Transcript of Chair Powell Q&A At Brookings, Nov 30 2022

*Edited by Tim Cooper at MNI, taken from Youtube closed captioning (**video link here**). Transcript may not exactly match delivery. Text of Powell's speech on "Inflation And The Labor Market" **linked here.***

Q: Thank you very much Chair Powell. I think you spared me the chore of asking you to pick between 50 and 75 so I won't have to ask you that thank you for your last paragraph. But I want to talk a little bit about wages and inflation. So as you said wages are rising faster than is consistent with a two percent inflation rate assuming reasonable productivity. You said in November that wages are not the principal cause of prices going up but for many workers real wages have been falling lately. So I wonder, Isn't there room for wages to rise a bit faster so workers can make up lost ground and what level of wage increases do you think is consistent with a two percent inflation target?

A: I guess I would start by saying that the inflation that we saw at the beginning of this episode in back in March of '21 was not really related to wages at all it was related to tightness in in goods markets largely due to supply chain issues. Over time though inflation has now spread broadly through the economy and while I would still say that the inflation we're seeing now is not is not principally related to wages, we think that wage increases are probably going to be a very important part of the story going forward particularly as it relates to that third category of course Services ex-housing. So we think it is an important thing going forward and ultimately in the service sector in particular where wages and benefits are by far the largest cost, wages need to go up. We and of course we want wages to go up, we want wages to go up strongly, but they've got to go up at a level that is consistent with two percent inflation over time making basic assumptions about productivity. So if you look at the principal wage measures that we look at I would say that you're one and a half or two percent above that with current wage increases. So particularly the employee compensation index and the average hourly earnings index, look at those two it's about one and a half percent higher than what would be consistent making various adjustments including for productivity from nominal wages.

So and as we look at the labor market today including today's JOLTS data what you see is a labor market that there's a real imbalance between supply and demand. There are 1.7 job openings for every unemployed worker. Everyone looking for a job the so-called jobs / workers gap is about 4 million meaning if you if you look at all of the available jobs including people who are working and then look at people who are in the labor force or looking for a job there's a four million shortfall. So you're in that world and you know we think that we there's a job for moderating demand in there and getting the labor force back into balance.

Q: But you don't think that there's a possibility that we could we should have a period of catchup of wage increases above the sustainable level and that businesses with relatively fat profit margins can absorb some of that without passing it through?

A: So question of the worker share of profits and that kind of thing is not really related to this. Right now people's wages are being eaten up by inflation so what you want to do is you want to have inflation stable and then have a very strong labor market where the biggest wage gains are going to the people at the bottom end of the spectrum. And we had that at the end of the very long expansion that ended with the pandemic. That's not what we have now. Now for most workers the increases they're getting in wages are being eaten up by inflation. That's actually not true at the bottom end where wage increases are higher than inflation. And that's a good thing. But if you want to have sustainable strong labor market where real wages are going up right across the wage spectrum especially for people at the lower end you've got to have price stability. And until we restore that we can't get back to that place where we kind of were for the two years before the pandemic hit.

Q: And did you take when you looked at today's jolts data which measures the vacancies and quit rates we did you find that encouraging?

A: More or less in line with expectations. So I guess job openings came down by several hundred thousand to to where they are now and yeah that that's a positive thing. As you know the relationship between job openings and unemployment is a very fraught one and job openings right now are, compared to unemployment, are all near their all-time high levels. So it has been our view that there's a possibility that in this highly unusual situation in the labor market, labor market could come back into balance to some extent through a decline in job openings and that there's been a typical relationship between increasing unemployment and declining job openings. But that our thinking has been in many labor economists share this that you could get a decline in job openings that wouldn't produce the same increase in a smaller increase in unemployment than it's typically the case looking back in history because of the very outsized level of job openings. And we we've kind of seen that so far but it's way too early to say that that'll…

Q: So traditionally the Fed looked at the unemployment rate as a measure of labor ,arket tightness and we've seen recently that that may be misleading unemployment rate is still very low and as you pointed out that job vacancies are starting to come down. But to the extent that the FED still relies on a Phillips curve kind of relationship going forward is the natural rate of unemployment a useless concept? What measures will the FED use to judge labor market slack as we look ahead to policy in the coming years?

A: Actually so I think the the way we think about it of course the standard way to think about it is it's the gap between the actual unemployment rate and the natural rate of unemployment that matters, right. And the issue really it's not that that framework doesn't make sense, it does make sense, but the issue is that uh The natural rate of unemployment is is very hard to identify with certainty even in normal calm times but when There's a, you know, a violent disruption of the labor market it can move very substantially. And that happened at The beginning of the of the pandemic you had the labor market was very much disrupted and we assume that the that the natural rate had moved up meaning that for any level of unemployment the labor market is tighter. So we knew that. I think what was different in this cycle was really that you had to look at things like job openings and quits and reservation wages and just wages overall to tell you that that the natural rate of unemployment had really moved up quite a lot. But I don't think it's a problem with the framework, but it is a fact though that it's Very hard to pin down where the natural rate of unemployment might be when there's this massive disruption in the Labor market going on.

Q: So do you think that the this state of the job vacancies per unemployed worker, that that's going to be a lasting measure of labor market tightness for you at the Fed?

A: Yes. I you know I think people will attend them for now people will tend to look at it. I'll just say in this particular situation we think it's important and we're going to find out empirically whether that was true for the the reason I the reasons I explained. We think that we can see a big decline in job openings and less than you would expect of an increase in unemployment. So it was this was a unique in so many different ways this series of events was different from… one in particular is just that so much of the inflation was due to supply side constraints right which was not a feature of the US economy for, you know, for a long time.

Q: Vice chair Lael Brainard said the other day in a speech that she raised the question of whether long-term changes of the economy like labor supply / deglobalization / climate change could make the could reduce the elasticity of supply and that this may be a problem going forward do you share that?

A: So that's this is a great set of questions that we've all been thinking about a lot and lail speech was really terrific on that Augustin Carstens has given a couple of speeches on the same topic including one at Jackson Hole this year. I mean the question is, what's is the does the new normal going to be unlike this normal that we've had where supply side disruptions and constraints were relatively you could look through them. The law has been for a long time that you don't need to worry about that it'll sort itself out. You know a supply shock from oil prices or whatever. Are we going into a situation a little bit like the 70s where there will be ongoing repeat shocks and which would tend to put more upward pressure on inflation over time. We don't really know. I mean that that's a it's a great question. But the question, I guess the real question is, what if that's true what are the implications. We still have a two percent inflation target and we still have to use our tools to achieve it and to keep inflation expectations anchored. But it's very hard to know, it's very hard to know the answers to these things. I mean we we tend to assume things will go back to the way they were just naturally, but that doesn't seem to be happening so far.

Q: Now, you mentioned in your remarks that forecasts of inflation have not only those that the Board of Governors but in the private sector as well have been lousy. Inflation has not behaved the way the forecasters said. So I wonder how you think about using forecasts of inflation and making policy, if you can't tell us or if your staff can't tell you with some degree of confidence what inflation is going to be 6 12 18 24 months out, how do you think about that in deciding when you make policy decisions?

A: i'll say it is very difficult to forecast inflation now, and one of the reasons is just that the situations are the situation is so different from the normal one and as I mentioned a lot of it is just that the difficulty is just, these supply-side constraints that we've had. We had no experience in forecasting that, it was you know this was a case of first impression, so that was that was very difficult. Nonetheless we have we do make forecasts, we'll continue to make forecasts. The way I tried to get around that in my remarks was to say let's put the forecast aside for a second and let's try to identify the macroeconomic conditions that we think we need to see that would put downward pressure on inflation. So that's that's a way to think about it. We'll continue to make forecasts but we're going to have to be humble and skeptical about forecasts I think for some time, and that calls for a lot of risk management. And the other difficulty of course is that monetary policy works with long and variable lags in particular or inflation is at the end of that train. And so if you're waiting for actual evidence that inflation is coming down you know you it's very difficult not to over tighten if that's all you're doing. So we have a risk management balance to strike and we think that slowing down at this point is a good way to balance the risks on the pace of rate hikes

Q: I see, but it's still a problem if you if you can't use today's inflation rate to set policy and you're not sure what tomorrow's inflation rate is, you're saying the inflation forecast will be secondary to the economic conditions that you think are likely to generate more or less inflation, is that basically it?

A: First of all I'm agreeing that it's a very difficult situation in which to forecast inflation and really very few professional forecasters have gotten it right. So I think we'll look at various things. We'll look at our forecasts. We'll look at the actual data. I gave you the three pieces and the elements of those three pieces of core inflation that we're looking at. We will you know look at these macroeconomic conditions where you know we, for example, we will try to identify a a level of of a stance of policy that's sufficiently restrictive to bring inflation down. We can't identify that with great precision and confidence but we'll make we'll we'll look at the changes in financial conditions and the effects that those financial condition changes are having on the real economy. We'll look at all of those things and make a judgment, and it'll have to be judgment as to as to what you know what that is.

Q: You've talked frequently about the need to have policy restrictive and that often is used as the definition of restrictive is above some neutral rate of interest, the one that will prevail when all is calm. And you gave a speech at Jackson Hole a number of years ago pointing out how identifying all these things - the natural rate of unemployment, the natural rate of interest - the problem is that we don't know what they are. So how will you know when policy is restrictive? How do you think about what the neutral rate is under the current conditions of the economy?

A: The answer to that is that there isn't any one perfect summary statistic so I the way I think about it I think the way we generally think about it is: we make our policy changes and they affect financial conditions. Actually it works the other way around - financial conditions tighten in expectation now, different from what it used to be. So they tighten. So we monitor the tightening of financial conditions, we look at at the history of these financial conditions index, and we ask how tight how tight are financial conditions. We also look at the effect that that tighter financial conditions are having on the real economy particularly now, interest sensitive spending, but also you know other things as conditions tighten. We also look - so what are the financial conditions we look at - we'll look at the entire rate curve. If you think about risk-free the treasury rate curve will look to see positive, significantly positive real rates across the curve. And you know you have that. You can argue about the short end, but you've got to pick some sort of a forward-leading forward-looking reading for inflation and I think, you know, inflation compensation in the markets definitely reflects confidence in us bringing down inflation. So so you've got real rates really across the whole yield curve. You also look though at credit spreads and what are private companies borrowing at because most borrowing doesn't happen at the Federal funds rate, it happens in many other places. We look at asset prices, we look at at you know, exchange rates which are just another asset price. We look at all those things and we try to make a judgment about whether looking at, put some weight on you know on the real interest rate curve, some weight on the other aspects I talked about, I think you have to make a judgment at the end, though, that you're restrictive.

Q: So an estimate of the neutral rate of interest didn't seem to be one of the big factors in that list?

A: No, it's in there. It's in there in looking at the real rate curve. So you look at the real rate curve you'd Want policy real rates to be above what we'd estimate as the longer run neutral rate. The issue is, you know the longer run neutral rate is is a rate at a time of full employment and two percent inflation and the economy and perfect equilibrium - that isn't where we are.

Q: Turning to the balance sheet from I'm going to turn to questions from the audience in a minute. How what criteria are you going to use to decide when to end the shrinking of the balance sheet. Is it the economy, is it whether money markets are functioning well, is it whether the Treasury is having trouble raising money, how do you decide when you've shrunk enough?

A: I should refer you to a piece of a document that is that lays all this out in detail that I really should be reading to you but i'll paraphrase it. So we're in an ample reserves regime and what that means is that changes in the reserve level will generally not affect the Federal funds rate. So there's there's more than enough reserves in the system so we don't we're not close to reserve scarcity. So what we've said is that we would allow reserves to decline until we're somewhat above the level that we think is consistent with scarcity. And then for a while what you do is you is you hold the balance sheet constant and non-reserve liabilities grow while reserves shrink. So we sort of shrink gradually down to that and then at a certain point we're just going to call it. We're not looking to really go back into proving that they're scarce because what happens is and you saw this back a few years the demand for reserves is not stable and it can move up and down very substantially. So we want to stop at a place that's safe. You know, having a lot of reserves in in the in the system is really a good thing. It's really a public benefit to have plenty of reserves plenty of liquidity in the markets and in the banking system in the financial system generally. So that's how we'll that's how we would do it.

Q: In the minutes of the last FOMC meeting it said this the staff had a forecast that does not forecast below-potential growth but not a recession, but then there was this interesting sentence where the staff said the possibility that the economy would enter a recession sometime over the next year is almost as likely as their baseline forecast. Is that where you are you look at it?

A: So I have resisted the temptation to handicap. I think i'll continue to do that but the way I think about it is, I do continue to believe that there's a path to a soft or a softish Landing. I do believe that. Unemployment goes up but Not it's not it's not a hard Landing, it's not a severe recession, you know you could think of unemployment going up but not not you know really spiking as it does in some in some recessions. So that's how I think about it and I think the path is pretty clear, it's we you know the labor market conditions soften we see inflation, and you know, the goods inflation gets better, housing services inflation gets better, and the labor market softens but doesn't go into recession, and and you see inflation start to come down and I mean I think that's very plausible. I don't want to be the handicapper on it and, you know, of course our job is to try to achieve that and I think it's still achievable. Although you know if you look at the history it's not a likely outcome. But I would just say this is a different set of circumstances

Q: But you said at the last press conference that you thought the path to that soft landing had narrowed has has it continued to narrow or is it widened or I don't know if you can have a wide or soft Landing but…

A: I don't know that it's changed since that was this is what five six weeks ago. I was asked the question has it narrowed, is it still possible, and has it narrowed. It's definitely still possible, and it has narrowed because if you look over the course of this year, nobody expected us to raise rates this much, no one expected inflation to be this strong and this persistent, and this you know to move to have spread so broadly through the economy. And so the extent we need to get keep rates higher or keep them higher longer that's going to narrow the path to a soft landing. On the other hand if we get good inflation data, and we get evidence that all the things that I talked about, if all those things start to swing the other way then we could very much achieve this.

Q: In August 2020 you announced a new framework for monetary policy - the flexible average inflation targeting framework - and I wonder whether there's anything in that that you think we should be rethinking now in light of the recent experience

A: So we said we would review do another framework review in five years and so that would be to to bear fruit in ‘25 or ’26, so that's what we're going to do we're going to stick to that I think we need to see this through a full cycle. We need to see the other side of inflation and what the economy looks like after this historic episode to really make good judgments about that. I will say though that aside from the framework itself we implemented it through guidance of various kinds and we put in really strong guidance because there were a lot of doubters that we would ever achieve two percent inflation if you remember that was the main criticism. Little did we know. But one piece of guidance that we gave was, and I don't I don't think this had much to do let's say it that way it didn't have much to do with all this inflation we're experiencing, but the one piece of guidance that we gave that I probably wouldn't do again is was we said we wouldn't lift off unless until we saw both maximum employment and price stability. I don't think I don't think I would do that again. It’s the tail risk. You know, we tend as human beings to underestimate tail risk and I think we didn't we didn't think … it seemed so unlikely if you remember 25 years of low inflation right, and on many years after the pandemic after the global financial crisis of inflation everywhere in the world it's all disinflation, just didn't seem likely and yet here we are.

Q: So it turns out that when you invite the chairman of the Federal Reserve to speak at Brookings a lot of people email you questions. Most of them are questions i've already asked or questions that were so poorly framed that I couldn't even understand the question. But somebody asked me this one and so I want to give that person an opportunity to get an answer what do you like to do in the morning before you start work?

A: Work. I'm a super early person and I you know I read a bunch of newspapers and drink my coffee in peace and then that's what I do.

Audience Q: So you've spoken both about risk management considerations and the inherent danger of inflation becoming entrenched so I was wondering what how much do risk management considerations suggest a terminal rate higher than would normally be expected to achieve your policy goals?

A: So I think there are there are a number of dimensions and it wouldn't necessarily one of them one of them would be potentially higher rate. But one risk management technique is to go slower right to go slower and feel your way a little bit to what we think is the right level. Another is to is to hold on longer at a high level and not you know loosen policy too early. I don't want to over tighten, I certainly we my colleagues and I do not want to over tighten, because you know we I think the cutting rates is not something we want to do soon, so that's why we're slowing down. And you know going to try to find our way to what that right level is. But it I mean theoretically it's another dimension but it's not, it wouldn't be my first choice.

Audience Q: One of the things that's a little obscured when we look at and discuss the labor force participation rate is there is a pronounced downward trend due to population aging so when you think about realigning labor supply and labor demand, are FOMC officials hoping or expecting that participation really moves back up all the way to a pre-COVID peak? And related to that is, how much of the realignment do you think needs to be done through restricting labor demand as opposed to the ability of supply to catch up, so on labor force participation?

A: I think it's useful to go back you know 10 years and the forecast that mainstream labor economists had was that you're right, aging of the population leads to declining labor force participation. Notwithstanding that, labor force participation was a was in effect flat and a little bit up from 2013 to 2020 roughly. And that was because you had a yet a strong tight labor market. People were staying in the labor market longer than expected, that
Was really what it was. So our ability to predict is not perfect in this except over long periods of time you have an aging population, so you're probably going to have declining labor force participation. I don't think it's reasonable to expect that we get all the way back to where we were with labor force participation in 2020, 63.7, I guess population adjusted. I don't see that, but I wouldn't rule it out. And we're nowhere near that now. You know we're a point and a half below that now. So the real question is, do we expect to see big chunks [jumps?] Of Labor Force participation. I gotta say this year we've seen in the aggregate not much and it's been it's been very disappointing and a little bit surprising. So um that's part of the story the other part as I mentioned is population. A big part of the shortfall in labor force is actually population as well as participation.

Q: So given population trends, given that there's still some some workers are clearly anxious about going to work during COVID, and given that immigration is well below the levels that were projected before the pandemic, does most of the balancing have to come on the demand side?

A: Well I think for now we have to assume that. That's why I talked about, you know, supply-side policies on labor but although they're not for us to recommend, or to answer questions about, so yeah the answer is yeah, I mean that's what I kind of said that in my speech. We have to do what it takes to restore balance in the labor market to get back to two percent inflation and that's what we're doing, really just by slowing growth job growth rather than putting people out of work.

Audience Q: Chair Powell back in 2018 you gave a speech questioning the role of the so-called star variables that the Fed uses to navigate and there was a simple a possibility raised that maybe unemployment could fall

Well below what the staff thought the natural rate u-star was then without causing inflation. But then COVID came And turned everything around. As you just said, one interpretation of COVID is that u-star went way up and we were on the wrong side of it, which is inflationary. My question is, going forward is it likely do you think it's likely that things could reverse as the dust settles from COVID and we could end up back in that world where maybe we're on the other side of u-star? What lessons did you learn from that period that that got forgotten because of COVID?

A: Well unemployment went below … so what we write down, what the staff writes down, is our longer run estimate of the natural rate of unemployment. I guess one thing I would say is that is that during the course of a long relatively gradual I mean, so we only have one experience, right, to generalize from. But what I learned from that experience was long relatively slow, not super fast expansion, you really saw the natural rate of unemployment, the shorter term natural rate come way down. We had three and a half percent unemployment with really little sign wages were just getting up to that level of productivity and two percent inflation. So we could be back in that place. I think we could certainly be back in that place I but what we've what we've seen, you know, it's another n = 1 situation. With the pandemic it's also unique. I would also point out, though, we did see the inflation we saw at the Beginning we did have the natural rate of unemployment go up probably significantly. But the again the original inflation we saw was not to do with the labor Phillips curve, it was not to do with that, it was to do with goods more.

Q: So I think another way to frame Joe's question is, I think a lot of us thought that the lesson we learned when unemployment fell very far, and we didn't get inflation, that maybe over time before you were in charge, the Fed was aired on the side of being too tight, that it was too worried about the unemployment rate falling and I think the concern is that will we fight the last war. And because of this experience the Fed will be reluctant to experiment with a low rate of unemployment in the future.

A: I'd love to have that problem again.

Audience Q: We've had unexpectedly fast and large rate increases this year and that has pushed up the dollar relative to basically any currency in the world. We've seen likely more financial market instabilities. So the Federal Reserve's dual mandate is for the United States, and yet are you worried that a severe Global recession or financial market turmoil would come back to make it harder for us to achieve the U.S dual mandate?

A: So we do we do of course look at global developments. We have a domestic mandate of course as every Central Bank does. But in in this world, global financial markets and the global economy really matter for us, so we monitor all that very carefully. We really thin,k and my colleagues and I really think, that the best thing we can do for ourselves and for the global economy is to get inflation under control as quickly as possible. We don't think the world is going to be a better place if we if we take our time and inflation becomes entrenched, and then we have to go in later. The evidence is that the employment costs of bringing inflation down only rise with delay. So at the same time we don't want to do any more than we have to do. But we feel like as a risk management matter we needed to do what we did, and feel like we're now in a place again as I said where we can slow down and try to reach that ultimate level.

Q: But how much do you worry about what Claudia's question implies is, we do something with rates, other people are forced to do things with rates, and that ends up spilling back to us and makes it harder for you to do it so you have to take that possibility into consideration?

A: We absolutely believe that, we take that into consideration. The model explicitly takes it into consideration. Of course they're not perfect, no one can say we do it we do it perfectly. But we have a very large Global model that we use for the global economy and it absolutely takes into account what's happening with real the real economy and monetary tightening and currency and all those things. Won't be perfect. But we do that. And we also sort of understand generally, there's a lot of research and people are talking about this a lot right now, that you know maybe the whole is bigger than the sum of the parts when it comes to tightening. Maybe it is, maybe it isn't, but we're aware of the risk of that. But again I come back to - look where we are. We we've raised you know 375 basis points. Markets are working. I think we're now in a position where we're in a place where we really can get inflation under control. And we haven't… unemployment's at 3.7 percent, so we haven't done … I don't regret getting to Where we are and I think broadly the world will be better off if we can get this over quickly.

Q: Two questions - so one question on the labor market is how do you reconcile the characterization of the labor market is very tight with the fact that wage growth isn't keeping up with inflation and the labor share

of GDP really hasn't risen since 2020. Then second question is how much credence or what kind of research do you rely on to think about the notion that a very tight labor market will lead firms to invest in and innovate and become more productive over time. I mean could that be a tailwind to productivity growth?

A: So naturally we understand that real wages are not going up for most people. But to me that isn't the, that's true, but it's not really dispositive. I think the issue really is that it's one of salience really. So at what point do people start saying I need higher wages because you know my real wages are going down you're giving me these six percent wage increases but inflation is seven point seven percent, I need more of that. So we don't really know when that point is. But when you get to that point, you're in serious trouble. And we don't think we're at that point, but it can't be that we can go on for five years at very high levels of inflation and that it doesn't work its way into the wage and price setting process pretty quickly. So that's a serious concern.

On the second question yes you know I think we're seeing that. The service industries, you're going to see you know this labor shortage that we have as I mentioned, it doesn't look like it's going away anytime soon, and that's absolutely I think certain to lead to a lot of investment in technology and, you know, labor replacement technology where there isn't labor and you're I think you'll see quite a bit of that and it could be a dividend going down the road

Audience Q: You spoke about going somewhat restrictive and then staying there for a long time. Why would you prefer that over a shock and awe approach that goes very restrictive but for a shorter period of time? And I ask that because there's some evidence that sacrifice ratios are lower in a more aggressive regime like that.

A: I think we've been pretty aggressive, I would say. No I don't agree. I mean we wouldn't you know to just raise rates and try to crash the economy and then and then clean up afterwards. I wouldn't take that approach at all. I think we I think we're in a position where the where the right thing to do is to move really quickly as we have And now slow down and get to that place where we think we need to be. And by the way, there's high uncertainty around that. You know, we have a broad set of thoughts about where that destination might be. But we could be wrong, you know, it can be higher than that, could even be lower than that, we'll have to see. But I think that's the right approach and that's also the approach that would allow us not to throw away the option value of upending a lot of lives which we would do if we if we crash the economy and raise them. We might get rid of inflation but at very high human cost.

Audience Q: Is the Fed in danger of neglecting its maximum employment mandate? Is the maximum employment mandate taking a back seat to the stable prices or inflation mandate?

A: No, absolutely not, absolutely not. The thing is this - without stable prices, we can't have maximum employment and that's that's how I think about it and I think my colleagues as well, in the sense that if if you're constantly fighting off inflation and having these battles and having to raise rates and it goes on for five or ten years as it can, you're not going to have maximum employment. The kind of the situation we would love is to have another one of these very long expansions and we've had four of them now in the last you know several decades really. When inflation was low after the 70s we got out of the habit of these short, you know, these short inflation-driven business cycles and we were able to reach where we were three and a half percent unemployment. Those are really good for, very beneficial to our society to have these long expansions and the benefits start to go to people at the lower end of the spectrum in the seventh or eighth year in the last cycle. So I I think the two things go together right now. The labor market is incredibly strong again, before this thing we've never had 1.7 job openings for every unemployed person so this is a great labor market in in that sense. It's too great in a way because it's going to be adding to inflation.

Audience Q: Right now a lot of analysts are arguing or believe that China's zero COVID policy is continuing to take a toll on the Chinese economy but also likely to weigh on the global economy due to the size of China's market and its position in the global supply chain. So we're just wondering about what impact or how much impact do you expect that a continuously slowing Chinese economy would have on the U.S economy or the fast next interest rate moves and is China's current economic situation disinflationary factor or inflationary factor to the US.

A: I guess I just say that to the extent China is having shutdowns in in the parts of the country in the parts of the economy that are deeply connected to global supply chains, that is going to make those supply chains less efficient less effective and so that will that will have an effect on you know on you the prices of some of these goods that we that are manufactured or assembled in China. So it does have an implication for for the U.S. it's hard to say how how big that will be without knowing how h persistent how how long these lockdowns take place.

Audience Q: I was wondering how you think about the trade-off of restrictive policy and the supply constraints you mentioned. So in particular when it has negative effects say, on housing production, that makes it harder to meet housing demand, or on the Congressional investment through the inflation reduction act in climate change mitigation, and in energy policy that will make energy cheaper long term. How do you think about that trade-off.

A: I don't think our restrictive policy would have much of an effect on the sort of climate mitigation investments you're talking about. In terms of of housing you know that there are two things: one there's a sort of a longer run housing shortage that we have, but in the meantime, coming out of the coming out of the pandemic rates were very low, people wanted to buy houses they wanted to get out of the cities and buy houses in the suburbs because of COVID. And so you really had a housing bubble. You had housing prices going up at very unsustainable levels and overheating and that kind of thing. So now the housing market's going to go through the other side of That and hopefully come out in a better place between supply and demand. But none of this really affects the longer run issue which is that we've got a built up country and it's hard to get zoning it's hard to get housing built to in sufficient quantities to meet the public's demand.