DEBATE

Jean-Claude Trichet, former President of the European Central Bank, Honorary Governor of the Banque de France

I have a lot of comments, but I do not want to start with myself. It seems to me very important that in our remarks, comments and questions, and I urge you to ask questions rather than make long comments, you ask the speakers who you think were particularly stimulating.

Yann Coatanlem, Cofounder of GlassView, President of Club Praxis

One trend I want to mention, which has been going on for a while now, is the concentration of corporate power and performance. I will just give you two stats, one American and the other one global. The first one comes from a study by the White House, which compared the performance of the top companies versus the average company. 30 years ago, the top 10% of companies would double the performance of average companies, which might be at 8% and the top companies at 16%, which is reasonable, it is now a factor of five. Another very striking stat, which comes from a McKinsey study carried out in 2019 on the top 6 000 companies with revenues over USD 1 billion a year. If you look at the top 10% of companies, they make 80% of all the net income, so the concentration, and 60% of these companies that are supposed to be superstars actually have zero net income, they are close to zero net profit. There are huge discrepancies in these big companies, and it gives you a sense of that, and again, that is playing again in favor of the US. The same could be said about patents, intellectual property and exports, where you 1% of companies are generating two-thirds of the exports in the world, so a huge concentration that I think should be mentioned.

Gabriel Felbermayr, Director of the Austrian Institute of Economic Research (WIFO), former President of the Kiel Institute for the World Economy (IfW)

Thank you, Jean-Claude. Thank you very much for so many interesting presentations. There is one thing that keeps puzzling me, for example, in the charts shown by Pierre Jacquet where we see negative TFP growth. How can this be and would it only go away if we had more investment, capital stock, in the production functions that are being estimated? How can we understand negative TFP growth? Of course, it needs a bit more complicated frameworks to see how that could work and one argument that immediately comes to mind is that for some reason the efficiency of factor allocation has deteriorated. That is one source, we have the capital stock and the human capital we have produce less. Is that because of bureaucracy, Sébastien has a different view, but is it maybe the decoupling or derisking that is happening, that means some gains from trade are being lost? Or is it, for charity for example, something to do with deterioration in the terms of trade, so imports become much more expensive, but the export prices have not gone up as much, and something is not captured in the models? In Europe in particular, I think we need to understand what is going on better.

I would also like to link that to the Draghi report because there underlying assumption there is that if we invest more, we will have more TFP growth. That is a good old argument that goes back to Solow 1.0. The growth model we all learn is Solow 2.0, but the older one has imported technical change, so the idea is that investing in new machines and techniques pushes TFP growth forward. However, the composition of TFP we are using is not using that model, it uses a very straightforward decomposition of GDP per capita or GDP growth. There are puzzles and I think before we start throwing a lot of money about, we should understand the numbers better, and in particular why TFP growth is negative. I can absolutely understand if it is slow, but I am left puzzled if it is negative and not just driven by cyclical phenomena. I would like to hear the views of my colleagues.

Jean-Claude Trichet

That is a question for Pierre. I very much echo what you said, Gabriel, and by the way, I feel a bit uneasy because I remember when we were saying that TFP was fantastic in all advanced economies, the US and Europe, from 1995 – 2006. Bizarrely, after that there was stagnation that lasted a long time and it was not in the figures we saw, which showed no difference and rather a constant augmentation of TFP. A lot of it may be methodological, so it would be very useful if we could know exactly how it was constructed.

Jean-Claude Gruffat, Member of United Way Leadership Council, Board member Atlas Network, Managing Director of Weild and Co LLC

A lot of things have been said giving various perspectives from different parts of the world and different sectors of the economy and the financial worlds. A lot of things have also been said about what is going to happen after Trump’s inauguration on 20 January 2025. The last session before the final debate tomorrow will be dedicated to Trump’s economic and foreign policy and I will be part of this panel and will probably give answers to the scenarios suggested by some of you, like Jean-Claude Meyer.

We will talk about that tomorrow, but I would like to give a different perspective. Like many of you, I have been in financial services around the world for more than 40 years and one of the things that probably concerns me more than anything else at the moment, is how we are going to finance the economy going forward. Schematically, we used to have the situation over the years where in Europe it was largely done by the banking sector and outside Europe and possibly in the United States, it was done by the capital markets. This is the situation for the very large corporations and when we come one level down, who is going to finance the middle markets going forward? The reality is that in both Europe and the US, the middle market is no longer financed by the banking sector. They run away from it largely because of risk considerations and also the risk/reward ratio. To put it simply, the banks do not want to finance the economy. I was at Citi Bank for many years, and we loved to organize credit, but we would not keep the credit on our books, we wanted to distribute it to the markets. In my opinion, this trend is going to worsen going forward and we now have a situation where the economy is largely financed by private equity and asset management companies. One of the largest lenders in the United States to the middle market sector is a group that I suspect many of you have never heard of called Churchill Asset Management, an asset manager with a lot of liquidity financing the middle market. This is good because at least there are players in this sector, but at the same time, I am not in favor of excessive regulation, but this is a sector that is totally unregulated, that could potentially represent some significant risk. You have heard of this one, but other sectors of the economy, the shipping and industrial sectors, are purely financed by private equity. Therefore, we have an issue of access to funding and liquidity going forward, we have the risk aspect and the problem of too big to fail. In the past, we have seen the situation where non-banking were rescued by regulators, central banks, and you are probably all aware of situations like that. This is something that will no longer necessarily be available, which is a matter of concern in terms of systemic risk but also funding of the economy.

Jean-Claude Trichet

Thank you very much for a very important remark. However, you Europe and the US put on the same footing when there is obviously an immense difference.

Jean-Claude Gruffat

Absolutely. I am not saying the situation is the same on both sides of the Atlantic, I am saying that this is a concern. In Europe, it used to be that the bank would finance and 80% of the economy was financed by banks and in the US, it was 20%. We are now in a situation where both sides of the Atlantic are going in the same direction. You are right that the availability of funding is much bigger in the US than in the rest of the world, there is no question about that.

Charles Letourneur, Managing Partner and Cofounder of ALVEN

I actually have a comment that responds to what has just been said about private equity financing. Just for information, I run a EUR 1.8 billion venture capital fund investing in technology and digital technology. I have heard a lot of comments about how productivity is absolutely crucial and tech is a key productivity factor, and therefore productivity and tech are a key driver for growth in the economy. I just want to stress, and it has already been said, how huge the gap is between Europe and the US. Just to give you a few numbers, new venture capital in Europe is about EUR 50 billion in terms of volume, in the US we are close to USD 200 billion, so it is a four times multiple just in private financing for technology. If you add to that the magnificent seven companies, worth EUR 17 trillion, it also makes a much higher multiple in terms of difference because, for example, the largest market in tech in France is a company worth EUR 50 billion, whereas you have seven worth more a trillion in the US. If you add the private equity financing capacity to the large corporation's financing capacity, the difference between Europe and the US is probably something between 10 and 15 times. It is a huge challenge because we are lagging behind, which relates to the comments about how important productivity is to growth. The AI world and investment will increase a lot this gap a lot because, as you said, investments in large language models are very important and AI depends on a lot of computing power, which is mostly in the US in these large corporations. I see this gap widening and the venture capital world in Europe somehow having less and less capital because the state does not have much capital in Europe. There are no pension funds in Europe and pension funds in the US invest in the US funds. I see a challenge there, which goes to my question, on how we finance innovation in Europe. You mentioned at the beginning that we need to do something with private money in Europe to try to reorientate it to innovation and I think that is the only way to do it because I cannot see any other resources for this financing in Europe. My question is, how do we do it?

Jean-Claude Trichet

That is a very good question, and I will give an immediate response to what you just said. We are exporting our savings, the US is not financing itself, and as an average over the last period, I would say plus 3% on this side of the Atlantic and minus 3% on the other. Where does the difference come from? In my opinion, we have failed to complete the single market and that is an immense handicap because we do not have a capital market union, and the Noyer report was mentioned. We do not have a banking market union, which is the paradox of the paradox because we created Europe to have a common market in goods and services, then we said that was not enough and we needed a single market, to really achieve a common market. Then we invented the single currency in a single market with a single currency there is no single market of the commercial banks and we recently experienced that and we can see that there is no single market. Of course, that is an immense difference with the US because we always compare ourselves to the US, and the US has a single market and we do not yet, particularly in the finance field. Another very important element is that we have not achieved a political federation, unlike the US. Bills and bonds denominated in dollars have only one benchmark signature, the US Treasury, we have dozens of signatures on them, the Bund, the OAT, Italian Treasury, etc. It is not surprising that the difference in the depth and liquidity in this market is in the proportion of 1:15 or 1:10, so we are in a totally different universe, and I think there is a glass ceiling because we are not a political federation. As I understand, that makes all the difference between the euro and the dollar and if we were a political federation I hope that we would really have a banking union and a capital market union, which would seem much simpler. We have to incorporate that into the comparison otherwise, what we hear will make us totally desperate and I would say that the European will never improve their situation.

Yann Coatanlem

Just a quick remark and I will repeat what I said this morning, there is a lack of profitability for European tech ventures and that makes a big difference when you have to invest, and that is why you see a lot of European capital flowing to the US.

Jean-Claude Trichet

One of the problems, and Gary was very stimulating on this, is whether it is true that this profitability will be there in the longer run, and there may be some doubts about that, but that is another story.

I want to make some comments on everything we heard because it was extremely stimulating. Sébastien mentioned the dollar level and the issue of the international monetary system, and this idea that it was enough for one of the partners in the global monetary system to say that they want their currency to go down or up. We know it is not as simple as that, there are *de facto* formal and informal groupings where you discuss that, and now in the G7 we have three countries in the euro, but it has to be discussed, no individual country can solve the problem.

When the US wanted its currency to go down, we had the Plaza and then the Louvre agreements, so we will see whether we go towards reviving this informal monitoring of the international monetary system. It seems like a fantasy to me, to suggest that it is enough for Mr. Trump to manage to engineer a much lower US dollar and on top of that, of course you have the coherence of the various measures he has in mind.

As regards to what said André on reserve assets, if I am correct, the figures are as follows. Reserves in US dollars, as far as they are shown by the BIS, were approximately 70% at the moment we created the euro. Progressively, over a period of 25 years, it has gone down to 60% but the euro did not take advantage of that because it was more or less at 20% at the very beginning, rose a bit then went down and is now at the same level it was when the euro was set up. The currencies that have benefited until now from this 10% shift from the US dollar are convertible currencies, and mainly sterling, the Canadian dollar, Australian dollar. The renminbi is not convertible and it is not yet really in this competition as far as I understand, even if much more trade is being denominated in renminbi. Of course, the sanctions decided upon by Congress in the US really shoot the dollar in the foot and will have consequences. However, up until now, the dollar dominates at 60%, we are number two at 20% and the yen, if I am correct, is the third currency at 5%, so there is a big difference between the top two and the others. I also want to say that the equity valuation in the US, mentioned by André and Gary, as well as implicitly by Jean, is, by my own computation, extremely abnormal in comparison with everything we have observed from World War II until Lehman Brothers. During that period there was an oscillation between the various indicators of valuation of equities but there was not a gigantic swing. Since Lehman brothers, and more precisely, since 2012, there has been the start of a pickup, which we could see on your chart, and then it goes up and up. If you compute the standard deviation between the two valuations, from memory, in 2012 the valuation of US stocks and shares started to pick up from a mid-point in comparison with European stocks and shares and then it was one standard deviation after three years, then two standard deviations, then three standard deviations. At the moment I am speaking, in the figures I have in mind, we are close to four standard deviations for the US valuation over and above the equity valuation in Europe. That seems absolutely fantastic and improbable compared to the whole history of this valuation. I thought it was due to the magnificent seven, but even if you take them out you still have several standard deviations over and above the Europeans. I thought it was because the Europeans were totally miserable and that comparison with other countries and markets would give us something different, but not at all. The US is the superstar in terms of valuation compared to the rest of the world and someone mentioned a 50% valuation figure for US stocks and shares in comparison with the global valuation. I understand that if you compute that now you are probably even above 50% at 60% plus and that happened in only two years. There is something that is extremely troubling, an immense concentration and immense expectations that will be fulfilled if-

From the floor

The expectations are high, but they are not that extraordinary.

Jean-Claude Trichet

They are pretty high to be frank, but we will see what happens. Clearly something has happened since Lehman Brothers.

André Lévy-Lang

Gary made a point, and I will just elaborate on it. I think there are two cases, the so-called magnificent seven, which are real businesses, something called Amazon, for example. As you know, Trump said that he would kick out Lina Khan, who was leading the antitrust case against these people, so that is finished. Then there is the bubble, which includes AI and drugs that help you lose weight, which are partly bubbles because the amount of money raised assumes that somebody will have to pay for that. There is an element of bubble but there are also some real businesses involved.

Jean-Claude Trichet

Clearly, we have some real businesses, innovation and fantastic capacity to organize. It came out of what John said, it is a fantastic illustration of a Schumpeterian restructuring, at the very moment of Covid you take the opportunity to eliminate a lot of jobs and recreate the new ones, and of course, nothing of that kind happened in Germany, France or Europe in general. I would say that we did not have the social cohesion capacity for this to happen.

But the idea was not to restructure but to *kurzarbeit*, and in France it was consider miraculous to embark on it, which was invented by Germany and the German speaking countries. Therefore, we did exactly the opposite and we probably could not afford to lay off a lot of people because it would have caused a revolution. We have to do the same as the US but, as you say, it will be much slower. Maybe we are not Schumpeterian as you are able to be and the price to be paid for that might be dramatic political change and it seems quite possible that Mr. Trump is the result of that.

I have a last point on what Pierre and John said on productivity and I think we have to work a lot on that. Are we sure that those figures are reliable? I can tell you that I have other figures in my mind and the output per capita in 2023, so very recent, for Europe and the US. Maybe paradoxically, some relatively small countries in Europe have a higher output per hour worked, not per capita, than the US. In 2019, France was at the same level as the US, and Germany was even a bit higher, now they are both below the US level but not far, in these statistics output per hour for Germany is 2% below the US level and France 6%. However, these are not two different universes. I am referring to the most advanced economies in Europe and there many others that are catching up. Naturally, their output per capita per hour worked is lower. That means the average is significantly lower than the US, but I am not sure that we are really talking about the most advanced European economies as being in a totally different universe on that front.

Of course, because we favor leisure, vacations and golf and I am very happy that the US is now embarking on golf. It is absolutely clear, our political arbitrage is very different on this side of the Atlantic and I thought Germany was in a different universe, but no, we are in the same basket.

Sébastien Jean

If I can make a remark, if you look at this comparison, of course we are all puzzled. What I find very striking is I think that where there is a kind of *décrochage* in terms of investment in Europe following the global financial crisis and the euro crisis, public and private investment never recovered. I think it has a lot to do with how we dealt with the crisis, which was deflationary and really limited public and private investment, so we are now at the stage where we are lagging behind in terms of productivity, but perhaps also in terms of macroeconomic dynamics.

I think we cannot assume that we entirely control and know about the dynamics of productivity and investment, and I would not assume that we have perfect measurements of that and the relationship.

Pierre Jacquet

I totally agree regarding the fact that we are using very imperfect data, especially regarding total factor productivity. We are indeed back to Solow's insights on the somewhat paradoxical nature of total factor productivity, both as a blackbox defined as a residual (a subtraction between the rate of growth and the estimated rate of growth of the capital stock and the rate of growth of labor), and as a major factor explaining long-term growth. However, for me the diagnosis we discussed earlier tells a story about innovation, which has not been at all dynamic in Europe, and we have not really embarked on the current industrial revolution. That may not be a catastrophe over time because in the end we will hopefully be able to also reap the benefits of innovation, wherever it is generated. But in the short-term, it is certainly a source of major differences across countries.

Coming back to a discussion we had in the plenaries, in the earlier industrial revolutions it took 50 years or so to see the full benefit of technical disruptions, and the work by the historian of innovation Paul David on the impact of electricity has illustrated that very well. Robert Gordon has expressed strong reservations about the potential impact of the digital revolution and was pessimistic about the capacity of the IT revolution to bring comparable benefits to former revolutions, especially electricity. As for artificial intelligence, the debate rages between those like Acemoğlu and Simon Johnson who are skeptical about what they see as an AI hype, and others like Brynjolfsson or Aghion who believe in the potential of AI to bring very substantial productivity gains. Some studies show clear, substantial but limited in scope productivity gains for less qualified workers, which I find very interesting because it creates optimism if it can be scaled-up and generalized.

To conclude, I agree that total factor productivity is certainly not adequately measured, but its evolution still tells a commonsense story. I am sitting in a country, France, where a lot of lip service is paid to the importance of education and research, but I do not see what is being done in terms of actual policies to strengthen them. As a citizen and an economist, that worries me.

Jean-Claude Trichet

Can I suggest that the public spending in the French budget is already 8% more than the average of the euro area?

Pierre Jacquet

Not on the right things.

Jean-Claude Trichet

Do not call for more spending, call for arbitrage.

Pierre Jacquet

I am calling for higher quality of public spending, and a better allocation of spending, not more spending.

Jean-Claude Trichet

We agree.I agree with you, but we have to pave the way for these new entities.

Pierre Jacquet

The fiscal adjustment should be planned ahead and introduced gradually and credibly over time because if not we will be plunging into a recession and that will not help.

By the way, that leads me to another remark linked to our earlier discussion. Part of the reason why Europe as a whole is sending our savings to the United States (China is a much more substantial financier of the US than we are), is because there has not been much dynamic domestic demand in Germany, and also probably linked to that, because companies do not see enough investment opportunities in Europe. I do not think we can discuss all that without looking at macroeconomic policies in the various countries.

Jean-Claude Trichet

We could add also that we have no pension funds as they do in the US and the European countries that have pension funds are doing a much better job, the Netherlands and Sweden. There are many reasons.

Pierre Jacquet

We also want to keep the retirement age low enough.

Jean-Claude Gruffat

Just to come back to some of the things that have been said, when it comes to the handicaps between Europe and the United States, I think we have to go back to after World War II and the beginning of the construction of Europe with the ECSC and then the Rome treaty. At that point we were talking about six European countries only and at the time there was always a discussion about confederation and federation. I think we have experienced two unfortunate events, one of which was that we chose to enlarge the European Union rather than have more integration. That was a political choice that we have to live with, and we moved from six to 27, which obviously made it more difficult to reach unanimity and have this political federalism you mentioned. The other thing is that I think one of the reasons we have so many difficulties in Europe in dealing with some of the issues Yann mentioned, restructuring, etc., is the fact that to a large extent it comes from Brexit. The fact that we had the UK in the European Union was a way to balance continental social democracy and the free market philosophy of the Anglo-Saxon world. The UK may have lost a lot with Brexit, but I think Europe has also lost a lot.

Jean-Claude Trichet

Right, but we did not decide to expel the UK, and it was not something the UK prime minister at the time even wanted. We all felt that it was a very unfortunate situation, you are absolutely right.

Tania Sollogoub, Head of research on Emerging countries and Global Geopolitics at Crédit Agricole Group's Economic Research Department

I am sorry, I arrived late, and I want to ask a similar question. You mentioned Acemoğlu and during the plenary session about how to reintegrate politics into macroeconomics, which is also the subject. First, how do we compute the fact that more or less the whole European Union has lower inequality than in the US, if you take all the data from the Inequality Database, looking at all points of view, revenue, wealth, etc.? Second, the level of political polarization may be growing in Europe, especially in France, but there are serious surveys on that showing that the level of polarization is lower. The political story of America is not over with the election of Trump and that will also impact the economic story, how do you also integrate some of the advantages of Europe from this point of view? I am trying to think about Acemoğlu's long-term lessons.

Jean-Claude Trichet

Of course, you are absolutely right, we live and experience different values and Covid is a case in point. Covid was used by the US to massively restructure and lay-off a mass of people while in Europe nobody did that because we are in a totally different universe in term of values. I do not know how you compute that, Pierre.

Pierre Jacquet

I am not sure we can compute that, but I would like to make a few comments. It may mean that the overall quality of growth, however it is defined, may matter more than the difference between growth rates. If we care about inequalities, what matters is how the benefits of growth are actually distributed over people and over time. I think we need to work more on income distribution and try to understand what happens. However, we still need growth to maintain our social structures over time and in the current debate about no growth versus growth, I think the advocates of no growth forget that we need to finance the kind of standard of living we want, so it is important. We need to redefine what growth means and work on how to extract value from the things we would like to give value to socially. That has become very difficult and yet crucial.

My final point, going back to a discussion that took place in the plenaries, I think that if we want to achieve more productivity and growth, we need to be a bit more populist but in the intelligent sense of the word. That means that we need to care about the populations rather than the elite absorbing most of the benefits from growth.

Jean-Claude Trichet

More democratic, more republican.

Pierre Jacquet

Absolutely. One of the reasons we are experiencing political difficulties, including in Europe now, is that a number of segments of the population have felt, rightly or wrongly – perceptions do matter –, that they have been excluded from the benefits of globalization and of growth, so they object. We need to tell convincing stories about benefits and the allocations of these benefits if we want to recreate public support for the kind of economic policy culture that we would like to promote.

Gabriel Felbermayr

In reply to your point, and I think this is very important, GDP is not the same as wealth here. One of my favorite papers is the one by Jones and Klenow, '*Beyond GDP?*'. What they do is use straightforward neoclassical economics, so you do not have to be heterodox and do funny things, but we have ways to deal with inequality, which like risk is not good to have if you are risk averse. We can deal with the fact that leisure is good, we can consume goods and also time. This is a big and famous paper, and I teach it as soon as I can to the first students I get because the focus on GDP alone can be misleading because it is not a measure of the level of life. It is funny that we have those commissions, I think France had one, the German Bundestag had a commission as well. It was all over around 15 years ago, and it seems that we have not really learned our lessons and that might mean that the discourse and the public debate is a bit biased because we might be too upset by the GDP per capita numbers. A couple of weeks ago, *The Economist* had a nice picture showing a ranking of countries regarding GDP per capita, APPP or not, and eventually hours worked. It is interesting, as Jean-Claude said, GDP in hours worked and we are actually quite good in Europe. If we manage to bring more people into employment, we would also increase GDP per capita, all the more if we manage to get people to work more. That has a cost, if leisure is something good, we have to give it up. It is always complicated, but I think the focus on GDP per capita is misleading.

Jean-Michel Severino, President of Investisseurs & Partenaires, former Vice President of the World Bank for Asia, former CEO of France's International Development Agency (AFD)

I am going to complexify the debate because there is one word we have not mentioned here, which is climate change.

Jean-Claude Trichet

I mentioned it.

Jean-Michel Severino

We have discussed relatively short-term productivity changes, even though we have referred to long-term curves and one very important consideration is that when you are in the corporate sector in Europe, especially in France, corporations feel that climate regulations are extremely tough. That is a very important reason for their lack of competitiveness when compared to the US right now and a very important reason for shifting investments to the US. This plays short-term but long-term, if the US is to continue emitting CO_2 at high levels and if the EU curbs its emissions, which is happening right now at a relatively significant pace, what is going to be the overall macro impact and who will be the ultimate winner of that specific competition? Of course, if we are the only ones who curb our emissions and, in any case, we have to tackle the challenge of adaptation because climate change will take place anyway, then we will have lost on two fronts, bearing the costs of reduction and having to weigh the costs of adaptations. On the other hand, if the US ultimately has to engage in very severe emission reductions over the next decade because climate change will be understandable, and adaptation will not be enough, then very severe changes may also take place.

I apologize for talking too long, but I would like to ask our colleagues how they compute this issue in the respective changes in competitiveness between the two sides of the Atlantic, bearing in mind that right now it is very clearly playing against the EU, but will that last?

Jean-Claude Trichet

It seems to me that we do not yet have a decision from President Trump. I mentioned the International Standard Coping, which was recently created and in principle it provides recommendations for the entire world. We will see exactly what happens but how would you compute that, Pierre?

Pierre Jacquet

I think we are in a process of redefining values and right now, we cannot really compute it. We could consider the price of carbon, but who decides what the price of carbon will be? The markets are not really working very well, they are very sensitive to government policies, and they may differ. It is a question of choice, and any choice is a gamble on the future. We are not taking the same gamble across major countries. If we are convinced that in the future the only companies that will be profitable will be the ones that produce less carbon, then what Europe is doing now makes sense, because it creates an environment in which only carbon-saving companies can prosper. That may succeed. But currently, Jean-Claude, US companies are much less constrained than European companies, who mention this as a major problem for competitiveness. I do not personally believe that means we should renege on European green commitments, but these commitments reflect a real gamble and I frankly don’t know what will be the outcome.

Jean-Claude Trichet

It is true that the European Union wants to be the star pupil in the classroom, it is systematically built into our system. Maybe we exaggerate a bit because we cannot afford to lose to the US. That being said, the US is much more complex with states that are totally against any kind of green transition, others, like California, that are very much in favor. The Federal government was supporting the global consensus and perhaps it will be against, the Republicans are very much against it and now that they have control of Congress we are in a different universe. It is very complicated. We are still living in an open world with market economies and if some have an incredible competitive advantage, it is clear we will pay a price in the long term.

Yann Coatanlem

A very brief point going back to the issue of concentration in the context of inequalities. Let us not forget that a lot of income inequalities between individuals come from inequalities between companies. In fact, if you look at the ratio of the salary of the CEO versus the average employee, unlike what the press is always saying, that ratio has been fairly stable over time for most companies. It only diverges for the top 5% or 10% so you have concentration right there again.

David Girard

I just want to say thank you, it is a great honor for me to be in the same room with such brilliant minds, it was really interesting. I think I am probably the youngest person in the room here and what really interests me is that from 2008, for example, the balance sheet of the Fed went from USD 1 trillion to USD 7 trillion in 15 years. What do you think is the future of cryptocurrencies, will they be used more in the future economy, which Jake Paul recently said was digital gold? How do you see President Trump's administration faring with crypto?

Jean-Claude Trichet

Thank you, a good question.

John Lipsky

Just a few comments. I was a student of Paul David at Stanford, and one of his messages was that productivity tends to move in waves. His seminal 1992 paper "Computer and Dynamo", that you referenced to, basically was a reply to Robert Solow's famous quip, 'You see computers everywhere but in the productivity statistics.' Paul David's answer was, 'That's how it appears to you, because you spend too much time with your econometric models that represent productivity gains as a constant. However, that characterization has nothing to do with how the process works in the real world.' Rather, he predicted that there was going to be a productivity surge resulting from the growing use of networked computers — i.e. the Internet — and so it occurred. Of course, this effect could prove to be overestimated, or even mistaken, but as of today, there is tremendous optimism that a positive upward wave in productivity gains deriving from the adoption of AI is just beginning.

A second comment: my impression is that the performance of the US economy has been quite good in terms of emissions. In large part, this is because success in fracking has helped to reduce the cost of natural gas. As a result, this fuel substantially has replaced coal in electricity generation, such that overall emissions have declined. There is no guarantee that this decline will go on forever of course. In contrast, the increased use of renewables in places like Germany has increased the use of coal, not decreased it.

Jean-Claude Trichet

It is a transition.

From the floor

In variation, not in level.

John Lipsky

More broadly, it is quite striking that opposed to years ago, I do not think there is any disagreement that climate change is real. It is worth asking why, if there is a consensus that something needs to be done regarding climate change, so little has been accomplished. The Bretton Woods Committee produced a study on this under the guidance of Axel Weber and Joaquim Levy, who I expect are known here. The report notes that there are three essential problems, or gaps that are inhibiting progress with regard to climate mitigation. First, there is no standard governance authority with regard to what has to be a global effort at controlling emissions. Second, there is no clear standard of implementation. In other words, if you want to act — how do you know what to do and where would you go to be sure that possible action X would produce result Y? There is also no standard of accountability, such that if you were an investor who wanted to invest in climate mitigation, how could you be sure that your investments had the results that were intended? The report concludes that until there is progress regarding these three areas — governance implementation and accountability — progress in this area will be limited.

Final remark, it strikes me that there is a widely-held assumption that technological progress is increasing inequality. This has always struck me as puzzling. I have concluded that the essence of the industrial era was that machines made weak people strong, and the essence of our technological era is that technology makes stupid people smart. If these conclusions are correct, it is not obvious to me why technology should increase inequality, at least in the longer run.

Jean-Claude Gruffat

I wanted to react to the question on crypto. As you know, there have been a number of announcements about potential members of the cabinet or other positions and you may have noticed that Chairman Gensler of the SEC is going to be replaced by Paul Atkins. He was at the SEC as a Commissioner 25 years ago and was in charge of the transition for financial positions during the first Trump administration but refused to join the cabinet and remained in the private sector. He has now been officially nominated, and I do not think his confirmation is going to be an issue, it is not controversial in any way shape or form. He has been much more open on cryptos, and I am not passing judgement on whether he is right or wrong, and he is much more positive on cryptos than, for example, Gensler or the Secretary of the Treasury, Janet Yellen.

Jean-Claude Trichet

The question was what you think about crypto.

Jean-Claude Gruffat

I have two issues with crypto, one is liquidity and the other is transparency.

Jean-Claude Trichet

Okay, clear enough.

André Lévy-Lang

I wanted to mention that we have a huge resource in Europe, that is really untapped that both Mario Draghi and Christian Sautter have presented very well. We have huge savings but unfortunately, we are risk-averse in Europe and today, there are a number of rules in the Eurozone that prevent the development of securitization, which is five times lower in Europe than in the US. I know that regulation in the Eurozone is specific and tends to be stricter and more risk averse than in the US. This money could be used to finance a number of things that have to be financed in terms of investment. One thing that has not been mentioned on climate is that today, climate risks are practically uninsurable, so they have to be covered by governments one way or another and the numbers are huge for flooding, fire, etc. There is a huge need for investment and there is a huge amount of savings available and a number of regulations that prevent it being used.

Jean-Claude Trichet

I have two remarks. First, the US is more socialist than Europe because in the US you have Freddie Mac and Fannie Mae, which are semi-public institutions that help commercial banks considerably by avoiding too much risk on their balance sheets. It is a very important difference between the US and Europe and that is a paradox. The other paradox is that we have excess savings in Europe, and they are badly in need of savings, to the extent that they are selling the US a little more each year and, I am not mistaken, we have net international financial positions of minus 90% of the US GDP. We are in surplus ourselves in terms of our net international position and the US is selling itself, which I do not think is sustainable in the long run. It is exactly like the four standard deviations over and above the other valuations, there is something rather extraordinary in the US that has positive and less positive elements.

Coming back to Europe, you are absolutely right about the regulation. What you say about the banks and what they are prevented from doing is not just about the euro area because I do not think the Central Bank is too dramatic about. Rather, it is the rules for the European Union as a whole, exactly as the rules of Solvency II prevent our reinsurance companies from investing in equities, so they are obliged, which is stupid, to invest massively in government bonds, etc., instead. There is something there that needs to be corrected, frankly speaking, because it is ridiculous. There is nowhere else for our savings because we have no pension funds in Germany, France, etc., so they are massively in the insurance companies.

Tania Sollogoub

It may be a bit different but for the last 10 years, as Sébastien knows, I have been trying to reconcile political science and macroeconomics from the point of view of indicators, which type of indicators we use and that is a value we give to dedicated indicators. For me, it is really striking if you take all the messages from political science, from people trained to reconcile that, for example, Modelski, Gilpin, or even a Rodrik, Acemoğlu, etc. Based, for example, on hegemonic cycles, it shows that the US is really now at the end of a hegemonic cycle with some deformed power, and it is really clear if you take Modelski’s work. What I am trying to say is that from this point of view of geopolitics and finance, and geopolitics and economy, these types of work but also Hirschman, or before him, Polanyi, etc., it shows that the deformation towards monetary power is a symptom of hegemon in the last four stages of the hegemonic cycle. This is very interesting work. From this point of view, inequalities, polarization, violence in society and many other institutional indicators have to be included in the equation and integrated into new indicators now, if we really want to build geoeconomics. That means we have to compute all these types of indicators in a different way.

Jean-Claude Trichet

We take your remarks into account, and I think we can totally agree that our understanding of what is happening is not sufficiently comprehensive. Still, we are living in the real world, and in the real world the hegemon of the US is there, even though I personally consider it excessive and probably based on some kind of bubbles. We cannot deny that is the case and fortunately, Europe and the US are democracies and that means that the people can exert influence, and I hope that this influence will be increasingly visible. In my country, we have some influence of our own, both historically and today.

John Lipsky

Actually, Jean-Claude, it seems to me that the discussion of crypto neglected something very important. I came away from the IMF annual meetings impressed with the seriousness of many central banks in moving toward a tokenized financial system. You are a great expert on this subject, so if we end up with a digitized, tokenized financial system that produces instantaneous, real-time settlement, etc., even across currencies, is there any role for crypto other than for illicit purposes, for gambling or for fun?

Jean-Claude Trichet

I could speak for a long time on crypto. I think we collectively made an immense mistake to let Bitcoin gallop, and I am appalled when I see that it is now supposed to be a fantastic currency in the eyes of the new President of the US. This is a purely speculative instrument, there is no doubt about that. It is not a currency, it does not have the characteristics of a currency according to Aristotle. It does not keep its value, which is one of the three major features, a good instrument for exchange, a good measure of value and a good store of value, which is not the case. All those equivalent currencies are pure speculative instruments, probably very amusing at the casino table but apart from that, I think that only the so-called stable cryptos could perhaps look a bit more like a currency. I think it is striking to see the central banks embarking on this because there are technologies behind it that could help to diminish costs considerably. To my knowledge, the crypto euro or crypto dollar, which would be a precise equivalent of the notes, are still being analyzed because it is quite difficult. The notes can be fully anonymous and of course, you have a way to control that, and you can stop more than 10 000 euros or dollars crossing borders. Then there is the question of the cryptocurrencies issued by the central banks themselves because they would have to be in control if we do not want that to become an abomination that is only used by organized crime. I do not know exactly how they will solve that, but that is another story.

The time is over, and I think we are at the end of our meditation. Thank you very much to all the speakers and questioners.