Discussion*

Christine Lagarde, Patrick Flandrin, Alberto Quadrio Curzio, and Wolfango Plastino

Wolfango Plastino: *In the Corona crisis, Europe and the EU governments reacted with fiscal and monetary policy responses. With the benefit of hindsight, do you think these responses were appropriate, and what can we learn from them for the future?*

Patrick Flandrin: The Corona crisis broke out extremely suddenly. This created an unprecedented, worldwide situation of emergency, calling for immediate actions from governments. This absolute priority led Europe to adopt rapid responses in terms of fiscal and monetary policy, with the added advantage of relying on community reactions to complement national initiatives. This proved effective but it also raises issues for the mid- and long-term, depending on whether the crisis will soon be terminated or, on the contrary, will only be the first of a series. It is therefore of the utmost importance for us to be prepared for possible future pandemics. This was precisely the topic addressed this year by the (S20) group of the Academies of the G20 nations, under the leadership of Italy via the Accademia Nazionale dei Lincei.

This resulted in statements submitted to political leaders, promoting the importance of anticipation and swift reactions at the international level. It was first proposed to promote the creation of a global network of surveillance. One further recommendation was to promote a fair distributed manufacture and delivery of diagnostics, drugs, vaccines, and medical supplies. It was finally proposed to launch an intergovernmental convention to pave the way to an international agreement on pandemic preparedness and management.

Two remarks about the way of thinking about pandemic preparedness. The first is that, while science has a key role to play –

* The text below is the full transcript of the Round Table that followed the *Lectio Magistralis* by H.E. Christine Lagarde, President of the European Central Bank.

that has been discussed as such within the S20 – economic and societal issues are equally important and cannot be separated from it. Acknowledging this necessity led the Accademia Nazionale dei Lincei to launch in parallel a discussion within the G20 Academies concerned with social sciences and humanities (SSH20), resulting in a companion statement. This initiative has definitely to be pursued and enforced in the future. The second remark is that, in terms of science, preparation for the future is deeply rooted in the capacity of engaging long-term, innovative research programmes, and not only of reacting to emergency situations. What we witnessed with vaccines for Covid-19 is particularly exemplary. If the development of mRNA vaccines has been so fast, it did not wait for the outbreak of the epidemics to be envisioned, nor did it appear from nowhere: it resulted from at least 15 years of discoveries and innovations. We cannot predict what will happen in the future, but being prepared for tomorrow means supporting today research efforts that are not necessarily driven by short-term objectives.

Alberto Quadrio Curzio: First of all, before answering the question, I'd like to thank the President of the European Central Bank (ECB), Mme Christine Lagarde, for her excellent speech and all those who made this session on "Science Diplomacy" possible, especially Professors Plastino and Barba Navaretti. Before turning to the questions, let me mention Luigi Einaudi (1874-1961), a crucial figure in Italian and European History. He was "un Piemontese" who died 60 years ago. His many contributions include those as President of the Italian Republic (1948-1955), as a scholar of Institutional Political Economy and as an "architect of a Federal Europe." When he was 23 years old, he wrote his first article on Europe, which is our main topic today.

I shall start by quoting Mario Draghi's Editorial on "Fiscal policy and the pandemic" which came out in *Economia Politica. Journal of Analytical and Institutional economics* in 2021[1]. He states: "The economy is recovering, and schools have reopened." He

[1] The Editorial, (*Economia Politica. Journal of Analytical and Institutional Economics*, 2021, 38, 3, pp. 797–802), is the English translation of Prime Minister Mario Draghi's *Lectio Magistralis* delivered on 1 July 2021 when he, in the presence of the President of the Italian Republic, received the International Feltrinelli Prize 2020 for "Monetary Institutions", given by Roberto Antonelli, President of the Accademia Nazionale dei Lincei, in Rome. As Editor-in-Chief of the journal, I was quite pleased to have the privilege of publishing Draghi's enlightened *Lectio* on this crucial period.

chose to talk immediately about schools! Then he goes on: "But we must be realistic. The pandemic is not over. Even when it will be, we will have to deal with the consequences for a long time." Draghi stressed two points at the beginning of his article: "The economic crisis that began a year ago is unprecedented in recent history" and, as you said, President Lagarde, the global nature and the timespan of this pandemic is yet unknown. Secondly – here Draghi is speaking as an economist, past President of the ECB and President of the Italian Council of Ministers. At the stage when the pandemic broke out, there were two choices: either fight a recession or accept a long and terrible depression. The first choice was the right one, otherwise it would have been a disaster with bankruptcies, breakdown of the supply chains, and massive unemployment. The necessary choice had the side-effect of producing a surge in the debt.

Draghi goes on to explain that the timing of policies is crucial in order to converge on a path of sustainable development. This brings me to the Next Generation EU (NGEU) and the Recovery and Resilience Facility (RRF) that the EU started in 2020, and which exists mainly due to Ursula von der Leyen and Angela Merkel. Thanks to this crucial innovation, for the first time ever, the EU will issue Eurobonds (EuroB) to finance reforms, investments and structural changes precisely for a greener, more digital, civil, social and scientifically oriented Europe. Close to 1 trillion euros will be raised to finance this path of innovation in the 27 European countries.

Christine Lagarde: The pronounced impact of the pandemic on the economy and the protracted weakness in inflation clearly called for a very accommodative monetary policy stance and a very supportive fiscal policy. Our monetary policy response has evolved in line with the economic situation. When the pandemic hit the world in early 2020, it was crucial to contain and stamp out the risk of a self-reinforcing spiral of uncertainty on financial markets. We also needed to ensure sufficient liquidity at attractive conditions to help firms and households get through the crisis. Gradually, our focus shifted towards putting the recovery on solid ground. First and foremost, we sought to preserve favourable financing conditions for all sectors in the economy to offset the negative impact of the pandemic on the inflation outlook. Closing the gap to the pre-pandemic inflation outlook is only the first step. Our policy measures are key to helping the economy shift to a sustained recovery which will ultimately bring inflation to our 2% target over the medium term.

Two policy measures have been crucial for achieving those goals: the pandemic emergency purchase programme (PEPP) and the targeted longer-term refinancing operations (TLTROs). The PEPP has been effective in reducing financing costs from their initial highs at the onset of the pandemic back to pre-pandemic levels. Our TLTROs – as a powerful complement to PEPP – have supported favourable bank lending conditions. Without our measures, we would have faced a much worse growth and inflation outlook.

What did we learn? First, monetary policy needs to be responsive and flexible. History has taught us that unpredictable events will challenge financial markets from time to time. Responding to those new circumstances will require the development of novel approaches and tools. The positive experience with non-standard measures implies they will continue to be a key tool in times of market dysfunction and when inflation falls short of target in conditions that constrain our traditional instrument. Overall, the low level of the natural rate of interest implies that encounters with the effective lower bound are likely to be more frequent than in the past. As a result, non-standard tools are also likely to remain part of our regular toolkit. This was clearly recognized in our strategy review.

Second, diversification of the policy toolkit is essential. Deploying a package of complementary tools enhances the overall effectiveness of monetary policy because instruments can be mutually reinforcing. For example, negative interest rates reinforce the effects of our forward guidance, i.e. the indications that we issue about the likely path of our policy rates. Marrying these two policies has proved extremely effective in making credit more affordable for households and firms.

Fiscal policy very effectively mitigated the fallout from the pandemic by channelling support to where it was most needed. Governments supported the health system and provided aid to the unemployed and other vulnerable groups through various social transfers. Fiscal emergency packages limited the economic fallout from containment measures through direct steps to protect firms and workers in the affected industries. Short-time work schemes proved effective in preserving employment. Extensive liquidity support-measures in the form of tax deferrals and state guarantees helped firms particularly affected by the containment policies to avoid liquidity shortages. The EU's response to the coronavirus (Covid-19) crisis – e.g. through Next Generation EU and SURE – has been unprecedented and significantly complements the fiscal measures taken at the national level.

Fiscal and monetary policy measures taken during the pandemic have been highly effective, and have complemented each other in their respective fields of responsibility: the European Central Bank's (ECB) monetary policy has stabilized markets and eased the monetary stance, in line with its price stability objective. Our monetary toolkit has proved large and flexible.

Fiscal policy measures were instrumental in setting the euro-area economy back on a sustainable growth path. They helped to limit scarring of economies. Fiscal policies are important for macroeconomic stabilization, especially in the proximity of the effective lower bound on interest rates. In such circumstances, fiscal policy can complement monetary policy effectively. Importantly, this requires that debt sustainability is ensured and that sufficient fiscal buffers are built in times when the economy runs smoothly.

Temporary European tools have been created to counter the pandemic crisis. If they work well, this could provide lessons for the Economic and Monetary Union architecture, which would benefit from a permanent stabilization facility to enhance the macro-economic policy mix during severe downturns.

Wolfango Plastino: *Recently, the ECB and other central banks have started to pay much more attention to environmental and climate policy considerations. Is this really covered by the ECB`s mandate or is this rather an example of mission creep, as some critics claim?*

Christine Lagarde: Exploring how the ECB – within its mandate – can support the public goal of mitigating climate change is not only our responsibility as a public European institution, but is also what we need to do in order to fulfil our mandate. First, climate change and the transition towards a more sustainable economy affect the outlook for our primary objective, price stability, through their impact on macro-economic indicators − such as inflation, output, employment, investment and productivity – and on natural interest rates, the transmission of monetary policy and financial stability. Second, climate change and the carbon transition affect the value and the risk profile of the assets held on the Eurosystem's balance sheet, potentially leading to an undesirable accumulation of climate-related financial risks. Furthermore, the Treaty on the Functioning of the EU not only allows, but arguably requires, the ECB to take climate change into account. The ECB has a duty, based on the secondary objective, to support general economic policies in the EU. And environmental protection and climate mitigation figure prominently among these policies which the ECB is required to support. In doing so, we have to find the right balance between exploring what is feasible within our mandate and ensuring that our actions never interfere with our primary objective of price stability.

Patrick Flandrin: It becomes every day more obvious that climate change must be the major concern when considering the future of humankind. Its reality has been amply documented by scientists and recognized as unambiguously attached to human activities. Global warming has dramatic effects on our environment, modifying ecosystems, impacting biodiversity, and creating new inequalities between populations. Consequences affect all aspects of our lives and profound transformations are to be undertaken in order to mitigate them. Energy production and consumption are to be reconsidered with respect to their environmental and climatic impact, many economic sectors have to be reshaped, and now is the time for action. This certainly justifies the ECB and other central banks to take such aspects in consideration, though at the expense of raising novel issues. One question concerns for instance taxonomy, with the issue of agreeing upon what is “green” or not (an classic example of the controversy that this may generate is the place to be given to nuclear energy, which should be included in view of its excellent carbon footprint, but which might be obstructed by other kinds of reticence). A companion question is related to the economic models on which central banks may rely, in which environmental issues or externalities due to climate are seldom taken into account while they should be, possibly by including specifically related costs when optimizing utility functions of economic agents.

Alberto Quadrio Curzio: The ECB could buy Euro Green Bonds from the European Commission and from the single states, as well as other types of green bonds. It has already been purchasing green bonds since 2016 in compliance with the Environmental, Social and Governance (ESG) criteria. Moreover, the ECB has many other ways of purchasing green bonds (directly and indirectly).

It is important to note that the European Commission (EC) within NGEU and RRF has adopted a broader sectoral strategy by also issuing “SureBonds” to alleviate unemployment. When it issued its first green bonds, it raised 30 billion euros (with a demand 10 times the availability!), while by the end of 2026 the total amount raised should be 250 billion euros, that is 30% of the total NGEU.

The EU, with NGEU, will become the world's largest issuer of green bonds.

More generally, the NGEU's EuroB and Green strategies must be evaluated from the technical and political perspectives. From a technical stance, NGEU has been developed according to the green bond principles (GBP) of the International Capital Market Association, which is a market standard reviewed by Moody's. Politically, the programme follows the protocol developed by the EC and approved by the European Parliament and Council. Furthermore, the effective compliance and use of the funds allocated to member states under the NRPs will be monitored. At least 37% must be earmarked for the green transition (from energy to transport).

As for the ECB's compliance with its mandate, the problem is more complex for multiple reasons; and the risk of infringing its statutes is always present. Now, the risk that the ECB might be brought before the European Court of Justice is notable. Over the past decade, Mario Draghi faced, with wisdom, courage and success, the financial crisis. However, a complaint was filed with the European Court of Justice (ECJ) against "his" ECB monetary policy and the massive purchases of state bonds. The ECJ ruled that the statutes had not been infringed. Nonetheless, the degree of ECB intervention since the pandemic has increased significantly and the total amount of state bonds in its vaults has soared.

The ECB's mandate must remain within the scope of the European Treaties. It is not as broad as that of the Federal Reserve for many reasons. One crucial difference is that the Fed buys US Treasury bonds without the problem of different rates of interests, which characterize the state bonds of the 19 EMU countries. This is one of the reasons why I have argued for 20 years (more or less, since the birth of the euro) that Eurobonds should be issued like Treasury Bonds for European federal economic policies, while state bonds should be issued for the national questions specific to the EMU members. If the ECB were to buy only Eurobonds, its policies would be simpler. To date, the ECB has been capable of solving the EU's challenges, but in the future, it might become much more difficult.

Wolfango Plastino: *What is your assessment of the current inflation developments? Is it a temporary phenomenon or, given the increase of primary commodities prices, might it be long-term?*

Alberto Quadrio Curzio: Inflation is a real danger for current EU policies and for worldwide economic recovery. Factors to consider include commodities, money and debt. While these aspects impact EU and EMU structural policies and the EU's stability, I will not address all of them here. I mentioned earlier that the ECB has a 2% (medium term) inflation target. The Fed does not have a target ceiling and so its expansionary policy also led to significant speculation.

However, let us consider other factors that could cause inflation.

The pandemic is changing the geo-economy and production chains. Many new combinations are being introduced, and there is a crucial return to commodities. At the beginning of 2020, commodity prices in euros, according to various indices, had fallen sharply, accentuating the decline that had begun in 2018. From a significant low around April, prices spiked violently, taking some indices in euros to all-time highs. This was due to factors such as a strong recovery in demand, a lag in adjusting supply, problems with logistics and maritime transport. In short, a supply chain disruption.

There are also other structural, long-term, problems to consider. One is global and concerns dematerialization and the transition to clean energies, which requires many rare and scarce raw materials. Commodities like lithium and copper – used for semiconductors – or gas are indispensable in most production processes. Another concerns the EU's scarcity of these materials and its lack of common stocks. The worsening EUR-USD exchange rate, which is the currency of commodity prices, has heightened the EU's vulnerability in this geo-economic and geopolitical area in contrast to the USA and China.

I've already mentioned that the ECB injected extraordinary amounts of liquidity into the EMU area. Now, various countries with solid public accounts are calling for a return to orthodox fiscal policy to avoid going from a "covid pandemic" to a "debt pandemic". This stance, in particular by a German institutional figure, was expressed in May and June also in the *Financial Times*, with the suggestion of introducing a "physically gold-backed rescue fund" in some countries (like Italy). However, this is a simplistic way of looking at these very difficult issues.

In fact, three aspects must be considered. The first is that the EU's public expenditure is 1% of its annual GDP, while for other federal states it's at least 20%. That is why the EuroBs prescribed in the NGEU and RRF should become permanent, solid, with long maturities, and why they should be issued regularly by the EU and EMU. The second is to provide a structure, for what should become "GoldEuroUnionBonds" beyond the issuances of EuroBs currently planned until 2026. These should have a long duration, most near to 30 years. Gold-backed bonds would provide the euro and EMU with extraordinary strength, since the EMU members have the largest official gold reserves in the world, around 10 thousand tonnes. I have been proposing this for more than 20 years and condensed it into an essay, “Eurobonds for EMU stability and structural growth”, published with Cambridge University Press (2017). Third, it will be impossible to implement the Stability and Growth Pact, which has been suspended to the end of 2022, with a target of 60% public debt to GDP ratio for individual states, when the average ratio in the EMU is currently over 100%. It is time to move from decentralized prescriptive fiscal policies to structural economic policies that are truly federal and functional.

Christine Lagarde: Inflation has been surprising to the upside for a while. In October, euro-area inflation rose to 4.1% from 3.4% in September. We see this inflation upswing largely reflecting three factors, which will fade over time. First, a broad-based surge in energy prices. Energy inflation alone accounted for just over half of the overall inflation in the euro area in October. It was also responsible for a large share of the recent upward surprises. The second factor is recovering demand, due to the reopening of the economy, which is outpacing constrained supply. The increase in HICP services inflation mainly reflected an increase in prices for high-contact services reopening after pandemic restrictions. Non-energy industrial goods (NEIG) inflation remained well above its historical average, reflecting high demand for durable goods in conjunction with global supply chain disruptions. The pipeline price pressures for NEIG inflation are visible in historically high rates of producer price inflation for both intermediate and final (non-food) consumer goods. The third factor affecting the inflation upswing is the base effects associated with the reversal of the 2020 VAT cut in Germany and the sharp drop in oil prices in 2020.

Price pressures from energy commodity prices and from demand outrunning supply are both lasting longer than we initially expected. But we expect inflation to peak before the end of the year, and then to decline in the course of next year, as the impact of these factors currently pushing up inflation will either fall out of the year-on-year inflation calculation or ease in the course of 2022. The impact of the reversal of the temporary VAT cut will fall out of the inflation calculation in January. Our projections are conditioned on the paths implied by energy commodity futures prices. Current profiles of these prices suggest that we will likely see a noticeable easing in energy inflation in the first half of 2022. Oil futures point to a gradual decline from the beginning of 2022, while gas and electricity futures suggest a drop in the spring.

Price pressures from demand outrunning supply are also expected to ease in 2022 as the demand boost in the reopening phase spreads more evenly and supply constraints ease.

The surge in prices could become longer-lasting only if it led to a wage-price spiral whereby employers agree to continuous increases in nominal wages – over and beyond what is justified by growth in productivity and by a medium-term inflation of 2% – on the expectation that they can keep increasing prices commensurately to protect their margins. There are no signs that this is happening or likely to happen.

Growth in negotiated wages has remained moderate (1.3% in the third quarter of 2021), but the data reflect negotiations that took place before the current inflation surge. At the same time, we still observe slack in the labour market that should contain wage pressures. Although the unemployment rate has returned to its pre-pandemic level, there is still substantial support from job retention schemes.

Medium-term inflation expectations are well anchored and remain slightly below our 2% target, which suggests that excess inflation pressure will not persist over time.

This being said, we monitor the possible consequences related to the current inflation surge closely.

Patrick Flandrin: Predicting the future is just impossible. Forecasting is possible but difficult, and it can only be approached via some in-depth knowledge of what happened in previous periods and/or on adequate models. Models are most often based on the behavior of agents that are supposed to act "rationally". This can be reasonably effective in normal situations, i.e., in the absence of severe drifts or of shocks. Designing better models for such situations is desirable but intrinsically difficult, with the need to introduce behavioral loops. As for inflation, much has certainly to be learned from the past, and central banks, which have been on the frontline in former crisis situations (e.g., in 2008), should be equipped for adjusting models and better anticipating further developments.

Wolfango Plastino: *You regularly use your status as global public personae to promote a better gender balance in politics, corporations or public institutions. Are you satisfied with the progress that you observe in this regard?*

Patrick Flandrin: There is no discussion that a better gender balance should be promoted in all sectors of activities. This includes in particular higher education, research, and scientific activities at large. While some progress has been observed in the recent past, much more is still to be done, and the question is: how? Imposing quota rules is a possible answer that could be effective in some situations – e.g., when used for a restricted period of time as a kick-off process – but it has several drawbacks, especially in academia. For instance, from a strictly quantitative perspective, the current situation in France is that only about one third of academic positions are hold by women. As a consequence, imposing an exact gender balance in panels, commissions, boards, etc., leads inevitably to an overcharge for women, which negatively impacts the time they can devote to their own research and, ultimately, their career. Another difficulty relates to legitimacy, many women being reluctant to accept any form of positive discrimination that could suggest they have not been recognized on the basis of their merits alone. Those caveats do not preclude development of all kind of incentives based on an explicit recognition of the situation and of the possible cognitive biases (conscious or unconscious) that resist change. The observed gender imbalance in science results also from a possible lack of confidence on the part of female students to engage in scientific studies, a question that can be given at least two answers. The first is the importance of being able to put forward "role models" whose professional trajectories can allow young girls to identify themselves and gain confidence. The second, which is closely linked to the first, is an educational effort that must be undertaken from school onwards, to overcome the prejudices that still too often exist about the gendered nature of scientific practices.

Alberto Quadrio Curzio: Gender balance is a crucial topic. I would require more space to adequately address it. Thus, I will limit myself to mentioning a few instances.

I shall start from the Farewell Event for Mario Draghi as President of the ECB held in Frankfurt on 28 October 2019, which he invited me to attend. His speech will remain a masterpiece not only on the past but also on the future of monetary and fiscal policies. Various illustrious dignitaries made speeches, but I shall focus on three. Mario Draghi in addressing the President elect: "The time has come for me to hand over to Christine Lagarde. I have every confidence that you will be a superb leader of the ECB"; Christine Lagarde expressing her admiration for Draghi: "let me thank you for all that you have done in bringing about the success of the euro area and more importantly the well-being of its people. Your legacy is a call for us to excel, to exceed expectations and to deliver on the mandate and to serve the European mission as you have served it with wisdom, with determination and with commitment"; and Angela Merkel, who stressed that "for the first time since the ECB was established there will be a female President very shortly at the helm of this institution." She also warmly praised Draghi, as did President Mattarella and President Macron, who also highly praised Cristine Lagarde. Ursula von der Leyen, President elect of the European Commission, sat in the front row. In short, six admirable personalities, men and women from the founding countries of the EEC. The event was emblematic of the important role of women in the EU and its institutions.

Let me briefly mention also two scientific examples. The first was a series of conferences that I organized in 2018 as President of the Accademia Nazionale dei Lincei. They were held by six eminent women from the sciences and humanities: Fabiola Gianotti, physicist, Elena Cattaneo, neuroscientist, Emanuelle Marie Charpentier, microbiologist, Bina Agarwal, economist, Marcella Frangipane, archaeologist, and Berit Reiss-Andersen, lawyer. The second is an event that was organized by a UNESCO programme unit based in Trieste, the Organization for Women in Science for the Developing World from 8 to 19 November 2021 on *Women, Science and Development*. As its Ambassador, I was involved in promoting and participating at the event organized by Jennifer Thomson, OWSD President and Tonya Blowers, OWSD Programme Coordinator, at which there were too many renowned female scientists and dignitaries to list here.

Christine Lagarde: Looking around us, we see that our reality is still predominantly driven by male decision-makers. Men make up 75% of parliamentarians, hold 73% of managerial positions and constitute 70% of participants in climate and peace negotiations.[2]

And it was no different during the pandemic. From a total of 115 national task forces from 87 different countries dedicated to tackling the pandemic, only 3.5% of them had gender parity while around 85% were made up mainly of men.[3] Yet a recent global survey showed that women leaders were more effective than their

[2] UN Women "Women's Rights in Review 25 Years after Beijing", 2020, https://www.unwomen.org/en/digital-library/publications/2020/03/womens-rights-in-review.

[3] European Commission, "2021 Report on Gender Equality in the EU", 2021, pp. 37-38, https://ec.europa.eu/info/sites/default/files/aid_development_cooperation_fundamental_rights/annual_report_ge_2021_printable_en_0.pdf.

male counterparts during the pandemic. According to this study, women performed better under pressure and rated more positively on most of the competences involving interpersonal skills, which were the most appreciated by employees.[4]

Progress is not certain and we should not take it for granted. The pandemic has once again shown us how quickly progress can be challenged and even reversed. Women's jobs are more vulnerable to this crisis than men's: more than half of overall job losses during the pandemic affect female workers.[5] Women work disproportionately in the sectors that have been worst hit by the crisis and they are more likely to have informal work that falls outside the scope of government support programmes. Additionally, while many women were at the frontline of fighting the pandemic, they have also been left with the responsibility to care for family members while trying to keep their own careers on track.[6] The Malala Fund estimates that 20 million girls in developing countries may never return to the classroom after the pandemic-related school shutdowns.[7] This is unacceptable.

So we have the evidence to inform better decisions in the future – it is up to us to take them. The future is inclusive and sustainable, and clearly it is in everyone's economic interest to ensure that talent does not go to waste. But things will not change by themselves. According to the World Economic Forum's *Global Gender Gap Report 2021*, there has been a decline in gender parity globally and it will now take 135.6 years to close the gender gap.[8]

It is time to rise to this challenge together. I see many young talented women who are taking a leap and going for it. But ending gender inequality will also require concentrated actions by institutions and governments.

[4] J. Zenger, J. Folkman, "Women Are Better Leaders During a Crisis", *Harvard Business Review*, December 2020, https://hbr.org/2020/12/research-women-are-better-leaders-during-a-crisis.

[5] McKinsey Global Institute, "COVID/19 and Gender Equality: Countering the Regressive Effects", July 2020, https://www.mckinsey.com/featured-insights/future-of-work/covid-19-and-gender-equality-countering-the-regressive-effects.

[6] European Commission, "2021 Report on Gender Equality in the EU", cit., p. 40.

[7] Malala Fund, "Girls' Education and COVID-19: What Past Shocks Can Teach us about Mitigating the Impact of Pandemics", 2020, https://downloads.ctfassets.net/0oan5gk9rgbh/6TMYLYAcUpjhQpXLDgmdIa/3e1c12d8d827985ef2b4e815a3a6da1f/COVID19_GirlsEducation_corrected_071420.pdf.

[8] World Economic Forum, *Global Gender Gap Report 2021*, 2021, https://www3.weforum.org/docs/WEF_GGGR_2021.pdf.

Wolfango Plastino: *Along with other central banks, the ECB is preparing the introduction of a digital euro. Why should citizens in the euro area support a digital euro? Will they have to stop using euro bills and coins?*

Christine Lagarde: The ECB intends to ensure that people continue to have access to cash. The central bank needs to guarantee that sovereign money remains fully accessible and usable, so that it can continue to act as an effective anchor at times when payment behaviours change. Providing citizens with riskless money for their payments is a key part of the Eurosystem's mission and a digital euro would be riskless money in another form. It would complement cash, and citizens would choose which means of payment to use. For example, at a physical store today, citizens wishing to use central bank money can opt to pay with cash. Neither they nor the merchant will be charged any payment fee or fee for holding the banknotes for them. Just the internal cash handling costs. But cash can hardly be used in digital payments, such as for e-commerce. One of the business cases for a digital euro is to make possible in e-commerce what has always been possible in a physical store: to pay digitally with central bank money and enjoy its advantages.

The benefits of a digital euro would also go beyond that. They relate to the role of the ECB as a public institution free of commercial interests. A digital euro would contribute to a fairer, inclusive, more diverse and more resilient European retail payments market. It could create synergies with private payment solutions and provide an alternative to foreign payment providers for fast and efficient payments in Europe and beyond. For small businesses, a digital euro would be another way of receiving payments from their customers. It would also ensure a high level of privacy. The ECB has no commercial interest in monetizing payment data. Overall, a digital euro would promote inclusiveness, diversity and privacy of the European payment system.

Patrick Flandrin: "Digital euro" rings the bell of something like bitcoins and cryptocurrencies, which are often associated with some way of getting rid of central banks… The actual situation should be different but it would benefit from a clearer explanation. From a naive perspective, one is already familiar with some forms of virtual money in the generalized use of credit cards or electronic payments, and less and less bills and coins. Going further, however, will be a matter of trust, as it raises cybersecurity issues that are observed every day growing in importance and which are known to have non-trivial solutions. Increasing security may also involve the development of refined protocols that have a significant energy and environmental cost that cannot be ignored. Moving from feasibility to usage, forgetting bills and coins is not guaranteed to be socially accepted in the same way by citizens of different EU countries. As with the first question on preparing for future pandemics, it is clear that purely technical issues and social science approaches must be considered together.

Alberto Quadrio Curzio: I am very cautious about digital currencies. Many seem worrisome and appear speculative in nature. I fear they could undermine monetary policies and jeopardize the central banks' role of providing stability and solvency. I am not, however, able to distinguish between digital currencies that could fall within a sovereign monetary policy and those which escape any form of institutional oversight. I will conclude my remarks on this issue by mentioning again Luigi Einaudi in his magnificent work *Teoria della moneta immaginaria nel tempo da Carlomagno alla Rivoluzione Francese* (1936), where he addresses the relationship between contractual monetary units and units of payment, between imaginary money and real money, reminding the reader that an increase in the nominal "value" of the latter, in terms of the "former," merely gives the illusion of being richer.

One of his affirmations has always impressed me, and even more so today. I shall quote his refined Italian:

"La manovra monetaria opera su un congegno delicatissimo e complicatissimo; e riesce quel manovratore il quale alla chiarezza delle idee astratte sa unire l'apprezzamento rapidissimo dei fatti invisibili".[9]

This sentence is almost impossible to fully translate with all its nuances; the gist is that an outstanding Central Banker should not only have a profound understanding of monetary theory and policies, but also the sensitivity to make extremely quick decisions that include an intuition of the public's response.

This is a challenge for central bankers from orderly states faced with creating "digital currencies". I hope that they will take into account monetary history and monetary theory, since for many centuries, currency has been considered a symbol of sovereignty and reliability.

[9] L. Einaudi, "Teoria della moneta immaginaria nel tempo da Carlomagno alla Rivoluzione Francese", *Rivista di Storia Economica*, 1936, 1, 1, pp. 1-35, p. 27.