



BANCA D'ITALIA
EUROSISTEMA

Sustainable development and climate risks: the role of central banks

Speech by Ignazio Visco
Governor of the Bank of Italy

Sustainable Development Festival 2019
'Finance and financial system for sustainable development'

The Italian Alliance for Sustainable Development
Rome, 21 May 2019

The question of whether natural resources and the development objectives of nations are compatible is an issue that has long been debated in the field of economics. It dates back to at least the end of the 18th century with the works of Thomas Malthus on food supply and population growth and has re-emerged a number of times since then in the public debate.

For example, at the start of the 1970s, in the wake of the demographic explosion and the related exponential growth in consumption, the simulations produced for the project of the Club of Rome on the 'Predicament of Mankind' set off an alarm which resonated strongly at international level concerning the risks to the survival of our ecosystems and of the human race itself. It was then observed that the scarcity of natural resources envisioned in that analysis, largely based on a linear extrapolation of the trend under way, did not take sufficient account of two fundamental mechanisms that regulate the functioning of the economic system: the rebalancing capacity of prices and the endogenous nature of technological change. When the resources used in the production of goods and services become more scarce, an increase in their prices discourages demand and provides an incentive to invest in new production methods that utilize fewer of those resources. Although these mechanisms make it particularly difficult to make reliable long-term projections, the fears for 'sustainability' – that is, the ability to meet current needs without compromising future generations' chances of doing the same – have not faded.

Over the last three decades the biggest concerns have been in relation to the effects of climate change, a factor for which there are no 'natural' market prices. In 1992, following the Earth Summit in Rio de Janeiro, the United Nations Framework Convention on Climate Change was born, giving rise to the Kyoto Protocol (in 1997) and the Paris Agreement (in 2015). In the autumn of that year, Robert Solow, winner of the Nobel Prize for Economics in 1997 for his contributions to modern theories of economic growth, spoke before an audience of environmentalists, stating that:

I do not have to remind you that 'sustainability' has become a hot topic in the last few years [...] As far as I can tell, however, discussion of sustainability has been mainly an occasion for the expression of emotions and attitudes. There has been very little analysis of sustainable paths for a modern industrial economy, so that we have little idea of what would be required in the way of policy and what sorts of outcomes could be expected.

Solow feared that the concept of sustainability would remain a slogan, without materializing into policies to encourage the use of sustainable resources. Almost 30 years later, data on the trend in greenhouse gas concentration – the leading cause of global warming – are not encouraging. In fact, the growing use of fossil fuels has pushed the concentration of greenhouse gases to levels that are dangerously close to generating a temperature increase of more than 1.5°C, with potentially catastrophic consequences for our planet according to the United Nations Intergovernmental Panel on Climate Change.

Some effects are already evident. At global level, the last four years have been the warmest since 1880. In Italy, 2018 was the warmest year in the past two centuries and 2017 was already characterized by a strong intensification in weather conditions, with severe cases of drought over most of the country that caused serious repercussions on the water supply.

Climate change and the risks to the financial sector

In Europe, southern countries like Italy will be most affected by the expected consequences of climate change, which pose new risks for the real economy and for the stability of the financial sector.

First, there is the 'physical risk' stemming from progressive climate change, in particular involving an increase in temperatures, greater irregularity in rainfall patterns and an increased probability of extreme weather events. According to all the main climate change scenarios, Italy will be the European nation that is most exposed to damage caused by its rivers flooding. These phenomena could result in significant losses in terms of human life and costs in terms of the destruction of public and private infrastructure, forcing households, firms and the State to allocate a large amount of financial resources to their reconstruction. The steady increase in temperatures could have permanent effects on the country's productive capacity.

The effects of climate change on the real economy may spread to the financial sector through various channels. Natural disasters interrupt the productive functions of firms and households, increasing their financial vulnerability, reducing the value of the assets pledged as collateral for loans, and making it more difficult for them to repay loans. The increase in climate change-related risks could cause banks to tighten credit towards households and firms in high-risk areas, with possible negative repercussions on the transmission of monetary policy stimuli. If the scale of these effects were to become significant, the stability of the financial system itself could be affected. Analyses carried out by the Bank of Italy highlight the fact that, in our country, more than 20 per cent of loans to the productive sector are granted to residents in areas with a high risk of flooding;

moreover, the flow of credit is negatively correlated with risk exposure, especially when the debtors are small and medium-sized firms.

Another type of risk, 'transaction risk', derives from the possibility that the necessary transition towards a low-carbon economy may occur in a disorderly manner. During this transition, the prices of energy products may increase markedly: climate policies are based on the use of alternative energy sources which are currently more expensive, and on the introduction of carbon-pricing systems, like the taxation of carbon emissions. Since the short-term demand for energy is not very reactive to price variations due to the fixed costs associated with changing the sources and forms of supply, a possible increase in prices would heighten the financial vulnerability of firms and households owing to the higher cost of purchasing energy goods. A sharp drop in the value of assets and infrastructures linked to the mining, transformation and use of fossil fuels (coal, oil and gas) could also trigger a rush to sell the securities of the most exposed companies and may make it more difficult for them to cover their liabilities towards the banking system and the market, with consequences that could significantly affect the economic system and financial stability.

The role of the private and public sectors in the transition

The public sector cannot be solely responsible for creating stable, fair and inclusive economic growth that respects environmental balances. It is up to the public sector to create a stable and modern regulatory framework, and to define and implement effective economic, environmental, energy-related and social policies that provide incentives that will stimulate new investments. In order to achieve sustainable business practices, strategies must be adopted that take account of the environment, human rights, consumer rights, diversity and best practices in corporate governance, i.e. the Environmental, Social and Governance (ESG) profiles. In adapting to the objectives set by the public sector, the private sector can draw some advantages. In fact, 'green' sectors are steadily gaining importance in Italy too. According to Istat estimates, in 2017 the eco-industrial sector expanded markedly: it contributed 2.3 per cent to total value added and employed nearly 400,000 full-time employees.

Given its critical role in resource allocation, the financial sector plays a key part in influencing the scope, speed and fluidity of the transition. It can do so effectively if intermediaries also consider sustainability factors in their corporate governance systems and in their risk management and investment strategies.

Today, central banks and supervisory authorities also pay close attention to these issues in carrying out their mandates. They are helping to raise awareness and nurture a better understanding of the risks related to the sustainability factors and the channels through which they are transmitted to the financial system. They can disseminate more data, help develop shared analysis methodologies, and facilitate cooperation and the sharing of best practices between the various stakeholders in the financial system. They are trying to provide a good example for all investors through their policies for managing financial resources and the related risks.

The Bank of Italy as an investor ...

This year the Bank of Italy has decided to adopt an investment strategy that integrates ESG factors into the management of its equity portfolio, a move that it announced on its website last week. The principles of diversification and market neutrality, part of the previously used framework, have been maintained and two new assessment criteria have been added. The first excludes investments in shares issued by companies mainly operating in sectors that do not comply with the United Nations' Global Compact, an agreement signed in 2004 that sets out the principles companies should follow regarding human rights, labour and environmental sustainability, and measures to prevent corruption. The second gives preference to the securities of companies with the highest ESG scores.

The new framework significantly improves the environmental footprint of our financial investments: the new shareholdings portfolio is characterized by lower greenhouse gas emissions (a reduction of 23 per cent), and lower energy and water consumption (by 30 and 17 per cent respectively). It also follows that risk management becomes more effective: a comparison of various solutions shows that this approach provides the best risk-return profile and the greatest protection against particularly adverse market trends.

For the time being, this strategy is being applied to equity investment; an assessment is under way of the possibility of extending it to other asset classes, such as corporate bonds. As we work towards further improving the ESG profiles in our portfolio, we will provide regular reports on the results achieved, so that our best practices and the methodology we use can serve as a reference for other investors.

Aside from ensuring less risk, sustainable investment does not penalize financial performance: numerous studies show that it leads to market returns that are not significantly lower than those achieved using traditional financial models. Good ESG practices enable firms to benefit from competitive advantages stemming from innovation, to mitigate operating, legal and reputational risks, and lead to more efficient resource allocation, all of which tend to lower the cost of capital and to achieve better operational and market performance. For example, some analyses carried out by the Bank of Italy have provided clear evidence of a return premium on the shares of European electricity utilities with lower carbon emissions. Experience has shown that reputational risks and the risk of serious losses for firms and their shareholders can instead arise from inappropriate business practices from an ESG point of view.

... and its cooperation with other institutions

The increasing concern about the possible consequences of climate change for the financial sector has strengthened international cooperation in the field of sustainable finance, with several initiatives being provided by industry and the institutions. The Bank of Italy has contributed to these projects and will continue to do so.

In recent years, in our role as members of the Financial Stability Board, we have discussed the studies of the Task Force on Climate-related Financial Disclosure; we participated directly in those of the G20 Green Finance Study Group; we are giving

technical assistance to the Ministry of Economy and Finance for the negotiations on the legislative proposals resulting from the European Commission's Action Plan on sustainable finance. In this field we have contributed to drafting both the disclosure requirements as regards the sustainability of the financial products offered to customers by market operators – including banks, investment firms and fund managers – and the regulations on new low-carbon benchmarks.

Together with the supervisory authorities of the other EU countries, the Bank of Italy will cooperate with the European Banking Authority in carrying out the tasks of identifying the risks that sustainability factors pose to the stability of the financial system, drafting methodologies to correctly assess such risks, and selecting the most suitable prudential treatment. It will also take part in the analyses scheduled by the European Single Supervisory Mechanism, which has included climate change in its risk map for 2019.

The Network for Greening the Financial System was founded In December 2017, on the initiative of a number of central banks and supervisory authorities. This forum, in which we participate, has a broad membership at international level, and analyses are conducted and best practices are shared within it regarding the management of financial risks linked to the environment and climate change. The Network aims to develop scenarios, methodologies and studies to integrate environmental and climate risks into microprudential and macroprudential supervision, collect evidence of the existence of risk spreads between 'green' and 'brown' assets, and draw up common guidelines for the adoption of ESG criteria for managing central banks' financial portfolios.

As part of the activities of the Italian Observatory on Sustainable Finance, set up by the Ministry of the Environment, we carried out a survey in 2018 of Italy's main financial operators to evaluate their level of preparedness on climate-based risks. The results are mostly in line with those of other surveys and indicate that awareness of the financial risks deriving from climate change remains limited. The issue of sustainability is mainly dealt with from a social responsibility point of view, yet it is generally neglected in the decision-making processes of administrative bodies and in financial risk management systems. Greater effort is therefore required on everyone's part in order to focus more on these topics.

Conclusions

The transition towards an economy with low carbon emissions is essential if we want to reduce the risks that climate change poses for our well-being. The financial sector, central banks and supervisory authorities cannot stand in for those who make the policies necessary to decarbonize our energy systems, but they can play an important role in promoting this process.

It is in the interests of financial intermediaries to be more aware of how sustainability factors can affect their activities: it would make it easier for them to take into account the corresponding risks in their strategies and governance, thereby helping to improve performance. Central banks and supervisory authorities are working towards making the

financial system ready to face this transition. The spreading of new financial instruments could be made easier by: the creation of an EU taxonomy of environmentally sustainable activities and the introduction of [product] labelling schemes (including the standards for green bonds); the wider uptake of the new low-carbon benchmarks; and the application of the new rules on disclosure.

Italian investors have expressed considerable interest in sustainable finance, but the supply of products is still not sufficient to satisfy demand: there is room for new projects to be financed, we need the right investment instruments, and it is vital that companies be able to provide the necessary information on the sustainability of their activities.

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