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Dr. Patrick Harker
President and Chief Executive Officer
Federal Reserve Bank of Philadelphia

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Webinar

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W.R. Berkley Professor of Economics and Finance
Dean Emeritus, NYU Leonard N. Stern School of Business
Vice Chair, The Economic Club of New York

Hello everyone. Thank you for joining us this morning. This is Barbara Van Allen, President of the Club. We're going to get started in exactly one minute. Thank you.

Introduction

Vice Chairman Peter Blair Henry

Good afternoon, and welcome to the 630th meeting of The Economic Club of New York in our 114th year. I'm Peter Blair Henry, Vice Chair of the Club and W.R. Berkley Professor of Economics and Finance and Dean Emeritus of New York University's Leonard N. Stern School of Business. 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 civil conversation and innovation. A special welcome to members of the ECNY 2021 Class of Fellows – a select group of diverse, rising next-generation business thought leaders as well as welcome to students from the Columbia Business School, CUNY Graduate Center, the NYU Stern School of Business and Rutgers University.

It is a pleasure for me now to welcome our special guest today, President and CEO of the Federal Reserve Bank of Philadelphia, Dr. Patrick Harker. Pat took office in 2015 and was reappointed for a second five-year term effective March of 2021. In this role,

Pat participates on the Federal Open Market Committee, which formulates the nation's monetary policy.

Before taking office at the Philadelphia Fed, Dr. Harker was the 26th president of the University of Delaware, where he was also a professor of business administration at the university's Alfred Lerner College of Business and Economics and a professor of civil and environmental engineering. And before his college presidency, he was dean of the Wharton School of Business.

Our program will begin with opening remarks by Pat followed by a conversation which I have the privilege of moderating. In addition, we will be using the chat box for this conversation, so you can enter questions there directly. We will end promptly at 12:45 pm, and as a reminder, this conversation is on the record as we do have media on the line. So without further ado, Pat, Dr. Harker, the mike is yours.

Opening remarks by Dr. Patrick Harker

Thank you so much Peter, and thanks, everyone for having me. It's a real honor to be here today to talk a little bit about our country's economic outlook, the Federal Reserve policy, and I want to highlight some recent research on housing that I think will be of particular interest to this group. I've really been looking forward to this. I've long wanted

to have this conversation with all of you at The Economic Club of New York, although I admit, when I envisioned it before, I thought we'd be doing it in 3D. Soon enough, I hope, really, soon enough.

So I'm really looking forward to our dialogue, especially the fireside chat and the Q&A after my prepared remarks. But you know the drill, before I begin I need to give you my standard Fed disclaimer: The views I express today are my own and do not necessarily reflect those of anyone else on the Federal Open Market Committee or in the Federal Reserve System. There, I'm done.

So, back at the beginning of the pandemic, I was often asked what shape the recovery would take. That was a common question from the media and others. Would it be a V, an L, a U? There are a whole variety of letters. We went through pretty much the whole alphabet. More often than not, I liked to say, I said then and I still like to say it, it would look a bit like a Nike swoosh - a sharp decline followed by a gradual climb upward.

Now, today, if I could amend that prediction, I would put it this way: our recovery looks like a Nike swoosh but drawn by somebody who has had one too many cups of coffee, like me on many workdays. We are climbing undeniably upward, but it's a very jagged path. And our turbulent recovery has been shaped largely, as so much has, as you all know, by the path of Covid-19.

So consider, the second quarter of last year saw our economy's sharpest contraction on record as Covid-19 reached our shores. This, of course, was largely intentional as states shuttered businesses and schools and ordered citizens to stay home in a bid to contain the virus. We put our economy, effectively, as others have called it, into a medical coma.

Now the economy jolted quickly awake that summer as states reopened and a large dose of fiscal relief was injected into American households and businesses. But then with last winter's tragic Covid-19 surge, it ensured the economy went sideways. This was followed by another growth spurt earlier this year as vaccines were introduced and Covid-19 rates plummeted. And then, of course, the Delta variant showed up and again, once again, growth slowed markedly.

So, in this year, 2021, GDP growth in the first half of the year was around 6½%, while the second half will come in only around 3%, for a 2021 of about 5½% Q1 to Q4. So next year, if another major Covid wave can be avoided, and I really do think it can, given widespread vaccinations and the natural immunity among those who have recovered from the virus, we should see another growth spurt of more than 4% before the economy returns to something approaching trend growth of around 2% to 3% in 2023.

The economy is continuing to recover, in other words, but it is doing so under

constraints, and you know those constraints. The first constraint is a lack of people – labor. While job gains were very healthy in September, the U.S. economy has created many millions of jobs in recent months that still aren't being filled.

Job openings, around 10 million, are at near-record highs, running at double their long-term average. So this rate at which Americans are quitting their jobs is very similar. We're seeing people quitting for better jobs. We're seeing millions and millions, ten million openings. Layoff rates, meanwhile, are at series lows. Those people who are working are putting in longer hours and also able to command higher wages: average hourly earnings are up more than 4½% from a year earlier.

So it really does seem that a combination of factors – trouble accessing childcare or eldercare, lingering fears about the virus, the rise in equities and home values spurring people to retire, and I wouldn't dismiss a general reevaluation of life choices, is persuading many Americans to stay on the sidelines even as the economy has reopened. And notably, the elimination of extra federal unemployment benefits has not – at least not yet – appeared to nudge people back into the workforce. Now, I do expect that will change eventually and especially as other forbearance programs run out. There is also a spatial-geographic component to unfilled jobs, which I'll discuss further when we get to the housing issues.

The other constraint hampering economic growth is, simply put, a lack of stuff, a lack of stuff. Supply chains are badly hobbled, leading to shortages of everything from new vehicles to home appliances to the worst thing in football season, a shortage of chicken wings. And so we have shortages of everything right now.

Manufacturers curtailed production as the pandemic set in and are now working furiously to ramp up, but it is taking time. And this is occurring as demand is very strong because household balance sheets are in such good health. The result of this equation – a lack of goods coupled with high demand – is, of course, inflation. And indeed, inflation readings are now at 30-year highs. Core inflation was up more than 3½% from a year ago in September, and headline inflation as up nearly 5½%.

Moreover, inflation is more widespread across products and services than it was earlier this year. So, in the third quarter, for example, nearly three-quarters of spending on goods and services in the CPI basket was on goods with annualized inflation of more than 4%. So just think about that. Three-quarters of the goods and services we see have inflation running above 4% in the third quarter. In the second quarter, that was true for only a little more than a third of the goods and services comprising the basket. So this is clearly becoming more widespread. So I am acutely aware that this period of rising prices is very painful for many Americans. But I do expect inflation to moderate next year as supply chains come back online and bottlenecks ease, but we can talk

about that more in Q&A.

So, with economic growth chugging along and job creation – if not job filling – so robust, the FOMC announced last week that we will begin tapering our purchases of mortgage-backed securities and Treasury bills by \$15 billion a month. I don't expect that the federal funds rate will rise before tapering is complete, but we are monitoring inflation very closely and we are prepared to take action should circumstances warrant it.

So one thing I've noticed in my travels is that when you're in Los Angeles, for example, you always end up talking about traffic – how it was bumper to bumper on the 405 or the I-10. When you're in Philadelphia, meanwhile, you always end up talking about the Eagles, although, let's not do that today, it was very painful to lose to our L.A. adversaries yesterday.

So I've also found out that whenever you're in New York, you end up discussing housing, and specifically housing costs. Which is why I'm delighted to share some recent research from the Philadelphia Federal Reserve about this most important of topics. One of the pleasures of my job as a Federal Reserve president, is talking about all of the path-breaking research we do besides that which is directly related to monetary policy. Often that gets overlooked. But we do a tremendous amount of work outside of the lane of just monetary policy.

Let's talk about housing, and let's begin with renters, who often get short shrift in our national political conversation, despite making up more than 35% of all Americans, and disproportionately higher numbers in big cities like Philadelphia and New York.

At the beginning of the pandemic, Congress passed a moratorium on evictions. This, in a way, functioned like mortgage forbearance; with evictions no longer a risk, many Americans who were struggling stopped paying their rent either partially or in full. And while the eviction moratorium did, thankfully, prevent people from losing their homes, those rent payments didn't go away. They became debt owed by the tenants.

Researchers at the Philadelphia Fed have been tracking rental debt in an effort to understand which households are burdened and how significantly. This is especially urgent now that the eviction moratorium has expired. This month, our economists project roughly 1.9 million households carrying Covid-related rental debt, or about 6% of all renter households nationwide. So that 1.9 million is a not-insignificant number. And these people carry an average debt of nearly \$9,000. That's a severe burden for the unemployed or the underemployed households that are in this group.

So Congress has made aid available to renters who are struggling, but there have been persistent problems throughout the pandemic in getting that vital support into the hands of those who need it most. So, as part of our understanding of how the pandemic is affecting people on the ground, the Philadelphia Fed has been conducting a series of

surveys of consumers. We've been doing this now for a while through the pandemic. And those surveys have consistently, consistently found that many renters are, unfortunately, simply unaware of the aid they qualify for or how to go about obtaining it.

As of last month, roughly 43% of renters who say they require assistance had not applied for it, 43%. Clearly, this is a problem. No matter how well intentioned or well designed a program is, it can hardly be judged a triumph if nearly half the people who would benefit from it are not partaking in it.

So, as we emerge from the pandemic, I would urge policymakers not only to make sure indebted households have access to the funds intended for them, but also to think creatively about ways to reduce rents, including reforming zoning regulations to induce more residential construction.

There is evidence, in fact, that high rents may be affecting the labor market and hindering efforts to get us back to full employment. That's because many workers can't afford to live where the jobs are. For example, it's tough to ask somebody to work in a restaurant in San Francisco, for instance, when the nearest place with affordable housing may be, say Fresno. This not only hinders attempts to fill jobs, but ultimately, degrades the economic performance of areas with expensive housing. Expensive metro areas simply are not achieving their full economic potential because millions of potential

participants simply can't afford to be there.

Now, I'd like to turn to homeowners. As I'm sure this audience is aware, the CARES Act provided for mortgage forbearance, allowing borrowers to stop paying on their houses for up to a year and a half. Earlier this year, my colleagues at the Philly Fed set out to answer two central questions about this program.

First: What is the extent of racial and income disparities among mortgage borrowers in nonpayment on their mortgages, and second, how has the pandemic affected these disparities? Then, they wanted to find out who took up forbearance on their mortgages and who missed this important opportunity.

Because the CARES Act mandates that borrowers in forbearance who aren't paying on their mortgages still be reported to credit bureaus as if they are paying, these turned out to be surprisingly tricky questions to answer. But through some quite clever methods – my Philly Fed colleagues are nothing if not ingenious – the researchers were able to suss out the data.

Here is what they found. Between April and November 2020, an acute phase of the Covid crisis, minorities' and lower-income borrowers' nonpayment rates were twice as high as for higher-income and White borrowers. So even if we compare borrowers with

the same credit score and the same loan type, Black and Hispanic borrowers have more than 30% higher rates of nonpayment, and lower-income borrowers, 50% higher. Moreover, and importantly, these disparities largely did not exist pre-Covid-19.

In a sign that the CARES Act was effective, in a sign that we see this effectiveness, my colleagues found that minority and lower-income borrowers took up forbearances at significantly higher rates than other groups. The rub, of course, is that under the CARES Act and subsequent extension from the Biden administration, forbearance lasts only up to 18 months, meaning many borrowers will be coming off of it by the end of the year, which is also when temporary protections against foreclosure are set to expire.

That's concerning, given that as of mid-October, about 15% of people who went into forbearance in the first place are still in it – an estimated 1.1 million borrowers. And as with rental debt, those missed payments didn't just go away. They are now additional debt burdening households who went into forbearance.

Now, the good news is that most of the 8 million or so households who took up forbearance during the crisis have fully recovered. Due in part to the booming housing market, which has seen a 20% gain in house prices nationally since the onset of the pandemic, more than two-thirds of households came out of forbearance and are either current on their mortgages or have paid off or refinanced them. Borrowers still unable to

offer to resume full payments are being offered payment reductions to the tune of 20 to 25%. While it's still early, some borrowers in need of assistance have started to take advantage of these home-retention programs.

Still, and that's all the good news, but still about 20% of borrowers are either still in forbearance or are now delinquent. Banks, meanwhile, report being unable to make contact with many borrowers who simply stopped paying and they want to be in contact with them to work out new terms. That presents a challenge to borrowers first and foremost, of course, but also to lenders given the expense and hassle involved in foreclosure.

Keeping people in their homes isn't only vital because of the first order issue of shelter, it's also crucial to wealth building. A person's house may be their castle, but in many cases, it is also their savings account. This is, in part, because homeowners can borrow against their home's value to boost their lifetime earnings and capital gains. Here, there is a silver lining to the current economic environment. Whereas during the Great Recession, nearly half of distressed borrowers were underwater, meaning their mortgages were larger than their home's actual value, today, only around 2% are.

The U.S.'s racial wealth gap owes much to both unequal rates of homeownership among groups and among disparate housing values – often a legacy of direct

government policy. For example, using a series of geospatial maps, Philadelphia Fed researchers have found that properties with covenants within the city of Philadelphia dating from 1920 to 1932, 100 years ago, formed an invisible barrier to less densely populated areas sought after by White residents and around predominantly White neighborhoods throughout the city – and that those effects are still visible a century later. This too is an issue that will require deliberate policy action to redress.

Ultimately, in my mind, we must all work to make sure that all Americans can build wealth and participate fully in the U.S. economy – and housing policy is a very, very big part of that. So I'm eager to discuss this and much else besides during our chat. And for more information, if you're interested on this or other research, please do check out our recently redesigned website: philadelphiafed.org.

So thanks again for having me and let's move on to the discussion. Thanks Peter.

Conversation with Dr. Patrick Harker

VICE CHAIR PETER BLAIR HENRY: Thank you, Pat. Thank you for sharing a very interesting and detailed set of remarks that I think have important implications that I think many of us haven't thought about, and this really is new path-breaking research.

So let's start with some of that research. I mean you make this very important point about a jagged recovery. Then you talked about some elements that could lead to sort of – if I can put it this way – kind of more jaggedness if we are unable to sort of put in place mechanisms to allow people to smooth the effects of being underwater from a renter's point of view or a homeowner's point of view. So talk to us first and foremost maybe about, as this sort of potential for more jaggedness, you know, which will depend on whether these policy measures expire or not, is that sort of built into your forecasts or will we get more jaggedness if some of these things expire? How are you guys thinking about that in terms of the future?

DR. PATRICK HARKER: Yes, so actually the work that our colleagues at Philly have been doing, they not only have presented the problem, the issue, but they also come up with some possible solutions. That is, they've gotten some rough estimates and in some cases, not so rough estimates, of what if the banks were able to renegotiate the terms under various scenarios, what would it cost the banks? And you compare that to what the possible cost of foreclosures are, it really looks like it's a win-win. That is, the banks would be better off by engaging in a pretty aggressive campaign to get new terms in place so that people could stay in their homes. That, we understand on the mortgage side.

The renter side is more complicated obviously and there's a lot of dynamics going on

there. Again, it's just harder to get your hands around that. But I tend to be an optimist, you know, I'm an engineer by training, and I just think we can solve this problem. This is a problem that we can solve. This is not something that's just coming down from on high on us. We can fix this. But it does take a kind of collective effort of a public-private partnership to try to figure out how to solve this, but we can do it.

VICE CHAIR PETER BLAIR HENRY: I think it's really interesting. I want to sort of ask you a question that sort of relates to that point you just made. You've had a lot of leadership roles, now as the president of the Fed, formerly as a dean, formerly as a president of a university. Convening power, you obviously walked a very fine line as a Fed president, sharing research, sharing ideas, but kind of sticking to your lane. Can you talk to us a bit about how you're seeing your role in this important new research that your team is doing? What are you doing as a leader of the Federal Reserve Bank of Philadelphia to sort of, to get people thinking about these issues and talking about these issues? Because as you've pointed out, this could have first order effects on the economy.

DR. PATRICK HARKER: Yes, so one of the areas that I think gets very little attention in the Fed and I've had the opportunity to chair the Systems Committee on overseeing it is our community development function. This, of course, grew out of the Community Reinvestment Act. This act comes, banks ask the obvious question to the regulator, i.e.

us and others, well, what do we get credit for? And so we had to do some research to try to understand that. And then that led to research on what really does move the meter on helping low to moderate-income communities make the leap to a better economic future. That work has been going on for quite a while at the Fed.

At the Philly Fed, we have a particular interest in this because Philadelphia is unfortunately among the top 10 cities in America, the city with the poorest, the highest poverty rate and the highest deep poverty rate. So we have long-term issues, well before the pandemic ever hit, that we've been really trying to understand. And we've put together a series of programs. We do a major conference every other year – the pandemic has put this on hold for now – called Reinventing our Communities. We bring together leaders from around the country, i.e. your convening authority – both policymakers, academics, and then just practitioners to try to figure out solutions. What works and what doesn't? Practical solutions.

We also have, we launched as part of that effort and really an outgrowth of that effort, something we've called the Economic Growth and Mobility Project, where we have taken on issues, and we're taking on one right now, that we think are generic issues that the economy has, but we're taking particular communities and trying to deal with the issue and come up with creative solutions.

So the one we're working on right now is childcare. We're working in the state of Delaware with the state's Department of Education, the Chamber of Commerce in the state, and a major foundation, philanthropic foundation in the state. And we, again, we've provided the convening and the research. And they are trying to come up with public-private partnership models because businesses have every incentive to want to solve this problem. Right? They can't get people to work, particularly, we see the data, women, particularly women with children at home are not reentering the workforce. We need to solve this problem. It's a long-term problem. It burdens family. In Delaware, it's over \$20,000 a year for every child. I mean this is not, you just can't do this as a low to moderate-income family. So we've done that work.

We started with a project in Northeast Pennsylvania where there were a lot of jobs out on the highways, logistics jobs, truck repair jobs, think of those kinds of jobs, up in the Scranton-Wilkes-Barre area. But people living in the city of say Scranton, the transit couldn't get them to the jobs, particularly second and third shift. So they've developed a whole new model. They call it NEPA Moves, Northeast PA Moves, that was based on some research we had done, some convening. We held a conference where we brought people together, including a national speaker, to talk about equitable transit. They are now on their way to solving this problem.

What I really like about the story is one of the major employers there, the major

employer and major healthcare system, they were all in on this because they had this problem. But then one of the people in the healthcare system, a lightbulb went off in their head and they said, well, what does it cost to us if somebody misses a doctor's appointment? This is where I like, the creative thinking came out. And the answer was \$70 if they miss a doctor appointment. And so they've created a whole way of helping people get to their appointment, including if they had to pay for an Uber or a Lyft or a van pool. It was worth it to them to spend \$20 to get somebody to their...and that changed their whole model.

So what we're trying to see is different ways of people thinking about these, what we see as structural problems that look like nobody's trying to solve this. Our convening allows us to bring people together in an objective bipartisan way and just put the facts out there. We're not going to solve their problem. People will have to solve their own problem. But we can at least provide the facts and the data.

CHAIR PETER BLAIR HENRY: That's a really interesting example, Pat. If I could ask you to sort of take off your Philadelphia president hat for a second and put on your FOMC hat, but to continue on the theme of jaggedness and unevenness, you made some very important spatial points. So are you and your colleagues seeing anything sort of particularly jagged by region as it were? Are there parts of the country that are being more affected than others by these structural elements that you're talking about? I

think you're so right to get the focus sort of rightly off of monetary policies, so to speak, and on the structural side of the economy. What kind of differentiation are you seeing across regions in terms of structure?

DR. PATRICK HARKER: Yes, I mean some of that has been around for a long time. I mean at Philly, the third district, which is Princeton, Mercer County, NJ South, Johnstown PA, Pennsylvania East and all of Delaware, we're a small district, we've always been a district where we don't hit the highs of the U.S. economy and the lows. We tend to be more moderate. So we don't see the same kind of swings that, say, other kind of booming kind of districts might, or portions of those districts. But there are some generic problems that really cut across all these districts. So we see variation in housing issues and other issues across the country. But particularly right now, the supply chain issues are hitting everybody in a pretty similar way. I mean it's not that different. If you can't get chips, you can't get chips, and that affects everything. I mean it affects the fact that you can't get washers and dryers to put in new homes. We were talking to one of our major home builders in the region. So those things are pretty consistent.

That said, if we can roll back pre-pandemic, and I think that's hard for us to do sometimes mentally, but if you think where we were. We had a very tight labor market. We had structural problems. We still had these racial inequities that are very real. We still had other issues in our economy. Those haven't gone away. All the pandemic's

done is just accelerated those trends by many years. It's accelerated automation in some cases. It's accelerated the problems we've seen. I mean childcare is an example we're talking about. It's just accelerated and really heightened the problem we have with childcare to get people back to work.

So, again, they'll vary a little bit by region of the country. Obviously, we have ag in our district but we're not like some of the other districts that have large ag footprints. So people will have different issues district by district, but generally these overall themes are pretty consistent.

CHAIR PETER BLAIR HENRY: ...some of these, kind of nationwide themes, it's still hard to disentangle all of what's going on, but one of the questions that sort of came in from one of our ECNY Club members is as you think about the supply side of the economy, how much of the challenge is sort of the issues you referred to around shipping issues, labor market issues, like there's a labor shortage? As you think about the relative balance of those two things, anything in the data that's jumping out at you? In other words, the structural labor issues are longer term. We hope the shipping issues are short term, particularly in terms of investment, which we can talk about. But what do you see in the data so far?

DR. PATRICK HARKER: So, yes, I get this question a fair amount. What is it? Is it this

or that? And the answer is it's all of the above. Right? It's all these things. It is a supply issue but it's also a demand issue because we've seen a surge of demand. Everybody, including myself, my avocation in life is I'm a woodworker. Everybody ran out to buy, either fixing up their home with lumber or in my case to do other things. So we saw this surge of demand and we saw supply issues at the same time. On the labor front, again go back pre-pandemic. We were having trouble getting truck drivers then – truck drivers, truck mechanics. So that problem just again accelerated. It just got worse during this period.

So that, I think all those issues combined are what's forcing the issue right now, what we have. And you can't play whack-a-mole, right, with the economy. You can't just say, oh, we'll solve this problem, we'll solve the ports. Well, but you don't have the truck drivers. And why don't we have the truck drivers? We need to move these things simultaneously.

If there's one frustration I have about policy generally, and this is the pragmatist in me, is we tend to want to pick one problem at a time and it just doesn't work. We run into other constraints. We really need to think more systemically about moving the economy forward on all fronts. We can walk and chew gum at the same time as a society. And we need to do all these things together, but we need to have a comprehensive plan for how to do that in our way of thinking. And that's some of the research that I'm personally

interested in, is how to move these things all in tandem.

CHAIR PETER BLAIR HENRY: So speaking of all aspects of the economy, you mentioned investment, which obviously can play a key role on the supply side of the economy, and we know we've seen a lot of investment in IT during the pandemic. But can you speak to anything you're seeing in terms of broader investment in terms of capital?

DR. PATRICK HARKER: Yes, so what we're seeing a lot is that with our manufacturing contacts, and it makes sense. Right? During the pandemic, they were having trouble getting machinists, say beforehand, and this has just accelerated that. A lot of machinists retired and so forth as we were talking about. So it's just now the break-even for putting automation in has just changed. So now that balance is tipped. And so you're seeing much more interest in automating basically everything you can automate with, not just software, but also hardware. So I think that's a big trend. The good news out of that is we should see a productivity increase. Right? The bad news is we need a lot more well-trained people to have the skills to do those jobs.

This is another area that I'll just highlight quickly, the Philly Fed has done a lot of work on, that I'm really proud of. I believe, and this is an odd thing, as a lifelong academic, for me to say and a former university president, not everybody needs to go to college and

not everybody needs to go to college right away. And so we've actually done work with our colleagues in Cleveland and Atlanta on what we call Opportunity Occupations. These are jobs that pay above median wages where you do not need a four-degree college degree. So these are jobs that can get you into the middle-class where you don't need a four-year college degree. We know where they are by region. We can go on our website and we can show you by region what those jobs are.

And we launched recently a tool, the Occupation and Mobility Explorer, where you can go on and say this is what I do now and with some training, how can I make a career move to a better paying job and what would be the average increase in pay? And then another move and another move. You can actually plan out, either you individually or often it's community college leaders or policy leaders. There are tremendous opportunities. And we had this before the pandemic. If we continue to automate, it just makes the problem worse. We now need people who can maintain the machines as opposed to run the machines. That's a higher-level skill. We really need to re-commit.

If there's one thing I worry about, look, I'm an old engineer, I think the infrastructure bill, our infrastructure needs work in America. So I'm not getting into the policy side of how do we pay for that and so forth. That's up to Congress. But there's no question we need work on infrastructure. But we're going to need a lot of operating engineers. We're going to need a lot of electricians. We're going to need a lot of people that do this work.

Where are they going to come from? I think we need to bring back the sense of honor and the value in the trades. I'm a first-generation college kid. My family is all pipefitters and steamfitters. So I'm the one that didn't follow the family business. We need to bring honor back to those jobs and encourage young people that that is a career path that they could take.

CHAIR PETER BLAIR HENRY: I think you're right, Pat. And I think in addition to your point about bringing honor back to those jobs, I agree with your point about, when we say not everybody needs to go to college, I think another way of saying that is there are a lot of companies out there that should think about hiring for skills rather than the credentials.

DR. PATRICK HARKER: Absolutely.

CHAIR PETER BLAIR HENRY: And there are a lot of people out there making this point, an opportunity to work, and others are making this point. And we have the data now, to your point, to actually build out that match to occur. So I think that's another important structural point.

DR. PATRICK HARKER: And for some people college is the right thing or maybe college, I'll just tell you a quick story. So I met a welder at the Philadelphia shipyard a

few years ago. She had studied art, metal art. Then realized she was going to starve by trying to do that. She realized, but I do know how to weld. She entered an apprenticeship program. She's getting education paid for now through that program. Got additional college credits. There are other ways to get a college degree or an associates or a four-year bachelor's degree than just going right from high school. I mean this is a big diverse country. Not everybody needs to follow the same path.

CHAIR PETER BLAIR HENRY: Absolutely. So you mentioned infrastructure. So let's talk about that for a second. So I'm not asking you to comment about Congress' job. But we had a \$1.2 trillion infrastructure bill passed last Friday. A question for you, from the point of view of monetary policy, have you and your colleagues, as you think about sort of forecasts of potential output for the future, is this already sort of built into your forecasts?

DR. PATRICK HARKER: Yes, it is in mine. And really, if you think about it, \$1.2 trillion spread out over ten years, it has a tenth or two-tenths of an impact on GDP. It's not going to have a very large impact. What I worry about, though, is if we don't have the skills to pull it off. Because the reason I'm excited about it is I have a basic principle, right, which I think is everybody's basic principle. We should be investing in the productive capacity of the American economy. Right? Things that are going to pay back over time. And I think this can pay back over time if it's done right. It's all on the

execution now. I mean the bill is done. And it won't have a large impact on GDP in terms of expenditure right now, but it could down the road if we do it right. Or not doing it could have a negative effect on GDP.

CHAIR PETER BLAIR HENRY: I'm tempted to ask you questions about the next stage which...reconciliation. That would be speculation at this point.

DR. PATRICK HARKER: I mean we've not really modeled that in any depth because it's hard to model a moving target. We don't know what it is. It's just hard to comment on that because I don't have hard numbers on that at this point.

CHAIR PETER BLAIR HENRY: I completely understand. I just encourage you; I mean obviously I'm sure your colleagues are thinking about the potential impact of spending on social infrastructure on the underlying potential of the economy, what you're alluding to. But we'll have to wait and see.

A couple of questions that came in from members, Pat, if I can change the topic, the subject, just a little bit.

DR. PATRICK HARKER: Sure.

CHAIR PETER BLAIR HENRY: So folks are, you know one of the things that's happened in the pandemic is so many people sort of switched their buying from services to goods and a lot of those are goods online which raises questions about cybersecurity. So how is the Federal Reserve System dealing with systemic risk around cybersecurity infrastructure from the institutions that you regulate?

DR. PATRICK HARKER: That's a really good question. It's one of the big concerns I have and I think the system has is on cyber risk. Not only within the financial services industry broadly and the impact that could have on financial stability. Right? Because as we know, this system we have fundamentally runs on trust. It all comes down at the end of the day when you peel everything back, it's all about trust, that we trust these institutions. We trust that our money is safe. If you lose that trust, it's a hard thing to regain.

So I think we are, and I think appropriately, obsessed with cyber, not only for our own operations, but also making sure that the financial institutions, at least the ones that we regulate, have proper safeguards in place. And we're trying to understand, through our research, the implications of this on broader financial stability because there could be an impact if it was widespread. It is priority, I won't say number one, but pretty close to number one right now for us.

CHAIR PETER BLAIR HENRY: It makes a lot of sense. And speaking of kind of the Fed's mandate, a lot of controversy around whether monetary policy should be taking into consideration climate issues. COP26 just wrapped up. How are you thinking about it from an FOMC point of view and from a Philadelphia Fed point of view?

DR. PATRICK HARKER: Yes, so from a Philadelphia Fed point of view, and we are thinking about it, first and foremost, from a supervisory and regulatory framework. I mean take Delaware, my old home when I was a university president, Delaware has a large ag industry down in the southern part of the state, Sussex County. They were already seeing saltwater encroachment into the farms and that is farmland being taken out of productive capacity. Well, if you're lending to those farms, you have a problem.

So, first, as regulators, we need to make sure that the banks are taking prudent steps to (a) understand the risk they're facing, and in some cases, us, through our research, helping to educate about what those potential risks could be. And we're seeing this volatility of weather and climate more broadly and that's going to have an impact on the risks that institutions, lending institutions are taking. So I think that is first and foremost our job, is to make sure we understand those risks so we can help the institutions understand those risks.

When it comes to monetary policy, that's a fuzzier area. It is a risk. Right? I mean these

losses are real risks to the economy if they become outsized. Certain regions, of course, get hit very hard in these events. But if it starts to continue to happen over and over again, it will start to create some overall risk for the U.S. economy. What monetary policy can do about that? I have to say personally I am skeptical that monetary policy itself has a big role there. I think our larger role is around supervision and regulation.

CHAIR PETER BLAIR HENRY: Thank you for a very clear answer to a very tough question. Thank you more generally, Pat, for being with us today. We really appreciate your time. We could talk all day, but...

DR. PATRICK HARKER: Yes, this was great. Thank you.

CHAIR PETER BLAIR HENRY: You've got things to do and our audience has things to do as well. So thank you very much for your time. We really appreciate it.

I'm pleased to report to our members that we have many prominent speakers lined up this fall and, as always, we encourage you to invite guests to our events. Next, on November 16th, we will have Scott Shay, the CEO of Signature Bank, and Alesia Haas, the CFO of Coinbase. On November 17th, we'll have a panel featuring Dr. Joyce Brown, President of the Fashion Institute of Technology, Brandice Daniel, Founder and CEO of Harlem's Fashion Row, and Terry Lundgren, former Executive Chair and CEO of

Macy's. On November 18th, we will have Robert Zimmer, Chancellor of the University of Chicago. And then on December 7th, we are very fortunate to have Carla Harris, Vice Chairman of Global Wealth Management and Senior Advisor at Morgan Stanley, along with Ken Bentsen, President and CEO of SIFMA and Dr. Lindsey Piegza, Chair of the Economic Roundtable. And we'll also have on December 7th, SIFMA Chief Economist on that day as well. And to close out the season on December 9th, we're looking forward to returning in person for our first hybrid event, The Honorable Gina M. Raimondo, Secretary of Commerce. So if you joined as a guest today and would like to become a member, please email the Club at the address on the screen.

And finally, I would like to take a moment to recognize those of our 338 members of the Centennial Society 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 now and in the future. Thank you again for being with us. Thank you again, President Harker. Please, everyone, stay healthy, be safe, and we hope to see you at our next event. Take care. Bye bye.