



Conference Transcript

The macroeconomic implications of climate action

Keynote: Pierre Wunsch (National Bank of Belgium)

Monday June 5, 2023, 11:15 AM EDT

This transcript was generated using speech recognition software and human transcribers and may contain errors. Please confirm quotes in the corresponding event audio.

Jean Pisany-Ferri: This is actually in this capacity that I first met you. So he knows what he's talking about as far as technicalities are concerned. Both the technicalities of economic modeling, but also the technicalities of a physical modeling. And, so it's not the first opportunity for him to speak about climate change and the implication for policy. He gave a speech that was -- I'm just checking. It was in 2021, about the ECB and climate change.

The title of which is extremely cautious, but very well-balanced. So, climate change and the ECB, we need both enthusiasm and realism, which is perfect introduction to what I think you are going to speak about now. So without further ado, let me give you the floor. So you're going to speak for -- we are a bit late, so if you could keep your remarks -- your initial remark within the allocated timeframe, and then we'll have a discussion. And then I'll open the floor to questions from the audience.

Pierre Wunsch: Thanks a lot, Jean. You've been too kind with me as always. It's a great pleasure to be here for this keynote speech and honor. As Adam said, it's, of course, a very topical issue. But I'm not going to talk about the why we need to do that or what we need to do, because it has been decided in Europe. We want to go to net zero in 2050. But why is it maybe even more topical to talk about it today? It was mentioned in previous panel in Europe, and I will give a perspective, which is a bit more European.

I think three developments were important last year or over the last 15 months. The first one is, of course, the fit for 55 package which is a game changer. I tend to agree with, with John, it should bring us to at least close to net zero by 2050. The other one is of course, a carbon price. We've reached a carbon price in Europe last year of €100 per ton. For a long time, the carbon price was moving around €20, and it was essentially having an impact on coal versus gas in the electricity sector. So it was a very focused impact on just one sector.

But it's also very topical, I think because -- and many discussed that already in the first panel, because I have the impression that we've already reached peak enthusiasm in terms of climate policies. If you look at recent event in

the Netherlands on nitrogen in the election in Bremen with significant fall in, in the votes for the green party in Germany, the discussion on gas boilers in Germany, it's becoming real, but you already see some form of political backlash.

So, in terms of message, I guess I will be in line with the speakers of the first panel. The comparative statics of climate change looks good, and the cost of going to net zero should be relatively limited. But the transition indeed is going -- probably could be bumpy. And part of it for political reasons and because of the first backlash that we are seeing, and as just mentioned. I will go through a number of policy issues and then communication issues, and then conclude with the impact for central banks, but also maybe the role of central banks.

So we'll start with -- to set the scene, a set of three graphs that may look a bit complicated. It's basically the cost of energy in megawatt euro per megawatt hour, which is quite easy, but you don't see often -- coal, oil, gas, and electricity prices. And you, of course, see the huge progress we've made in terms of renewables. So my first message here would be basically that the future is green, and it's a future of relatively abundant and cheap energy. It might not be as cheap as energy we've known in the 90s when energy was extremely cheap, but it's probably going to be broadly in line with the cost of energy, uh, in the 2000s.

So, much I would say for *décroissance*, the future of energy is I think at least in comparative statics, relatively positive. Now, of course, and we know that, and I know that -- the transition is, is mostly about electrification, but renewables are not perfect substitutes for all forms of energy. They're intermittent, batteries are bulky. Electricity is not easy to store. But it does also have some advantages.

I mean, there are two sectors for which electrification will bring huge efficiency gains, electric cars compared to commercial engine and heat pumps compared to gas boilers. So I think there are actually, when you look at the cost of the transition, four cases in point. One is going from brown electricity to green electricity, and especially in Europe, probably it means lower prices because electricity prices right now are quite high. So that's about 20, 25% of energy use, probably cheaper.

Then you have electrification with substantial efficiency gains, and I just mentioned it, heat pumps and electric cars, which should, at least on an energy basis, means that we should be close to the very low levels of energy costs that we had in the 90s. But for different reasons, just because of the efficiency gains of 300 to 400% in those sectors. Then you have electrification without efficiency gains when you have to use electricity for

heat, for instance, in industry, but without heat pumps or for some other processes. And there it's probably going to be more expensive.

So, green electricity in 2050 should still be more expensive than gas at €20 per megawatt hour in the 90s. And then what is really going to be more expensive, it's what you cannot electrify and where you will have to rely on decarbonized fuels. And that's really comparing a gas price of €20 as we used to, to know it in Europe with the cost of carbon capture, which is probably going to add €20 to €30 to the gas price. If you can do carbon capture. The cost of, uh, green, uh, hydrogen, which is probably going to be four to five times higher than the gas price of €20, sustainable aviation fuel and the likes.

And I've great backup slides on those. So hopefully someone will ask questions after I've run out of time, and I can say a little bit more on that. So the impact of climate change on the economy, is it macro critical? And I think the best way to start the discussion is to read one of John's many paper, because it's crystal clear. I think it really points at all the very important questions we need to ask ourselves.

And in terms of criticality, what John does is basically says, okay, let's take a carbon tax of €75 to €100 per ton, and let's look at how big is it worldwide? And it's about 3% to 4% of GDP. And John tells us, yeah, but that's more or less to be compared to the old shock of the 70s. Of course, you can discuss whether it was permanent or not, but I think it gives a first order magnitude, which is very, very useful.

And of course, then you want to add -- but that's spread over 30 years, so we have much more time to adapt to that. Other maybe more qualitative impacts. We're going to need some major resource reallocations, workers investments, higher investments, probably net in the order of 2% of GDP, which probably should have an impact on our star-- our star should go up.

What about inflation? Well, it's a relative price story, so whether inflation is going to be higher, we're going to have bottlenecks, not clear, but it might have an impact on inflation, lower consumption, and of course, many, many distributional impacts. And we just mentioned this morning his opinion on the double dividend that we should not be too optimistic on that front.

Now, what John does, I think, again, is a very good first proxy for the cost of the transition, but at the end of the day, it's a supply shock. And I think what we need to know is, is the integral below the tax curve, and it's really about the average abatement cost per ton of going to net zero.

So of course, we already have a carbon price of 100 in Europe. And the carbon price actually should go up to the last technology that's going to be

passed with transition, most likely if we need negative emissions, which is the case, the direct air capture. Now, direct air capture, the cost of which is between 300 and 700, depending on what you read and what you believe, it's not a proven technology.

So we are very far from the 75 to 100, but that's the highest cost of technology that's going to be relevant unless we can do negative emissions with, basically, burning whatever, trees or trunks or -- that would be associated with carbon capture, biomass basically. But anyway, so I guess the right way to go about the impact is really to try to compute the negative supply shock, and that's where you need an idea about the cost of abatement.

And my take on that one, if it's worth what it's worth, but it's -- we are probably talking about an average cost of abatement of about €150 per ton. So, how big is that? If I compare that to the virgin GDP, that 3.5% of GDP today, 2.5% of GDP in 2050, and Belgium is a high emission country, we emit 10 ton per inhabitant compared to, for instance, six in France.

So the comparable numbers for France would clearly be lower. And again, spread over a period of about 30 years. Well, now closer to 25, that's probably negative supply shock in the order of 0.1% per year. So it's significant, but it's not huge. Now, of course, for countries that have a lower GP than Belgium, €150 per ton is more, but typically growth rates are higher. So, we are still around like two years of growth, as an impact spread over a period of 25 to 30 years.

Yeah. One big question here is, of course, the level of crowding out we are going to have in investments. If you need to do a lot more green investments, are you going to have a negative impact on other investments? But I would add to that, what is going to be the crowding out on technological progress? I mean, if all our engineers work on greening the economy, do we have people left to work on the frontier innovations in other sectors? I think this is going to be one of the critical unknowns in terms of the impacts on GDP growth, maybe more so than the cost of abatement as such.

So where is the 150 coming from? It's, of course, illustrative, and there is a lot of uncertainty. I mean, a lot of those technologies are not proven at scale. What we know is that there are a number of technologies that are already today cheaper or competitive with brand technologies, renewable of course, heat pumps, some energy efficiency investment insulation of houses, at least to some extent. Then we have a number of technologies that are today more expensive but might be going in the right direction, for instance, electric cars probably today the abatement cost is actually closer to €200 per ton because the vehicles are more expensive.

But one expects that they will be within 5 to 10 years on par with the combustion engine vehicles. And then you should actually see the abatement cost for electric vehicles going to closer to zero. And then you have the more expensive technologies. Carbon capture is going to be very important in the industry. I put here a number between 200 and 300, but there are more recent indications that at least carbon capture for natural gas use because the fumes are quite clean, could be closer to 100 per ton, maybe 150, which would be, again, closer to my average cost of abatement.

And then, of course, you have sustainable aviation fuels, which is probably going to be more expensive. Green hydrogen is going to be quite expensive, and actually probably more expensive than blue hydrogen from natural gas with carbon capture. And then you have, the most expensive one, uh, which is direct air capture. Now, what are the main policy issues? I think one of the main policy issue is actually we are running out of time. If we just look at public economics 101, it's quite easy and simple. You should set a Peruvian price because it's -- you have a negative externality.

You should of course, pay attention to redistributive issues. I know that really we don't really know how to do that but it's important. And then, that's it. I mean, enjoy your holidays because as a public economist, you've said more or less what you had to say. What the issue here is that to get to net zero, we probably need the carbon price of 300 and more, which is the cost of direct air capture. That is politically not feasible to move in one drop to €300.

So you need to increase the carbon price progressively to that level. And of course, then you green your economy, and at the margin, when the price goes up, it only concerns now smaller and ever smaller volume of emissions. So it should be doable. The problem is that in doing so, you don't work on all fronts at the same time, unless you really assume perfect foresight and perfect markets, which we probably don't have. So with a carbon price of 100, you might do a little bit of carbon capture, but not so much. You don't do sustainable emission fuels. You don't do the green hydrogen and probably not even the blue hydrogen investments.

And this is why I believe that while a carbon price, probably the wave that will ultimately lift all the boats that we need more than just a carbon price. And I wouldn't be against complementing the carbon price as we have in Europe with some subsidies, with some regulations, so that we move on all fronts. And it could be R&D, it could be a carbon price of 100 complemented with a subsidy of 50 so that you move faster in some directions.

Main issue number two is keeping the voting public on board. And I've already mentioned it. We should not take that for granted. We already see

with some policies that have been introduced and typically that are mandating electric cars or moving away from gas boilers. You already see very strong political reactions. And it's really beyond the [inaudible 00:17:05]. You see it coming in the Netherlands, in Germany with the debate on the gas borders, in Belgium with the declaration of the Prime Minister recently on the need for a pause in the nature legislation in Europe.

So it's coming, and I think it means that we really need to understand better what are the implications of very specific policies being put in place for everybody or for most people. If people have the impression that they're forced to do something for which they don't have a solution, they need to buy an electric car, but there are no charging stations or to go for green heating in their homes, when there are no technicians to come and install the heat pump, or when it's just not possible because you don't find an agreement with your neighbors, then, of course, they get angry and you get a backlash.

So I'm afraid that the debates on climate is going to become more polarized in Europe, than it has been so far just because it's becoming real. I hope we don't go the US way, but, I'm a bit concerned that it's moving in the wrong direction. The third big issue I'm not going to discuss is the international dimension, because I just don't have the time, and I'm also not sure I would've much to add to what others will discuss in the panel on that, I guess tomorrow.

Demand versus supply destruction. I don't think we should even be discussing that, but you see a lot of attention to supply destruction in the media, and actually a lot of pressure on the financial system. The problem with supply destruction is probably doesn't work to the extent it would be working, it's self-defeating because it increases the price to producers. And then at the end of the day, you get the in investments. But beyond getting the investment, you see weird things like politicians visiting countries they are not really friends to because they really need more energy right now because there is a crisis and we have not invested enough.

And I think the way the message from the International Energy Agency has been interpreted by militants on the green front is doing a lot of damage from that front and leading to discussions that we should basically not have -- need having. Carbon price versus subsidies. I'm lucky because I, I love this quote from John, and John didn't put it in his presentation so I can use it. If the problem is overfishing subsidizing chicken will not make it or solve it.

And I think you've made the case during the previous panel. I think using subsidies for R&D and for complementing a carbon price is probably good policy, but as a standalone policy is going to lead to cheap brown and green

energy and an overuse of energy while we need to go into the other direction. And of course, we need to be aware of rebound effects. For instance, in Germany, there are indications that after a lot of investments in insulation of houses, actually, emissions and gas consumption has not gone down just because people see their bill is very low and they just increase the temperature or open the windows and whatever.

Stranded assets. I'm going to pass that quite quickly because there is a panel tomorrow, I guess, on stranded assets. And I think there is a growing consensus that the issue is not that important and part of it just that a compound interest rate over a period of 30 years leads to a quite high number. So the value of something in 2050 doesn't really matter for financial markets.

There are a little bit more concerns about what the implication of 2030 objective in Europe might be, for instance, for the value of some houses that are not well insulated, and for which the cost of insulation installing heat comes could be close to the value of the house. And that's where also the fact that we seem to mandate very high level of insulation. Taxonomy talks about label A might not be efficient. And I think we need to pay attention to what is really the efficient level of insulation that we have. Because in most estimates of the level of investments that are required, a lot of it is insulation and maybe a bit too much of it.

Why do we need the taxonomy? John was quite clear. We don't need it. I'm not sure. I mean, it might be useful in terms of providing customers that want to invest with transparent information about what they invest in. But we should be aware of dark green solutions. I had the discussion with people at the National Bank. We were discussing the taxonomy, and I was asking questions like, why is it not green to have a house without a label A insulation, but a heat pump and electricity not coming from solar panels, but from windmills.

And then, one of our specialists of the taxonomy, and we have four and only one person working on the macroeconomics impact of the transition because that's it. And he told me, "Mr. Governor, if you think that the taxonomy is about going to 2050 in an efficient way, you are mistaken. It's about being dark green." So what is the risk of that? I don't know, because I don't know what we are going to do with the taxonomy. But if I talk to bankers, I hear them saying, are we still going to serve the lower segment of mortgages for people that have houses that are not well insulated? It's not very profitable, and we are going to get criticism and pressure from the militants because we have mortgages to houses that are not well isolated. So the taxonomy is not helping in terms of getting to efficient solutions.

And then you have the behavior versus technology, which one is the most important in the transition. And to some extent, the discussion about a moral argument. We are killing the planet, so we are bad people, so we need to do something about it. And efficiency. My take on it and, and I see your report is not that different. It's probably going to be 80% technology and 20% behavior. If you talk to people and read the media, and you talk to your kids, I talk to mine, it's 80% behavior, and they don't know about technology.

Actually, they are convinced that we are not doing enough, and they have no clue what the ETS is. If you tell them, we have an ETS in Europe and the carbon price is 100, they don't have a clue, but they really believe very strongly that discussing whether you have plastic silverware or cups at your cafeteria is very important. Does it matter? Yeah, I don't know. Again, it might lead us to solutions that are not efficient or at least a lack of focus on the solutions that are efficient.

Beyond that, I think you have the problems, the ones that care the most about climate are also probably the ones that are against some of the solutions or the instruments that might be, or probably will be required, carbon capture, blue hydrogen, and nukes. And so sometimes it's the most militant today, putting the most constraints in reaching net zero. I'm maybe moving to the last one, which is the last part of my presentation. So is it macro-critical? Yes, but it's okay. The comparative statics looks good. I've gone through very quickly on a number of policy issues, but then what is the impact for monetary policy? And is it what is actually the role of monetary policy? And we are back to our star in inflation. If we need to invest more, our star is going to go up.

And, of course, this is going to have an impact on monetary policy. Whether inflation is going to go up, I don't know. We are going to have bottlenecks, but we had them before. So net, net, I'm not sure. What is interesting though is that if you take a model, you put a carbon price in the model, and the model has been calibrated on the oil shocks, you've got lower investments. So whether you have a top-down or bottom up approach leads to very, very different results. And we are updating our forecast up to 25 now at DU level. I cannot give details on projection, but for Belgium, we are seeing less investment because of higher interest rates. We're not seeing more investments.

So we should have a boom today in investments, because of the transition, what is required and what we see in the projection is just the opposite. So, one other issue is in terms of inflation measurement. It's also in John's report. When electric cars enter the basket, they're being considered as a different good. So they don't impact the inflation number. When you are then mandated to go from conversion agent to electric cars, but the cost of

electric cars go down. Actually, the impact on inflation is negative, not positive.

But the perception of people is of course, that they have to buy an electric car, which is more expensive, so they're purchasing power is going down. It might look like a -- just an interesting feature, and not more than that, but it can have a negative impact on the perception of the quality of the inflation measure. So what is then the role of monetary policy? The Atlantic divide on this front is quite big. [inaudible 00:27:21] Paul said it very clearly, we are not going to become a climate policy maker.

If you talk with people at the ECB, it's a bit less clear. So, let me go through it quickly because it's essentially a symbolic discussion. It's not going to make you a big difference, but sometimes symbolic discussions are important, especially when you have a mandate and you're independent. The no-brainer part of it is we need to better understand the impact of climate change on the macro economy. I think this is very clear. Where we have more discussion is whether it's just macro models or whether we also need to have a better understanding of technology p- technology sector per sector. What are the implications? I'm with John, and I'm with you in saying we are going to discuss that for 30 years, so we might as well have some understanding of the technologies behind it.

So what is clear also conceptually, but maybe overblown is we need to look at the risk for, we are supervisors and sometimes regulators. The risk of defaults for firms and households. Why may be overblown because basically, I mean, we're torturing the banks telling us that they need to better understand the green risks. And what they tell us is, most of our portfolios except for mortgages have a duration of three years, and honestly, we don't see anything. And then we talk to them a little bit more, and then they come back and say, well, we still don't see much.

So the question here is whether the usual metrics, the rating agencies and so on, just whether we should assume they just don't get it, they will never get it, or whether it is just a risk like any other. And then of course you have the last one, which is the most controversial, whether monetary policy, central bankers should work on relative prices, tilting portfolios, buying green, doing green QE or the likes.

And then of course, I have to go back at the treaty, and the treaty tells us that we have a primary objective, which is price stability, but that we should also, without prejudice to that objective support the general economic policies of the EU. And in article three, you have a long list of those economic policies of the EU, among which a high level of protection and improvement of the quality of the environment, but also many, many other things. So what is the risk there? The risk is what I would call an animals

farm reading of the treaty, that we would focus on one of those elements without focusing on the other ones.

And also the without prejudice is actually, a quite easy condition to meet. I can easily spend 10 billion on anything on giving support to the Peterson Institute, on giving support to Ukraine culture, whatever, spending 10 billion. It will not prevent me from reaching the 2% objective. So this condition of without prejudice being interpreted as, I can spend 10 billion on anything, is not setting the bar very high. And this leads to a broader issue of emission creep and potential emission creep of central banks.

There I think it's interesting to look at the discussions you are having in the US but also in Israel on constitutional courts, and whether they have gone too far in interpreting the constitution. We are not there yet in terms of monetary policy, but there is a risk that by here and there making a number of choices, we will be perceived as going outside the remit of our mandates. And I really do believe that being independent is an exorbitant privilege and that it should be handled with care.

So my take on tilting portfolios, doing green QE and basically working on relative prices. If central banks would have an instrument that policymakers do not have, and that's really part of the first best or second best solution, then I think we should try to support. But if you read most textbooks on monetary policy, they will tell you that allocated efficiencies is typically not part of the remit of monetary policy.

And maybe to go a little bit more into the issue, why would we look at whether firms are Paris aligned, which we are doing when all firms in Europe will have to be Paris aligned? And there is an implicit assumption of linearity there that all firms should be Paris aligned in the same way, in a sort of linear way, but that's just opposite the objective of a carbon price, which is precisely to do it efficiently and not linearly.

So I think just in terms of the implicit assumption behind asking whether firms are Paris aligned or not, there is a big conceptual mistake that goes against efficiency and the carbon price. So I'm afraid, and I believe that discriminating between firms that fall under the remit of the ETS is flirting with autonomous policy making, which is forbidden by the treaty. I will be more open to discussions on whether, should the QE for firms that invest in coal power plants outside of Europe. And there, we don't have good instruments. I mean, we have CBAM, but it's not a good instrument. So I think, it's easier to defend that we would be supporting EU policies instead of doing maybe or risking doing autonomous policymaking.

And I'm moving then into communication because it's really about dealing with symbols and there is a tension between Tim Bergen's rule, which is

one issue, one instrument. And it's the idea that when it's about climate, it's about saving the planet, so everybody should be part of the solution. And I think that's basically the core of the discussion we are having, not so much what we can do, because at the end of the day, it's going to be relatively marginal.

Now, there is a communication issue here, because when I say I'm working for a central bank, people say, oh, you work for a bank? No, no, I work for a central bank. Yeah, but that's a bank. No, no, because we don't finance the economy actually. We stabilize inflation. But now if you are starting to say that you are helping transition by tilting portfolios or buying green assets, it'll make it ever more difficult to explain that you are not a bank, but a central bank. We also need to decide whether we go the great opportunity way, which the commission has mostly been doing over the last few years.

I mean, they have a forecast with the positive impact of the green transition on the economy, or whether we go a bit more the ECB way, which is risks are huge and banks don't get it, which is a bit what we've been saying recently that banks don't see risk that we see. And there is a mismatch between those two communications from I think the commission and the ECB, we need to be better aligned.

So, my conclusions, and again, I've got great material in the backup slide, but the comparative statics looks good. So the road to 2050 is going to be bumpy and politically difficult, but thanks to huge progress in terms of renewables, but not only renewables, we should be able to get there at a reasonable price. So in a way, getting there is a no-brainer. But because the political world is going to be bumpy, this puts a lot of premium on being pragmatic and flexible. But there is a tension between being pragmatic and flexible and giving the right signals because economic agents want predictable and stable price signals. And there you have a tension between giving those strong signals and being able to react to political constraints.

Also, I believe that unless you think that radical, uh, change is possible in terms of behavior, that we are going to need a carbon capture blue hydrogen for the nukes. And that probably means that we are still far away from stopping investing in fossil fuels because carbon capture means that you still use probably natural gas and maybe even some coal in China. So we should, at some point go through the discussion and arrive at whatever conclusion, but we cannot say that we want to get to 2050, that we need a discussion on carbon capture, and that we should stop financing fossil fuel today. And I will stop with that. I was more or less on time.

Jean Pisani-Ferry: Thank you [inaudible 00:36:59] for a great speech. You can perhaps sit here. Why don't you sit here?

Pierre Wunsch: Yeah.

Jean Pisani-Ferry: Oh, if you want to use the slide. Anyway, it was a great speech because it perfectly illustrated what I said at the, at the start. That you know what you're talking about also in terms of monetary policy and central bank and macro, but also in terms of the technical stuff. So, my first question, I sort of focused my question on the interaction between the two and your current responsibilities. My first question would be -- so what you described that is sort of long term in which the situation is much better, there is much more stability. We are going to rely on energy sources that are going to be relatively cheap. Prices will be stable. There's no reason why they should be unstable.

So, that's the long term. But the road to the long term is likely to be very bumpy because lack of investment in renewables, lack of investment in fossil fuels, so, sort of instability. And the risk also that critical raw materials will be scarce and so that may mean that the next decade may spell the end of the sort of great moderation and that we might be in a world of great [inaudible 0:38:43]. And then my question would be is it your fear?

I mean, is it a perspective that you regard us likely? And if so, what should be the response of the central bank? I mean, because that's typically relative price shocks coming from the supply side. The doctrine is that you should be looking through them. But the question is to what degree would you be able to do so?

Pierre Wunsch: Well, I might anticipate to something Beatrice was going to say tomorrow, but the implicit carbon price related to the increase in the gas and oil price in Europe in 2022 was about 700, I think, for gas and 1,000 for electricity, whatever. I mean, it was a huge number. So I'm not so sure that the bottlenecks that are going to come with the transition if we're flexible enough and we have means to be flexible, like we can play a little bit with the number of ETS permits that would issue our bank or not bank and so on.

I think we, if we are flexible enough, it might be the case that the volatility we've seen, especially in 22 on fossil fuels, which also was a natural experiments in terms of stressing the price of carbon. We had it in 22. That was a big stress test. That what we are going for in the future is probably going to be another kind of volatility a bit less on the fossil fuel front and a bit more on rare earth on whatever, some other commodities. Whether it's going to be more difficult to manage than what we've just been going through. I don't think so. And again, in theory, its relative prices should not have an impact on inflation. Reality might be a bit different, but, so I do not expect that it would be much more difficult to deal with than what we've just seen in 22.

Jean Pisani-Ferry: That's a relatively low bar.

Pierre Wunsch: Yeah.

Jean Pisani-Ferry: Because no, I mean, we've gone through and we are still struggling with this inflationary push. So, the question is, looking ahead, I mean, certainly part of it will finally go away, but how much will remain and what are the implications?

Pierre Wunsch: Well, I think if you go to 2030, the big issue is housing and whether it's even feasible and that's in your report, to scale up the level of insulation, uh, to 1% or 2% of GDP in addition to what we have today. Is it required? Is it feasible? If you force that, and if you force investments to go up very quickly, if you mandate a number of policies for which you don't have the people, then you are going to have huge spikes because you are going to create bottlenecks with your policies.

I guess my take is bottlenecks that are self-inflicted don't survive the test of reality. So if it's not coming from Russia, but it's coming from your own policies, the political backlash is going to be such that you are going to have to find a way to backtrack it and give more time. So I don't really believe in a big shock that would be endogenous to the political system because I think just the political reality will make it such that you will have to find some lee-ways.

Jean Pisani-Ferry: In terms of the -- and that will be my last question -- in terms of the role of central banks, I mean, I see in what you said some sympathy for the US stance that fundamentally climate change is an issue for elected officials. It's not an issue for central banks. Now, if I listen to what has been said by colleagues from the ECB all the time, I mean, I see some danger in the combination of being very strict on the interpretation of the treaty. Never saying that climate change justifies changing the mandate or departing from the mandate at the same time making all the noises that may lead public opinion to believe that central banks just have the magic to make it happen.

Pierre Wunsch: I think most of it is a symbolic discussion because what we're doing in terms of tilting and so on is very modest. So you have a communication issue --

Jean Pisani-Ferry: [inaudible 00:43:45]

Pierre Wunsch: -- which I think is a difficult one. Do you want to play it? We are a central bank. We don't lead with that, which might give the impression that you don't care, or do you want to convey the fact that you care running the risk that you are going to increase expectations, that you're not going to be able to manage expectations. Because let's face it, in the US and Europe, you

have people that just want us to finance the transition and that we cannot do, and we all agree on that.

So it's a fine line in terms of communication. I think it's important that at least we have the discussion on the mandate on what are the limits? And I'm playing a little bit the devil's advocate in this discussion in Europe. But at the end of the day, I don't think what we do is endangering our main objective and that's what's important. But the communication challenge I think is important just because some people expect so much from us.

Jean Pisani-Ferry: Okay. Let me open the floor. I see Suman and I see who is it there? Robert. Yeah. And Jim.

Suman Bery: That was a most refreshing discussion. So, I was particularly struck by the point that supply destruction is not a solution. And also some of your comments on CBAM. So, I mean, you indicated, sort of some kind of peaking, but I'd still like either your view or that of Jean on as it were how much existing in a magical or sort of -- how much of the symbolism is directly related to the presence of greens in where this important government. And therefore, whether the kind of realism that you're talking about is likely to enter the public debate. So that was really one issue that you have a realistic view of the future role of fossils, which is very different from, as it were, the public stance of a lot of NGOs and this, that, and the other. And so what is likely to change that?

But my second question really goes back to my reading of what Jean had to say, I think even in his first strategy paper about the role of, I think you called it, frugality or sobriety on, [inaudible 00:46:24]

Jean Pisani-Ferry: Sufficiency.

Suman Bery: Huh?

Jean Pisani-Ferry: Sufficiency.

Suman Bery: Yeah. On the consumption side. Okay. And this, I'm partly saying because it is a very important part of India's kind of G20 plank, which is to say changing as it were, attitudes towards consumption, which in a sense, Europe has seen in response to the gas issue, which Japan saw in response to Fukushima. So are there instruments and handles which are not price -- and what and what is the role of politicians in causing that kind of change rather than price instruments?

Jean Pisani-Ferry: Thank you. Let's go to Robert and then back to you.

Robert: So I found myself thinking that maybe our conference is only looking at half of the causal link. We've been asking the question, how does climate policy affect macroeconomics? But suppose we were to reverse that and ask how does macroeconomics affect climate policy? And I would suggest that climate policy is going to be incredibly easier to implement when there is stable macroeconomy. That if the economy is at full employment, people's willingness to adjust is going to be dramatically different. If we have an unstable macro economy, both the politics and the economics of climate change is going to be vastly more difficult.

And so, if you start from that perspective, you get a slightly different take on what central banks should be doing. Because actually maybe if they just stuck to their knitting and achieved macro stability, they would do far more for climate change than if they try to get beyond their traditional ambit and introduce all of these other issues in their central bank communication and in their central bank policies. So I just thought I'd provoke you.

Jean Pisani-Ferry: That's just music to your ears.

Pierre Wunsch: Okay. Behavior green finance supply versus demand destruction. The ones that are most motivated in terms of the climate agenda are also the ones that believe that behavior is a big part of it. They want to change the way you live. And they're quite transparent about that. I mean, it's not so much that they don't like combustion engine cars. They don't like cars in some cases. And I think that's where you've got a problem is that we need to go to net zero, but the ones that fight the more about that issue are also the ones that want people to change their behaviors, probably in ways that people would not accept.

So there you have a tension and I think we're not going to resolve that tension if the lead on climate policies is not being taken by probably political parties or majorities that will decide to focus on efficiency. And in Europe, you see that we cannot really decide because we have this carbon price, which is about efficiency, but then we have the taxonomy, we have greening the financial system. We can't really decide whether it's mostly about efficiency or whether we also need to have a stronger impact on the way people behave.

But I think the backlashes that you see now on the agriculture front in the Netherlands on the gas boiler dimension in Germany, are probably going to change the political landscape. But then the risk is of course, that you go from one extreme to the other and that we lose 10 years. And there is a real risk that we lose 10 years. So I hope that we can keep the feature 55 package, at least the ETS part of it, the broadening of the ETS and some regulations that I think make sense.

But if we go too fast too far, then we're going to lose 10 years on the political front. And I think the pressures that the banks are facing in terms of green investments and the debate on greenwashing and so on, you are not going to have a green financial system on top of a brown economy. They have to move in parallel. And that's not the nature of the debate. I mean, people have the impression that we are going to clean the financial system and make it green, and that on the ground, in reality, things don't have to change. That is not going to work.

Adam Posen: Hello?

Jean Pisani-Ferry: [inaudible 00:51:41]

Pierre Wunsch: Yes, there is the question on the macroeconomy. Yes, of course. I mean, a stable macroeconomy is going to help and should help. And I would add to that, that we need to recreate some fiscal room. And it's really about priorities. If it's really the priority that we get to net zero, we should find 0.5 to 1% of GDP in terms of public finances. This is doable. If we cannot do that, then it's not a priority.

Adam Posen: I'm terribly sorry to interrupt the flow of discussion. There's good people wanting to make comments and ask questions, but we are behind and lunches are one opportunity to catch up for our thousands of viewers online. So John, you don't get to ask another question. I can tell from your face.

Jean Pisani-Ferry: Just wanted to give the floor to Jim.

Adam Posen: That's another question.

Jean Pisani-Ferry: That's another question.

Adam Posen: Jim Stock is a God, but we're outta time. So with that, deep thanks to, to Governor [inaudible 00:52:46]. You showed why we invited you. Thank you so much for your keynote. Thanks to John.

Adam Posen: We will work in professor Stock and other distinguished people who wanted to have questions into the next session. And now I must invite everyone to lunch. Sorry. Thank you.

[End of transcript 00:53:17]