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## **INFLATION DEBATE BETWEEN PAUL R. KRUGMAN & LAWRENCE H. SUMMERS - PART II**

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### **Webinar Transcript:**

Markus Brunnermeier: So welcome back everybody to another webinar organized by Princeton, hosted for everybody worldwide. We're very happy to have Paul Krugman with us from CUNY and Larry Summers from Harvard. We will talk about inflation. It's part two of an earlier debate we had about 12 months ago and we're very grateful that both could make it and can outline their views on inflation and how we will go forward. Some people call this now the Super Bowl for Economics or economists, so we will see the outline, so we will proceed with the following. Paul and Larry will give some opening remarks, and then we will go and see how the discussion leads us to various topics. In particular we're interested in soft landing, how we can have soft landing for the financial side and also for soft landing for the real economy, what are the implications for emerging market economies and other aspects. So, Paul, the floor is yours, I think, outline your views on how the last year went and how the outlooks look forward.

Paul R. Krugman: Okay, great risk of running way long, but let me try to hit just a few main points. The first thing I want to say, I think most of our audience here, at least the economists, remember the big debates over QE early in the last decade, and all of the economists who predicted dangerous inflation and then refuse to admit that they've been wrong. And I don't want to be one of those guys, so I need to start out by saying that when we had our last discussion I was relaxed about the inflationary outlook and I was wrong, it turns out that inflation is coming way higher than I expected and I think the important thing on stuff like that is to try and figure out why you were wrong and learn from it. It's when you get to the why I was wrong, what's odd is it's not the simple script that I might have expected. For those who remember our earlier debate, that was centered mostly on fiscal policy, which I think is not going to be the case now and it was centered around the American rescue plan, which was a very big slug of money. And Larry was arguing, like a lot of people, that it was just way too big, that it was too much stimulus and that the economy would massively overheat. I was, I agreed that it was a lot of money, but argued that it wasn't designed as stimulus and, in fact, you know that had other purposes, and that it was likely to have low multipliers, so that there wouldn't be that much overheating. And the funny thing is that, the multipliers actually do seem, and we can maybe discuss this, or maybe not, to have been relatively low, that if you look at real GDP, it appears to be still slightly below pre-pandemic CBO estimates of potential output, we look at prime age employment ratio, it's still significantly below the pre-pandemic level, and if you had told me in the spring of 2021 that that's what the GDP and employment numbers would look like I would have said "okay that's going to be an environment that relatively benign inflation," I wouldn't have expected a big

inflationary surge, given that. But obviously I would have been completely wrong. In fact we've had a huge inflationary surge given the level of economic activity. We kind of know what's going on. There are two pieces, which I think are very distinct and distinct in their implications for the future. One, of course, is the supply chain stuff. And the demand (overall demand) has been strong, but what has really happened is there's been a skew of demand, because of fear, fear of face to face activities skewed towards goods, especially durable goods, which has overstressed supply chains, plus a few random events like the semiconductor shortage so we've seen a big rise in some prices. Let me say that that's the larger part of the elevated inflation, but in many ways, I would say the least worrisome part because the private sector has a huge financial incentive to get stuff moving again and although fixing the supply chains is turning out to be much more prolonged and hard process than one might have imagined, I think we've all learned far more than we ever wanted to about logistics. That is still the old adage that the cure for high prices as high prices, probably still applies, and so that part is probably not a—it's huge, it dominates people's perceptions— but I think it's the less important. The other thing is something's happened in the Labor market and you can really see that, although measures of you know, employment, we were all kind of devotees of the prime age employment ratio as the barometer of the Labor market, but that is really not working now. I just been doing, if you do your quits or another barometer of the Labor market and there was a very nice, very close relationship between the employment ratio and the quits rate up through the up to the beginning of 2000 and now it's way off. Now we have vastly higher quits than we did before for any given level of employment, wages are rising rapidly. We, because of compositional effects, it's tricky to assess, but there clearly has been a substantial wage acceleration, so that it looks as if despite a sort of the raw employment numbers, this is in fact a very tight Labor market, possibly— probably— somewhat above sustainable full employment. The issue in a way has been supply rather than demand, but the supply issues are big enough so that where we are right now is clearly an economy that does not need more stimulus and in fact needs to cool off a bit. The big questions —well there are multiple questions that will come up— but I think I would find that if I were at the Fed now, I would be arguing for a series of interest rate hikes, no question, data dependent, we want to keep an eye on what's happening, but clearly, you want to be taking your foot off the gas now. There's a big question about how much? Is it simply let up on the gas? Maybe tap the brakes? Or is it slam on the brakes, and really try to bring the economy to a sharp slowdown to revert further inflation and then there's a prediction question: is this — we've retired the word transitory but they're still a live argument and I'll be willing to make a case as we go along that that we will —by the time 2023 rolls along, we'll be looking at a situation where what we're, in retrospect, it looks more like the '46-'48 inflation, which was very high for a little while, but did not leave an underlying inflationary environment than like the '70s, but that's what you know there's lots to get into there, and life comes at you fast, as I say, I mean, I don't know what the opposite of instant gratification is, but I've had instant antigratification in the sense that that I made an inflation call and it went it went wrong pretty fast, and I think we all have to try to understand what the hell has been going on.

8:00

Markus Brunnermeier: Thanks a lot, Paul, so let's pass the microphone to Larry, and you know Larry was not in the team transitory, he was more on the team persistent. I don't know whether

he thinks that inflation is coming back down or not., but perhaps learning can, you know... how do you see that now? Do you see inflation coming down again, or what are the right steps or the right diagnosis of what's going on? And to what extent you know, for example, pricing power might play a role as well and it came up in the discussion over Twitter and other places.

Lawrence H. Summers: Paul and I are much closer to being in agreement now than we were when we had this conversation, a year ago, on the subject of inflation. I think I would put substantially more emphasis still on demand than Paul would. Imagine that potential GDP is fixed and can't be exceeded, because the people aren't there, and you stimulate demand substantially. And you'll see substantial inflation, but you won't see output ahead of potential GDP. So using what happens to output as a measure of supply vs demand can easily be misleading in a context where there are supply constraints. I don't think a year ago I was enamored of the employment ratio as a measure. The advocates of measures like PPP and all of that emphasized how there will be consequences for aggregate supply of the ordeal the economy went through in 2020 so I don't think it's reasonable to be so surprised that Labor force participation is depressed, and in the context of a shortfall of aggregate supply it's the job of those who control aggregate demand to balance aggregate demand with available supply. I think that fiscal policy and monetary policy both operate to affect aggregate demand and either can be used to restrain or accelerate aggregate demand without the combination of hugely stimulative fiscal policy and hugely accommodating monetary policy, we wouldn't be where we are today. So I think that, where we are today can be attributed to both fiscal and monetary policy. Either could have led to the situation being avoided. I hope we can agree that there are some positive measures that can be taken to promote competition policy, and I hope we can agree that there's nothing that competition policy can do that will meaningfully affect the inflation rate over a two year horizon and I hope we can agree that wall greed may be a useful political message for pursuing some desirable policies that as a scientific matter, greed is irrelevant for thinking about the level of inflation; I suspect we can. I hope that Paul's residual team transitory instincts turn out to be right and I recognize that they are widely shared at the Fed and among professional forecasters. My own assessment is that that would be an optimistic case, not an inconceivable case, but not a reasonable best guess. The long term historical evidence suggests that vacancies in quits are better predictors of inflation than unemployment and that unemployment is a better predictor than the employment ratio. The vacancies and quits rate that we have now is what would historically go with 2% unemployment. So I think that's how we should think about the degree of tightness with which we're now dealing. So I look at 2% unemployment and the economy widely expected to grow faster than potential this year and to experience declining unemployment, real fed funds rate that is almost certain to be substantially negative at the end of the year, fiscal policy that is substantially more expansionary than it was two years ago, before Covid, a substantial overhang of liquid assets, inflation expectations substantially accelerating on almost every survey, and the breadth of inflation substantially widening, and significant new risks of adverse supply shock coming from geopolitics and coming from the difficulty that China is likely to have in dealing with Covid. I look at all of that, and think that a deceleration of inflation from the five to seven rate range to the two range is very much an odds off forecast for the next 12 months.

14:36

Markus Brunnermeier: Thanks, but can you just give us a what's your policy recommendation then? Paul mentioned that he will see several rate hikes this year, would you argue the same way, or how many rate hikes do you foresee?

Lawrence H. Summers: So I'm in agreement with Paul on the desirability of being data dependent and I don't think there's any reason to lock things in. I, in general, do not share the modern academic fashion for using forward guidance as a major tool of policy. My impression is that the market mostly doesn't listen, so it doesn't have a large effect on market expectations, but those who issue forward guidance feel constrained to follow it, so you get the cost in terms of having to live with commitments you regret and you don't get large scale benefit. I would, in the Fed's shoes, have ended QE months ago and end QE as rapidly as as soon as practicable, given the promises that they have made to markets. I would be signaling clearly that all meetings are live this year and that, as necessary, they are prepared to contemplate rate increases at all meetings, meaning up to seven rate increases this year. I wouldn't be indicating that that is something I'm highly confident is going to take place, but to be clear, I think that the prospects for unemployment staying well below for multiple years, as the Fed now predicts, real interest rates staying negative for multiple years, as the Fed now predicts, and all of that coinciding with the disinflation that the Fed now predicts, I think that is a very unlikely combination. I do see significant risks coming from financial markets, coming from geopolitics, coming from consumer sentiment, to the pace of recovery. And so recovery may slow significantly exogenously, in which case there wouldn't be a need to pound on further rate increases, but I think the judgment about the nature of aggregate supply that is implicit in the current 3.5% unemployment, negative 2% real interest rates, but deceleration of inflation, to the 2% range is a possible view, but a highly, highly optimistic one.

Markus Brunnermeier: Thanks, so we went really deep into monetary policy, so let me ask Paul so there's, as Larry pointed out, they're much closer together, these days, than one year ago. But there are still differences in nuances, essentially Paul arguing that the demand pressures are not the driving force, supply components are very, very important. I wanted to know from Paul also, given your expertise about Japan, it seems like in the U.S., inflation came back very quickly through some fiscal stimulus measures and supply components. While in Japan, for decades, it didn't work. Is there anything you know Japan could learn from the US experience and in this regard, perhaps you can go a little bit in that direction, and then the other question I have going to the next block is how important is this new monetary regime: the Fed, ECB, they all started reviews very much focused on how to avoid persistent deflation periods. You think these regimes are still alive and it had many components, like the flexible average inflation targeting. Do you think it will still be alive? Then there was another component, you don't want to have forward looking monetary policy or preemptive monetary policy, and that was a very much a regime change, and then the second two components are with respect to the unemployment rate, so it was putting more weight on the unemployment and also arguing. employment cannot really overheat. So these are the four components of these reviews, the new strategy of the Fed. Do you think that's played a role, besides the fiscal stimulus that the

markets realized, you know the monetary policy regime is now different or they think that's not the core element, why we have so high inflation these days?

19:57

Paul R. Krugman: Well, okay, I'm going to hopefully touch on all of that, let me talk about a couple of things. One thing that I am— something I've been noticing taking place, and I think we need to be very careful about as economists is inventing new models on the fly as stuff comes along. Obviously sometimes you really do need to rethink your models, but if you are saying something that is very different about how the economy works from what the profession was saying a couple of years ago, you might want to ask about that and one doctrine I mean... I see Larry's point about potential output and I know Jason Furman has been making much the same point. But what that amounts to is a statement that the aggregate Phillips curve is a right angle. That it's... that when you get up to a certain point, all of a sudden it gets completely vertical. Now that could be true; it's certainly not the way we model things in the past, it's not the way potential output is estimated, potential output is not supposed to be a physical capacity limit, it's supposed to be the level of output consistent with a stable inflation rate. And it's I would really hesitate to start tossing aside the evidence on output, based upon the view that the Phillips curve looks nothing like what we thought it did before. I'd also add that if we believe that there are these extreme nonlinear parties in the response of prices to capacity utilization. Then, that also lends credibility to the view that a lot of the inflation we're seeing is about the unusual skew of demand. If we think that what's happening is that people are buying Pelotons because they can't go to the gym and that the result is that the peloton prices are soaring, but gym membership fees are not plunging, that's a story that's also about this kind of right angled Phillips curve thing, so if you believe in that kind of skew, you should also be giving a lot of weight to the to the dislocation stories about inflation. About inflation expectations: we have a problem here: the inflation expectations that we really care about are the expectations of people setting wages and prices. I mean there's financial markets, this is one thing, but what we really want is the expectations of what we're... if we're worried about stagflation, we're worried that we're going to get into a '70s type thing where prices rise simply through self fulfilling expectations, so someone, I think, was it might have been Martin Bailey said it's like when everybody stands up at a football game because there's exciting action on the field and the answer, and nobody can actually see any better, but they're all less comfortable and so that's what you want to avoid happening. Unfortunately for that —which it's not even clear that expected inflation in the sense that matters for these stories even really exists— those were our models. There's a P.E, but that's the model, real people don't actually exactly think that way. We're more talking about patterns of behavior and a '70s style pattern of behavior where everybody acted as if there was going to be sustained high inflation all around them. But, to the extent that we can measure it, we were not interested in the, particularly in the financial markets, except as an indicator of one group of private sector participants is interested in. Consumer expectations is better, although the trouble with consumer expectations is that again people don't really think real people don't think about these things. But for what it's worth the way I've been looking at it is that we have data on short term and medium term inflation expectations, there are different numbers, the Michigan survey currently is showing that one year inflation expectations are way up, they're are 2.1 points from a year ago; five year inflation

expectations are also up there up half a point from a year ago. Now, if people were actually doing consistent math which is questionable, but still if they're doing consistent math, that would be an implicit projection that inflation will stay high this year but revert to more or less normal levels thereafter. So it does not look— and the other thing, the bond market is actually telling a similar story, it does not look from the available evidence, as if we are yet in a '70s type situation where people are building in the expectation of continuous inflation into their decisions. That could happen, and if we really are running the equivalent of a 2% unemployment economy, and we keep doing that for an extended period, then yeah we can get there. So I would agree that we need to be cautious, which is why I am supporting a process of ongoing Fed rate hikes, but I think we do need to be careful about what we mean by inflation expectations and what matters it's the behavior of wage and price setters that we care about and that's what we need to be alert for. On the Japan story, look Japan entered secular stagnation, long before the rest of us. Japan has had persistent weakness of private demand for almost a generation now. I guess a full generation now, and has needed fiscal deficits to kind of make up for it. Japan has followed in a way, the policy that pre pandemic, Larry Summers was advocating for the United States, and although it's led to a large accumulation of debt, the debt surface remains not a serious problem. And I've often been suggested that those of us were extremely critical, a Japanese policy in the early 2000s, so that we should all go to Tokyo and apologize to the Emperor, because they've actually done a better job of handling all this than we are. So I don't think that the Japan example tells us anything much about the fiscal policy debate. Sorry, one last point: what is true is that this drop in labor force participation, it's not universal, it's very strong in the United States. It's happening, but not to the same extent in the UK it's not happening at all in a lot of continental Europe. France, the prime age employment ratio is above its pre-pandemic level with considerably less inflation, so it's not something that we knew was happening. If I have to make an excuse for myself a year ago I say “I thought we were going to be like France” and it turns out, we aren't.

26:56

Markus Brunnermeier: Thanks a lot, Larry, do you want to react to that?

Lawrence H. Summers: You know, Marcus, I think Paul and I are in about the same place on Japan. I suspect we agree that if Japan in some year had increased its deficit by 12% of GDP, they might have seen something substantially different happen, but they haven't done that. But I think Paul and I are in agreement on GDP. I think Paul and I are actually in agreement on the technical point that you can either believe in nonlinearities or not believe in nonlinearities. I'm inclined actually to come down on the “anything that hinges on nonlinearities is probably a bit problematic,” and so I don't think the shift from services to goods, which only really matters, if there are nonlinearities is that strong an argument, and I think it's probably right to say that we had an adverse supply shock to which we did not adjust demand policies, which we did not adjust demand policies at all, and that's why we're having our problem. And I guess, those of us who predicted an inflation problem were more accurate on that, turned out to be luckier on that than those of us who didn't make that prediction, but I would agree with Paul on the analytical point about nonlinearities. On the question that you raised about the Fed's framework: I don't know and it's kind of a Talmudic matter whether the Fed's framework is its problem or the Fed's

interpretation of its framework is a problem. I think it was high order folly to be buying mortgage backed securities in large quantity while you had the most rapidly growing housing crisis in American history, and they were well above trend. I think, once it was clear that inflation was running well above 2 to still be talking about everything being transitory and no need for rate increases for a year and a half was foolish. I think that it's evidence of non seriousness about some of what was literally said in the framework that nobody is now talking about the need to have inflation below 2 to offset what will be the substantial period of inflation above 2, even though averaging was the central concept in the framework. More broadly, and this is a quite unfashionable view that I have (and is a view that's probably largely uncorrelated with the other views that I have), I think Alan Greenspan and the Delphic Oracles understood something that the modern generation has lost. And that is that if everybody thinks you're omniscient and omnipotent but you actually don't know much, it's a good idea not to make specific predictions and specific promises. And so I think that the framework (the flexible average inflation targeting framework) was predicated on a desire to credibly signal more expansionary policy in an economy that was more deflationary than inflationary, and that was plagued by secular stagnation. I think that unknown unknowns are an important part of life and therefore entering into firm frameworks that describe your intention for multi years is a prescription for either sacrificing credibility or being constrained. So I do not think that announcing that we're never going to act anticipatorily in the face of unemployment, we're always going to be committed to using averaging, I think, none of that was terribly valuable in providing stimulus and I think it drove significantly misguided thinking when the world changed substantially, so I would advise much less in the way of providing specific frameworks of this kind, I think the most successful bit of financial communication in the last 20 years was Bob Rubin (excuse me last 30 years), was Bob Rubin's doctrine that a strong dollar was in the American interest which he declined to clarify or explain. But that provided reassurance on rectitude that was helpful and in its simplicity and lack of elaboration provided more. And I think if he had had a dollar framework with ranges and caveats and approaches, the dollar would have been managed considerably less well and I think some similar principle applies more generally, so I don't much like the flexible average inflation targeting regime, but it's not that I prefer that it'd be replaced by something different, of the same type.

33:40

Markus Brunnermeier: Thanks, Larry, so I guess the simplicity of communication carries a lot of weight. I will probably add Mario Draghi's "whatever it takes," also in this class of very simple messages which carry a lot of weight.

Lawrence H. Summers:

Yes, exactly.

Markus Brunnermeier: So let's perhaps move on to the next, I mean we talked a little bit already about how we can now orchestrate a soft landing and there are several challenges out there. How do you organize a soft landing? Of course, there is, on the one side, if you have to raise interest rates, there are more expenditures, interest expenditures, and the fiscal side, there will be some fiscal dominance pressures there. But there might also be some financial instability

issues if you raise interest rates too fast, and that might actually make it more difficult for the Fed to raise interest rates so it's called financial dominance or while you may hold back on being too aggressive in order to make sure that there is no havoc in the financial industry. And so I would like to get Paul's and also Larry's take. Where do you see, is this a constraint that you know you cannot do just focusing, let's say on the wage setters and on the households, and firms who set the wages. Do you have to take some considerations on the financial side as well, to make sure that this is not going in one sense? And then there's also when you look at the Twitter feeds and others as all these so-called bear flattening. So essentially what you have is your short enough yield curve is going up, but the relevant interest rate, the long end, it's not moving at all. So you don't have any tightening of financial conditions so that's another element touching on the financial side. So how should the Fed maneuver the soft landing, you know, removing the Fed put to some extent, but not too much or should we ignore the financial side all together or how would we then deal with this potential financial dominance aspects?

Paul R. Krugman: Okay, so my take first of all I think it's kind of natural if you're a practicing analytical America economist, if you work at the Bendheim Center, to think that all of these issues are much more important than they are. I mean again, mostly what we're concerned about –obviously, financial markets are not irrelevant– mostly what we're concerned about is wage price dynamics and out there in the real economy. And if you asked the median wage or price setter “what do you think about flexibility average inflation targeting?” His or her answer would clearly be “what?” This is all completely irrelevant to the expectations of people who are actually making the decisions that we care about. I would say about the impact of monetary policy. The dirty little secret of monetary policy is that it works, primarily through housing and, to some degree, through the exchange rates. That business investment is highly insensitive to interest rates that really we're talking about about housing and to the extent that the US is moving faster than other countries which appears to be in the cards and appreciated dollar and worsening real net exports. What I'd be looking at is that mortgage rates are rising. So, in terms of the rate that is relevant for the actual real world decisions, the Fed's tightening rhetoric is gaining traction. Now whether it's enough or how much this has to go is a really...if you ask people for a point estimate of how much a given move in the Fed funds rate affects aggregate demand, I don't think we had anything like an accurate picture of that. Or along a variable legs that's the hardest thing right now, and we think, Larry and I, both want this to be data dependent, but Friedman wasn't wrong about that and so trying to adjust, it's going to be hard, and so this is not going to be smooth, so if a soft landing means that there are no whoopsy moments, moments when GDP growth is slow or negative for a quarter and everybody goes into a tizzy, or it means that there are no points when we say “oh boy, we have not been tightening fast nothing inflation is still running too hot.” That's too much to hope for. This is going to be awkward but whether it's actually going to be a seriously disruptive thing is another thing. You can go back and look at the famous bond tantrum of 1994 which is legendary as a cautionary tale amongst central bankers but is basically invisible in the real economic data. So I think that this is going to be hard, but you know, even if it wasn't for all of these experienced tracks bringing a boom to an end is always hard. We've never gotten through... you can never expect it to be something where there's a very clear exact place to set the dials and I still think we have a pretty good chance of coming through this with –now you know this year's inflation, I



don't understand the Fed, the dot plot, I don't understand the forecast for Q4 Q4, I just don't see how you can get there, it's a there's there's a lot of inflation, still in the pipeline, particularly shelter prices, you know I think many people know; right, the shelter prices that the BLS measures are something like the average rent on apartments. The private lease/rental agencies report rents on new apartments which have gone up much more, and that was there, and that has yet to be reflected, so I think Q4 Q4 is going to be substantially higher than the Fed is predicting but I'm much more interested in Q3 Q4, and whether the rate of inflation will have been coming down quite a lot. And I think there's still reasonable odds that will be happening. But will the Fed will this be easy, no. And let me just say that I think Greenspan got a lot of mileage out of making incomprehensible forecasts, but he also later after leaving the Fed made a lot of fully comprehensible forecasts that were utterly disastrous, so I think we might want to qualify what we say about him a little bit.

40:38

Markus Brunnermeier: So Larry, how do you see this?

Lawrence H. Summers: So let me, let me just say that Paul and I agree that markets think a lot more about the Fed than the Fed thinks about markets and that's probably how it should be, and that what really matters is the real economy. Paul and I agree that the inflation forecast for the next year that the Fed is issuing is very hard to understand given what's happening with housing and other things. Paul and I agree that this process of slowing things down is not so likely to be a completely smooth one. Here's the issue that I don't have a certain view about that Paul touched on that I think is very difficult. I think there are a lot of reasons for thinking that the impact of interest rates on demand has attenuated over time. Housing and durable goods are a much smaller part of the economy than they used to be. As you reference, with more federal debt and more short term federal debt higher interest rates translate more quickly into higher disposable income than they used to. The fraction of long lived investment in business investment is much larger—much smaller than it used to be and the available empirical evidence suggests the same thing. So in economic parlance, the IS curve has, if anything, probably steepened and Paul is right to emphasize that what happened in 1994, which was a 3% increase in the Fed funds rate in one year with a disproportionate, highly exciting increase in long rates at the same time, did not have a large impact on the level of aggregate demand at a time when monetary policy was probably more potent. And so what I am baffled by is why people believe that an increase of 100 basis points is likely to pose substantial threats to the recovery and, more broadly, why people believe that we can end this whole episode of inflation concern without rates ever rising above 2%, which seems to me possible but doesn't seem to me like a preponderance probability in the current environment, so I take these various comments about how monetary policy operates and the example of 1994 as indicative of why we probably are likely to need to raise rates significantly into positive real terms in order to deal with this. And finally, Marcus, I would say that I know that many are very excited by questions around the sustainability of deficits and debts and issues around fiscal dominance I'd have to say that for a country in the 100% debt to GDP ratio I wouldn't begin to see those as serious issues until I saw meaningfully positive real rates. And as long as real rates were meaningfully negative and substantially below likely growth rates, it does not seem to me that the set of

issues around fiscal dominance are of primary importance. Again, one needs to be data dependent and events could change quite rapidly, and if so that situation could change, but I think the I think the emphasis on fiscal dominance is harking back to the kind of monetarism that was badly wrong in 2010 that Paul and I agreed in 2010 was badly wrong and that does not strike me as being a high order concern in the current environment in general, I think that central bankers like generals tend to fight the last war and that the taper tantrum was an extremely minor event in American history that was not 3% as important as the Vietnam War 1970s inflation. And that we are paying a substantial price for the fact that it is looming far larger relative to the broad political and social consequences of inflation in the minds of central bankers than it should.

46:51

Markus Brunnermeier: Thanks, but you are less concerned that there will be problems in the financial markets if there is a hundred percent, 100 basis points or 300 basis points inflation, interest rate hike. Concerning the fiscal dominance you outline very clearly, as long as the real interstate stays negative it shouldn't be a big issue. What about the financial markets, the financial dominance that the Fed is reluctant to raise interest rates to make sure that there would be no havoc in the financial industry?

Lawrence H. Summers: I think that today's generation of central bankers is excessively attentive to the vicissitudes of financial markets in terms of levels. I do think that it is a vitally important responsibility of central banks to assure well functioning financial markets, but not to be managing the level of financial markets and, certainly, if anything, it seems to me that the greater financial stability concern is with the level or with the current height of financial market asset price valuations rather than with some concern that they might, meaning that they might correct by some percentage from here. I think the general idea that a fluctuation in asset prices, even a fairly significant one, is if it takes place, other than extremely suddenly— it'd be meaningful damage that, by the way. And now I'm going to say something else, very unfashionable, and I'd be curious whether Paul agreed. The fashionable idea that somehow the market doesn't understand that fossil fuel assets are overvalued because of environmental regulations that are coming. That the zillions of analysts in the private sector don't understand that, central banks do understand the proper evaluation of assets. And that there is some kind of meaningful systemic financial risk that would come from the revaluation of those assets. That needs to be a major preoccupation of the central banking community strikes me as a very analytically implausible proposition about how the world works. I am in favor of almost any measure that would cause us to do more rather than less about global climate change and about the environment. But the arguments suggesting that it is a source of important financial systemic risk coming from the valuation of fossil fuel companies strikes me as an extraordinarily implausible proposition.

Markus Brunnermeier: So Paul, let me broaden the scope a little bit because you have done a lot of research, also in the international area. So, if you look at the US monetary policy and try to generate a soft landing for the U.S., it might also have implications for the emerging economies and the developing economies. How should the Fed take this into account, you know, when

suddenly capital flows reverse and things like that, then we have to solve and default potentially in some emerging economies. And there might be Spielberg effects coming from these countries back to the U.S. Can be in the whole, you know, soft landing also the international dimension can be putting it into the picture as well. I think you're muted. Paul, you're muted.

Paul R. Krugman: My apologies, I got disconnected there for a minute so I missed some of Larry's previous thing, and I think what we just had was a demonstration of the importance of investing in broadband infrastructure. They... before I get to that, let me say a word about possibly overvalued asset classes and actually, sorry I'm going to do three things I'll get to your question as number three. The first one is about constraints on the Fed, fiscal dominance, financial dominance. Those, as far as I can make out, are mostly just in the imagination of people who are looking for stories, particularly the fiscal dominance thing, it just hasn't been relevant for— hasn't been relevant even for Japan, with a far higher debt/GDP ratio than we have the so far at least, you know the basically the United States is is not the Weimar Republic, at least not in economic terms, and we won't get into the other stuff. And the financial dominance I don't see any reason to think that the Fed, particularly this Fed, which is a lot more academic than, in many ways, than previous Feds is going to shed tears over the possibility that some asset prices will fall and one thing we should really mention to your I would have said a much bigger possible story than energy than fossil fuels is housing and we have had an extraordinary run up in housing prices. Which is if I might say just there's a puzzle, which I am trying to figure out and don't know the answer to, but this is a much more broadly based run up in the housing bubble of the noughties. The last time it was the highly zoned construction restricted areas, it was San Francisco and Boston that had the big housing run up. Now, the housing prices have run wild in places that we thought were immune to that because of the ability to construct easily, what the hell is happening in Atlanta? But the funny thing is that if monetary tightening were to take some air out of the housing market, I think that would be unambiguously a good thing. It would actually be an important way in which we could actually limit aggregate demand and things do look kind of crazy there. Now, on the emerging markets. In a way, if you take— if you step back, take the long view of some of what Larry said about monetary policy, which I'm not sure, but I think it's an interesting case, certainly applies to the effect of US monetary policy on emerging markets, it is still the case that there's a lot of dollar denominated debt out there. That US monetary policy has disproportionate effects on the emerging world. But not as much. When we used to talk about original sin, and all of these countries who were completely unable to issue debt in their own currencies, and that is no longer the case for many of them, so that the whole... things are quite a bit different now from the way they were in the 1990s and so the blowback, not saying that wouldn't be any, but I don't think it's a big deal. And then the— sorry, the blowback from emerging markets, the United States, you really want to understand that that's a two step process with major ratcheting down at each stage so, yes, US monetary policy would have some adverse effect on emerging markets and emerging market difficulties would have some blowback on the United States, but it's hard to believe that that's a first order issue. I mean, is anybody revising their forecasts for the EU, based upon recent events in Turkey, I don't think so.

Lawrence H. Summers: So I will, Marcus I would agree with everything Paul just said with one small emendation and one modestly significant qualification. The emendation is that, in addition to the more local currency denominated debt, emerging markets have vastly higher reserve levels than they did earlier and that's another reason for less concern. The qualification is that I think Paul, I suspect, Paul will agree with this, that his statement was an accurate statement about the somewhat emerged, middle income countries. There is a category of much poorer countries that have quite substantial issues and who are experiencing a substantial new liability around the pandemic, to which the world is responding inadequately and there are real issues at a time when there's more private credit, and especially where there's more Chinese credit, about the ability to work through the necessary debt restructurings and the world is not where it should be the adequacy of the so called debt, sovereign debt suspension initiative, or whatever it was, of two years ago, it's adequacy is entirely reflective of the fact that significant problems did not arise, rather than the fact that it was a framework with a power, and so I would put that on an agenda, and I would also put on an agenda with respect to developing countries, much more satisfactory systems for financing global public goods from the world's development banks than now exist, but I don't think that trying to restrain U.S. monetary policy from doing what's necessary to deal with U.S. inflation because of a concern about developing economies is a good idea. Mostly because if you do it, what you'll do if you do it and you make a mistake, what you'll have to do is even larger and more painful of policy, not very many years later. So that would not be – wherever I wanted to come down on the inflation trade off, I think, using developing countries as an argument for more dovishness, this is not a compelling position.

Paul R. Krugman: I fully agree.

Markus Brunnermeier: I guess the proposition is to move early rather than letting it up, I guess. So we're running a little bit over time already, and I think we have already covered a lot of the material in the next block. And so I would like to ask you perhaps one brief question and then perhaps you have some concluding thoughts and then we bring the whole thing to the end, so we talked already about the exit strategies, you know rate hikes versus quantitative tightening and so forth, but can you give us perhaps a few thoughts, where do you see the long term interest rate outlook, in a sense that do you see that secular stagnation is still with us and will come back? Or you know now with inflation considerations, stagnation is actually put on the back a little bit and is not so prominent anymore? I mean it's, of course, very hard to predict many, many years ahead, but it would be nice to get your take, whether you think this development now what we're seeing is actually helping us to get out of this secular stagnation phenomenon or doesn't really help because secular estimations of structural underlying force, which is much more long lasting along a trend, and so perhaps Paul you want to move first.

Paul R. Krugman: Yeah, so I see nothing that has happened now that changes the secular stagnation arguments and I've been a full buy-in on secular stagnation from the beginning, actually. I agree with Larry from day one, if not before, on all of that and I'm still of the view– I know that there is a little bit of academic dispute – that demography is the driving force there and the demographic drivers of secular stagnation, have not gone away in fact they've gotten worse. One of the side effects of the pandemic has been for the short run a very sharp drop in

legal immigration to the United States and also a sharp drop in the fertility rate for the longer run, so I see no reason to think that we're going to be anything other than a secular stagnation world once this whole storm has passed with the one thought that there is a scenario that I've been thinking about a bit, which is that the that inflation comes down, but comes down to 3%, rather than two and that the Fed in effect declares victory and pulls out, because there was always a case that said "look the the 2% inflation target came out of some quantitative estimates and reasoning and to a large extent, accidents, in the 1990s. All of which has been invalidated by subsequent events so that there's always been a case that said that 2% for this, long been a case that said 2% was too low. Now that would, if they do that, that would hurt the Fed's credibility but Fed credibility, which Larry's also been saying is wildly overrated on these things so it's possible that we'll emerge from this, not with... we're not going to you know, accept 5% inflation, 7% inflation, but if we do end up with 3% inflation and long term interest rates over the long term interest rates could be somewhat higher but in terms of the real side the forces of secular stagnation look, if anything, intensified by the effects of Covid-19.

1:02:28

Markus Brunnermeier: You don't think it triggered some innovation along, then we will have higher productivity close down the road you know...

Paul R. Krugman: I think productivity growth is good, but in terms of its impact, a little bit like social security finances, productivity growth is good, but demography is around three times as important, and I think that's probably true for interest rates as well.

Markus Brunnermeier: Larry, what is your take?

Lawrence H. Summers: My instincts track Paul's, probably with a bit less confidence that he had those instincts. I agree with him about demography. I actually think that if we have more productivity growth, Markus, it's actually likely to go with more demassification, which is likely to reduce the demand for investment and may well reduce neutral rates of interest, rather than increase them, so I think they're very strong reasons to think that over the next 20 years, the dominant macro problem is going to be savings absorption. And that has all kinds of implications for development finance, for the desirability of financing the green transition, for the design of social insurance arrangements, and I think that that's all correct. I think there are two places where I probably wouldn't be quite where Paul was. The first is that I think that you do need to recognize that a period when we have substantially larger debt and substantially larger deficits is a period where neutral real interest rates should be increased, and that operates against a secular stagnation. And I think part of what is really quite stunning about market pricing is that if you make an adjustment for term premiums, markets are saying that the neutral rate, eight or 10 years from now, is going to be negative 20 to negative 50 basis points, even as the debt to GDP ratio is going to be far higher than it was before around the world, and deficits are going to be significantly larger so what's being priced in, in terms of the fundamental forces driving secular stagnation, is really a kind of secular stagnation on steroids. The other place where I would at least express the nuances a bit differently than Paul did is I am and I have always been— and this is a place where Paul and my emphasis has been a bit different for some

years— I have always been more of a fiscalist with respect to secular stagnation, relative to a monetarist or monetary policyist. And that's because I just find it hard to convince myself that taking the real short term interest rate from negative 50 basis points to negative 150 basis points, which is the kind of thing you might accomplish by raising inflation to 3%. A) I'm skeptical that there will be that much extra investment generated. B) I'm skeptical that whatever the investment that is generated by negative 150 basis points but not negative 50 basis points will be particularly productive investment and C) I worry about the financial stability and asset price bubble consequences of doing it, and so the strategy, probably most prominently associated with certain ways with Ken Rogoff, that says that economics works, and if the neutral interest rate needs to be negative, we just need to figure out ways to have the neutral interest rate be negative. A combination of IS curve skepticism, skepticism about investment quality, and skepticism about financial stability lead me to be more enthusiastic about policies that operate directly on savings and investment if the goal is to contain secular stagnation over the medium term. And I guess a final thing I would say, Paul, you and I share this exactly this instinct but you know many of the people we admire most, and the tradition of which we are a part, was extremely confident and extremely wrong that the Second World War would be followed by a return to secular stagnation and depression. And that turned out to be wrong, and I think that we should remember that, as we form a view about what comes after this, and I, at least, in addition to taking the message from markets about secular stagnation, am sufficiently surprised by what's being priced into markets, that my expectation would be that bond prices, a couple of years from now will be significantly lower than what the forward market is now saying.

1:08:59

Markus Brunnermeier: Thanks a lot, Larry and Paul, so I think this will bring that to an end. We ran a little bit over 15 minutes or so, but I think it was a fantastic discussion and got different perspectives, and also a lot of overlap, where you think very much alike. So I hope we can do this again, perhaps in one year's time and see how things evolve in the next 12 months and thanks again, and I should just advertise next week, we have Motohiro Yogo talk about financial inclusions across United States, so he has a lot of new interesting new data and surprising findings about the financial inclusion, you know of less well off people and minorities, which was also very important for United States. Thanks again and I hope to see you again, all of you next week, and for all the other subsequent sessions. Thanks, Larry, Paul.

Paul R. Krugman: Take care.

Lawrence H. Summers: Thank you!