## 5/10/22 - Neel Kashkari and Christopher Waller, Interview: 5/10/22

#### Neel Kashkari:

Good afternoon, everyone. Good afternoon. We're going to go ahead and get started with the program. You all keep eating, please. My name is Neel Kashkari. I'm on the Board of Directors here at the Economic Club and I'm president of Minneapolis Fed. I'm really honored to introduce our guest speaker today. He's going to join me. We're going to have a fireside chat, and then we're going to open up to all of you to ask your questions to Governor Waller. Before I introduce him, I want to just acknowledge a few people. We've got a lot of dignitaries who are here, but I want to take the liberty, since I have the microphone, of just acknowledging some of our board members from the Minneapolis Fed. We have Sri Zaheer, who's the chair of our board. Paul Williams is on our board of directors. Jeanne Crain is on our board of directors, and Kate Kelly is an alumnus of our board of directors.

### Neel Kashkari:

And so, a lot of my colleagues from the Minneapolis Fed are here as well, so thank you all for being here. Really appreciate your support and your participation. So now, it's my pleasure to introduce Dr. Chris Waller, member of the Board of Governors in the Federal Reserve. Dr. Waller is a member of the board. He was confirmed in December, 2020 for a term that expires in 2030. Prior to joining the Board of Governors, he was Executive Vice President and Director of Research at the Federal Reserve Bank of St. Louis from 2009 to 2020. He began his career at Indiana University from 1985 to 1998. He spent time at the University of Kentucky, and then he went to the University of Notre Dame as the chair of the economics department. His research focus is on monetary theory and he's been published in a wide variety of top economic journals, such as the American Economic Review and Quarterly Journal of Economics.

### Neel Kashkari:

Most importantly, he earned his BA from Bemidji State University in 1981, followed by a master's and PhD in economics from Washington State University. Please join me in welcoming Chris Waller to the stage. We're going to get to a bunch of economics and monetary policy questions in a minute, but before we do, I thought it'd be great just to spend a little more time about your background. Your background in Minnesota, but also your background to economics and to the Federal Reserve. I think it's a pretty interesting story.

# Dr. Chris Waller:

Yeah. Well, I just want to say thanks for having me. This is home, obviously. My mom lives up in Brooklyn Park. My sister is up there too. My brother's up in Big Lake, so this is really home for me. I grew up in Brooklyn Center and a product of Park Center High School, and then went to Bemidji State, partly because I just went up there one September weekend, and a buddy of mine was going to school there, and it was like, "This campus is beautiful. I'm going to go here." And of course, I didn't have any clue what the winters were like, but yeah, going to Bemidji was wonderful. It was a smaller state school. I got a great education out of it. I had a lot of personal attention from the faculty there. That's the one advantage of going to a smaller university, is more one-on-one contact. I went to college to be an accountant.

### Dr. Chris Waller:

I took... As part of the requirements, I had to take an economics class, which I had absolutely no idea what that was, so I took an economics class. I had this very young, ex-Marine as a college professor, and he was talking about the economy, and policy, and this mysterious power called the Fed. And I thought,

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"God, that would be the greatest place to ever work for." So at that point, that was when I became very interested in economics and always thought I really would like to do monitored policies. So when you're 19 and you have these crazy ideas, you never think one day you're going to be sitting here doing policy, taking credit, and blame for everything you do. So for me, that was... it's been a great career. And I ended up staying in... going into academia, so I was an academic for 30 years.

#### Dr. Chris Waller:

And as I always tell people, the thing about being an academic is your students never age, but you do. And so, the other thing is, you never talk to anybody that's not 18 to 22 years old. So when I went to the Fed, the big difference was, I had to talk to adults, and explain economic issues to them, and engage with them. And for an academic, it's kind of terrifying actually, because you're used to being the professor who knows everything, but it's been an absolutely fantastic experience for me, having done this in St. Louis for 12 years, engaging with the community there, our boards of directors, all the people in the community, doing the outreach, trying to talk and explain economic issues in a way where I could put my professor hat on and go out and help people understand things. So it's been great training for me, taking on this job as a governor. It's a much more different, more high-profile job, but I'm loving it. It's great. Other than the part where people throw tomatoes at me over inflation, which will be coming later, I'm sure.

#### Neel Kashkari:

So let's just one more background point, which I think folks may find interesting. So when the US Congress created the Federal Reserve in 1913, they did something unique. They said they didn't want it all housed in Washington. They wanted it distributed around the country. So they created the Board of Governors. Chris is a member of the Board of Governors, appointed by the President of the United States, confirmed by the Senate, and then 12 independent federal reserve banks that are overseen by independent boards of directors. The Minneapolis Fed board is who appointed me. Maybe you could just spend a moment and talk about the difference between the job of a governor and the job of a president, because a lot of times, people don't know what the differences are.

# Dr. Chris Waller:

Yeah, so this structure, this is one of the things I studied earlier in my academic career was the independence of the Fed and the structure that it has. If you look at the structure of the Fed, it is the most bizarre thing you've ever seen, but it was designed this way on purpose. It was this some degree of political accountability in DC. That's the Board of Governors. We're all nominated by the President, confirmed by the Senate, but then to get away from the political center of the country, they created the reserve banks, and they're actually private corporations. And this has a bad tone to some people, but the point is, Neel is not a government employee. He's a private sector employee who happens to make public policy, but Congress set this up so that there would be this other independent voice, independent point of view from all around the country, and you don't get just the inside-the-beltway attitude about things.

#### Dr. Chris Waller:

So that's where this structure and this balance comes from. And to ensure that there was no political influence, presidents were chosen by their own communities. They weren't nominated by the President, confirmed by the Senate. And the whole idea is they bring the regional perspective to the table when we have FOMC meetings. They represent the community. The Boards of Directors are involved. The

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community is involved. And the whole idea is just to keep the politics, as much as possible, out of the way that the reserve banks run. But at the end of the day, we all have to come together and make policy. So I'm confirmed by the Senate, appointed to the board. I'm in DC, Neel's here, and we all have to come together, express our views, and come to a common decision about what we think is best for the country.

#### Dr. Chris Waller:

The one thing I will tell everybody; I've been to close to 80, or over 80, FOMC meetings in my career, because I went to them as a research director in St. Louis. The one beautiful thing I've always loved about the Federal Reserve is, it is an extremely collegial body. We have very hard discussions. We have very different points of views, but we all listen to each other. The level of discussion is always very high. We never have any kind of really nasty or negative discussions. And then, the chair listens to all of us first before the chair speaks, so that's an amazing thing, where the leader wants to hear what everybody else says to get the full sense of what everybody is opinion, instead of saying, "Here's what I think we should do. What do you think?" And then, everybody goes, "Oh yes, Mr. Chair. I think that's a fantastic idea."

#### Dr. Chris Waller:

So that's what I've always loved about the Fed, where we have very diverse, very different views about how things do, but every six weeks, we have to come to a decision, which means you have to be willing to compromise. You have to be willing to come to some kind of common ground to take the step forward in terms of policy. And that, I think, puts a lot of responsibility on Neel and I, that we've got to find common ground on what we're going to do.

### Neel Kashkari:

Great. So let's talk about what we're going to do and what we have done. So obviously, inflation is top-of-mind for everybody, almost everybody, in the economy these days, certainly everybody at the Federal Reserve, top to bottom. And a lot of people are saying, "Hey, you guys, you have all these really smart people working at the Fed. You really missed it." So what did we get wrong?

### Dr. Chris Waller:

Yeah, so one of the things that... This is now the big thing is, "How did you get it so wrong?" Well, everybody got it wrong. Every professional forecaster who's paid a million dollars or more, they got it wrong too. So this was just a really unique situation where people could make a lot of projections about demand stimulus from fiscal policy, loose monetary policy, supply change. All these things came into play, but pretty much everybody thought, when we think about this in just basic economics, the stimulus was going to go away, supply chain things will get worked out. That's the beauty of a capitalist system. Monetary policy was going to tighten. It wasn't going to be loose like this forever. So all this stuff had a, I'm going to say the dreaded word, transitory impact on inflation. Okay?

### Dr. Chris Waller:

Now, that story basically held up until about October of last year. Inflation peak jumped up at a monthly level in April, a year ago, at 0.62% for one month, and then it just... it was high, but it was coming down just like we thought. Meanwhile, the labor market was doing great. And then, all of a sudden, September, we got this weak jobs report followed by another one for August and September. So we had inflation coming down, the labor market started to look like it was softening, and then we got the

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October inflation report, and inflation was exploding. And that was when we all realized, "Oh boy, we've got to move," okay? This temporary, transitory story is not working. This is not going to happen. We've got to start going. So starting last September, we started signaling that we were going to start ending our asset purchases, which we did.

#### Dr. Chris Waller:

We started signaling rate hikes much sooner and much more in our December meeting, and that has just gone up because we are responding to inflation. We are staring at inflation. The labor market's holding up well. So at the end of the day, 90% of the people thought this was going to be a transitory thing, and it turned out not to be. That's how we got it wrong.

#### Neel Kashkari:

So as you look ahead, we know that there are still supply chain issues going on. Now, we've got Ukraine. We have lockdowns in China related to COVID. What's your outlook? Do you think inflation is going to start... And of course, the Federal Reserve is tightening policy. What's your outlook? Do you think inflation's going to start turning down? And when can people expect to see it?

#### Dr. Chris Waller:

Yeah, at this point I don't care what the reasons are. Inflation's too high and my job is to get it down. I don't care what the sources are. I don't care about any of these things. That means we have to raise rates, we have to cool off demand, and try to get inflation pressures down. If we get some help from supply chain resolution, that's fantastic, but I'm not counting on it. I'm just going to say, "I've got to get this stuff down," and that's the only reason they put me on this Board of Governors. So inflation is first and foremost, our concern. Now, in the back of our heads, we know we have this powerful, but very blunt tool called the Fed funds rate that we can raise and lower. If you start trying to slow down the economy, you do run the risk that you're going to put some downward pressure on economic performance, and some potential downward pressure on labor markets.

## Dr. Chris Waller:

But we're in a... For me personally, in my career as an economist, 40 years now, we're in a very amazing situation where we have a labor market that's so hot, so overstimulated, that it's a market where you could pull back a lot of demand for labor and it would actually be a good thing. It's not a bad thing. You're putting the market back in equilibrium, or closer to equilibrium. Right now, there are two jobs available for every worker. Okay, that's great, as long as it's not creating other imbalances that we then have to deal with. Excessive wage increases that get passed on in the form of higher prices, so that's the concern that we're worried about. I am all for people having great job opportunities and good wages. That's not what this is about. So whenever we talk about the labor market, we're just trying to get the labor market back in some sense of equilibrium, because it really looks like it's out of whack.

#### Dr. Chris Waller:

We've never seen vacancies two to one in this country, ever. Prior to all this, the average was something like 0.6 jobs per looking worker, so one job for every two people looking. Now, it's just completely flipped. So that's where we think we can raise interest rates, pull back demand, and not have a big impact on employment or unemployment. That's the plan and I'm sticking to it.

## Neel Kashkari:

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So in the five or so years before the pandemic hit, I'll just speak for myself. I was kind of an outlier saying, "Hey, why are we raising interest rates? We're missing both sides of our dual mandate." So we have a dual mandate; stable prices, maximum employment. We were undershooting inflation, and in my judgment, there was still slack in the labor market, so setting policy was easy in that environment for me. Just said, "Hey, just don't do anything while the economy heals." I would argue setting policy is also easy when you have runaway inflation. You know you got to get rates up. What happens once we start getting rates up, we start cooling off demand, and now we start looking at trade offs between labor market and inflation? It's a lot trickier then. How do you think it through?

#### Dr. Chris Waller:

Well, I was in the same camp as Neel, prior to the pandemic, which was; inflation was running below our target, the unemployment rate was steadily coming down, we were hearing all those reports of marginally attached workers, minorities having a better job market than they'd seen in a long time, and so I, like Neel and my boss, Jim Bullard in St. Louis at the time, were like, "Why are we raising rates? There's no sign of inflation. Nobody's forecasting inflation. And it's out of a fear that there's going to be inflation that you want to tighten everything up and start putting a damper on the labor market."

#### Dr. Chris Waller:

So in part, this is why President Trump picked me. He thought I was a total dove. It's easy to be a dove when inflation's running below 2%, but when it starts going to 6%, the doves disappear and the hawks come out. There's just no other way to describe it, as Neel was saying. So that's what's been such a shock, because for 10 years, it was like we really didn't have a lot of reasons to raise rates and we didn't, but now we do. And we haven't had to really raise rates in a very serious way since about 15 to 18 years ago. It's a whole new committee of people. The people who did it before, they're not there anymore, so it's up to Neel, and I, and our colleagues to take care of this. So that's the tricky thing was, we've got inflation that's very high.

#### Dr. Chris Waller:

Our number one job is we've got to get that inflation down, and we're shooting for what everybody calls a soft landing. Normally, you'll hear people say, "You can't do it. You got to cause a recession. You're going to tank the economy," because they're thinking back to Paul Volcker in 1979, 80, 81, which is, Volcker had to get inflation under control, jacked up interest rates to 20%, tanked the economy, unemployment sky rockets to 10%, and now the entire world thinks that's what you have to do to bring down inflation. I'm going to say that's not the case. Volcker had to deal with a world where inflation was out of control for almost a decade. The Fed had zero credibility in its promises to do anything about inflation, because every time they did, unemployment would tick up. They immediately abandoned the inflation and went after the unemployment. That's not the case. We barely had inflation for about a year, of any significant magnitude, and we're on it.

## Dr. Chris Waller:

We are on it already and there is no backing off. And the other advantage is the labor market, as I said, is so strong and the economy's doing so well. This is the time to hit it if you think there's going to be any kind of negative impact, because the economy can take it. You want to do this when the economy's strong. You don't want to say, when the economy's weak, "Now, let's hit it with a big rate increase because we didn't get inflation under control." So this has been my line, which is, "It's time to raise rates now when the economy can take it." Don't keep putting them off and then as we see the economy

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starting to get softer or maybe unemployment starts ticking up, as Neel was saying, now you have to say, "Now I'm going to hit the economy with these rate hikes."

#### Dr. Chris Waller:

So from my view, do it now, front load it, get it done, and then we can judge how the economy's proceeding later. And if we have to do more, we're going to do more. And if the economy cooperates, we'll do less, okay? But the idea is, we're going to get this inflation down. That's the main thing we have to do, because we know the damage that happens if you don't do it. That's the lesson we learned from the 80s. We know what happens from the Fed not taking their job seriously on inflation from the 1970s, and we ain't going to let that happen.

#### Neel Kashkari:

Well said. Let me shift gears and then I'm going to open up to the audience, because I'm sure they're going to want to follow up on a lot of what you just said. I'm going to shift gears, so just everybody bear with me for a second. There's been a lot of talk in the public about digital currencies, and some speculation about a central bank digital currency. I will just confess that I am a skeptic, but I want to hear your thoughts on... And I know, by the way, the Board of Governors, they're studying this. Publicly, they're saying, "We're going to study this and see if it makes sense." I'm just curious. What is Chris Waller's take on this?

#### Dr. Chris Waller:

Yeah, so one of the things I've learned over the last year is how much confusion there is over a central bank digital currency. You've got Bitcoin, you've got crypto, you've got DeFi, and it's all this technology, and now the central bank's getting into it. I'm going to tell you what a central bank digital currency is. It's a checking account at the Fed. That's it. That's all it is. There's no magical Bitcoin token encrypted. It's just a checking account at the Fed. If you want to pay your electric bill through us or your local bank, that's what you're doing.

## Dr. Chris Waller:

I just demystified it completely. So then, you have to ask the following question: when Congress created the Fed, they gave us the responsibility to have a safe, secure, efficient payment system. And what we have done for 100 years is to say, "Here's how that's going to work. We're going to let the banks handle the payment system, paying your electric bills, processing the funds across accounts, and the Fed will be in the background, making sure that the accounts and the money moves across the banks. So you work with the banks, we'll work in the back end with the banks, and then we'll make sure everything gets done." What a CBDC is basically saying is, "We now want the Federal Reserve to step up front and engage directly with the consumer and compete directly with the banks in the processing of payments.

# Dr. Chris Waller:

I want to know why. What was wrong the last 100 years that we want to make this kind of a dramatic step in how we handle payments? There's lots of arguments people have put through. I gave a speech last summer where I went through each of these arguments, what they were, and then countered every one of them. And the question comes down to, what is the major failure in our payment system, that this is the solution? There's other ways to deal with things, much cheaper and much easier, and there's just more of a question of, we do not have the federal government or the Federal Reserve compete with the private sector in anything else.

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#### Dr. Chris Waller:

Electric cars are a wonderful thing for thinking about climate change, but we don't have to say, "Let's let the federal government build our electric vehicles." We let the private sector do it. We don't compete directly with the private sector. So then, why is the Fed now saying the one time in US history we need the government to compete with the private sector, it's over paying your electric bill. I just don't see it.

#### Neel Kashkari:

Great. Well, I know we have... I believe we have microphones. Is that correct? So people can ask questions. Do me a favor; just raise your hand. We'll bring a microphone to you and then just please identify yourself. And just so you know, we're live streaming this to billions of people around the world, so make it count. I'm not trying to scare you off.

#### Lauren:

Yes, sir. Sorry. Hi. Lauren Bresmahan-Cargo. I know we all want to hear about inflation, but I also want to hear about the labor market, particularly the labor force participation rate, and all those people who are still on the sidelines of the labor market. One way to get wages to slow down is if we had more supply of workers, so what is the Fed thinking about that, about the labor force participation rate? And should we expect it to settle at a rate lower than we previously thought?

#### Dr. Chris Waller:

Yeah, so this is one of the things we all thought last year as we were seeing improvement in the labor market, that labor force participation would rebound, particularly after all of the labor subsidies, unemployment insurance, everything expired last September. We didn't see it. It didn't happen. So when you break this down, you see a couple things. So first of all, about two million, or a little under two million workers disappeared to early retirement in 2020. Retirement is an absorbing state, to be honest, for most people. Only about 2.5% Of retirees come back into the labor force, so they're gone. You can just pretty much count two million gone from that. Then, you have probably, I think it's close to about a half a million, in particular women, who are still at home. Now, we thought once childcare, schools, everything would open, these women would come back into the labor force, but they haven't.

# Dr. Chris Waller:

Now, maybe that's a permanent lifestyle change where they're like, "I'm looking at where I'm working. After I pay my taxes, after I pay my childcare, why am I doing it?" I just don't know, but we have about a half a million women who are still not in the labor force that were in the labor force before. You still have a significant fraction. Again, I think it's about a half... These numbers may be a little off, but it's like another half a million who are just still afraid of the virus. They just don't want to come back into the labor force because they're still worried about the virus. And then finally, the big one, the big animal in the room is you're about a million to a million and half jobs short from immigration.

## Dr. Chris Waller:

We have shut down immigration in this country for both policy and for COVID. That's a million and a half workers, okay? So you just start adding that up. That's where about you're down to four and a half to five million workers short. That's where they are. Any of that coming back anytime soon? I don't know. Immigration would be a big solution to a lot of it, but I don't think politically this is going to be

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something we're going to see happen anytime soon. But otherwise, you're going to probably have no resolution of this labor force participation for a while.

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Neel Kashkari:		
Other questions?		
Dr. Chris Waller:		
Dr. Chris waller.		
Don't be shy. I'll start calling on you.		
Neel Kashkari:		
He's a professor.		
Dr. Chris Waller:		
Exactly.		

#### Chris:

Hi. Chris Burkhardt from Barrett. So two part question. You did shock and awe on the way in. Why not shock and awe on the way out, especially given what Volcker did back in the 70s, in October of '79? And then, why neutral and why not restrictive at this point?

#### Dr. Chris Waller:

Good questions. So the shock and awe... So you remember, when we went into this, the whole pandemic or the whole virus was a shock. So this was a huge shock. And so, at the time, because it was such a huge shock, that was why the feeling was, "We can't do this in a gradual way. We've got to go big and go now." So it's just the nature of the shock that made us go big and go early. Now, on the way out, there's always this issue of one of the big changes over the last, I'd say 30 years of my career, is that we've learned that it doesn't make life better for people if you surprise them and shock them all the time, right? Give them a lot of warning. So imagine you're on a highway that's under construction and they don't put up any signs until you get there.

### Dr. Chris Waller:

None of us would be very happy with that. It's a shock. It's awe. You're now stuck in traffic for four hours. Whereas, if you'd have known, you might have done something else, taken a different route. So the economics profession has really moved away from this shocking people to give them notice in advance where you think we're headed. Let people start building this in. Let them get used to it. And then, we can move there without causing big shock and catastrophes from it. Volcker had to do it because inflation had been running rampant for a close to a decade. And every promise the Fed had made that they were going to do something about inflation, as soon as they would tighten and unemployment would start to go up, the Fed would back off, so they had zero credibility. So Volcker, he just basically said, "I got to just do the shock and awe because that's the only way I'm going to get anything to change."

## Dr. Chris Waller:

We don't have that problem right now, okay? This is not a shock and awe Volcker moment. I once talked to Paul Volcker about 10 years ago and said, "Man, it must have taken a lot of courage to do what you

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did, knowing what was going to happen." And he said, "If I had known what was going to happen, I never would've done. But once I did it, I couldn't back off." So that's the thing to remember, this idea that, "Oh, I knew I was going to cause a recession with 10% unemployment." He did not know that. He thought he was going to get something a lot softer and he got hit, but he knew he had to build the Fed's credibility. So, that's the most important thing we learned from the Volcker era is, the only thing a central bank has is its credibility, so when we say we're going to do stuff now, we do it. And we give you a warning we're going to do it. I'll stop there.

#### John:

Hi. John Healy, Crown Bank. Thank you for this. Already, it's been one of the best, if not the best, I've ever seen.

#### Dr. Chris Waller:

Oh, come on. You're just sucking up.

#### John:

Question about the Fed balance sheet. How strong of a relative tool is that Fed balance sheet reduction? And second, what percent is driven by market forces of large institutions withdrawing to chase asset prices or loan demand, say? And how much of it is voluntary? Thank you.

## Dr. Chris Waller:

So on the balance sheet, the balance sheet is not a tool we try to use in normal times. We did it after the financial crisis when we drove interest rates to zero. That was pretty much all the further we could push them. Once you go below zero, there's all kinds of issues, even when you had the legal authority in the US to do it. So once you're at zero, you're stuck as a monetary policy maker, but the idea was, "We could do asset purchases and put downward pressure on longer-term yields by buying tenure treasuries, agency, MBS, things like that." We could put more pressure on longer term rates, so that's what we did in that period. And then, in 2013, we said, "Okay, we need to start unwinding that before we start raising rates." So once we hit the pandemic and we went right back down to zero again, the only way we had to try to provide stimulus to the economy, once again, was to step in and start doing asset purchases.

# Dr. Chris Waller:

Now, these are very politically controversial actions. I understand all the arguments. The alternatives, the Fed just says, "Okay, we're done. Close up shop, go home. Good luck America." That's not what we do. We try to do what we think is best in what we can do to help the American public get through these tough times, so that's why we did it. Now, it's over. It's time for us to unwind. We learned last time, how to do it. We'd never done... We had never shrunk our balance sheet in the history of the Fed until 2013. That was the first time we ever tried it, so when you've never done something like that, you may want to go small, and gradual, and take your time, and figure out how this is going to impact everything. So we learned a lot from that episode that we're doing now. We learned we can go faster.

### Dr. Chris Waller:

The markets now understand how it works. That's a critical fact. They get it, okay? We communicated this way in advance this was coming, and that allowed us... and our balance sheet was just a lot bigger.

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And we know there's a ton of liquidity floating around in the market because we're being handed about two trillion dollars a day at our reverse repo facility, that the markets don't seem to care about. So we can pull that out and shouldn't have too much impact on anything. So those are the reasons we now think we can go a lot faster in doing this.

#### Dr. Chris Waller:

The last question, I look at the markets are the markets. Nobody's putting a gun to anybody's head, as far as I can tell, other than the banks for regulatory holdings of liquidity, and leverage ratios, and things like that, that we think are there for a reason, not that we're doing it just to be spiteful in any way. But as far as that, the markets work. We let the markets do what they want. We don't control the 10-year rate. We try to maybe put some pressure on it or take some pressure off, but we sure don't control it. That's a globally determined interest rate.

#### Ron:

So the Fed... Ron Shoots from Robins Kaplan. So the Fed has taken some increasingly aggressive measures on monetary policy to keep inflation under control, but there's another player in that equation, and that's the fiscal policy players. And to what extent is fiscal policy getting in the way of monetary policy being able to reduce inflation? And if you could comment on that, is it going to come to a point where fiscal policy is so problematic in reducing inflation that you have to resort to some more shock and awe?

#### Dr. Chris Waller:

Fiscal policy is the responsibility of Congress and you elect the people that do that. It's not my job to correct fiscal policy or somehow change it. We take fiscal policy as a given. This is the fiscal policy that's impacting the economy and that's how we take it. It's just no different than the dollar exchange rate. We don't try to manipulate the exchange rate. We just take it as a given and then we behave. So, that's literally how we do it, so whether fiscal policy is good, or bad, too loose, too tight, that's not our job to answer or try to fix. All we do is look at output, employment, and inflation, and then we deal with that, that way.

### Kevin:

Kevin Gafford with Faraday Partners. Quick question on asset price stability. First of all, thank you for your time and comments today. It seems like cheap credit may be funded a pretty significant movement of institutional money into the real estate market, so we're not necessarily looking at '08. That was an underwriting problem, but it seems like maybe there was a glutton of investment in real estate. Are you modeling any risk from the Fed's perspective on that and how that could develop?

### Dr. Chris Waller:

Yeah, The '04 to '06 to period was a shock in many ways. As you said, there was a real relaxation and underwriting standards. Money was being handed out. A large part of it is there was a huge flow of foreign money coming in, looking for safe, liquid assets, which would've been mortgages in the US. If you're a Chinese investor, this thing looks great. And the worst that happens is you own a house. So back in that period, there was a lot of foreign money coming into the US. And again, there was a lot of underwriting issues, a lot of teaser rates to help people get in, all those kind of things. And there was a lot of overbuilding. If you just look at home construction, the numbers were just booming. So now, what

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are we faced with? We're short houses, about three million, because we just haven't built houses in a decade, for a bunch of reasons, but we're short on housing.

#### Dr. Chris Waller:

We have tightened up everything in the financial sector in terms of mortgage underwriting. So household balance sheets are in great shape. You just look at households equity and whose... 28% of all mortgages or home purchases last month were cash only, 28% cash. So that means if housing prices go down, there's just going to be some equity loss by the owners of the house. The banks aren't going to suffer from this. The financial system's not going to bear an impact. So that is the really big difference is, owners have a lot of equity in their homes, and they're going to be the shock absorber if there's anything on prices that comes down. It won't go filtering back into the banking system because you're still having to put 20% down, you still got all the underwriting, and right now, I think the demand for housing's not going away. We're short on the supply side, and demand because millennials have finally come off the sidelines, the second largest generation in US history. They finally decided to start buying houses.

#### Dr. Chris Waller:

And they're at that age where this is going to go on for five to 10 years, at least. So I think the demand is permanently there. The supply hasn't caught up, so I don't see some housing boss, and all the financials look good. So I just don't see anything bad happening to the housing market.

#### Neel Kashkari:

Let me interrupt, just I use my seat to ask you a question. You mentioned household balance sheets. One of the surprises that I've found over the past six months to nine months is that household balance sheets, they've got about two and a half trillion dollars of what we would call excess savings, relative to the trends before the pandemic. I would've expected that two and a half trillion dollars to be spent down pretty quickly as stimulus faded. It hasn't happened. How do you think about that?

## Dr. Chris Waller:

Yeah, so actually, one of the oldest things you're taught in graduate school in economics is if you get a one-time shock of income, your interest is to smooth that out over your lifetime. In other words, you don't want to have a big party and then nothing. You're like, "Oh, great. I can raise my standard of living a little bit every year going forward if I just smooth it out," so that's what most economists think of when they say, "Suppose you got a sudden windfall. You don't just blow it. You save it and then you slowly spread that out over your lifetime."

#### Dr. Chris Waller:

So I never really thought this was going to lead to a big explosion in consumption. What you're going to see is what we're starting to see. Originally, people shifted out of services into goods, and now they're shifting back into services. Travel is picking up, just go to the airport and look around. Look at the planes, they're full. So we're seeing in hotels. So what you're going to see is more of a shift, but it's not the total level. It might go up some, but it's probably going to be stretched out over time.

# Neel Kashkari:

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But that sounds like even more evidence that it's not transitory, that the effect of that is going to be over a very long period of time.

#### Dr. Chris Waller:

Right, but it may not be as big as you would think if you blew it all in one weekend.

#### Dominic:

Hi. Dominic Washington with the Federal World Reserve Bank of Minneapolis. I'm curious just about... You've spent so much of your time before becoming Governor, in a role where you prepared an individual to make these decisions at FOMC. Now that you're the person who's making the decision, is there something that you would've done differently in preparing somebody? Yeah, I'm just curious about that decision-making process and the preparation for it.

#### Dr. Chris Waller:

Yeah, I think the thing that when you're a research director, you can throw a lot of ideas at a president and say, "Here's this view. Here's this view." We try to sort out from the data, which one may have more validity. I just gave you a view of what was going to be done with all the excess. And that's what the research staff does is, they provide the evidence. They provide the theories of explanation to the president, but then the president's got to take a position. And as me as research director, it was like, "Hey dude, you're on your own" at that point, right?

#### Dr. Chris Waller:

I did my job and you get to choose. Now, I'm the one that has to make the choice, so that's really the big difference is, we have great staff at the Board. They feed me all this data, all this information, but at the end of the day, they're like, "What are you going to do?" And that's where it comes back on me to think, "What do I have to do? How do I use all this knowledge that my staff gave me to try to do the right thing?" And hopefully, you get it right, but you can get it wrong. We're humans. We can make mistakes.

#### Neel Kashkari:

In the back.

#### Stacy:

Hi, good afternoon. I'm Stacy Ackerman with Wells Fargo Bank. And one of my questions has to do with the regulatory environment. And one of the questions we're getting more often from clients, and families, and businesses is how we're dealing with ESG issues. So I'm wondering what kinds of conversations you're having around that, and what kind of implications we'll have for the future in terms of the regulatory environment and reporting criteria.

# Dr. Chris Waller:

Yeah, so the ESG is much more in-demand from the private sector. It's not really a demand from us. There's a lot of debate about the role of climate change in the way of thinking about regulating banks and the financial system going forward. My own views, and these are my views, this is what you learn to say as a Fed person, is that when it comes to thinking about regulatory structure on environmental stuff, that's Congress' job. It's not a job of an unelected official like myself to say, "Okay, here's this one of 10,000 types of shocks in the planet that you have to do special treatment for," right? So all the banks

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here, we do large bank stress testing. We give you an economic scenario; unemployment goes to 10%, housing prices collapse 30%. We don't say why. We just say, "That's the data. Deal with it." Somehow now with climate change, we're giving a specific cause and saying, "Okay, how are you going to deal with that specific cause?"

## Dr. Chris Waller:

That's a very different exercise. And you have to ask yourself, "Well, why is that being singled out of all the things that could cause financial problems? Why is that one somehow different than the other ones?" So a lot of the evidence I've seen, climate change is going to have very limited impact on the financial stability of the system. There's going to be obviously individual risk in certain asset classes for certain areas and see certain geographies, but the idea that there's some physical risk that will collapse the financial system like 2008, you cannot generate that out of any climate change model. You can create regional problems, right? Florida disappears. Okay.

## Neel Kashkari:

It's not in our district.

#### Dr. Chris Waller:

If you're in Florida, you have to start thinking of a condo like a car. It's just going to eventually fade away and then you'll get rid of it. It'll just melt into the ocean, but for 30 years, you had your condo, and your nice view, and you enjoyed it, just like your car, until it just went away. You have to think about assets differently if you're going to talk about Florida's going to go underwater. So it's really... What people really think is going to be the biggest disruptor is just transition risk if the government adopts a carbon tax overnight, and levies a huge tax on driving an automobile, or heating your home in a particular way.

## Dr. Chris Waller:

That can cause huge disruption, but that's under our control, right? Transition risk is us choosing policies and not doing shock and awe. We'll be letting you know well in advance whether these things are going to happen, so the risk should be lower. The bank should have much more time to get their portfolios adjusted to deal with it. And at the end of the day, markets work. Markets will price this risk just like any other risk, okay? You may not like the price, but that's the price, okay? And then, you just let the markets do their jobs. So I'm rambling at this point.

#### Neel Kashkari:

Other questions? Up there.

## Carl:

Hi. Carl Bergot with Bank of America. I'm curious what your perspective might be on the faster payment system, such as real-time payments or Zelle, and if banks or consumers can be doing anything differently to adopt that further, make it more ubiquitous in the system.

# Dr. Chris Waller:

Yeah, real-time payments... I'm on the oversight committee for the FedNow real-time payment system that's being developed, so I've learned a ton of stuff in the year I've been a governor, on real-time payments and just the basic payment system in the US and other places. So real-time payments is just,

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to make it simple, you want to pay somebody, split the dinner check, you go to an app, you click, you send the money. Boom, they get it. That's it. That's a real-time payment. It's not like you have to wait a couple of days for the payment to go winding through the banking system and finally get authorized to be in your... It's there and it's over. It's done. So Zelle and the private sectors, the RTP model for the private banking system, the Fed's developing one, and that's what people want.

#### Dr. Chris Waller:

So it's really, you're responding to what the consumer wants is, "I want faster, real-time payments." The obvious problem when you have a real-time payment is, the finality of the payment is the finality of the payment. So if you accidentally send something, sorry. Your kids get in your account and start spending money in certain ways that you don't want. Somebody conned you in a hack in a phishing email to give them your password. Eh, it's gone. That's the problem with the real-time payments is, because it's so fast; under say, four or five seconds, there's no recourse if it's wrong.

## Dr. Chris Waller:

You're stuck. And so, this is one of the arguments that's being talked about right now is, who's responsible for fraudulent payments? Is it the payment processor? Or is it the person who sent the payment request, even if it wasn't you? So that's the one thing people are trying to now sort out with real-time payments, but it's the reality. That's where people want to go, and we're developing the technologies to do it. And Zelle's an example in the private sector where they have it right away, but there are well-known issues, what I just said, with fraud, that Zelle's dealing with and the Fed will have to deal with it too. It's not like we have some magical way of figuring out who's sending fraud versus the private sector. It's a real concern.

## Neel Kashkari:

On that front, one of my colleagues is here. She told me a story that somebody did a real-time payment into her account mistakenly, and that person said, "Hey, can you help me get my money back?" And my colleague wanted to do that, but then her account was basically shut down by the bank as they were trying to unravel it and looked at fraud. So there was actually a huge burden on the recipient, not just on if you accidentally send money out, which I'd never heard that before, but it made sense once she shared her experience. How are we doing? One more question? Any final... I have a question if nobody else has one. So here's my question, Chris. And you've been so candid.

## Dr. Chris Waller:

People say that a lot. I got to work on that.

#### Neel Kashkari:

I think we should clarify that your comment that these are your views, it captures the whole thing and not just their comment on that one question. We know that inflation affects everybody, but it disproportionately hurts the lowest income Americans because they have to spend most of their money on basic necessities. But we also know if we end up having to raise interest rates, and tap the brakes in the labor market, and maybe not achieve a soft landing, maybe end up in a hard landing, it's in many cases, those same people who are going to most suffer from that. How do you think through that?

#### Dr. Chris Waller:

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Yeah, so when I used to teach all of this, I used to tell everybody that inflation is a tax that everybody pays. You can't avoid it. Unemployment is a tax a fraction of the population pays because it's only the people who lose their jobs that bear the cost. Those of us who don't lose our jobs, we're not bearing any cost of it, so it really is this touchy problem. We're trying to lower the inflation tax on everybody, but there's a small section of the society that may bear the brunt of that by losing their jobs. And that's the tough part of doing this. And that's why when people lose their jobs or any unemployment go, it's a very clear focus that this is the person bearing the cost. The fact that I paid 10% less for my toothpaste isn't a story in the newspaper, but the person who lost their job, that's a story. And the other thing I used to tell my students is, "People vote. Prices don't."

## Dr. Chris Waller:

So unemployment's always a concern because these are people that are going to go to the polls and start choosing. My toothpaste isn't. So, that's really the way I often think of it is, we're trying to do something by reducing inflation that benefits everybody, but in the process, we have to be fully aware that there might be a subsection of population that has to bear that burden. And that's where it's tough doing the trade off. It's not a trivial thing. There is no magical formula in a textbook that tells you how to do it. You have to take your chances and see where it goes. I just think now, we're in a situation with the labor market, we can do this without causing much damage, if any damage, to the labor market, because it is so strong, so we can pull this off.