know. So just when the economy looks stable at 2%, 2% growth, unemployment at four, five, whatever, whatever that interest rate is, just stop there. That's your neutral interest rate.

David Wessel So let me close on this. As I said earlier, you join the Federal Reserve Board in December 2020. We were in the throes of the pandemic. It's been an extraordinarily interesting period in economic policy. Huge response to a pandemic. The vaccines came online. Lots of fiscal stimulus, lots of monetary stimulus. We enjoyed a very quick recovery, quicker than a lot of us expected. As you pointed out in your speech, we're thinking about the relationship between unemployment and inflation pretty differently. When you look back at what we've learned over the last 2 or 3 years about how the

economy functions. What are the things that stand out to you that we really need to be thinking hard about? That maybe history wasn't the best guide.

Christopher Waller So I think this issue about vacancies and unemployment or labor market tightness, as it's called in labor research models, that was never built in, really in Phillips curve analysis in the past. But now everything I see, more recent academic work, more policy analysis, the best measure of labor market tightness is not just the unemployment rate, right? It's vacancy to the unemployment rat. That really is has got to be the case. And I think that's a step forward and thinking, look, we got to think about a more broader, more accurate measure. And then just to tried and true Phillips curve. It's not that it's necessarily wrong. I've never been a big fan of it, but at least people are thinking about how to think about what happened in the last two years. And how do we think about policy going forward, what's the right kind of analytical tools to do that? So I think that's been very good. I think just the robustness in which the US came back. And there's been some debates about the difference between Europe and the US. I was just in Europe out of some meetings last week, and this came up. You know, Europe is flat. Their GDP has not come back. It basically got back and then it's just completely flattened out. It hasn't got stayed on trend. And so there's a lot of discussion about why has the U.S. recovered so well and Europe has not. Maybe it's the policies that were done during the pandemic in terms of in Europe. They protected the workers on the job. And we just basically said, we'll just give you unemployment insurance. Firms just let people go and people quit. And then there was a rematching. Maybe that had some some advantages that we just aren't seeing in Europe where nobody left their firm. They stayed there. They got paid by the government, but there was no resorting or reallocation of labor. So maybe there's something to be learned from there from an academic point of view. The things is inflation isn't dead. For 40 years, or 30 years, people thought, yeah, what inflation, there's no such thing as inflation, we don't even need to worry about it. Well, we do, and you know, we can't go to sleep on that. And it's our job to make sure that that stays of 2% and that's it.

David Wessel I appreciate your candor. How how does that inform your thinking about the framework, the fed monetary policy framework, which you'll be beginning to revisit at the end of this year?

Christopher Waller I think there's some good lessons learned about what we saw. I mean, I think the old framework was really backward looking in the sense that it was like trying to solve the problems from the previous decade that we thought were going to continue, and then we got punched in the face with, you know, what happened after 2020. So it is going to lead us to think about what is the right framework for how we do it. Now we have a dual mandate. So it isn't going to be eh we're going to ignore employment and just focus on price to do it. That's not going to happen. So those kind of things are not going to be seriously considered. Probably a lot of discussion in terms of, you know, what kind of framework? How do you want to think about operating procedures? How worried are we about the zero lower bound going forward, which was our nemesis for a decade? So, there'll be a lot of discussion and we'll look for input from the general public, academia, the policy world, just like we did last time.

David Wessel Great. Well, with that thank you very much for your time. And let me add my thanks to the AV and communications team in Brookings for allowing us to do this even though Washington is paralyzed by four inches of snow. And appreciate your time and your very crisp answers to the questions.

Christopher Waller All right. Thank you, everyone. I appreciate it, especially, again, the AV staff for pulling this together for the last minute.