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James Bullard
President and Chief Executive Officer
Federal Reserve Bank of St. Louis

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Webinar

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Introduction

Welcome. This is Barbara Van Allen, President of The Economic Club. Thank you for joining us this afternoon and we will get started in exactly in one and a half minutes. Thank you.

Robert K. Steel: Good afternoon and welcome to the 546th meeting of The Economic Club of New York in our 113th year. My name is Bob Steel. I'm a trustee of the Club and the Chairman at Perella Weinberg Partners. The Economic Club of New York is the nation's leading nonpartisan forum for discussion on economic, social and political issues. The mission, we believe, is as important today as ever as we continue to bring people together as a catalyst for conversation and discussion. We proudly stand for all communities seeking inclusion and mutual understanding.

A special welcome today to guests of our members and members of The Economic Clubs of Chicago and Washington, D.C. who we have also invited to join the webinar today. In addition, we're happy to welcome members of The Economic Club of New York 2020 Class of Fellows as well as undergraduate students from Fordham University and the Zicklin School of Business at Baruch College.

Before we begin, we'd also like to thank our healthcare workers and frontline workers for all they do, particularly during these challenging times, to keep all of us healthy and

safe.

Now, on to the program. Today, it's a pleasure for me to introduce our guest, James Bullard, President and CEO of the Federal Reserve Bank of St. Louis. In his role, Jim is a participant on the Federal Reserve's FOMC, Federal Open Market Committee, which meets regularly to set the direction of U.S. monetary policy. He also oversees the Federal Reserve's Eighth District, including activities at the St. Louis headquarters and its branches in Little Rock, Arkansas, Louisville, KY, and Memphis, Tennessee.

As a noted economist and policymaker, Jim makes Fed transparency and dialogue a priority on the international and national stage as well as on Main Street. He serves on the Board of Directors of the St. Louis Regional Chamber and the Board of Directors of Concordance Academy of Leadership. He's a past board chair of the United Way U.S.A.

Jim is co-editor of the Journal of Economic Dynamics and Control and a member of the Central Bank Research Association's senior council. He's an honorary professor of economics at Washington University in St. Louis, where he also sits on the advisory council of the economics department and the advisory board of the Center for Dynamic Economics.

Today, the format will begin with opening remarks from Jim followed by a conversation

that I'll be excited and fortunate enough to be moderating. We'll end promptly at 3:15 Eastern Standard Time. And any questions that were sent to the Club from members in advance were shared with me. As a reminder, this conversation is on the record and so we do have media on the line. Mr. President, over to you.

Opening Remarks by James Bullard

Thanks Bob. And thanks to The Economic Club of New York for the opportunity to speak today. I'm going to talk about the state of Covid-19 and the crisis in the U.S. I'll have a view that may be a little bit different from some of what you've otherwise heard and so maybe this will be interesting and challenging. So let's go ahead and get going. Let's go to the next slide. So this will be the introduction section. The key themes here are five, which I'll talk about with charts and various slides.

First of all, the macroeconomic news has been stronger than expected in May and June and I'll document that with some pictures. We'll try to assess where we are based on that momentum coming out of May and June. I'll also talk about how the progress in managing the health crisis has been substantial, I think. But at the same time, I think Covid-19 has proven to be more persistent than many would have expected back in the March-April time frame. So we're certainly past the initial phase of the crisis, but the crisis is persisting.

Now, I'll talk a lot about how I think the second quarter experience suggests that we can do simple things that will mitigate the risk of the disease spreading, including masks. And we might be able to use that to effectively manage the disease going forward. So I'll talk about that theme quite a bit here. And because you can do it that way, because you can effectively manage the disease, I think, a base case in which the economy continues to build on its momentum from May and June in the second half of 2020 is reasonable. That's a base case. That's not necessarily what's going to happen, but as a base case I think that's reasonable.

There is downside risk. I'm not actually going to talk a lot about downside risk in this talk, but I'll stress here before we get going that there's a lot of uncertainty. Downside risk is substantial and we need a better execution of a granular risk-based health policy that will be helpful in keeping the economy out of depression. If we got into a depression, I think healthcare outcomes would be worse and economic outcomes would be worse, so that would be the worst of all worlds. And so hopefully we don't get into that scenario. So I'm not going to talk about that too much today, but these are the main themes that I'm going to touch on here. Let's go to the next slide, and the next slide.

Okay, so let's talk about the upside surprise for the macroeconomy. The macroeconomic news for May and June, which, you know, of course, comes out with a lag seems to suggest that April will prove to be the low point of the crisis. You really

have this March-April shock period where the pandemic is descending upon the economy. I'll show you a picture in just a moment of the Citi Economic Surprise Index. It suggests that there's been a substantial economic upside surprise in the data releases recently. Employment, in particular, has rebounded more rapidly than expected. I'll have some charts on that. And this supports the idea that many layoffs in the current situation are viewed as temporary and as firms adjust to the pandemic, they recall workers. And I'll have a slide about that, pictures of that as well.

And finally, while second quarter growth is projected to slow, sorry, show substantial contraction – one of the worst quarters of all time in terms of economic growth – those forecasts have nevertheless become less negative in recent weeks showing once again that the news in the May-June time frame have been quite strong. So let's go to the next slide.

So here's a picture of the Citigroup Economic Surprise Index. We took this all the way back to January of 2015. You can see that the index goes from, you know, has a zero value on average. The impressive thing about this is that at the right-hand side of this chart, you know, you've got a value of something like 240. That is way outside of anything, any kind of normal variation in this series. So it's not just that there's been some good news recently, it's tremendously outside normal experience in this Economic Surprise Index. You can see going back that typical values are either plus-50 or minus-

50. Here we're at a plus-240. Let's go to the next slide.

So, one of the things that's happening is that unemployment is declining more rapidly than after the previous peak. And I think maybe some of you listening here and people in the forecast community are thinking in terms of past shocks that hit the economy. But this shock is very, very different, and the next couple of slides are going to try to make that case here.

Now, what this slide does is take the peak unemployment rate this time and after the financial crisis in 2007 to 2009 and it showed, also zero, and then shows the decline from the peak after the peak occurred. So that blue line at the top of this chart starts a zero. That would be, correspond to 10% unemployment in October of 2009. Then you follow that blue line out to the right in this picture, 24 months on the horizontal axis, and you see that after two years the unemployment rate had only come down 1.2 percentage points from the peak. So an extremely slow decline in the unemployment rate the last time around after the last crisis.

Now, this time around it's a totally different story because this is a totally different shock. These two lines over on the left side of this chart, the gray line and the gold line there show two different measures of unemployment. I'm going to talk about the unemployment rate plus an adjustment for mis-reporting that the BLS has talked about.

And you can see that gray line basically goes straight down from the peak. In fact, it has declined 7.2 percentage points and that occurred in just two months.

So last time it took, you got 1.2 percentage points after two years. This time you've got 7.2 percentage points after two months. So it's a completely different situation than what has occurred in the U.S. post-War economy. And that makes sense because this is a very special shock. We all understand exactly what's going on despite the chaos. We understand we got hit by a pandemic. We understand we have to invest in public health. We understand we have to ask people to stay home and that's going to send people to the unemployment line. But the recovery from this is a very different animal than what has occurred in the past.

That dotted line in the middle is the Blue-Chip projections. And what are they doing? They're doing what all good forecasters would do. They're averaging between what's actually happening and what has happened in the past so they're picking something in the middle and they're projecting out that way. But I'm going to make a further case here that we have a lot of potential for further unemployment decline going forward. So let's go to the next slide.

So this is showing what is so different about this shock compared to other shocks that have hit the U.S. economy in the past. This chart goes all the way back to January of

2006. The gold line is the official unemployment rate and you can see the Great Recession there in 2007 to 2009 in the gray. And then you come over to the right-hand side of this chart and you can see the current recession in the gray.

And the blue line, dotted line there, is the percent of those that are unemployed who described themselves as being on temporary layoff. And you can see from 2006 all the way out to 2019, the typical percent that you would get of the unemployed that are saying they're on temporary layoff is maybe 10% or 15% on the right-hand scale there. So even at the peak, October 2009, which is when unemployment peaked last time, you can see there just after the Great Recession there, even at that point when unemployment was 10%, only about 10% of those that were unemployed described themselves as on temporary layoff.

But you go over to the right-hand part of this chart and you see something totally different. Here, the unemployment rate has skyrocketed all the way to 14.7% in April. But look at the dotted blue line, that went up basically in tandem with the gold line and you had a huge fraction of those that were unemployed describing themselves on temporary layoff and expecting to be recalled back. And indeed that's what happened in May and June. A lot of them did get recalled back, not all of them obviously. But that's why the unemployment rate declined as far as it did. Let's go to the next slide here.

So based on this we can do a back-of-the-envelope calculation which is going to suggest that there's room for a substantial decline in the official unemployment rate in the months ahead. If you just take all of those unemployed that say that they're on temporary layoff, and you just assume in the next six months they're going to be recalled one way or another, and nothing else is going to change, the official unemployment rate would decline to a shocking 4.5%, almost completely back to normal, I think, most people would think looking at the situation today.

Now, maybe you think that's too extreme. Not every single one of those people are going to be called back. But if the on-temporary layoff category returned to a more normal value over the next six months, like one million workers, and nothing else changes, the official unemployment rate would still decline to 5.1%. So this suggests that there's a lot of room, if we play our cards right, to get the unemployment rate way down from where it is now over the next six months. But we're going to have to play our cards right to do that. And you wouldn't expect – being in the middle of a crisis – that everything would go at a perfectly straight line. There's a lot of downside risk, things can go wrong, errors can be made. Things can compound. So it's likely to be an uneven journey as the next chart is going to suggest. Let's go to the next chart.

So this chart shows some real-time data which has become extremely popular in the last few months here in trying to predict what's going on with the economy because this

is such an unprecedented situation. This is based on a blog post by our economist team that's listed on the bottom there reading the labor market in real time. We put this out on June 9.

This uses Homebase data which is freely available and is now being widely used on Wall Street. The Homebase data is the blue line in this picture. This is expressed as percent decline from January 2020. So a reading like a minus-15 means you're 15% below the January 2020 level. The reason this has become so popular is that it has accurately predicted the last three jobs reports when the rest of Wall Street got this completely wrong.

So you can see that the Homebase data declined in the March-April time frame. Then that gold dot there at April 17, that's the official BLS value for the household employment number, and it was down about 15% from the January 2020 value, and the Homebase data had predicted that almost exactly. Then when you got to the May point there, the next point on May 15, again the BLS data was very close to what the Homebase data would have predicted, about a little more than 12% below the January level. And again, in the June data, the Homebase data predicted it would be down about 8%, it was down about 9% from the January 2020 value. So this has been very useful in tracking the economy in real time and that's why it's become very popular so I encourage you to go and read this blog.

You can see at the right-hand part of this chart that this has rolled over a little bit in recent weeks and that's causing a lot of concern. But if you put a gold diamond on there at that very last point, you see that the gold diamond would actually still go up from June to July so we're probably still adding jobs at this point, but not as fast as before. So we'll see how this progresses but this is a good way to track the economy in real time. Let's go to the next graph.

This is the last thing I'm going to say about the upside surprise in the economy. This is just showing various forecasts. These are kind of stunning and ridiculous numbers for the U.S. growth rate. You're taking the quarter on quarter growth rate, multiplying that by four, so that's why you're getting these numbers like down 40% for Q2. We long expected that Q2 would be a very negative quarter. It's not surprising really. We took some of the economy out of production in the second quarter on purpose to try to get the health situation under control. So, of course, a number like this is going to look very bad.

But if you go over to the right here, the forecast has been revised in the last 30 or 40 days here, and the revision is given in the last column. So these various forecasters have marked up their forecasts somewhat. A little bit unusual is how big these revisions are. The revisions by themselves are really big numbers in the world of macroeconomic

forecasting, but it just shows that the news has been quite good in the May-June time frame compared to what was previously expected. So let's go to the next slide.

So now I'm going to start talking about successes in health policy. One of my themes here is that initially there was a lot of concern and very legitimate, I think, about how serious this pandemic would be. Any time you get hit by a pandemic; it's going to be chaos. You're not sure what the disease is. You're not sure how it's transmitting. You're not sure how contagious it is and so on. And so it's a panic-inducing type event.

The initial projections from Imperial College suggested that the human tragedy would be as high as 2.2 million fatalities this year if nothing was done to curtail the pandemic. They said in that study that the best you could do was 1.1 million fatalities. But if you look at where we are today, the current projections from IHME, that's the Institute for Health Metrics and Evaluation at the University of Washington, which I'm going to cite a lot here, they're suggesting less than 1/10th of the 2.2 million level through October 2020. So I think in some broad terms, as bad as the pandemic has been, it has not been anything close to the worst fears of the March-April time frame.

Daily fatalities in the U.S. have declined about 70% from the peak level in April. But I would also say that Covid-19 is proving to be a persistent threat. It's not enough just to get past the initial wave. You also have to manage the crisis and you need continuing

risk mitigation to keep the disease under control. So let's go to the next slide here.

So this slide shows the U.S. experience versus the European experience from March 1 up until the present. We use daily fatalities from Covid-19 as recorded in these various countries. I like to add France, Germany, Italy, Spain and the U.K. together. That's a population that's very close to the U.S. population, 321 million. The U.S. population is 331 million. The response was uneven across those European countries just as it's been uneven across the U.S.

But you can see here that in some sense Europe was hit harder by this. They had daily deaths approaching 3,500 at one point. They've come down faster. The U.S. peaked at about 2,300 per day and has declined slower and so now Europe is at a lower level of daily fatalities than the U.S. The U.S. ticking up just slightly at the end there, but still down substantially from the peak. So this is a classic pandemic-type picture where you get the initial lag of the disease is spreading initially in ways that are unknown, but as you get more experience with the disease, you're able to control it better as you go forward. So both Europe and the U.S. have done better here.

But I'd say another thing about the right-hand side of this picture, just because you get fatalities down to a lower level doesn't mean that, okay, everything goes back to normal. That's what everybody's learning. That doesn't occur at all. The disease is still around.

You have to have risk mitigation which is one of the things I'm going to harp on here. So let's go to the next slide.

So one of the lessons of the second quarter is that work from home is quite powerful and we've been able to produce a lot of our normal output by having people not come into the office and instead work from home. Mobile technology has been around for years and now it's really paying off in this crisis so that's been extremely helpful. And then for those businesses that can't do the work from home, I would say that the second quarter results show that essential retail services can also be provided with low risk as long as simple precautions are taken. I would cite grocery stores. Large retailers like Walmart and IKEA and others have been able to protect their customers and protect their workers and open their stores and allow regular retail to occur. It's not as nice as it would be if we didn't have to deal with a pandemic but fairly simple and logical measures can be taken to mitigate the risk.

I think that for non-essential services that are high contact, they have strong incentives to restore revenue streams and deliver products and services safely. They have very strong incentives to keep their employees safe, keep their customers safe, but also, they want to get their revenue streams back up and running. And it's not just firms, but also economic entities like non-profits that want to get back to some sense of...can you stay on the previous slide there...some sense of...let's go back one.

So I think what will happen now is that during the third quarter many firms will learn from those kinds of companies that have had to operate during the second quarter and they'll adopt the proven risk mitigation activities pioneered by those essential services industries and that will include ubiquitous mask usage in contact situations but also other simple procedures that can be used. More testing, personal protective equipment, other things, take temperatures of people, ask people to be aware of their health and stay home if they're feeling sick. So many things that are simple that can be done that do not rely on some scientific breakthrough or anything like that. Just very simple low-cost things that can be done to get back to normal. So I think what will happen now going forward is that this may bring the disease under control in the second half of 2020. So now let's go to the next slide.

So this slide is again from the IHME at the University of Washington. They have a model. Here's what their model says. The solid blue line is data. The dotted blue line is what their model is projecting. This is the projection with a lot of mask wearing, ubiquitous mask wearing across the economy. And it shows that – according to their model anyway – the daily fatalities would dwindle down to around 200 a day, which would certainly be a much more manageable situation than we were in, in April, the March-April time frame. So I think this is all very doable. That's a simple, known technology that can be done. It would bring the disease under control and would greatly improve our economic prospects as well. So we'd do better on both dimensions. We'd

do better on the health dimension and better on the economic dimension. Let's go to the next slide.

So I want to talk about Covid-19, mortality risk management. So let me bring out this argument here. U.S. citizens face many types of mortality risks. This isn't anything new about how we operate. We face mortality risks every day. And the third largest cause of death in the U.S. is a category called accidental injury. That includes car accidents, but it includes all kinds of other accidents that occur and they're all lumped together in the mortality tables and we call it accidental injury.

So what's happening is that the Covid-19 deaths, which are major, are approaching the typical annual total for accidental injury. So it's a very large cause of single category of death. Now, when you look at accidents of all types, those are associated with significant risk mitigation activities all through the society, that permeate the society, including things like air bags, seatbelts, traffic regulations, and fire codes, and all kinds of other safety precautions. OSHA has a sea of safety precautions that apply to U.S. factories. And then we still see deaths from this particular cause but those are deaths that occur even with the mitigation strategies in place.

And I would say one other thing about this because people say to me, Jim, those are not contagious whereas the pandemic is contagious. But I would point out to you that

fire is extremely contagious. Rome burned down. London burned down. Chicago burned down. So fire is something where it's been around for centuries and been a major risk to humans and we have developed risk mitigation strategies for fire, including having people on the ready to go to a fire as soon as they're notified so that they can keep it from spreading and keep the problem under control. So that's an example of a well-established risk mitigation strategy that's solidly in place, in addition to fire codes.

So, a similar risk mitigation strategy is not yet fully in place for Covid-19, but it appears that we could do this fairly simply, and again the masks come in, but other simple measures can be taken that would provide important components of a risk mitigation strategy. And if we did that, we can reduce deaths and increase output and have a better economy, thus offering better outcomes on both the health and economic dimensions.

So I want to cite these papers that are in this footnote here. These are examples of recent research that has argued that there are better policies out there that will improve on both dimensions. You'd get a better healthcare outcome and a better economy. And that's what I mean by risk-based strategies to contain the pandemic and get the economy back to normal. So let's go on to the next slide here.

So this is a slide that we've been working on at the St. Louis Fed that tries to calibrate

how big this mortality, new mortality risk is. And, by the way, a lot of people have had the idea that, oh, there's going to be a vaccine coming or there's going to be a therapeutic coming and that's going to fix everything. I don't like to do that. I mean I hope that happens and that will be great if that happens and we can eliminate this mortality risk, but that's a tough scientific problem. It's not an all-clear that that will be solve and we should not be planning either the economy or our health policy on the basis that some scientific breakthrough is going to occur at some point in the future. We should be dealing with the situation using simple, available technologies that are not complicated, that we can use right now and bring the situation under control. And then if we get the vaccine in the future, that's all the better, but we want to use technology that's available today.

So this chart is meant to calibrate how big is this new mortality risk that's descended upon us and the gray bars are the accidental injury deaths by age category expressed as death rate per 100,000 using the 2018 data. So you can see the gray bars there. It's about 52 in 100,000. So all of us face this risk. That's the unconditional risk. Every time you go out in a car or get on a plane or whatever, those things can lead to accidents and can produce deaths. So that's what these gray bars are talking about.

The blue line, blue bars, are the Covid risk based on the total number of Covid deaths projected through November 1 for 2020. So you can see that for those over 65, the

Covid risk is higher than the accident risk. That blue bar is higher than the gray bar. So that group is facing a mortality risk that is somewhat higher, about double I'd say or even more, than the risk that they would face from ordinary accidental injury. For the other groups, the other age groups, particularly those below 54, they're at more risk from dying from accident than they are of dying from Covid based on the blue bar data.

The gold bars are the, if you take the projections from IHME with universal masks and you just assume that the endpoint will just continue on, which is about 200 deaths a day, and that just continues all the way through June 30, 2021, so that would give you some idea of the risk going forward with masks of Covid. So those are the gold bars in this picture. So that does reduce the risk for everybody. But again the main message of this picture is that for those under 54, they're facing low risk. For those over 65, they're facing high risk.

So what's going to happen here is that people know this and have become acutely aware of this. I think we all know this from our interactions with our families and friends. And so the people over 65 are going to stay out of harm's way. They're going to take their own risk mitigating activities, most of which involves not interacting too much in the economy and that's going to bring the death rate down still further from what it would otherwise be. For the 55 to 64-year olds, the risk, about the same as the accident risk, maybe a little bit lower with the mask. But again, they're going to take more risk

mitigation activities, people in that age group than people in the younger age groups.

So I'm going to finish up here and so let's think about where we are with the Covid-19 crisis. I think there have been successes in health policy. The response, generally speaking, has been successful, both in Europe and the U.S. But Covid-19 is proving to be a persistent threat, which has not dissipated, and all of us have to continue to take risk mitigation in mind as we go forward.

The second half of 2020 will be a period of continued learning and adaptation to the new mortality risk in the economy. But the good news is that simple risk mitigation strategies, including masks, hold the promise of delivering higher household incomes, that is, higher output – output and income is the same thing in macroeconomics – along with lower fatalities. So you get both higher household income and lower fatalities – improvement along both dimensions relative to where we've been during the second quarter.

There is, I'll just come back to the downside risk, which I haven't talked a lot about here, but it's a time of tremendous uncertainty in the U.S. economy. Downside risk remains substantial. We need better execution of a granular risk-based health policy. That will be critical to keep the economy out of depression. But depression and financial crises are not my base case. My base case is that we will be able to accomplish this in the next six

months and come back to a more normal looking U.S. economy. So I'm going to stop there, Bob, and thanks for the opportunity to regale everybody with my thoughts on where we are in the crisis.

Conversation with James Bullard

ROBERT K. STEEL: Well, Mr. President, thank you very much. I think regale isn't right. You were quite informative and you continued your role as an academic to teach us all. And for that, we're appreciative. We have just a couple of minutes left and you've given us a broad perspective. Let me ask one question that's more of a short-term nature and then second, one of the longer term. And then hopefully that will lead us to a conclusion. You know, you've alluded to this on the charts with the gold diamonds and the blue bar of the instant feedback we're getting in terms of activity. And it does seem that, as you said, that March-April clearly had a lot of energy and we saw great improvement. In the last few weeks, things seem to be a bit slower. Could you talk about that and what you're watching, kind of with your hand on the pulse, to see if we have a pause that continues up or whether it's an inflection point that maybe rolls back a bit? Just comment on the current perspective.

JAMES BULLARD: Yes, I think one thing about using real-time data is that normally we don't do things this way because the real-time data has so much noise in it that we like

to aggregate more so that we smooth things out a little bit. So I think, while the Homebase data has been, you know, very successful and our own blog was very successful on this, I think, I do want to be a little bit careful about putting too much weight on that. And you wouldn't expect in a crisis, you wouldn't expect things to go in a straight line. There would be, you know, a few weeks down, a few weeks up. So we'll see how this progresses here.

I think a lot of people feel like the pandemic is still rolling across the economy. I think there's still adjustment going on, kind of mental adjustment that, okay, this isn't going away and I really have to get serious about, you know, having policy in my head. Every day I have to worry about whether I'm going to get Covid or not. I think all of us individually have that feeling, but then businesses, schools, and all these other entities, they really have to get into the swing of, okay, I have to do these things all day every day. They have to become very, you know, second nature that I would behave this way because that's the new world that we live in. And that hasn't completely taken hold yet. What I'm telling you is I think it will take hold as we go forward because there are so many incentives to get this right. People don't want to get sick and they want to get their revenue streams back and they're going to have to take risk mitigation into account in order to do that.

ROBERT K. STEEL: Thank you. I think that maybe my last question really relates to

things we should think about. You and your colleagues at the Federal Reserve Board have been so forward-leaning and really put your shoulder to this and for that we all thank you and recognize that success. Without your early and courageous efforts, we'd be in a very different place. So thank you for that. Are there other policies, and it could be of a fiscal nature, that you – as an economist – think we should be thinking about here that are going to become more important in the intermediate term that you'd like to put a thumb on the scale to consider. Things – infrastructure, skill building, are there other things that you feel like we should be thinking about at this time?

JAMES BULLARD: Yes, I didn't talk about it here but I've talked about it elsewhere that the policy response has been – in my opinion – quite good. And I think the Fed and the Board of Governors, I would give them a lot of kudos for immediately putting the so-called 13(3) programs, emergency lending programs into place. Those really haven't had to be used all that extensively, but just the fact that we put them there and got them in place reassured markets that we weren't going to allow this to morph into a financial crisis on top of the pandemic and so far, that's been very successful. So I think that's really been the bulk of the Fed policy, plus low interest rates of course.

And then on the fiscal side, I think – despite dysfunctional politics – we got a great fiscal response here I think because both sides in the political debate just recognized that this was a very serious situation. And it was so successful that personal income in the

second quarter looks like it'll be actually higher than personal income previously. So personal income, you know, you're counting all these transfers and stuff that are occurring and the checks people get in the mail and stuff. So that part has really kept people afloat through the second quarter. And now I think you can probably extend that some with the new fiscal package at the end of July here.

But again, I think the main thing for the second half of the year is to get everybody on board with the idea that you have to have a kind of continuing risk mitigation strategy to keep the disease at bay and just getting down to a low number of fatalities is not really, is not helpful at all by itself. You have to take action every day to make sure that you're safe, just as you would take action every time you get behind the wheel of a car to make sure that you're safe from accidental injury.

ROBERT K. STEEL: Well, I think there's no question. Those of us that watch markets recognize that the Fed policy had an immediate effect on opening capital markets because of the confidence it created and the transmission mechanism was quite successful.

So let me just conclude by saying, Mr. President, thank you for your time today. Thank you for your service as the leader of one of the Federal Reserve, regional Federal Reserve Banks, and we're most appreciative.

And now, as we close, I speak to members and say you've already seen, I hope, that we have an active Calendar of Events coming up over the summer this year. We have many great speakers. Tomorrow actually we have two sessions scheduled, webinars. One at 12:30 Eastern Time with Stephen Hahn, the Commission of the FDA, and at 3 p.m. with Secretary of State, Michael Pompeo. Next week, we're back with Bobby Kotick, the Chief Executive Officer of Activision Blizzard on July 20, and David Solomon, Chairman and CEO at Goldman Sachs on July 22. Please watch our website for things that are popping all the time. We thank our members for their support. We look forward to their input and appreciate the honor to serve all of you. Thanks so much everyone for coming today. Thanks again, Mr. President, and everyone, you always have to end by saying please stay safe and take preventive measures as the president suggested. Thanks so much.