



## The Economic Club of New York

114<sup>th</sup> Year  
595<sup>th</sup> Meeting

---

Neel Kashkari  
President and Chief Executive Officer  
Federal Reserve Bank of Minneapolis

---

April 8, 2021

Webinar

Moderator: Greg Mankiw  
Trustee, The Economic Club of New York  
Robert M. Beren Professor of Economics  
Harvard University

## Introduction

Chairman John C. Williams

Good afternoon and welcome to the 595<sup>th</sup> meeting of The Economic Club of New York, and this is our 114<sup>th</sup> year. I'm John Williams. I'm the Chair of the Club and President and CEO of the Federal Reserve Bank of New York. As many of you know, The Economic Club of New York is the nation's leading nonpartisan forum for discussions on economic, social and political issues, and our mission is as important today as ever as we continue to bring people together as a catalyst for conversation and innovation.

A special welcome to members of the ECNY 2021 Class of Fellows – a select group of diverse rising next-gen business thought leaders. And welcome to the graduate students from Harvard University, the Gabelli School of Business at Fordham University, Rutgers University, Manhattan College, and the City University of New York Graduate Center, and Brooklyn College.

Now it's a pleasure for me to welcome our special guest today, Neel Kashkari. Neel is the President and CEO of the Federal Reserve Bank of Minneapolis. He earned his bachelor's and master's degrees in mechanical engineering from the University of Illinois and became an aerospace engineer, developing technology for NASA missions.

Eventually turning to finance and public policy, he earned his MBA from the Wharton School, joined Goldman Sachs, and served in several senior positions at the U.S. Department of the Treasury, including overseeing the Troubled Asset Relief Program, or TARP, during the financial crisis.

The format today will be a conversation where we're very fortunate to have Robert M. Beren Professor of Economics at Harvard University and Club Trustee, Greg Mankiw, as our moderator. We'll end promptly at 2:45 p.m. And as a reminder, this conversation is on the record as we do have media on the line. So without further ado, Greg, I'm going to throw you the mike.

Conversation with Neel Kashkari

GREG MANKIW: Thank you very much, John. Neel, welcome. Thank you very much for spending your valuable time with us.

NEEL KASHKARI: Thanks for having me. It's great to be with you.

GREG MANKIW: Let's start off by just talking about where the economy is right now. So I have sort of two broad questions. First of all, where are we at this moment? The CBO estimated that at the end of 2020, we were, GDP was 3% below potential. I was

wondering if you think that's the right measure of slack or are we more or less than that? And where do you see us going over the next year or two?

NEEL KASHKARI: Well, for me, I'm really focused on the labor market. And while the headline unemployment rate has come down to around 6%, we think that understates how many people are out of work because a lot of people have left the labor market and they're not counted. By our calculus at the Minneapolis Fed, we think the real unemployment rate is around 9.1% which means there's still a lot of slack in our economy. Of course, it's not evenly distributed. Certain sectors are still under tremendous strain because of the Covid crisis.

You know there's been good news, the vaccine development. I got my first shot last week which I'm really excited about. That rollout continues to go very well. But we are still in a horse race between vaccinating as many Americans as possible and these variants that I know you and the viewers are very familiar with that continue to spread rapidly around the country. And we need to stay vigilant and we need to get as many people vaccinated as possible to try to prevent a fourth wave from taking off and potentially setting us back in our economic recovery.

GREG MANKIW: How clear do you think the labor market indicators are? I mean you're absolutely right, there's still a lot of people who are without jobs. But other labor market

indicators don't suggest as much slack. For example, job openings, there's quite a few job openings based on the JOLTS Survey, which is kind of unusual if there's a lot of unemployment.

NEEL KASHKARI: I know but, you know, I looked at a lot of labor market indicators in the last recovery and we kept hearing from businesses that they couldn't find workers. There was a historic worker shortage. And then if you look at the data on wages and compensation, wages weren't growing very rapidly. And so that told me that there was likely still slack out there. So, you know, we do look at a lot of different measures. Certainly trying to understand how many unemployed bodies are out there, how many people we think want to work because they were working before the pandemic hit, I assume they want to go back if given the chance.

And then we look at things like wages. You know there's a bridge between the labor market and inflation and one stop on that bridge is wages and compensation. So we look at each element of that chain to try to figure out where we are and by all of those measures I think there's still a lot of slack in the economy.

GREG MANKIW: You mentioned inflation, so let's get to that because that's on the tip of everyone's tongue these days. Larry Summers recently called current macro-policy the least responsible in 40 years. Now I don't think he was referring to monetary policy in

particular. I think he was mainly talking about the big fiscal package that was just signed. But I think he's also worried a little bit about complacency in monetary policy. In fact, I was just watching CNBC an hour ago and I saw Jeremy Siegel say that this is the most dovish Fed he's ever seen. So, are you worried about inflation? And at what point would you get worried about inflation?

NEEL KASHKARI: Well, we've adopted a new framework that the Chair and Vice Chair led us through last year on how we approach monetary policy. And instead of raising interest rates in advance of achieving maximum employment, we said, no, we're going to actually achieve maximum employment and we're going to tolerate a little bit of an overshoot of inflation in the near term so that we average 2% inflation over time. I'm very comfortable with that framework.

And the policy that we've implemented as a result of that framework is what we call outcome-based forward guidance. So we're going to watch the labor market. We're going to see when we achieve maximum employment. We're going to watch inflation. We're going to watch inflation expectations. And so if these developments happen more quickly than we think, then our policy stance will allow us to move more quickly. But the key is we're just not going to shortcut the recovery just because we think inflation might be around the corner. I mean that's the mistake that the Committee made repeatedly up until the Covid crisis hit. We always thought inflation was around the corner and we

were always wrong. And it was the workers in America that paid the price for those preemptive hikes that we undertook.

GREG MANKIW: And so you said inflation is going to come up. What's your best guess as to how high it'll go?

NEEL KASHKARI: I mean, you know, it's hard to know. Short term, we know that there are going to be some bottlenecks because of some of the Covid-related effects, because of trade frictions that are in the global shipping channels as an example. We also know a year ago we had very low readings on inflation. They're going to fall out of the calculation. So we know this year we're going to see an uptick in inflation, but it's pretty clear that that will be temporary and we'll be comfortable looking through it.

I think on a steadier basis over the next few years, it wouldn't surprise me to see inflation get to 2 ½%, maybe higher. But we're not just going to look at the immediate reading of inflation. We're also going to look at measures of long-run inflation expectations. Our new framework is designed to boost inflation in the short run while leaving long-term inflation expectations anchored in the long run at 2%. I'm quite confident we can achieve that.

GREG MANKIW: What's your favorite, you mentioned long-term inflation expectations,

what's your favorite gauge of that? Is it breakeven inflation or some other gauge?

NEEL KASHKARI: We've got breakeven inflation measures, which we know they're not perfect. We also, at the Minneapolis Fed, look at options and the risk of high inflation versus the risk of low inflation. That gives us more signal. We also, of course, look at surveys. All of those together try to give us some read of where we think long-run inflation expectations are. And while inflation expectations have climbed over the past few months, it's really near-term inflation expectations that have climbed the most and long-run inflation expectations are still solidly anchored around our 2% target.

GREG MANKIW: I had a hedge fund manager friend of mine offer me a bet. He's very confident that year over year inflation will see 4% in the next couple of years. If he turns out to be right, would that concern you or you could even view 4% as a temporary blip?

NEEL KASHKARI: I think it's going to depend on why. We'll have to get under, you know, look at the individual components of inflation. Is it a shortage? Is it a blockage of the Suez Canal that's a temporary measure that feeds through? Is it currency movements? Are these one-time effects or do we actually think it's leading to an ongoing increase in prices year after year? Those are two very different scenarios, and I would look at them very differently.

GREG MANKIW: So a one-time reading of 4% wouldn't necessarily scare the Committee, in your view?

NEEL KASHKARI: It wouldn't scare me, especially if at the same time we were, our various measures of long-run inflation expectations continue to be anchored at 2%. That would give me confidence that this is a temporary blip that we wouldn't have to respond to.

GREG MANKIW: What are the biggest risks to the recovery right now?

NEEL KASHKARI: The biggest risks that I see to the recovery are these variants because the B.1.1.7 variant that came from the UK now appears to be much more effective in infecting young people and children, spreading, even leading in some cases to hospitalizations and unfortunately in some cases, death. And so you are actually seeing up here in the Upper Midwest where I live, you are actually seeing pockets of outbreaks in selected schools and in daycare centers. That was not happening six months ago or nine months ago. And we're a long way away. We have not yet approved these vaccines for people under age 16 yet.

So if, in fact, that is happening and if, in fact, schools and daycare centers could become a source of spread more widely across the country, that's very concerning to

me because then that means we may have to go back. We just got people, in many cases, back into schools, now if we have to go remote again, if that's going to put strains on families who are no longer going to have access to daycare, they're going to have to stay home. That could set us back.

Now that's not my base case scenario, but that's what the healthcare experts that I consult with are warning me about and are telling me to pay attention. And it's that horse race between vaccinating people to try to extinguish the crisis and these variants. I really hope that the vaccinations continue to go well and we can keep this B.1.1.7 bottled up.

GREG MANKIW: I mean, and even scarier scenarios where some new variant comes in that the vaccines don't work against. Then it'll all start again with perhaps a new vaccine. But I hope we've made enough progress so we can maybe do that quicker. Now, one of the phenomena that I've been fascinated about with the economy is that over the past 40 years we've seen this very consistent decline in real interest rates. Do you know why that is? Do you have a hypothesis as to why that is?

NEEL KASHKARI: Well, I think my, and I talk about this a lot with my economists at the Minneapolis Fed, I think our view is these are broad global forces, whether it's demographics and the aging of societies in advanced economies, trade and technology

developments, that these are all conspiring. Ultimately, what sets the neutral interest rate? It's the balance between savings and investment.

And one other thing that we've seen in the last ten years, we've seen companies buying back their stock rather than making new capital investments. Well, why is that? And, you know, there's, as you know, there are big debates in the economics profession about are we out of exciting new ideas that require a lot of capital? What's been the biggest demand for capital in America in the last ten years? It's been the oil industry. It's not been Twitter or Facebook because those don't require very much capital. So where are the big new demands for capital coming from?

You know, I think that if Elon Musk or somebody invented some brilliant new technology that required trillions of dollars of investment but was very profitable, I think you would see capital flow to those investments and you'd see the neutral interest rate climb back up. That's not set by central banks. It's set by the economy in general.

GREG MANKIW: So, do you think that could happen if, think 20 years from now, we could see interest rates like we saw 20, 30 years ago?

NEEL KASHKARI: I think it's certainly possible but I do think it's going to depend on technology development driving big demand for new investment in a profitable way. You

know, just saying, well, we're going to borrow money, the government is just going to borrow money to dig ditches, that might work for the short term. That's not going to raise the neutral rate for the long term. It's going to require a big new demand for investment of capital seeking profitable returns.

GREG MANKIW: That makes sense to me. I was talking to a friend's father who is well into retirement, and he was blaming the Fed for these low interest rates. I tried to convince him that the Fed doesn't really, doesn't control them, you're the messenger, you're not the cause of these low interest rates.

NEEL KASHKARI: That's exactly right. You know, this comes back to, Greg, I hear a lot about, oh, my gosh, the Fed is boosting asset prices. And I always ask people, I say, look, if you buy the argument that we're in a low neutral rate environment, then you would expect all asset prices to re-price themselves reflecting that low neutral rate environment and that would lead to higher asset prices. That's not about the central bank. And I know that that's a concept that not everybody wants to embrace, but it's something that resonates with me.

GREG MANKIW: The one group that has not embraced it is pension funds and endowments that haven't really lowered their growth expectations in line with the new environment we seem to be in.

NEEL KASHKARI: That's right. And I know it's tough for them because if they lower those return assumptions, then in many cases they either look really bad in terms of their funding status and/or they have to go to their members and ask them to increase contributions and that's a tough thing for them to do.

GREG MANKIW: That's exactly right. But at some point you have to face reality and it is tough. Now some economists, probably Olivier Blanchard most famously, but I've heard in other circles too, have suggested that the 2% inflation target is too low. And the argument, which I'm sure you've heard, is that, well, if we have really low real interest rates and the target is only 2%, then nominal interest rates are normally going to be very low. It gives you very little room to cut them when you need to in a recession. So why not target inflation at 4% so nominal interest rates will normally be 2% higher and that'll give you more room to cut when necessary? Do you have any specific \_\_ for that argument?

NEEL KASHKARI: Yes, I mean I've heard the argument and it really makes sense in a theoretical framework, but we live in a political reality. And the Federal Reserve exists because the American people, through their representatives, decided to create the central bank and we have to do everything we can to maintain their trust and credibility with the public.

One of the other questions I get all the time is why 2% and why not 0%? Intuitively most people say, well, shouldn't inflation just be zero year on year on year? So I explain why we have a 2% target, for the same reasons you were just articulating. I just haven't seen any evidence that the American people would support raising the inflation target to 3% or 4%. And I think an attempt by us to do that unilaterally could undermine the credibility and the trust that people have in us.

Instead of doing that, I think that the new framework that we've adopted, which says, you know what, we're not going to keep undershooting 2%. We're actually going to deliver 2% on average over time. I actually think that's an important step forward that may change our political credibility but also better equips us to deal with these downturns that you are worried about.

GREG MANKIW: I once suggested that the Fed target inflation at 3.14 to sort of explain my comments, I always called it pi in the models. But you can feel free to use that as you see fit. Okay, so let's talk about sort of the Fed's balance sheet. It's been expanded tremendously. The Fed looks like a very different institution than it looked when I was a student studying monetary policy 40 years ago. Do you think this bigger balance sheet, the expanded role of the Fed in the financial system, is sort of a permanent feature of the economy? Or do you think, as we put the financial crisis and now the pandemic behind us, we'll slowly move back towards a smaller balance sheet, a more modest Fed

in its scope?

NEEL KASHKARI: I mean I think at some point, once the pandemic is behind us we will begin to move back to a more modest balance sheet, just as we did after the financial crisis. Now it took several years, but eventually the Fed did start to gradually shrink down its balance sheet until we got to a level of reserves that the banking system and the financial system needed. I would anticipate at some point we will go through a similar process as well. But the Fed's balance sheet is going to be bigger than it was historically because we've changed the operating framework.

Just the way we implement monetary policy means there are going to be more reserves in the banking system and that means we're going to have a bigger balance sheet and the demand for U.S. currency, physical currency, continues to climb at a really rapid clip all around the world. That also means the Fed's balance sheet is going to be bigger. And so I think there are structural reasons that it's going to be bigger than it was 15 or 20 years ago, but it's probably going to come down from its relatively large size right now after we get past the pandemic and we gradually slow things down.

GREG MANKIW: And this regime where you're having interest on reserves being your main instrument, that's kind of, probably a permanent feature of monetary policy going forward?

NEEL KASHKARI: Yes, the Committee has deliberated the various different ways of implementing monetary policy and we see a number of benefits of implementing through using interest on excess reserves as a key part of that and making sure that there are abundant reserves in the banking sector. It's a more efficient way for us, a more effective way for us to implement monetary policy and transmit our policy goals through the short-term funding markets.

GREG MANKIW: The government debt is very high and in the next couple of years it's going to go even higher. So it's probably going to reach levels that is the highest it's been in U.S. history. Does that complicate monetary policy?

NEEL KASHKARI: I don't think so. I mean our jobs are to achieve the dual mandate that Congress has given us – maximum employment and stable prices, which as we've defined is averaging 2% inflation over time. If the U.S. government – Congress and the Executive Branch – issue a lot more government debt and if that leads to investors to raise long-term interest rates because they're worried about inflation, we will then respond to that. Now I don't see that on the horizon. There's no indication in financial markets or in the data that we look at that that is brewing, but you certainly can't rule it out. And if new spending plans come to pass and it leads to even more debt and eventually it passes through to inflation, we will then respond to that.

So it's not going to change how we approach monetary policy. It may force us to change our actual policy moves. But our job is clear – maximum employment and stable prices. And I know all of my colleagues on the Committee are committed to delivering those two goals.

GREG MANKIW: The people who are worried about linkages between debt and monetary policy point out that when the government is high in debt, that your actions on interest rates are going to have a bigger impact on the federal budget because it's going to raise the federal government's interest costs and that could potentially increase the political pressure that the fiscal side is exerting on the monetary side. Do you see that as a risk or do you think independence is pretty well entrenched?

NEEL KASHKARI: I think independence is well entrenched. I mean certainly everybody in the Federal Reserve that I know and have spoken to are completely committed to our independence. And even if you look at politics in Washington over the past several years, both parties have actually stepped up to say, you know what, it's important that we keep the Fed independent and we have the Fed doing its job, not members of Congress of either party saying here's what interest rates should be. So I feel like both parties have embraced and recognized the value of having an independent Fed. That gives me a lot of confidence.

GREG MANKIW: I'm not sure the previous president quite embraced it.

NEEL KASHKARI: Well, I'm speaking about Congress.

GREG MANKIW: Okay, as long as we're on the topic of debt, I have to ask you a question that I get all the time and I don't like getting it either, but I'm going to give it to you anyway, which is modern monetary theory. Everybody is saying, well, what do you make of modern monetary theory? So, Neel, what do you make of modern monetary theory?

NEEL KASHKARI: Well, from what I can tell it's not actually an economic theory. It seems more like a political philosophy. I do think the U.S. government has a lot of debt capacity, and I think the Biden administration and the last, Trump administration, leaned on that to fund some of their priorities. And I think, by the way, I think the government spending in response to Covid has been wise, and I applaud Congress for coming together to support the American people from Covid.

So, yes, the U.S. government has a lot of debt capacity and that's evidenced by the low long-term interest rates that Treasury is able to borrow at. I don't think that debt capacity is unlimited. I don't think that means that they can just pick any spending priority they want and continue to increase the debt forever. Eventually we know it eventually shows

up in inflation because investors get nervous, wait, is my purchasing power getting eroded, I need higher compensation of loan money to the government. So I still believe that mechanism holds, and I think that that's fundamentally in violation of modern monetary theory. What I've also found is when you try to pin people down on what modern monetary theory means, it seems to mean lots of different things to lots of different people.

GREG MANKIW: You say it eventually shows up in inflation. Does that mean at some point if the debt gets too high, the Fed's ability to control inflation becomes circumscribed?

NEEL KASHKARI: I don't think it becomes circumscribed, but it will then lean on us, push us to then say we have to act. If we're not achieving our long-term 2% inflation target, we're going to have to adjust our policy stance to tap the breaks to bring inflation expectations back down. And we know how to do that, we have the tools to do that, and we have the political will to do it. But I don't see us needing to do that in the foreseeable future.

GREG MANKIW: So it wouldn't necessarily be inflation, it would be higher interest rates in order to combat the inflation risks?

NEEL KASHKARI: Correct. Or where we'd see inflation climb and then we would then have to respond with higher interest rates to make sure that inflation expectations stayed anchored.

GREG MANKIW: And then I presume the bad side effect is the crowding out of capital due to the higher interest rates.

NEEL KASHKARI: Potentially. Some people say, well, then it'll be more expensive for the government to roll over its debts. And that may well be true, but that's not the Fed's job. Our job is to focus on maximum employment and stable prices. It's up to Congress and the Executive Branch to decide how much they want to spend and how they finance themselves.

GREG MANKIW: You also said a minute ago that the Covid packages from Congress have been wise – I think is the word you used. Does that mean you don't think they're too big?

NEEL KASHKARI: Well, one of the things we learned in 2008 is that we try to be very targeted in our assistance in 2008. So, for example, to families and homeowners who were losing their homes. The American people were really angry about the '08 crisis and a lot of people said, hey, don't bail out my neighbor. He was irresponsible. He

bought a house he never should have. Don't bail him out. So we tried to help homeowners who just needed a little bit of assistance. And you know what ended up happening? We didn't help very many homeowners. And I think the housing downturn was deeper than it needed to be because we were erring on the side of being fiscally prudent. I think we ended up being penny-wise and pound-foolish.

So, for me, one of the lessons is in a time of national crisis like this, it is better to err on the side of being generous, even if that means you help some people who don't deserve it or who don't need it. It's better to do that so you do get the assistance to those who need it. And I think Congress has embraced that and that has motivated a lot of their policy responses. And I think in this terrible pandemic, which is like a natural disaster, it was better to err on the side of getting more assistance out and I think Congress should be applauded for that.

GREG MANKIW: You mentioned the financial crisis. What other mistakes did we make back then? It was obviously a terrible time. We did some things right, some things wrong. Looking back, could we have handled things better, or maybe earlier?

NEEL KASHKARI: You know it's hard because even, whether it's Covid or the '08 financial crisis, you never know in the moment how bad it's going to get. And there's always a reluctance for policymakers – for good reason – you don't want to pull the

Five-Alarm fire bell right away because it may not be that bad and then people will lose confidence in you. And so in the '08 crisis, we kept getting surprised at how much worse it ended up getting, how much deeper it ended up getting, and how much longer the crisis went on. Sure, with the benefit of hindsight, I wish we had been much more aggressive more quickly.

Now I will say this. The Fed has also learned those lessons from '08. And in this pandemic we acted much more aggressively than the Fed acted in '08 in terms of the scale and speed of the various facilities that we launched this time around. That's because we had the benefit of the experience from '08 and a lot of institutional knowledge stayed in the Federal Reserve system, and I think that was absolutely the right thing to do. So I think we've learned from it. With the benefit of hindsight, there are lots of things back in '08 I would love to have done differently.

GREG MANKIW: Back when, the Fed had been very aggressive in '08, quantitative easing, some economists were forecasting inflation then and they were wrong. Do you think the fact that they were wrong makes the Fed more willing to be a little more dovish today because the risks of inflation never materialized back in the aftermath of the crisis?

NEEL KASHKARI: I absolutely do. Not only the risks from the, say quantitative easing,

people said it's going to cause high inflation and it's going to crush the dollar. They were totally wrong. But then also we learned in the recovery, in the labor market recovery, we kept thinking, oh, we must be at full employment, inflation must be around the corner, that didn't happen either, and the labor market continued to tighten. So I think both of those things we've learned from.

And we have not said we're never going to raise rates. We've simply said we are actually going to allow the labor market to fully recover. We're actually going to allow ourselves to get to 2% inflation. And we're going to tolerate a modest inflation overshoot for some time. It's a minor change from the way we did things before, but it's a really important change, and I think a really positive one without taking unnecessary risks of very high inflation in the future.

GREG MANKIW: I don't know if you've seen it but there was a book by Johns Hopkins University Professor, Larry Ball, called *The Fed and Lehman Brothers*. And Larry argues that the Fed had the ability to bail out Lehman, to give them the liquidity which they sought, and he argues they didn't do it for largely political reasons and that was a mistake early on in the crisis, in part because they didn't fully appreciate how bad things might get. But, in particular, he's arguing, counter to the official Fed line, which is that he could have if he had wanted to. Not you personally, but the Fed. Do you have any sympathy for that looking back at the Lehman episode? Do you think the Fed could

have handled that better?

NEEL KASHKARI: You know even if the Fed had found the authorities, and one of the things that really struck me when we were in the middle of it in '08, we had our lawyers at Treasury, at the Fed going back through American statutes from the 1800s looking for some authority that allowed us to do certain things. Remember, Congress and the Fed can only...excuse me...Treasury and the Fed can only do things that Congress has said you are authorized to do the following. So we're inherently limited in what we can do.

But even if the Fed could have found a band-aid, a work-around to save Lehman Brothers, it wouldn't have saved Merrill. It wouldn't have saved Morgan Stanley. It wouldn't have saved Goldman Sachs. And so ultimately, sadly, a shock like Lehman ended up being necessary to catalyze the political leaders in Congress to pass the TARP, to give us the authority to put in capital in the banking system. There's no way, no existing authority at the Fed or Treasury to put in money on an unsecured basis, which is what equity is. Only the TARP gave us the authority to do that. And so, you know, whether a band-aid could have been found for Lehman, I don't know, but it would not have changed the fact that we ultimately had to go to Congress.

GREG MANKIW: So is the financial system safer now given all the reforms and

everything? Do you feel like events like 2008 couldn't happen or are there enough shadow banks floating around that aren't very well regulated that we could have another financial crisis, perhaps a slightly different one?

NEEL KASHKARI: Well, we saw it last year. It happened again. I mean let's not kid ourselves. March of 2020, the central bank backstopped the financial system. You know we can debate money markets and liquidity facilities and corporate bond markets, but we basically backed the lender of last resort up to the financial system and opened the spigot. And the idea that the U.S. financial system is so vulnerable that we had to do that twice in 12 years is shocking to me.

Now, yes, the biggest banks in America have more capital than they had before the last crisis so they were less risky this time. But they also tremendously benefitted from the Fed's liquidity provisions because they participate in those markets too and they directly benefitted from the fact that Congress gave money to their customers, meaning the 10, 20 million Americans who lost their jobs, how did they pay their credit card bills, how did they make their car payments, how did they make their mortgage payments? Because Congress gave them money to do that and that rolled up into the banking sector.

So my view is the reforms from '08 were necessary but are wholly incomplete. I don't think that they were strong enough in the banking sector and they were completely

inadequate in the shadow banking sector. And I hope we use this moment to study it and implement reforms to finish the job.

GREG MANKIW: Which particular reforms would you like to see? Would you like to see the Fed have more authority to bail things out if necessary, or less, or more regulations?

NEEL KASHKARI: A few examples. I mean the short-term funding markets – it turns out – are extremely fragile. Why do we allow firms – just an intellectual question – why do we allow firms to fund themselves overnight? What's the point of an overnight funding market that dries up at the blink of an eye? It allows them to eke out a few extra basis points of profit and then when fear hits the market, it requires the Fed to step in. And there's a lot of maturity mismatch that are still going on in our funding markets. And so I think all of these markets, we need to take a fresh look at. What value are they creating to society? And what risks are they presenting to our financial system and our economy? So money markets are a great example of that. Reforms were very much incomplete last time. We have to finish the job. But I think it's broader than just money markets.

GREG MANKIW: Yes, I think your statement about overnight funding is fascinating. No homeowner would buy a house with an overnight mortgage.

NEEL KASHKARI: Exactly. And yet we let corporate America and big banks and hedge funds trade with each other overnight. They all think they're so clever. Look, we eked out a few extra basis points. And then when fear grips the market, they run to the Fed and say you've got to bail us out. That's a hell of a system we've got.

GREG MANKIW: I'd like to move away from monetary and financial policy to sort of the bigger issues. A lot of discussion these days about the U.S. economy and what policies we need and don't need are framed in terms of our competition with China and the global economy. I remember when I was a student 40 years ago, at the time it was all framed because of our competition with Japan. Is that a useful way of framing economic policy, thinking about us competing with China? Or is that a bit of a red herring?

NEEL KASHKARI: I think it's a bit of a red herring. I mean I think competition is good and wanting to be the most competitive economy in the world is a good aspiration to have. I wouldn't just focus on China. You know one of the other things that's true in this pandemic is we've seen the power of the American innovation engine. And it's not just America, but wow, is America leading innovation in the world. We have for decades. And our innovation advantage continues to just really break new ground. I mean look at what's happened on the healthcare front. Look at what's happened with this technology that we're all using as we work from home.

A year ago the best health experts in the country warned me, hey, we may never have a vaccine for Covid so don't count on it, and it'll probably take several years. A year later we have several very effective vaccines for Covid, and that's extraordinary technology development. And, you know, that is really coming out of the U.S. and Western Europe. China has a role to play as well, but I'm not worried about competing with China because so far China has yet to develop a competitive intellectual property engine, a competitive innovation engine to compete with the best of the west.

GREG MANKIW: Let me ask you a question that a student asked me yesterday, which is a question that comes up fairly often in general discussion of the future of the economy, not just over the next couple of years, but over the next decade or two. Are robots going to take all of our jobs?

NEEL KASHKARI: Well, I think people have been predicting the end of labor for as long as they've been predicting the end of food and both predictions have been wrong repeatedly throughout human history. Certainly if you look at what happened when automation came to farms in America, oh, my gosh, what's going to happen to all these farm workers? You know, it did disrupt their lives, but the nature of work changed and they moved into factories.

So, no, I am not worried that robots are going to take away all of our jobs. I'm not

worried that artificial intelligence is going to take away all of our jobs. I think it can make us more efficient. I think it can make us more productive. And I think it'll put a burden on us to continue to invest in our skills, our own skills, the skills of our children, the skills of future generations. The nature of work will continue to change. But I'm very confident there's still going to be the need for human labor doing the most important activities.

GREG MANKIW: You gave a much more elegant answer than I did. But I basically agree with you and I said the same thing. There was another professor in the conversation with a student and this professor was worried about something he called the singularity. I'd never heard of that before. But apparently some artificial intelligence specialists believe there will be a time in the next century when robots are smarter than humans. And this other economics professor predicted that human's labor will go the way of the horse, that it's no longer necessary for economic activity. I told him I'd bet against him, but I won't be around to collect. So I agree with you, but it is an interesting question that bothers lots of people.

NEEL KASHKARI: But I always remind people that, you know, the original Terminator movie with Arnold Schwarzenegger came out in 1983. And if you remember that movie, Skynet was supposed to become self-aware in 1999. So artificial intelligence is supposedly tracking cold fusion. Real AI has been 20 years away for the past 50 years. And so far, you know – I'm paying a lot of attention – except for a very narrow class of

problems where AI is really well suited to, anything beyond that, AI so far, from what I can tell, is mostly hype.

GREG MANKIW: Yes, I agree with you. Oh, speaking of hype, I can't help but ask you about bitcoin. To me it seems like a lot of hype but it keeps going up and up and up. So everybody who has disagreed with me and bought it has made money making me look increasingly foolish. So what's your view of cryptocurrencies?

NEEL KASHKARI: Well, I can't, you know, I've spent a lot of time looking at it and people ask me about it all the time. The basic thesis of bitcoin is that there can only be so many bitcoin ever created by the algorithm so you'll never have runaway inflation, which is fine. But the barrier to entry to alternative bitcoins is zero. And so if I can go in my basement and create a new substance that looked exactly like gold, weighed the same as gold, had all the same properties as gold, even if you called it something else, effectively I would have made gold and gold would be less scarce. So until somebody can figure out a way to create barriers to entry for these thousands of copycats, it reminds me of America in the 1800s where every state had its own currency, every bank had its own currency. They had runaway inflation, not just based on one currency, but just based on the plethora of currencies that were being created all over the country.

GREG MANKIW: Right. I heard one person describe bitcoin as gold without the gold.

It's got the scarcity value of gold, but you don't actually have the gold. Okay, I know you've thought very broadly about economic policy. You've even run for elected office, so you've thought about lots of things. So I want you to just sort of cast your mind very broadly now and imagine that you could convince the general public and politicians to pursue one policy. I'll tell you which one I would pick. But if you could convince everyone, I'll make you the benevolent philosopher king and you can convince everyone that you're right, what would you convince them of?

NEEL KASHKARI: You know something we're actually working on in Minnesota, in Minnesota a group of us are trying to pass a constitutional amendment to amend the state constitution to create a civil right to a quality education for every child. I would love to do that nationally. If every kid in America actually got a good education, so many other of our problems in our society would become much smaller or much more manageable because I really do think education is the key to solving poverty, solving disparities. And so, for me, it would be focusing on education.

GREG MANKIW: Oh, I couldn't agree with that more. I think education is tremendously important. The hard thing, though, is figuring out what educational reforms to pursue because sometimes the barriers to education aren't just money.

NEEL KASHKARI: Correct. Absolutely.

GREG MANKIW: They're more structural.

NEEL KASHKARI: In many cases it's not money. In many cases they are more structural reforms. And what we've analyzed in Minnesota is we think by creating a civil right to a quality education, that civil right, the power of civil rights can break through many of those barriers leading to the reforms that ultimately can be effective for young people.

GREG MANKIW: For what it's worth, the one policy I was going to pick was a carbon tax because I'm worried about climate change and I'm worried about the federal debt and that one policy helps a little bit on both dimensions. In looking back over your own intellectual journey, you've actually had a fascinating career, doing all sorts of different things. You know there's the phrase, it's not rocket science. Well, you've done rocket science. You've done everything. Are there particular thinkers, either economists or non-economists that have been particularly influential in shaping your view about public policy and the issues that you face every day?

NEEL KASHKARI: You know I can't say that there's an individual thinker, but I read a lot of history. I love history. I found my love for history after I served in Washington and I got curious about where our government came from and why was it designed the way it was. The leaders of history that I find so inspiring are those that, you know, like

Abraham Lincoln is behind me, those that came from nothing, through their own talent, their hard work, accomplished something and then used their place in the world to try to advance a cause that's much greater than themselves. And so Lincoln is a great one.

Ulysses S. Grant is a great one. I mean those two examples also have this amazing characteristic that despite all of their accomplishments, they carried themselves with the utmost genuine humility. And that's just an amazing package and they just responded to events. So, you know, it's not so much a great thinker as it is a great leader and how they dedicated themselves to a cause bigger than themselves, and that's inspiring for me.

GREG MANKIW: If you focus on sort of economic policy, are there particular people in the past that you look to as inspirational figures, whether in history or in other parts of economic policy?

NEEL KASHKARI: Sure. I mean I'll say it's hard not to be inspired by Paul Volcker and the courage that he showed when he became Fed Chair to take on inflation and to realize that he was going to be, a lot of people were going to be mad at him for raising interest rates so dramatically and having the conviction to follow through and do what was necessary to break the back of inflation. I mean I think Paul Volcker must be an inspiration to anybody who is involved in central banking for the courage and the insight

that he showed and the fact that he could stick to it and actually deliver. It's a great example for all of us.

GREG MANKIW: So you mentioned books. Can you give us some recommendations on books that you particularly would recommend the public read?

NEEL KASHKARI: Well, I'll say one, I mentioned Ulysses S. Grant, the recent biography of Grant from Chernow is just an amazing, it's an amazing book, amazing story, amazing man. Most people don't know a lot about Ulysses S. Grant. When I stumbled into him, I just couldn't believe the leader he was, what an inspirational figure. And he's, in many ways he's been forgotten by history, so I encourage people to learn about him.

I just finished a biography of George Marshall, the Army Chief of Staff during World War II who went on to become Secretary of State and Secretary of Defense, another remarkable leader from history. And now I'm on to, I just started a biography of Douglas MacArthur, who is a much more, he's very famous, of course, Douglas MacArthur, but he's a much more mixed character. Some great strengths, but also some very deep character flaws.

GREG MANKIW: Yes, he and Truman didn't get along all that well.

NEEL KASHKARI: Yes, he didn't get along with anybody from what I can tell because it was McArthur's ego. But interestingly both he and his father both won the Congressional Medal of Honor. I don't know if there are other father-son pairs to have done that.

GREG MANKIW: Wow, that's really interesting. So, in the last five minutes, tell us a little bit about, you said that you've had a baby not too long ago.

NEEL KASHKARI: Yes, five months ago. We've got a two-year old and now a five-month-old baby.

GREG MANKIW: Well, congratulations. That's great. I was going to ask you what you do in your free time, but I'm guessing if you have two small kids like that, you probably don't have any free time. But if you had free time, what kind of things do you do?

NEEL KASHKARI: Well, pre-Covid, my wife and I pre-Covid and pre-children, we used to go out to see movies a lot. We don't do that, first because of Covid and then because of our children and our hands are full. Four years ago I decided – this is a weird thing to do – four years ago I decided to commit to learn to play the piano. I made a ten-year commitment to myself that I would learn to play the piano over ten years. So I'm four years into it. I'm making slow progress, but I am making progress. And it would have

been a lot easier if I'd started when I was four years old instead of when I was 44 years old.

GREG MANKIW: And did you play another instrument before that or is this the first instrument?

NEEL KASHKARI: No, I mean, I mean in fifth grade I think I played the trumpet for a month, but other than that, no.

GREG MANKIW: And movies, do you have a favorite genre or type of movie?

NEEL KASHKARI: I love Christopher Nolan. First of all, I love Christopher Nolan movies, just about anything he creates, but I love the Christopher Nolan Batman movies. Of all the action hero movies, I thought the Christopher Nolan Batman movies were brilliant. Movies like that, you know, I have a pretty wide, I think a pretty wide appetite.

GREG MANKIW: Do you watch mini-series too, I know, like things like The Queen's Gambit has been a big deal in a lot of circles, and The Crown.

NEEL KASHKARI: My wife and I watched The Crown. I just finished, on Netflix, there's

a Hitler and his circle of sycophants. I can't remember the name of the series, but it's like a ten-part episode on Hitler's henchmen, which was a fascinating and disturbing, but fascinating view of history of who Hitler surrounded himself with and how effective they were in sucking up to the boss, but also advancing his agenda.

GREG MANKIW: Yes, I saw that. That was fascinating. Well, anyway, Neel, thank you very much for spending this time with us.

NEEL KASHKARI: Thank you, Greg. I appreciate it.

CHAIRMAN JOHN C. WILLIAMS: Well, terrific. Thanks, Greg, and thanks, Neel, for a fascinating conversation. I really appreciate you sharing your insights with us today.

And with that, I'm just going to just mention that we've got a lot more great speakers lined up. We encourage everyone to both attend and invite your guests. So next week we've got John Waldron, the President and CEO of Goldman Sachs. Looking further ahead, on April 19<sup>th</sup>, we have Debra Lee, the Co-Founder of the Monarchs Collective and former Chair and CEO of BET. On April 22<sup>nd</sup>, we've got Paul Offit, Director of the Vaccine Education Center at Children's Hospital in Philadelphia. And on April 28<sup>th</sup>, we have Robert Swan, polar explorer, and the first man to walk both poles. And then on April 29<sup>th</sup>, finishing out the month, we have Ben Hecht, the President and CEO of Living

Cities. Now that's April. We've got a lot more events in May and later in the year. So please check our website, look at your emails. And also if you're interested in joining the Club, please email the Club at the address on the screen.

And finally, I'd like to take a moment to recognize those of our 332 members of the Centennial Society who are joining us today as their contributions continue to be the financial backbone of support for the Club and help enable us to offer our wonderful diverse programming both now and in the future. So thank you again and please stay healthy and safe.