The Economic Club of New York

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Mark Carney
United Nations Special Envoy on Climate Action
and Finance
Former Governor, Bank of England

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Webinar

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Introduction

Chairman John C. Williams

Good morning and welcome to the 577th meeting of The Economic Club of New York, and this is our 113th year. I'm John Williams. I'm the Chairman of the Club and I'm 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.

I'd like to take a moment to recognize those of our 316 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 and diverse programming now and in the future. A special welcome to members of The Economic Club's 2020 Class of Fellows – a select group of rising next-gen business thought leaders. I make special note that applications for the 2021 Class are still open, so please visit our website for more details. We'd also like to welcome graduate students from Rutgers University, Baruch Zicklin School of Business, NYU Stern School of Business and the City University of New York Graduate Center.

Now it's an honor for me to welcome our special guest today, U.N. Special Envoy on Climate Action and Finance and the former Governor of the Bank of the England, Mark Carney. Mark was appointed to his current position in December 2019 but from 2013 to March 2020, he served as Governor of the Bank of England and Chair of the Monetary Policy Committee, the Financial Policy Committee, and the Board of the Prudential Regulation Committee.

In addition to his duties as Governor of the Bank of England, he served as Chair of the Financial Stability Board from 2011 to 2018, First Vice Chair of the European Systemic Risk Board, and a member of the Group of Thirty and the Foundation Board of the World Economic Forum.

Mark received his bachelor's degree in Economics from Harvard University. He went on to receive a master's in Economics and a doctorate in Economics, both from Oxford University. After a thirteen-year career at Goldman Sachs in London, Tokyo, New York and Toronto offices, Mark was appointed Deputy Governor of the Bank of Canada in 2003. He left the Bank to become Senior Associate Deputy Minister of Finance and he held this position until his appointment as the Governor of the Bank of Canada back in 2008. Mark served as Governor of the Bank of Canada and Chairman of its Board until June 2013.

The format today will be a conversation on the Group of Thirty Report on "Mainstreaming the Transition to a Net-Zero Economy", which Mark co-chaired the Steering Committee along with Janet Yellen, former Chair of the Board of Governors of the Federal Reserve System. Joining Mark in conversation is Andrew Ross Sorkin, who we're very happy to have back in our events. Andrew is the Founder and Editor at Large of DealBook, a columnist for *The New York Times,* and co-anchor of CNBC's Squawk Box. We're going to end promptly at 11:45 and I assure you that questions that any of you sent to the Club were shared in advance with Andrew. As a reminder, this conversation is on the record. We do have media on the line. And with that, I'll turn it over to Andrew.

Conversation with Mark Carney

ANDREW ROSS SORKIN: Thank you so much for that introduction. Mark, it's great to be here and it's great to be with all of you, and I do hope at some point we can all do this again in person. But in the meantime, Mark, we will make do, and we'll hopefully do more than just make do over the next 40 or so minutes together. You know John really set this up exactly where I want to go which is to go straight to this G30 Report and really try to understand it and understand how you're thinking about this issue in an even broader context.

I wanted to start out maybe with sharing what I thought was the most salient point. It's on page 16 of the report, for those of you who are playing at home. But as I was going through it, this is what struck me, and I wanted you to maybe help with it. You wrote, "Too often governments' climate strategies lack credibility. Benefits of climate policies will not be fully visible until long after the next elections, but any short-term cost will be felt immediately. Once elected, politicians are hence tempted to skimp on environmental efforts to fuel short-term growth. This can make it difficult for businesses to predict the future direction of climate policy." And this was the sentence that really struck me. "The credibility is similar to the challenge that monetary policymakers used to face." And as a monetary policymaker yourself, I'm hoping that maybe you could expound on what you mean by that.

MARK CARNEY: Exactly. Well, first off, thank you, Andrew, and The Economic Club of New York for having me. And I want to pay tribute to Janet Yellen, in a small way, as co-author of this, co-Chair of the group, John Williams, who was part of the Steering Committee. I probably should say also Janet in taking, I wish her the best in her new role as Treasury Secretary.

Look, you're right. As typical, you've gone to the heart of what this report is saying, which is that there is an analog between the problems we used to have with central bank credibility when those decisions were heavily influenced by the political side. My old shop, the Bank of England, the decisions actually were made by the Finance Minister, the Chancellor of the Exchequer, before 1997. And there is that incentive to promise low inflation but then renege and eventually the market learns that and ignores the promises and we had the problems we had in the 80s, etc.

The issue with climate is that in a number of countries – not all – in a number of countries climate is a decisive factor or important factor for being elected, but then once governments are in place, they do exactly what you identified, which is to skimp on the measures. And the point we're getting across in this is drawing out in 85 pages of detail and argument and structure, is to show the cost of that inconsistency, that time inconsistency because if you can – as a country – have a credible and predictable climate strategy and the market has the information it needs from companies and others and we'll get to that I'm sure, the market will pull forward the adjustment.

It'll smooth the adjustment so by the time you get down the road, and let's say, for the sake of argument, part of your climate strategy is a carbon price, by the time that carbon price is higher, lo and behold, the economy has already adjusted to that carbon price. But if it stops, starts, stops, starts, and then eventually there has to be a very, very hard climate policy put in place, it's extremely costly. And that's what we're playing with is this direct analogy between central bank credibility and climate policy credibility. It's as much a message to the policymakers across the aisle as it is to what we need to build in the financial sector.

ANDREW ROSS SORKIN: You mentioned the market and companies. Do you think it's built into the market really?

MARK CARNEY: Do I think, no, I think it's beginning to be built into the market. And there's a couple of reasons why it hasn't been built into the market if we're talking about the trends. Let's define the "it." It's the transition to net-zero, is that built into the market? Because ultimately in order to stabilize the climate at 1.5 degrees, 2 degrees, 3 degrees, 4 degrees, you have to get to net-zero at some point. And the question is what's the arc in terms of where you're going to get there? And for the market to build that in, it needs information, it needs climate disclosure. It needs a sense of how relevant the transition is for the company.

And again, I'll use my carbon price analogy, it's about much more than carbon prices but, you know, if the carbon price is going from $10 to $20 to $50 to $100 over the next decade, how much does that matter for a company? What does it have to adjust? And it also goes back to this credibility point.

Now, there are bits of the market, and I'll finish on this to answer, there are parts of the market where this is built in. So if you look at the cost of capital on the renewable side versus the cost of capital for offshore oil, heavy oil, deep oil, the cost of capital is somewhere between a third and a quarter on the renewable side today as it is on the heavy oil side. If you look at the shadow carbon price that you can calculate on the basis of those differentials, it's somewhere in the $80 mark, $80 a ton, but that's not applied across the whole market. That's the point. It's applied in the extremes, the extremes of renewables, the extremes of heavier fossil fuels. And what's going to happen if we are going to get to net-zero is we're going to need the whole of the economy to transition and we're going to need to unpack who is ahead of the game, who is behind in terms of that transition in industrials, in consumer products, in tech and in finance.

ANDREW ROSS SORKIN: One of the things that's happened over the last several years is we've seen some companies decide to be much more aggressive on climate issues than others. Those that have taken more aggressive steps typically – at least at this point in the ball game – have oftentimes bought the equivalent of carbon credits and carbon offsets.

And I want to talk to you about that because part of what has to happen here is we really do ultimately – I imagine and I've seen you talk about the idea of properly pricing carbon, people have talked obviously for a very long time about what a carbon tax really looks like – but at the same time, and there was a fascinating article, I don't know if you read it. In *BusinessWeek* magazine just last week that these carbon offsets and the way carbon is being priced might not actually even be real, which is to say when you buy or pay money to effectively protect a forest somewhere, to some degree in certain cases you could argue the forest was potentially already protected. And the question, therefore, becomes sort of how to price it and actually whether there's, even in whatever market you think exists today, it's even being done properly to begin with.

MARK CARNEY: Okay, so I'll give you a short answer to that last bit of the question which is, no, it is not being done properly today. If you look across that market for offsets, which is a small, fragmented, uneven quality market, you know the trades last year were something in the order of $320-$325 million a year, so it's a tiny market in the end. So that's the short answer to the question.

ANDREW ROSS SORKIN: You can give the long answer too if you want.

MARK CARNEY: Well, then I want to go to the bigger issue, which is actually what we're seeing, so obviously the market's not that big so it's not that central to companies' decarbonization plans yet, the first point. The second point is that this will be an important, but still, so this market is a $50-$100 billion a year market, okay. And let me explain that. What's happening is that more and more companies, and you see it every day, are making these net-zero commitments. The core of those commitments is to reduce absolute emissions, you know, getting renewable power, reducing their carbon footprint, re-purposing processes, all these sorts of things. But at the same time, to have the trajectory, they are buying some offsets, or they will buy some offsets if there is a market, if there is a market for a period of time.

Now, if you're a company CEO, I'll use Microsoft as an example because they actually are going to go beyond zero and they're going to make up for all the emissions they've had over…you know, since it was founded in Albuquerque by Bill Gates and Paul Allen, so they have to actually take carbon out of the atmosphere in order to get to net-negative. But they're not going to put that in their annual report unless they know it's real. So they need a real market and there's a demand for this real market. So one of the things that we're doing for COP-26, which is this climate meeting in Glasgow a year from now, is to set up that real market.

And Bill Winters, who is the head of Standard Chartered, and Annette Nazareth, who is the SEC Commissioner, are working with a, there's a task force of 130 private sector institutions, throw on top of that another 40 or so NGOs and third party sectors who are developing this market so you have verification, you have authenticity, you have an exchange-traded core contract and an OTC market that's developed around that. And by the time, you know, hopefully if we do this again this time next year, the early stage of that market, the pilot of that market should be up and running but at a standard that you know that if you bought that offset, it's real, it's verified, the forest gets planted.

And this is another important point. Obviously if you're planting a forest and as the forest grows, that's taking incremental carbon, that's removing carbon as opposed to avoiding carbon being produced, which is the preservation of an existing forest.

ANDREW ROSS SORKIN: What do you make of some of the very ambitious goals that we've heard from a number of large companies that are attempting this, some of which are not just trying to get to be carbon-zero or carbon-negative, they have to – as you said – they have to become so carbon-negative, Microsoft trying to effectively rid itself of all of its carbon use over the lifetime of its entire existence?

MARK CARNEY: Yes.

ANDREW ROSS SORKIN: Are these stretch goals or are these realistic goals?

MARK CARNEY: Well, I have tremendous respect for that company and I don't think they'd put out a goal that they didn't intend to fully achieve. And they, in addition, invest in and look at these various decarbonization metrics, direct air carbon capture, other technologies that ultimately will be necessary for all of us to get to net-zero in the end. I mean one thing I think we should recognize is about 60%, 65% of decarbonization is economic today. The technologies exist. You can put it in place. And so it's a question of capital turnover and restructuring.

There is another, and there's another 15 or so percent which is on the margin and it depends on government policy that could make it economic. And then there's about 20%, which is, let's call it venture, right? So hydrogen, direct air carbon capture, sustainable aviation fuels. And what this process is in place, let me answer the question, answer the question, then make a bigger point if I may, what do we make of these net-zero plans, they're like anything that comes into play. They're of uneven quality. You know some companies have an objective. They have a clear plan. They have milestones that go out the next five years. They tie executive compensation to meeting those milestones. They have the technologies, you know, you can track it that way. Other companies have the objective and they're going to figure it out.

But, as the whole, what we need in order to get to where we need to get to, and we're in 126 countries and counting, it is the objective of the country to get to net-zero. And the President-elect has made it clear that in the U.S. he intends to be in clean energy by 2035 and net-zero by 2050. In order to get there, we do need this whole economy transition. And I think, Andrew, what this process does, you figure out which companies have the right plans and need to be backed with capital and that's going to be a driver of value. You figure out which companies don't have a plan and they're going to be punished ultimately for that because they're going to lag. But you also can see, in the market you can see, well, which are the big technologies that if I can unlock hydrogen in industrial processes, which is a probability, well, that's going to be incredibly valuable. And so it shines a light on where the huge opportunity set is.

ANDREW ROSS SORKIN: When you think about, we have a number of investors, as you might imagine, that are on this call with us right now, and part of what's driven this, at least the market-based version of this where companies have decided to approach it in this way – I want to talk about government policy in just a moment because I think that's going to be critical to all of this – but some of this has been driven by the movement otherwise known as ESG. And my question to you is you're seeing, you know, a BlackRock and others that have been very aggressive, even more so in Europe than necessarily in the U.S., but how much of a driver of value you think that is changing the dynamic? Meaning that the investor class itself is the one that's actually pushed other companies to do this or do you think it's the tail wagging the dog?

MARK CARNEY: I think that the best in the investment community, and this has long been the case, anticipate where things are going. They get out in front of it. They catalyze change. The same is true in the corporate sector but there's also, you know, that's the spearhead on the corporate sector. You can see certain companies who are out in front, have anticipated, they are moving. But, in general, to get mainstream change, you need those investors who see where the world is going.

Now, where is the world going? I said a moment ago, you've got 126 countries plus soon the United States, with net-zero objectives, that is not going to happen in a niche. That's going to happen across the whole economy. That is going to be a driver of value. Okay. This is why when you say this consistently, is that this is one of the biggest commercial opportunities, not just because of the scale of investment, although at $3.5 trillion a year globally, dollars, that's pretty big and, you know, gets even, you know, your attention, some investors online. But also because, and it goes back to a question you asked a few moments ago, which is how much of this is in the market? The answer is some but not all. So part of the judgment here is who really has a plan? Who's ahead of the game? And what can I do, I mean one I'm doing in my private sector life is actually around this, which is to help companies with the transition from being above the line – if you will – to getting below the line on the transition towards net-zero, and that creates real value.

ANDREW ROSS SORKIN: One other investor question and then I want to get to government policy. I think there's a big issue right now where certain investors, including the BlackRocks of the world are called, or banks even, are called hypocrites. People say, you know, you're out there on one end saying that you are for working on climate change issues and zero carbon emissions and the like, and yet at the same time you clearly have investments or you continue to work with carbon-producing companies in a meaning way. Now the companies, whether it's a BlackRock or a JP Morgan or whatnot, will say, look, we're staying in it and we're engaging on these issues and trying to use our influence to push these companies in this direction. There are other people who say that the way you actually make change is you effectively sell out of these positions. That's actually how you make the real change. Where do you sit?

MARK CARNEY: Yes, well, there's a couple of observations. One is investors, I said a moment ago, this is a big determinant of value, so investors are increasingly going to make a judgment about which companies are on the right path or can be put on the right path to transition and which aren't. Okay. So they're going to make those judgments and they're not going to do it by algorithm. Those are judgments. But investors themselves and banks are too. They are also going to be judged. They're going to have to show, and we're seeing that, the question itself reinforces it. Well, what are they doing? How well are they positioned for the transition towards net-zero? So if I'm, again I won't pick, if I'm a pool of capital, what proportion of my assets, companies I own, have a transition plan? How do I judge whether or not those transition plans are credible or not? And then, of course, it also goes to voting records and others.

I'll say two things about divestment, if I may, and then I'll hand it back. One is that divestment, it's sometimes said that divestment doesn't make any difference because the asset is still there, someone else buys it. That's not the way the market works. The market does, it will change. If you get supply and demand in balance, which you will if there's a movement, the cost to capital changes. We already see, I referenced earlier the cost to capital, and that's how the market works and that's a signal about renewed investment and it's a cost.

But the second thing is, to go back to this core issue, that if we are going to get to net-zero, we need a whole economy transition. And so we need to take the big energy companies that have a plan to move towards, you know, lower carbon solutions, the big industrials who have plans, back them with capital and get them to move as opposed to just shunning them across the board.

ANDREW ROSS SORKIN: I promised we'd get to government policy, but I do have one additional follow-up related to the corporate and investing sphere – if you will – which is the idea that investors effectively, when they do get out of these positions and divest, whether you think that from a public relations standpoint that that is actually, I understand the market argument that you just made, but whether you think that it actually changes the dynamic inside the boardroom?

MARK CARNEY: Let me make sure I know what you're asking and redirect me if I'm answering the wrong question. If you're saying that it, from an ESG perspective, it's easier to be out of certain industries and so that decision is taken by an investor or a bank, I think that, I think candidly that sometimes is the case and could increasingly be the case given social views.

ANDREW ROSS SORKIN: By the way, I should actually have asked you this: are you surprised given Covid and the pandemic we're living through right now – we haven't even really talked about the pandemic – I think going into this pandemic there were lots of questions as to if we ever had an economic downturn – now maybe we could argue that there hasn't been an economic downturn for some of the largest companies in the world that are committing to some of these climate policies, but if there was, that they would abandon them? Because the question was if you only had so much resources, you'd either keep your employees or keep your pledges. Are you surprised that people have seemingly kept their pledges thus far and do you think there's a lesson in Covid that relates to climate for companies?

MARK CARNEY: If you'd ask me that question in March of this year, which way did I think things would go, I would have given you a classic "on the one hand, on the other hand" and genuinely been unsure because, you know, we both lived through the 2008 crisis. You had a center seat at it. And there was a similar momentum going into that crisis around these issues which just disappeared. I mean I'm overstating it but effectively disappeared. And I think what Covid, a couple of things are different. One, we're 12 years on so we're that much closer to the problem. The manifestation of the problem is greater. The understanding of transition risk and opportunity is greater in the financial sector. People understand that, wait a minute, and it goes back to the G30 Report, if you wait until the end to make a big government policy adjustment, we're going to have a ton of stranded assets, we're going to have a bit hit.

But then I think the other thing is the nature of Covid has reinforced some things. Look, think about this crisis. Massive inter-generational inequity, right? You know the young people coming out of college, it's tough for them to get a job, tough to get started. It's very hard to make that up. We all know the problems with education online which is better than nothing but it's not that good and there's going to be a cost there. There's going to be big fiscal costs which will ultimately be repaid by the next generation on top of, of course, climate is the ultimate inter-generational inequity. You've got that.

And then also you just have a sense of – for lack of a better word – solidarity. I mean we're all in this together. You can't self-isolate from climate. I mean you can try to self-isolate from Covid. It works for a time, but it doesn't work that well – witness President Macron and others, and so it kind of rams home this point.

And then the last thing which again – and I'm not trying to shift this onto government policy, but it goes to government policy – which is that it is now the case that actually some of the most job-heavy and GDP, you know, highest GDP multiplier policies actually relate to the transition towards a more sustainable economy. And that's partly because of the advances that have been made in technologies and the economics of that.

But I can I make, just before we shift, because I didn't quite finish my answer around, because I do think the ESG factor is an influence in divestment and other things. My way of thinking, though as well, it reinforces this point that if you don't have an overall strategy and you, as a pool of capital, whether you're a bank or investor, that relates, and an overall view in terms of are you part of the solution or indifferent or part of the problem in terms of the transition, of course you're going to get pressured to divest on certain specific industries. But if you are saying that we are going to manage down our loan book in a way that's consistent across all industries that's going to reduce the carbon footprint of the loan book or the investment book, and within that context on backing this utility that today has, you know, a poor carbon footprint but is going to change, well, that changes the conversation because then you're having a real impact.

ANDREW ROSS SORKIN: Let 's pivot to government policy and maybe we'll go micro and macro. You wrote this report with Janet Yellen. She is our next Treasury Secretary here in the United States. What can she do and what should she do?

MARK CARNEY: Well, she's a much better judge than I am in terms of the answers to both of those questions, I think what you would take from this report and recognizing that she has a long history in these issues and is one of the finest economists of our age. So, you know, way back when she was Chair of the Council of Economic Advisers she worked on these issues and probably before, but that's the first exposure I had to it. I think what she can do or what this administration can do – maybe I should say it that way and I mean more broadly in terms of all the U.S. regulators – is at a minimum bring the U.S. up to global levels and I suspect surpass and raise the game of global levels in terms of disclosure around climate-related issues, the risk management of the banks – by the way, I noticed that one of the large banks put out today, Citi put out today a variant of the climate stress test of their loan book, which is exactly the kind of thing that is needed – developing of some of these carbon markets. So all of that sort of regulatory aspect, the U.S. has not been part of, should be part of, and by being part of, will make much better. So that's, I think, straightforward but hugely important.

Then I think the second thing that the administration, and I'll talk slightly in generalities, but I think with the proposed appointment of Brian Deese at the NEC as one example and there are countless others, John Kerry's role, the Energy Secretary proposal yesterday, etc., all of that points to an integrated approach to climate and economic growth, right?

So putting, you know, seeing the upside of the sustainable investment, which is huge in the U.S. So I think that goes to regulatory policy having a sense of what are the fuel standards going to be on a national level. What's the role for hydrogen? Are there going to be any hydrogen fuel blends down the road? What's going to happen with the internal combustion engine over time and what does that mean for the auto industry? All of those aspects of regulatory policy are incredibly important. It goes back to credible policy.

There's a decision, and I don't have any insight on this, there's a decision of whether there will be a carbon price in the U.S. Obviously, logically that would be the case. I would point to the example in Canada. Last week, last Friday the Canadian government laid out the path for the carbon price to 2030. It goes to $170 Canadian, which is real money even in Canadian. But what they do is they rebate all the proceeds, all of the proceeds to Canadians. And what you get is about two-thirds, 70% of people end up ahead including those least well off. So you get up to the 70th decile where you end up ahead and you're going to get a quarterly check from the government. All it does is change the price. Now that's a big, big decision and the U.S., you know, obviously it's not a debate that's really even begun in the United States.

ANDREW ROSS SORKIN: But blue sky it, given what you know about politics in the United States, do you think the idea of a tax dividend, which is what they call it here, would be a politically palatable, more than palatable bipartisan effort? You're already hearing, frankly Republicans come out even in relation to Janet Yellen's appointment in terms of some of the things she has said about climate.

MARK CARNEY: Yes, well, do I think, let me answer, is it a good policy? It's a good policy. It is a good policy because it is a progressive policy. It helps with the adjustment. It sets a path for investment in the economy which is what we all need in all of our economies to grow. I'm not the one to make a judgment about, you know, Congressional politics and within the broader, you know, the art of the policy in the United States. I will say, though, that what is, what is sometimes underestimated is the power of regulatory certainty and getting a sense of what is the economy going to look like, whether it's in the transportation sector, in the power sector, what's it going to look like ten years from now and the path to that? And then you combine that with companies who are going to have net-zero plans because it's clear that that's what's required and a financial system that increasingly is focused on this. And we'll get some, my view is we'll get some pretty powerful investment multipliers from that, and really private investment at the core.

ANDREW ROSS SORKIN: We only have about five more minutes together and I feel like I would be remiss if we spent no time getting your views and expertise on where we are in the global economy frankly and trying to understand what you think about monetary policy during this Covid pandemic and what it means on the other side.

MARK CARNEY: So an open-ended question. Okay, well, first off I'll pay tribute. I, of course, well, you may not remember but I left on the Ides of March, the Bank of England. So I handed this sort of time bomb, you know, exploding bomb to Andrew Bailey, my successor, because it was just the teeth of the start of the lockdown. And at the time we thought we were bridging, based on epidemiological advice, we were bridging to about now. In fact, probably just earlier in the fall. Obviously that's not the case. We all know that now.

I think the emergency support mechanisms put in place have been highly effective. I think that the innovation, particularly of the Fed around the stance of monetary policy, and John Williams, I pay tribute to his central role in that, is a big, big deal. The market is waking up to how big a deal that is as the prospect of the recovery comes into view. And recognizing that policy, again consistent with what the Fed said yesterday that policy will continue to be stimulative until real traction has been established, some of the undershot of inflation has been made up and we've made real progress, and the U.S. has made real progress on reducing unemployment to appropriate levels. And that, in effect, that policy has been adopted with local twists in the U.K. and Europe.

So the role of monetary policy, while it has been less important than the huge, huge fiscal will be very important as we come out of this. So I, you know, look, I pay tribute to that. I think we are still to see the full power of those decisions as finally, when we finally get to the point that we're exiting this health crisis.

ANDREW ROSS SORKIN: How concerned are you that some of these policies will only exacerbate inequality? As my colleague at *The New York Times*, Tom Friedman, said, you know, Occupy Wall Street may look like a, just a warm-up act in a couple of years from now depending on what the outcome of this all looks like.

MARK CARNEY: Well, I think that clearly the health crisis has exacerbated inequalities. We talked a moment ago about the inter-generational effects. Just the ability for you and I to carry on our careers versus others who are, you know, on the front line and tend to, you know, I'll give you a statistic in the U.K. Forty percent of the jobs that are directly affected by the lockdown measures, these are the 40% least well-off people in the country, right? So everything is pointing to exacerbating inequalities and we had inequalities coming into this and inequalities that were going to be reinforced by some of the technological change. So a focus on re-balancing is going to be, re-balancing those inequalities is going to be a responsibility of government in any jurisdiction.

ANDREW ROSS SORKIN: Do you believe, though, that monetary policy is exacerbating it?

MARK CARNEY: No, I don't actually. I mean I think that, I think that the choice set, and particularly the choice set as we come out of this, so let's be clear, I mean as you know, but just for those who maybe don't watch this closely, you know the Fed has this commitment to bring unemployment back down to its natural rate, its natural level. And even within that, an inclusive definition of employment because they've taken a lesson from the previous expansion – and they don't use this term but I'll use it if they "run it hot," that you get, that you actually start to reduce some of these inequalities by building up. So I think the stance of policies there, yes, it's true that we do have, you know, asset prices are, those who are asset owners are benefitting, but that's the mechanism by which the policy has to be delivered.

ANDREW ROSS SORKIN: So, but given that, that perhaps that's how the medicine has to be delivered, is there something that from a policy perspective you would do to offset it on the other side?

MARK CARNEY: Well, from, I think there's two big policy issues that come from this. One is, one, there is an issue in terms of the structure of the market and market-based finance and the supports that were put in place, that had to be put in place in March-April. That's not a good place, I mean it was the right thing to do but it's not a good place to be and we shouldn't end up in that situation again. That's a set of regulatory issues that need to address that. I think in terms of the, to loop back to the bigger situation of the inequalities, yes, there are a host of policies that need to lean against those. Those are primarily fiscal policy related and, again, to kind of go back to where we started which is that one of the big inequalities is inter-generational, which is around climate, it's pretty clear what the younger generation wants on climate, which is that we deal with this. And we can deal with this and put in place the policies that are starting to be in place in a way that actually leads to the growth and the jobs that we need to address, the more immediate inequality issues.

ANDREW ROSS SORKIN: I know you're an optimist, but if we were to have this conversation five years from now, what would we be talking about when it comes to climate? Where would we be? How should we measure success from here to there?

MARK CARNEY: I think we'll have to measure success in terms of absolute reductions. So we had absolute reductions in emissions this year for all the wrong reasons. We shut down the economy. So five years from now we need to see, you know, compounded, sort of 7% reductions over that period in the U.S., in the U.K., in Canada, the other major advanced economies. That will be the proof of whether or not these net-zero plans and these policies are actually having their impact.

And do I think we will get there? I think we could get there. I think that a lot of the building blocks are being put in place, but this is about execution. It's not about rhetoric, it's not about clever speeches. And it's moved a long way in the last 12, 18 months but, I think what I also will say, I would say is that when we look back five years from now, our view of the sophistication of climate stress testing, the adequacy of climate disclosure, the quality of net-zero transition plans, they will all look pretty primitive from the perspective of five years hence. Because what's happening, and maybe this makes me sound like an optimist – I think it's kind of realistic – is now you have the best in finance. This is mainstreaming. And so now you have the best in finance focused on it. And the consequence of it is you hand off from the sort of mediocre in finance, you hand it off to the best in finance and they will be much, much better at it. And I think they'll be much better at it because they have the prospect of making a lot of money on it.

ANDREW ROSS SORKIN: Mark Carney, on behalf of everybody on this phone call, thank you. It's been an education, a great education. We appreciate it. We appreciate you. And I'm going to hand it back to the Honorable John C. Williams.

CHAIRMAN JOHN C. WILLIAMS: Well, thanks a lot, both Mark and Andrew. It's been a fascinating conversation. I appreciate you sharing your time and your insights with us today. This has been, like I said, a fascinating conversation on important issues. With that, I want to take just a moment to thank all of you for attending today and throughout this year. This has been a very active year for the Club with many, many events, and we hope you and your guests have enjoyed the programming that we've offered. We look forward to great speakers and discussions next year.

So peeking past New Year, I've got a couple of announcements just to, for early next year. On February 2, we're going to welcome our Club member, Nasdaq's President and CEO, Adena Friedman. And on February 10, we'll welcome back the Chair of the Federal Reserve, Jay Powell. So thanks again and we wish you and your loved ones a wonderful and a happy holiday season and Happy New Year and we'll see you next year. Thank you.