BANCA D'ITALIA
EUROSISTEMA

Sustainable investment choices: emergencies and transition

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Καὶ τὸ τρίτον τῆς γῆς κατεκάη, καὶ τὸ τρίτον τῶν δένδρων κατεκάη,
καὶ πᾶς χόρτος χλωρὸς κατεκάη.

A third of the land was burned up, along with a third of the trees
and all green grass.

Revelation 8:7

Your Most Reverend Excellency, Ladies and Gentlemen,

A few months ago, when, at the kind insistence of your Chair, I accepted the invitation to take part in this event, the topic I had indicated was 'Climate transition: the role of finance and of financial supervision'.

Times have changed. Over the last hundred days, we have seen the horrendous daily spectacle of indefensible aggression and war play out before our very eyes. We have seen, albeit from far away (now that every part of the world is, whether it likes it or not, an eyewitness to what happens in every other part of the world), human suffering and material destruction on a scale that we no longer believed was possible in Europe after the days of Sarajevo and Srebrenica. The economic consequences of the conflict, while indirect, have been felt here at home too: a slowdown in GDP, a surge in prices, and supply chain insecurities.

I therefore felt it necessary to change the topic of this conversation as well so that it better reflects current developments. And you will forgive me for also choosing to add a verse from Revelation as an epigraph, to symbolise the anxieties of today and tomorrow. Indeed, the emergency situation of the last few months has blended with the emergency of the century – climate change and the need for a transition towards sustainable development. If the Book of Revelation speaks of the mystery of the end of time to a believer, to a secular person the verse that I have quoted serves as a dramatic and

quite literally effective reminder of the challenge threatening humanity and the planet, its 'common home', for which it must care.[1]

Provided we are farsighted in discerning the ends, and wise in choosing the means, a reaction is possible and, therefore, necessary. Contrary to what is often heard, the consequences of the war, especially the issue of energy supplies, must not cause us to stray from the charted course – or at most only for short stretches. They should actually strengthen our resolve to walk this path to the very end. If sound individual and collective choices are made, the economy and finance can prove to be powerful instruments for leading us forward.

I shall try to tell you what criteria economic policy choices should follow, in my opinion. But I would like to start with a brief outline of the current situation. Given the limits to my knowledge, the point of view of this speech will be above all ours, that is to say Italian and European. I shall defer to another occasion – should it arise and should I feel able to seize it – to elaborate on how the perspective that I put forward could be extended to the rest of the world, above all to those 'peoples and countries which have little weight in the international market, but which are burdened by the most acute and desperate needs'.[2]

The economy during the emergency

Global imbalances between supply and demand are subjecting energy prices to pressures not seen since the 1970s. In May of this year, oil prices in the world markets rose by 65 per cent year-on-year. In Italy, electricity and gas prices in the wholesale market had more than doubled. There were similar trends in other European countries, which share our dependence on Russian gas. While fossil fuel prices have risen everywhere, the rise in gas prices was less pronounced in the United States, though it has been accelerating in the last few months (with year-on-year increases of 53 per cent in February and 175 per cent in May).

These developments, which stem from the difficulties that fossil fuel supply is encountering in keeping up with the rapid growth in demand following the exit from the pandemic crisis, were exacerbated by Russia's invasion of Ukraine and the resulting fears of a contraction in the world supply of energy commodities. Russia is one of the world's main producers of hydrocarbons: in 2020, it accounted for 17 per cent of the supply of natural gas, 12 per cent of crude oil, and 5 per cent of coal.

Following the outbreak of the war, the economic outlook has worsened, although the vigorous growth recorded in Italy in 2021, which intensified progressively, ensured that 2022 started at a relatively high level, and the economic system has so far shown considerable resilience. Based on the latest data, another very small increase was recorded in the first quarter.

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1 Encyclical letter *Laudato si'* of the Holy Father Francis on care for our common home (2015), paragraph 164.

2 Encyclical letter *Centesimus Annus* of the Holy Father John Paul II on the one hundredth anniversary of *Rerum Novarum* (1991), paragraph 58.

So what will happen next? At a time like this, making predictions is even harder than usual. In April's Economic Bulletin, in the Annual Report published at the end of May, and in the recently released projections conducted as part of the Eurosystem coordinated exercise, the Bank of Italy formulated scenarios – updated as the situation evolved – based on developments in Ukraine. The most optimistic scenario in April's Economic Bulletin assumed a rapid conclusion to the conflict, which unfortunately did not materialise. The central scenario formulated at the time and its successive refinements continue to project positive growth in both 2022 and 2023. Compared with the pre-war forecasts, however, the new growth projections are down by almost 1 percentage point per year. A more adverse scenario takes into consideration a temporary interruption in the flow of natural gas from Russia, to be offset only in part by other sources: the impact on GDP is projected to be significant, and activity in some very energy-intensive sectors could be affected by interruptions in production.

The sharp acceleration in imported fuel prices has considerably widened the deficit in the energy balance of the balance of payments, which in turn led has led to a worsening in the current account balance. For now, the energy balance deficit remains smaller than in the early 1980s.[3] In any case, the strong positive net international investment position that Italy has built up over the last decade, thanks to the enhanced international competitiveness of its production system, means it is less vulnerable than in that earlier period.

The impact of the crisis on prices instead remains significant. Inflation, measured according to the EU's harmonized definition, exceeded 8 per cent in the euro area and 7 per cent in Italy in May. The dynamics of energy prices directly account for about half the change in the consumer price index observed since the beginning of the year.[4] However, it also pushes the prices of other goods upwards, owing to the energy costs incurred by firms across all sectors. Medium-term inflation expectations, both those obtained through surveys and those implied by market trends, are largely consistent with the Eurosystem's objective for the time being, but they have increased, and are the focus of intense scrutiny.

Italy's energy supplies and the measures adopted

Russia is Europe's main hydrocarbon provider. In 2021, the European Union's imports from Russia accounted for 27, 40 and 46 per cent of its total consumption of crude oil and other petroleum products, of natural gas and of coal respectively.[5] Italy's dependence on Russian gas (39 per cent) is in line with that of Europe; that on Russian coal is higher still (56 per cent), but coal plays a limited role in the energy mix of our country.[6] Gas instead meets 52 per cent of residential demand (mainly for heating) and 84 per cent of thermoelectric

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3 C. Giordano and E. Tosti, 'An assessment of Italy's energy trade balance', Banca d'Italia, Questioni di Economia e Finanza (Working Papers), forthcoming.

4 F. Corsello and A. Tagliabracci, 'Assessing the pass-through of energy prices to core and food inflation in the euro area', Banca d'Italia, 2022.

5 European Commission, 'In focus: Reducing the EU's dependence on imported fossil fuels', 20 April 2022.

6 G. C. Blangiardo, 'Attività conoscitiva preliminare all'esame del Documento di economia e finanza 2022: audizione del Presiente dell'Istat', (Preliminary fact-finding inquiry relating to the examination of the 2022 Economic and Financial Document: testimony by the President of Istat), 14 April 2022 (only in Italian).

power generation, i.e. 50 per cent of total electricity production.[7] The impact on the energy costs borne by final consumers, and particularly on poorer households, is therefore greater than for countries with a more diversified electricity production mix.

A complete interruption of Russian exports to Italy would mean substituting about 30 billion cubic metres of gas every year (just under half of the country's total imports) by relying on other providers. Alternatively, it would mean reducing demand, which is dominated by thermoelectric power generation (44 per cent) and, for the remaining part, is divided almost equally between residential and non-residential uses (the latter encompassing both industry and services)

Most Russian gas comes to Italy via pipelines and is therefore difficult to replace. Importing gas by sea, which is more flexible, requires regasification plants, of which there are currently not many. The Government is trying to increase both the supply of gas from other providers linked by pipelines (Algeria and Azerbaijan) and Italy's ability to import liquefied natural gas from Qatar, Egypt and, in the longer term, the Republic of Congo and North America, by building new floating storage and regasification units, which are easier to make operational compared with land-based terminals.[8] Moreover, some coal power plants could be reactivated, reversing the decision to close them all down by 2025. In the longer term, this would also be accompanied by an increase in the number of renewable energy power plants.[9]

In addition, as early as the second half of 2021, the Government adopted measures to limit price growth by reducing excises and other measures specifically targeting vulnerable households (e.g. by increasing the amount of 'energy bonuses' to be paid and expanding the range of those eligible for them). To contain demand, temperature limits for air conditioning and heating have been set for public buildings, although they are not always easily to implement and check. More drastic provisions to reduce demand have not been adopted for now, such as those proposed by the International Energy Agency (IEA) in April.[10] Such measures include stepping up the use of remote working, limiting air

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7 Ministry of Ecological Transition, 'La situazione energetica nazionale nel 2020' ('The national energy situation in 2020'), July 2021 (only in Italian).

8 Coordination initiatives among European countries would make it possible to achieve more effective results. According to a study by the Fondazione Eni Enrico Mattei, a sudden interruption in gas supplies from Russia would lead to a further rise in energy prices, but if electricity flows were optimised within the EU, it would not force Italy to ration gas demand (see F. Del Grosso, I. Livi, F. Pontoni and E. Somenzi, 'Crisi russo-ucraina: analisi di scenario per il sistema elettrico italiano' ('Russia-Ukraine crisis: a scenario analysis for the Italian electric system'), Fondazione Eni Enrico Mattei, Brief, 2, March 2022, only in Italian).

9 In Italy in 2020, the installed renewable energy capacity amounted to 56.6 gigawatts (GW). The medium-term growth target for this capacity is laid out in the integrated national energy and climate plan (NECP) and in the national long-term strategy for reducing greenhouse gas emissions. According to the NECP, 4 GW of capacity would need to be added every year for the next ten years; this becomes 7 GW in the national long-term strategy, given the new decarbonisation targets set out in the European Green Deal. These increases are much higher than the yearly 0.8 GW installed in the period 2013-2020. Despite a marked growth in applications for connecting to the grid, the scope for renewable energy development projects is limited by an adverse environment in terms of authorisation processes and the mismatch between production (located mostly in the South and Islands) and demand (mainly from the North), an imbalance that requires sizeable investments in energy storage technologies.

10 IEA, *A 10-point plan to reduce the European Union's reliance on Russian natural gas,* Paris, March 2022.

travel, and also measures reminiscent of those adopted after the first oil shock (reduced speed limits on motorway and car-free Sundays[11]).

What to do now

There are four objectives: reducing the excessive dependence on energy supplies; mitigating the financial consequences of rising energy prices on households and firms, especially the most vulnerable ones; averting inflation; and doing all of the above while, as far as possible, staying the course on the climate transition.

Climate transition, emergencies and energy security

Let us begin with the latter, which remains the fundamental compass for steering medium-term action. I believe I am preaching to the choir when I say how important this is. The environmental, economic and human risks linked to rising temperatures are well known, and it is not an issue that can be deferred to future generations.[12] We have recently been reminded of the urgency of taking action by, among other things, the extreme heat wave that hit vast areas of India and neighbouring Pakistan in March and April, exposing more than one billion people to temperatures well above 40°C, with the hottest part of the year still to come. Even though our climate is more temperate, the rising trend in the temperatures of our major cities, borne out by Istat data, is easily confirmed by our daily personal experience.[13]

To counter the rise in temperatures due to the greenhouse effect, humanity must reduce net greenhouse gas emissions, first and foremost those of CO_2. Ever more ambitious and binding objectives have been proclaimed over the years at European and international level.[14] To achieve them, three elements are necessary: well-designed rules, targeted

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11 In November 1973, the Rumor Government raised fuel prices and imposed strong limitations on the use of private means of transport, a reduction in speed limits, and ordered public businesses to end their working day earlier.

12 *Laudato si'*, 169 et seq.

13 According to data that have just been published, last May was Italy's second warmest in more than two centuries (+1.83 °C above the average for the period 1991-2020), and the warmest ever in the Centre and North.

14 The Paris Agreement adopted in 2015 at the close of the 21st Conference of the Party was the first global and legally binding agreement on climate change. In 2018, the European Commission set out a long-term development strategy for the EU based on the decarbonisation of its energy system (*A Clean Planet for all. A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy*, COM(2018) 773 final, 28 November 2018). In 2019, the European Council approved the target of climate neutrality by 2050 and the European Commission presented the Green Deal (see European Commission, *The European Green Deal*, COM(2019) 640 final, 12 December 2019). In July 2021, the Commission adopted the 'Fit for 55' package, which is a series of legislative proposals setting out the measures through which climate neutrality is to be achieved, with an intermediate objective of a reduction of 55 per cent by 2030 compared with the levels of 1990 ('*Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality*, COM(2021) 550 final, 14 July 2021). The same year, Regulation (EU) 2021/1119 came into effect, confirming the climate neutrality objective and introducing the intermediate objective of reducing net greenhouse gas emissions by at least 55 per cent by 2030 (see also *Laudato si'*, 164-165). *Laudato si'* (166) deplores the fact that practical action has not yet lived up to the promises of international cooperation agreements, as do many other documents.

(public and private) investment decisions, and consumption choices consistent with these goals. Underpinning all this, in a country based on a democratic system and a market economy, is an awareness of the problem on the part of citizens and consumers, 'a growing ecological sensitivity',[15] without which the right incentives cannot be created, either for public authorities or the private economic system.[16]

The investment needed must be borne largely by the private sector, on account of both the amount, which is presumably well above the public sector's spending capacity, and of the tendency of market mechanisms to promote its efficiency. Hence the question of 'green' finance and the rules needed to make it a reality, the original topic of my talk (which has in any case been addressed by other speakers here today). About this I will only say, very briefly,[17] that – in addition to investors' acceptance (and there seems to be no lack of this, given the rapid development of 'green' investment instruments in recent years) – for environmental finance to expand in a sustained manner, access to data of sufficient quality (taxonomies, audits and so on) is essential; the lack of it would undermine efficient selection and lead to a considerable risk of greenwashing. It is also important that banks and institutional investors become aware of the need to manage environmental risk effectively, among others. Efforts are being made on both fronts, especially at European level.[18]

Let me make an observation on this point, however, that I think is fundamental. In a market economy, even more than taxonomies and prudential rules, what really counts are relative prices, a key tool for allocating resources efficiently. As is now widely acknowledged, it would be quite difficult for a transition strategy to work without carbon pricing: without, that is, incorporating into the price of fossil fuels the damage that they cause to the 'common good',[19] i.e. in economic jargon, the negative externalities

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15 *Laudato si'*, 55.

16 *Laudato si'*, 55; see also *ibid.*, 206: 'This is what consumer movements accomplish by boycotting certain products. They prove successful in changing the way businesses operate, forcing them to consider their environmental footprint and their patterns of production. When social pressure affects their earnings, businesses clearly have to find ways to produce differently. This shows us the great need for a sense of social responsibility on the part of consumers'.

17 For further details, please refer to some of my recent speeches: 'Climate transition, finance and prudential rules', 3 March 2022 (only in Italian); 'Conversing about Dante. Civil passion, public life, economic reasoning', 6 December 2021; and , 15 October 2020. Without going into much detail, the second touches upon the merits of advanced countries making cash transfers to the emerging ones in exchange for achieving certain climate-related targets.

18 Among the numerous initiatives undertaken at European level, regarding supervision, the European Central Bank published a 'Guide on climate-related and environmental risks' in November, which sets out the expectations concerning: (a) the methods for integrating climate-related and environmental risk into the business strategy and model, corporate governance processes and the risk management framework of the significant banks within the Single Supervisory Mechanism (SSM); and (b) the information to be publicly disclosed. In line with the initiative of the ECB and the other national supervisory authorities, the Bank of Italy prepared an initial set of 'Supervisory expectations on climate-related and environmental risks' for all intermediaries subject to the Bank's authorisation and supervision.

19 *Laudato si'*, 23, 156 et seq.

associated with their use.[20] Rendering human activity 'climate neutral' – a prerequisite for limiting the temperature increase to 1.5-2°C, pursuant to the solemn commitment made with the signing of the Paris Agreement[21] – means setting prices that encourage a more efficient use of energy, and, in particular, choosing a relative price that makes fossil fuels less affordable than alternative fuels, thereby favouring the development of low-emission technologies.

We would ideally like carbon pricing to follow a gradual and predictable path, the result not of exogenous and unpredictable factors, but rather of explicit economic policy decisions (rates, grants, market rules), carefully evaluated, credible and (not least) consistent at global level. A gradual and predictable path will make it easier for investment and consumption decision makers to further the transition. A fiscal component (which is only one of the possible ways to achieve carbon pricing[22]) is useful for redistributing the cost of the transition and mitigating its impact on households, firms and the worst affected areas.[23] Global cohesion is important in order to avoid unfair competition and the leakage of emissions from one jurisdiction to another: carbon knows no borders.

Clearly, we cannot realistically wait for anything but an imperfect approximation of the ideal path I have outlined: this must not distract us from our goal, but should rather make us aware of the obstacles to be overcome. In particular, there have been numerous experiences of how difficult it is to reach a global agreement; not even in the course of Italy's G20 Presidency, during which a great deal of progress was made nonetheless,[24]

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20 This refers to the matter of 'collective goods' (or in economic terms, 'public goods') 'which cannot be safeguarded simply by market forces' (*Centesimus annus*, 40), but can at least in part be traced back to these forces with measures that incorporate the collective value into individual prices. Allow me to refer once again to the observations made light-heartedly, in my 'Conversing about Dante'.

21 As stated in Article 2 of the Agreement: 'This Agreement […] aims to strengthen the global response to the threat of climate change […] holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change".

22 Mechanisms that set an appropriate market price for greenhouse gas emissions through the trading of emission allowances, such as the European Union Emissions Trading System (EU ETS) for large energy-intensive European installations, also have a role to play. These prices have also been rising recently, exerting pressure on the costs of generating electricity from coal and gas: in May, emission allowance prices increased by 60 per cent over the previous year, exceeding €85/tonne.

23 An interesting examination of the distributive and welfare effects of a hypothetical carbon tax and of the various ways of redistributing the revenues can be found in I. Faiella and L. Lavecchia, 'Households' energy demand and the effects of carbon pricing in Italy', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 614, 2021 and in F. Caprioli and G. Caracciolo, 'The distributional effects of carbon taxation in Italy', Banca d'Italia, mimeo, 2022.

24 In 2021, the Italian G20 Presidency placed the issue of sustainability and fighting climate change at the heart of its agenda. The Finance Track, made up of the finance ministers and central bank governors of the member countries, was particularly active. For the first time, a permanent Sustainable Finance Working Group was established to launch a series of initiatives and to develop a roadmap for increasing the financial world's contribution to the sustainability goals. The Financial Stability Board (FSB) was also asked to develop a roadmap for addressing climate-related sustainability risks, with the goals of: (a) improving data availability and promoting uniform standards for the disclosure of non-financial data on climate-related risks; and (b) refining the methods for assessing the vulnerabilities of the financial sector connected with climate change. The commitment to these issues is apparent from the focus on them in the numerous statements of the ministers and central bank governors, and in the 'G20 Rome Leaders' Declaration' adopted in October 2021.

was it possible to reach agreement on a series of specific and detailed measures. Hence the proposals for a 'climate club' composed of those countries most determined to proceed, for countervailing duties at the borders, and other similar measures. Nor can we forget that it is a lot to ask of any system of government, democratic or otherwise, to make a credible commitment for *decades* to a strategy that in theory offers great long-term advantages but, by considerably raising prices, could prove to be unpopular in the short term. All the more reason, bearing in mind that the same optimal price, that which correctly incorporates the externalities associated with emissions is subject to uncertainty in its calculation, while the technical instruments to achieve it give rise to differences of opinion, and it is therefore inevitable that we will have to move forward, at least in part, by trial and error.

This already complex situation was made even more difficult by the sudden, sharp rise in fossil fuel prices between 2021 and 2022, following the economic and political tensions with which we are all familiar. A rise that was neither desired nor foreseen, and certainly not 'optimal' in its timing, manner or extent, and with such a heavy and unexpected impact on households and firms.

Various governments, including Italy's, have taken action to mitigate the immediate effect on citizens' well-being. Energy services are, in many respects, a primary asset; an increase in their prices weighs more heavily on the budgets of less well-off households, exacerbating 'energy poverty';[25] and, in any case, it is not easy to adjust for in the short term. This latter point is also true for energy-intensive companies, which, in the face of a shock that impacts different economies asymmetrically, would find themselves, in the absence of any relief, having to tackle at least a temporary crisis of competitiveness.

With all this, it would be rather short-sighted not to recognise that the price shock, along with uncertainties concerning supply chain security, is triggering a reaction that, in a more or less short space of time, could result in energy savings and/or a conversion to alternative resources. Raise your hands those of you who, if you have had the chance to, have not thought in recent weeks about reducing your future consumption of fossil energy sources at home or in the office, for example by installing solar panels or using other renewable sources? How much will be saved and how long it will take, we do not know; but it would be surprising if the effects were insignificant.

In the years following the two great oil shocks, Italy became one of the most energy efficient countries in the OECD: between 1970 and 1995, the energy intensity of Italian GDP fell by almost 30 per cent. After the exogenous shock, energy prices remained high in Italy, in part due to it having among the highest taxes on energy products in the EU.[26] The prices were a key signal for improving energy productivity, which had stalled prior to the oil crisis.[27]

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25 Faiella I. and L. Lavecchia, 'La povertà energetica in Italia', *Politica Economica*, no. 1, pp. 27-76, 2015.

26 According to Eurostat data, in 2020, Italy taxed final energy consumption (expressed as tonnes of oil equivalent) at €350 per unit compared with an EU27 average of €232.

27 Paolo Malanima, 'Transizione energetica e crescita in Italia. 1800-2010', ISMed–CNR, 2011.

There are certainly some differences between now and then; among other things, the energy component of GDP has continued to fall over the last thirty years, in part due to the growth in services to the detriment of manufacturing; moreover, at this moment in time, we do not know how permanent the increases that we are experiencing will be. The example of the 1970s cannot therefore be interpreted as a qualitative estimate of the possible effects of the current shock. However, there are also more than a few similarities; qualitatively speaking, the effects could be considerable.

All this, provided that it is recognised that, aside from emergency measures taken to smooth temporary 'bumps', public intervention aimed at mitigating the effects of the crisis should, more than it already has, take the form of income relief for those most affected and of support for the transition, rather than fighting price increases. We must certainly help those in difficulty, but we should also leave the signal of relative prices to function to the extent reasonably possible, just as we essentially did in the 1970s. We must also remember, and we should remind the public, that in order to achieve the climate transition goals, fossil fuel prices still have to rise, and rise a lot, no matter how much the estimates of the exact end point may vary.

This action must be accompanied (as we have already started to do) by every possible incentive, including regulatory ones, to turn to alternative sources, with a view both to accelerating the transition and making it affordable for everyone. Looking ahead, it would be good to help households that are or are at risk of being in a situation of energy poverty, not by offering permanent subsidies for the use of fossil energy sources, but by giving them a real opportunity to reduce energy waste and switch to renewable sources. It is not an umbrella to shelter ourselves indefinitely from higher carbon fuel prices that we need, but rather a sturdy pair of boots for making the leap towards decarbonisation as soon as possible.

Mitigation actions are also limited by the need to keep the public finances stable. All the more reason to avoid generalised relief and focus on subsidies for those who really need them.

The climate transition strategies and those for eliminating energy dependence do not conflict with one another; on the contrary, they are mutually reinforcing as they both presuppose a sharp decrease in the use of fossil fuels and a sharp increase in renewable energy.

The only exception to this convergence of goals could be a temporary increase in the use of coal, the most polluting of the fossil energy sources. It may be an acceptable compromise if limited to the short term: 'until greater progress is made in developing widely accessible sources of renewable energy, it is legitimate to choose the less harmful alternative or to find short-term solutions'.[28] Some economists fear that an increase in the consumption (and the price) of coal may encourage excessive future investment

28 *Laudato si'*, 165.

in this form of energy production, which would then affect future choices. We must certainly be careful to avoid any conduct, especially public conduct, that pushes us in this direction; but, all things considered, it seems to me an unlikely scenario. That coal is considered unsustainable in the long term, also because of its serious effects on local pollution, is something we all know; it is therefore difficult to believe that substantial long-term private investment in this sector can be decided on the basis of expressly, credibly temporary measures.

Prices and inflation

The 1970s saw a marked reduction in the energy intensity of GDP, but also a period of high and variable inflation, which did not abate for many years and only with great difficulty. Inflation is in the headlines again at the moment, after several years of being seemingly moribund, and households are beginning to feel its effects. Do we need to push the analogy with those days to the point of believing that a hike in the inflation rate is inevitable? Not at all; but two clear conceptual distinctions are required, as are consistent choices.

The first distinction is between relative and absolute prices. The energy transition calls for an increase in the *relative* prices of fossil fuels; the general level of prices is (at least as an initial approximation) entirely indifferent.

In fact, the increase in fossil fuel prices is actually leading to generally higher prices: in part (as I said at the beginning) directly, because of the proportional impact of energy prices on the general index, and in part indirectly, through the sectoral interdependencies in production, which mean that energy prices are incorporated into the cost of products that use energy as input, and the increase thus spreads to other components of the index. So?

Here we need the second distinction, between a one-off increase in prices and prolonged inflation. We need to start from the point set out very clearly by the Governor in his Concluding Remarks a few days ago. The external rise in energy prices is a kind of 'unavoidable' tax that weighs on the economy of importing countries, technically through a worsening in the terms of trade. The Governor said that 'government action can redistribute the effects of inflation between households, factors of production, and present and future generations, but it cannot wipe out the overall impact'. For this reason, this tax is reflected in a one-off increase in price levels; given the same nominal income, everyone comes out poorer.

Inflation would be unleashed if, under the illusion of being able to recoup at individual level the purchasing power that the community as a whole has lost, everyone (households, firms) tried to redefine their nominal income from time to time, thereby causing what the Governor defined as a 'pointless wage-price spiral' while talking about European monetary policy. Pointless, because by impacting firms' costs, also affected by higher energy costs, a wage increase would in turn spark a new round of price rises, and vice versa, in a symmetrical way. There is a risk that this process, once started, will not stop.

The experience of the 1970s shows that prolonged inflation is not an unavoidable consequence of an external shock to input prices. It is what happened in Italy at that time, because we were unable to protect ourselves against the monetary illusion. It was

different in other European countries, and the effect of the oil shock seemed more like a one-off increase in prices than the triggering of an inflationary process that was then difficult to tame.[29] We must build on that experience, both because of what it teaches us to do because we did it right (letting the mechanism of relative prices work) and because of what it teaches us not to do (unleash a 'pointless spiral').

The premises are there. One thing that needs to be considered in the specifically Italian context is that, unlike then, wage negotiations now use inflation forecasts calculated net of the effect of energy goods (the 'unavoidable' tax) as a parameter, thereby reducing automatic mechanisms; as the Governor stated, the protection of the most vulnerable can and must be compatible with maintaining price stability. The medium-term inflation expectations are still close to the target of European monetary policy, but they are growing, and require our attention. Nowadays, monetary policy not only has its traditions of independence, but also institutional guarantees for that independence, intended to pursue price stability, explicitly as their first objective. It has now left behind those long drawn-out periods when deflation was the enemy. It cannot do anything about the increase in the prices of energy commodities that comes from outside, but it must take care that the risk of a one-off growth in prices does not turn into an inflationary spiral. Here I refer again to the Concluding Remarks: 'the economic outlook has therefore changed […] the negative key rates policy can now be left behind … The Governing Council stands ready to adjust all its instruments to pursue its medium-term inflation aim'.

The four objectives I have set out (energy security, mitigating the effects of the crisis, monetary stability and climate transition) can therefore all be pursued at the same time, as long as the collective choices are well thought out.

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Ladies and gentlemen,

The challenge posed to humanity by climate change is immense, and requires a response at planetary level. There are many and varied instruments to be used to meet it. In this conversation, as befits my profession, I have given you some arguments of an economic nature to consider and judge. Others have made technical, administrative and corporate contributions. Nevertheless, I believe that none of us are under the illusion that the problem can be solved at a purely technocratic level. The natural laws, those laws in which the legal system is embedded, and also the laws of economics, albeit far less precise, cannot be ignored; and yet, especially in an open society such as ours, the essential prerequisites for

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29 When comparing consumer price inflation trends in Germany and Italy in the decade 1971-80, it is noticeable that, while the 'creeping' inflation that began at the end of the 1960s was common to both countries, their paths clearly diverged after the oil shock of 1973. According to data from the Bank of International Settlements (Consumer prices), the average inflation differential between the two countries went from just over 1 percentage point in the three years 1971-73 to over 12 points in the years 1974-80. Inflation only returned to single figures in the mid-1980s in Italy; it was not until the 1990s that it was stably below 5 per cent, when the prospect of a European currency was drawing nearer.

effective and long-lasting action are, above all else, the awareness and willingness to act of civil society: of citizens, voters, consumers, investors and those who influence public opinion.

Today I have responded to the invitation of an association that is inspired by the social doctrine of the Catholic church. For the broad swathe of humanity that identifies with religious principles, the teaching of those who interpret them is of enormous importance in shaping shared values; by which in turn, in the ways and forms of every religious tradition, it is influenced.[30]

The Holy Father made his authoritative voice heard in the *Laudato si'* encyclical, which is cited here several times. Among other things, I was struck by its references to the teaching of exponents of other denominations and religions, especially Patriarch Bartholomew.[31] The emergence and consolidation of an active concern for the fate of the 'common home' is not confined to the Christian religion, nor is it limited to the Abrahamic religions (Judaism and Christianity always have to contend, among other things, with the Biblical mandate to 'subdue the earth',[32] and with the need to understand this expression differently from twenty-five or thirty centuries ago, when it was impossible to conceive of a 'subduing' of creation that would seriously call into question its equilibria[33]). To give a completely different example, the strengthening of an 'ecological' vision of the world has certainly been no less natural in the Buddhist tradition, which does not place man at the heart of a divine project, but more strongly emphasises the links with other living beings and nature as a whole (*esho funi*, the non-duality of life and its environment, 'two but not two').[34]

Each in their own language, religions put the emphasis above all on a personal 'conversion'[35] or 'enlightenment'.[36] As I said, widespread awareness is essential; society as a whole will not change its course if the tiller of its people does not move. Yet this is not enough. For the individual approach to trigger incisive collective action, collective tools are required. There are two main pathways: politics and economics.

It is not my place to talk about the former. As regards the latter, I notice that religious figures who proclaim the need for a social good sometimes view the market with a certain diffidence: 'When nature is viewed solely as a source of profit and gain, this has ... serious

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30 'Christianity, in fidelity to its own identity and the rich deposit of truth which it has received from Jesus Christ, continues to reflect on these issues in fruitful dialogue with changing historical situations. In doing so, it reveals its eternal newness' (*Laudato si'*, 121).

31 *Laudato si'*, 7-9.

32 'Be fertile and multiply; fill the earth and subdue it. Have dominion over the fish of the sea, the birds of the air, and all the living things that crawl on the earth' (Genesis 1:28, New American Bible).

33 'Although it is true that we Christians have at times incorrectly interpreted the Scriptures, nowadays we must forcefully reject the notion that our being created in God's image and given dominion over the earth justifies absolute domination over other creatures' (*Laudato si'*, 67). 'In our time, the Church does not simply state that other creatures are completely subordinated to the good of human beings' (*Laudato si'*, 69).

34 Ikeda Daisaku, *Per una società globale sostenibile ogni persona è protagonista del cambiamento* (For a sustainable global society, each person is a protagonist of change), the Italian Buddhist Institute, Soka Gakkai, 2012, p. 48.

35 *Laudato si'*, 216-221.

36 Nichiren Daishonin, *Raccolta degli insegnamenti orali,* 2008.

consequences for society'.[37] What then is left? The integrity of personal conduct, 'giving things up' and 'sobriety'.[38] Without taking anything away from the moral and social value of responsible individual behaviour, I believe that, in order to respond to the challenge of our society, it is useful, indeed indispensable, to leverage market forces *as well*.

The market is a means, not an end. It has no 'vision of nature'; it should be neither hypostatised nor 'idolised'.[39] We are the market, we consumers and entrepreneurs; its values are ours. It has laws that should not be cast aside if we truly want to pursue the common good; yet at the same time it represents a method, the least imperfect that has been invented so far, for allocating resources based on individual preferences, as well as on the rules and incentives instituted by the State.[40] It responds powerfully to the price system and it should be exploited.[41]

Just as the opening of the emerging countries to the market economy (the Governor recalled this a few days ago, somehow echoing, if I may say so, the *Centesimus annus*[42]*)* has made it possible for humankind to take giant steps towards 'eliminating poverty',[43] wise and farsighted policies for tackling the new challenge of the century should see the market as a powerful ally to be recruited, not as an adversary to be defeated. Thus, in answer to the noble-minded appeal 'that we may protect the world and not prey on it, that we may sow beauty, not pollution and destruction',[44] we can give an increasingly effective response, thanks to the work of willing men and women.

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37 *Laudato si'*, 82.

38 *Laudato si'*, 113, 223.

39 *Centesimus annus,* 40-41.

40 *Centesimus annus,* 41. See also C*entesimus annus,* 34: 'It would appear that, on the level of individual nations and of international relations, the free market is the most efficient instrument for utilizing resources and effectively responding to needs'. John Paul II added that 'however, this is only the case for 'solvent' needs and for 'marketable' resources. Many – of course not all – of the steps to be taken for the climate transition consist of acts of investment and consumption that imply monetary transactions; for these acts, including environmental externalities in market prices makes it possible to exploit their potential for allocating resources efficiently'.

41 With his permission, I quote here a comment by a Christian friend and colleague who read this in advance: '*Here the argument seems to be: the market has some mechanisms for guiding conduct consistent with pursuing the individual and collective good. Willingness, morality, sobriety and giving things up can help but they are not the founding elements of a project designed to achieve collective well-being. A Catholic [...] would disagree with this, because the incentives (that [...] always end up with a monetary dimension) do not complete the information set based on which people choose what conduct to adopt. The founding values of a society determine the shape of the utility function and therefore, with the same price signals and constraints on resources, they generate different behaviour. This is why I believe that real Christians [...] insist on values so much. In micro-economics, we assume that preferences are a pre-economic datum from which we begin our analyses. The Catholics tell us that perhaps we should work on this pre-economic datum'.* In reality, we do not disagree at all. Willingness, both individual and collective, *is* a fundamental element of the project. Whether or not you are a believer, if you care about the fate of the planet, you *must* work on what the economists see as exogenous preferences. The market is nothing more than an instrument for realising these preferences; but it is a powerful instrument.

42 'Recent experience has shown that countries which did this (i.e. which isolated themselves) have suffered stagnation and recession, while the countries which experienced development were those which succeeded in taking part in the general interrelated economic activities at the international level' (*Centesimus annus*, 33).

43 *Laudato si'*, 175.

44 *Laudato si'*, 246 (paraphrased).

Grafica a cura della Divisione Editoria e stampa della Banca d'Italia