

# Policies for addressing climate change risks



## Denis Beau

First Deputy Governor, Banque de France

### Supervisors must support the mainstreaming of climate change risks and opportunities

Climate change is real, it is global and irreversible, and no one can ignore its impacts on financial stability anymore. Indeed, climate-related risks are a source of financial risks as the Central Banks and Supervisors Network for Greening the Financial System (known as NGFS) concluded in its reports. It is therefore within the mandates of central banks and supervisors to ensure the financial system is resilient to these risks.

Indeed, even if policymakers bear the primary responsibility of the success of the Paris agreement, all hands are needed on deck to tackle climate change. In that perspective, the Banque de France and the Autorité du Contrôle Prudentiel et de Résolution, as a central bank and a supervisor, are determined to stimulate and support the integration of risks and opportunities in financial intermediaries' strategy, governance and risk management. The continuously growing membership of the NGFS and the remarkable work carried out within the network clearly highlight that this agenda is broadly shared among this community.

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*"The next immediate operational goal to meet is clear: strengthen the work on governance and scenarios as soon as possible."*

- DENIS BEAU

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Looking at the potential courses of action for supervisors, the main short run priority should be to improve the quantity and quality of information disclosed about existing exposures in the financial sector. A number of supervisors have taken steps in that direction, including the Autorité du Contrôle Prudentiel et de Résolution which published, last April, two reports on the exposures of French banks and insurers to climate risks.

But, it is also time to go further and push for a forward looking vision of the impacts of climate risks, in order to properly size the financial effects of climate change and to ensure that financial institutions have put in place appropriate risk management structures and tools to mitigate climate-change related risks. The next immediate operational goal to meet is clear: strengthen the work on governance and scenarios as soon as possible. In practice, achieving a forward looking scenario analysis implies bringing together >>>

>>> three “bricks”: (i) a handful of severe enough but realistic transition path scenarios all the way to 2050, (ii) macroeconomic assumptions to capture the impact of climate change on macroeconomic variables, and (iii) the direct and indirect exposures of the financial system to climate risks.

There is substantial amount of analytical work to be done in order to equip central banks, supervisors and financial intermediaries with appropriate tools and methodologies to identify, quantify and mitigate climate risks, and their dialogue on those topics is of the essence. In that perspective, two of the technical documents to be published by the NGFS early 2020 will be important milestones, namely one on climate and environment-related risk management for supervisory authorities and on scenario-based climate risk analysis.

On the regulatory front, supervisors can support the work of financial intermediaries in agreeing on a robust taxonomy of « green » and « brown » assets and in specifying how and when supervisory frameworks will integrate climate-related risks. In that perspective it is a watershed that the Basel Committee on Banking Supervision and the International Association of Insurance Supervisors recently joined the NGFS as observers. They will have the opportunity to take part in the work of the NGFS and to ensure the consistency of the regulatory effort at a global scale. Indeed, climate change as a global challenge requires a global and coordinated response. ●



## Philip Owen

Head of Unit, DG Climate Action, European Commission

### A 2050 climate neutral EU economy: a key role for sustainable finance

The Commission’s Communication “a clean planet for all – a European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy” sets a direction of travel for the next 30 years. Already, since 1990, the EU has successfully decoupled greenhouse gas emissions from economic growth. New industries and jobs have been created, technological innovation has taken place and costs driven down. Between 1990 and 2016 energy use was reduced 2%; greenhouse gas emissions by 22% while GDP grew by 54%. The renewable energy revolution is the best example of this change: renewable energy in final energy consumption has increased from 9% in 2005 to 17% in 2018.

The EU is broadly on track to meet its 2020 greenhouse gas, renewable energy and energy efficiency targets. The 2030, 40% economy-wide reduction in greenhouse gas emissions has passed into legislation. The flanking, renewable energy (32%) and energy efficiency (32.5%) targets have also been enshrined in law. If these goals are fully achieved total greenhouse gas emission reductions are estimated to reach around 45% in 2030. While these current policies will continue to generate impacts after 2030, they will only achieve an estimated 60% reduction in emissions by 2050. This is insufficient for the EU to meet the Paris Agreement’s goals.

In the transition to a climate-neutral EU, energy plays a central role as it is today responsible for more than 75% of the EU’s greenhouse gas emissions. Ensuring maximum energy efficiency and a secure and sustainable energy supply that integrates electricity, gas, heating/cooling and mobility systems and markets with smart networks, placing citizens at its center, is key to delivering this goal.

While industrial processes will have, via technological improvement, to become more efficient, the greatest improvement in efficiency needs to be achieved in buildings >>>

>>> that currently account for 40% of energy consumption. Given that most of the 2050 building stock exists today, higher renovation rates, fuel switching, use of the most efficient products and appliances, smart management systems and improved insulation methods will be needed. To achieve these changes new and appropriate financing methods and instruments will be required to permit consumers to make these investments in a rational and economic way.

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*"Reorienting capital flows and fostering long-termism is thus key."*

- PHILIP OWEN

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Today, the major part of the EU energy system is fossil fuel based. Achieving climate neutrality implies that the energy system becomes renewable for both consumers and industry. Europe depends on imported fossil fuels that will reduce by 2050 releasing billions of euro, currently spent on imports, for domestic investment. By 2050 more than 80% of electricity will come from renewable sources (mainly off-shore wind) with nuclear power accounting for some 15%. While several sources of renewable energy, such as ocean energy, are still to be harnessed, the EU industry already employs 1.5 million people and 6 of the 25 largest renewable energy companies are European. Furthermore, the deployment of renewable electricity permits the decarbonisation of other sectors such as transport and industry and the production of e-fuels that can be stored and used in multiple ways. This transition will require a smarter and more flexible system with greater consumer involvement.

The transition will not be without cost. Some 2% of EU GDP is currently invested in the energy system. This would have to increase to 2.8% (some €520-575 billion annually) to achieve a climate neutral economy. Public budgets alone cannot meet this sum. Public finance may act as a catalyst or even guarantee private investment in cases of market failure but the private sector will have to fund the vast majority of this investment.

Reorienting capital flows and fostering long-termism is thus key. Fully integrating climate risks into financial risk models, at both a macro and micro level, is necessary to address the longer-term impacts of climate change. The recommendations of the High-Level Expert Group on sustainable finance and the subsequent Sustainable Finance Action Plan show the way forward. Making the financial system sustainable, avoiding carbon lock-in as well as stranded assets, will greatly assist in creating a climate neutral EU in 2050. ●



## Benoit Lallemand

Secretary General, Finance Watch

### Environmental crisis: mission or risk for the financial system?

Recent reports by the IPCC and IPBES leave little doubt: the combination of climate change and the depletion of biodiversity and ecosystems puts our societies on the path to environmental collapse.

Young people are calling for immediate action by governments. And rightly so: without additional resources, world leaders can start steering the

economy out of fossil fuels and nature-depleting activities. Public subsidies to energy, agriculture, fisheries and other sectors and all public expenditures should be aligned with environmental objectives. Environmental and economic regulation, accounting rules, reporting requirements should be reviewed and enforced to match the scale and urgency of the problem. Such clear political ambition is the prerequisite to any substantial contribution by the private sector. Markets won't be on a mission if public authorities do not show the way.

How does finance come in the picture? In two ways. First: transforming our systems of production and consumption will require massive investments. Second: the environmental crisis presents a threat to financial stability. Given the predominantly prudential character of the financial reform agenda sealed at the Pittsburgh >>>

>>> Summit in September 2009, the risk approach is naturally where most of the action is taking place. And with impressive ambition. As the NGFS puts it: "...climate change presents significant financial risks that can only be mitigated through early and orderly transition". This is a strong call not only for the political ambition we just described, but also for financial regulators to press the financial sector to start identifying, disclosing and managing risk now. An optimistic reading of the quote could even be: "because the only way to avoid a major threat to financial stability is an early and orderly transition, it would be within central banks' mandate to contribute to initiate this transition by constraining financial institutions to move away from fossil fuel and nature-depleting investments". The micro- and macro-prudential toolboxes,

not to mention monetary policy, certainly offer interesting options. In any case, it seems like mandatory, harmonized climate-risk disclosure should be implemented without delay – including methodological work around non-climate environmental risk (natural capital valuation and risk assessment techniques are a great basis to start from).

*"A group of central banks on a mission is great news. Combine it with a plan to bail-out nature."*

- BENOIT LALLEMAND

Now we come to how finance needs to contribute positively to support

transitioning the economy. Here there are two complementary ways: steering private finance towards a long-term mission and increasing the role and share of inherently mission-oriented financial institutions (public and development banks, ethical banks, impact investing, etc.). The first part requires to address the root-causes of short-termism, including the "cult of liquidity" and the absence of a clear political signal of where the economy is going. The second requires to design what can only be called a "bail-out of nature", mobilizing resources of and coordinating efforts from all sources of public finance. This plan would have the additional benefits of leveraging private finance and, because it would trigger an "early and orderly" transition, reducing financial risk across the system. ●



## Daniel Hanna

Global Head, Sustainable Finance,  
Standard Chartered Bank

### Can we bank on a low-carbon transition where it matters most?

Climate change will impact those who have least benefited from the industrialisation and globalisation that have led to its creation. In tackling it, we must strike the right balance between transitioning to a low-carbon future and continuing to lift millions out of poverty; connecting them to power, water and other necessary social goods; and supporting rising living standards.

How can we accelerate the flow of capital to those areas where the biggest risks and opportunities are to ensure climate resilience, mitigation and adaptation? How can we ensure that we are focused on where it matters the most in determining the pathway to limiting global warming to significantly less than 2 degrees?

*"Climate change requires a multifaceted response based on science, technology, economics, and policy."*

- DANIEL HANNA

There is no single solution. Climate change requires a multifaceted response based on science, technology, economics, and policy. Like all transitions, an optimal outcome is one that is measured and orderly; a gradual and linear rate, like the 7% per annum assumed in the EU's Climate Benchmarks proposal.

However, more global collective action is required to achieve this in all regions. This is especially true across Asia, Africa and the Middle East, where investment is required to leapfrog now to low-carbon alternatives and ensure that per capita emissions do not reach the levels of high-income countries.

We believe that science-based targets can play a critical role in allowing companies across all sectors, including the financial sector, to set long-run decarbonisation goals consistent with the Paris Agreement.

Standard Chartered is proud to have set such targets for our own financing activities across Asia, Africa and the Middle

East, and to be at the forefront of work on how such targets can be set for lending portfolios, as outlined in our recent Emissions White Paper ([www.sc.com/emissions](http://www.sc.com/emissions)).

We are supporting our clients in their transition to low-carbon energy sources as costs continue to fall. We took the decision to stop financing new coal power projects and are taking a leading role in financing investment into renewables across our markets. We are connecting investors with platforms such as Ayanna in India, and we are financing the largest single concentrated solar power project in the world in Dubai. We are also innovating new products to catalyse capital flows into the countries and sectors most affected.

Regulators are playing an important role, as shown by the rapid growth of the Central Banks and Supervisors Network for Greening the Financial System. Further work is needed to take scenarios designed for policymakers and translate them into tools for capital allocation. In particular, further analysis on physical risk is needed by both public and private sector bodies. Regulatory focus helps to illustrate the realities of a disruptive transition and support action to deliver a smoother path.

Financial institutions are already supporting regulatory initiatives such as TCFD reporting in ways that often go beyond current government policies. An individual financial institution might prove to be 'Paris aligned' but the financial system and underlying economy will not be unless there is coordinated industrial strategy and financial policy. Collectively, these efforts will ensure the transition to a low-carbon economy where it matters most. ●



## Eugenie Molyneux

Chief Risk Officer of Commercial Insurance,  
Zurich Insurance Group

### Decarbonisation and mitigation of climate related risks: regulatory tools and insurers' contributions

Insurers are playing a major role in taking into account transitional, physical and climate-related risks into their operations and investments.

Climate change and other ESG issues will have an impact on insurers, both as investors, and as underwriters. Zurich Insurance proactively ensures its businesses accompany the transition to a low-carbon economy and contribute to the mitigation of emerging climate related risks by optimally using both sides of their balance sheet (asset/liabilities), having appropriate governance and ensuring the data necessary for investment and underwriting decisions becomes accessible.

The FSB Task Force on Climate-related Financial Disclosures (TCFD) recommendations form a useful framework to respond to climate change-related risks, embed sustainability in governance structure, corporate strategy and risk management across organisations. This is a first step toward a global regulatory harmonisation.

Data transparency and trust are essential for institutional investors and a driver of change. To this end, the

proposed EU Regulation on disclosures and the development of a sustainable investments taxonomy will help generate a common understanding of what is deemed sustainable and scale-up these investments. They will allow parts of the financial industry least accustomed to investing in ESG to rapidly build the necessary capacity.

It is vital that the taxonomy is flexible to reflect technological changes, new insights and the different pathways to achieving science-based targets (SBT). It is key that methodologies are built over time, comprehensive (especially taking into potential conflicts between E and S goals) and leave space for innovation. Their use should not be mandatory before both regulations are finalized and verified to avoid unintended consequences.

The taxonomy should not be considered a prudential tool to identify assets that have a higher/lower exposure to risks but a sustainability classification of economic activities.

#### **The prudential framework for insurers is fit for purpose**

The current Solvency II risk framework allows sustainability risks to be captured without needing to add their explicit specification.

Prudential regulation should not be used as an economic tool to the detriment of financial stability. Therefore, Zurich does not support a penalising 'brown factor' nor the idea of stimulating 'green investment' by building incentives in Solvency II in the form of lower capital requirements. Capital requirements should remain risk-based and are not the right tool to support the pricing in of environmental externalities. Other market mechanisms should be preferred: transparent disclosure of ESG data, cost transparency and polluter pays principles, standards to measure ESG impacts, and ESG-integrated underwriting practices.

In that context, modelling is becoming a major tool to assess climate-change related risks and hence price and underwrite accordingly. The timeframe of the modelling has to be carefully calibrated so we believe it is too early to impose detailed and prescriptive requirements on scenario planning.

#### **Challenges remain**

A lack of adequate sustainable investments opportunities with the appropriate risk-returns is visible, rather than a lack of committed capital. Institutional investors want to fund sustainable investments but cannot put all the capital to work.

Other challenges remain: defining what is sustainable is a priority, assessing the profitability when investing in ESGs, establishing a common and adequate methodology. ●

## Stephanie Maier

Director, Responsible Investment,  
HSBC Global Asset Management

### Decarbonising the economy: regulatory tools for real economy impact



The European Commission (EC)'s strategic long-term vision aims for a climate neutral economy by 2050. This transition will require sizable investment and finance. To meet this ambitious goal, we need to consider policy and regulatory tools focused not just on the financial sector but on bridging between finance and the wider economy.

The EC Action Plan on Sustainable Finance set out meaningful and far-reaching proposals, which have already catalysed and accelerated action across the industry. The proposed Taxonomy is central to a number of the actions – including the EU Green Bond Standard and additional labelling for investment products. The Taxonomy Technical Report issued in June 2019, has sought to outline a common language for economic activities making >>>

>>> a substantial contribution to climate change mitigation or adaptation, to be used by investors, issuers, lenders, policymakers and regulators. While there is a clear roadmap to evolve, it currently describes only a narrow set of activities.

For low-carbon investments to become mainstream, clear, long-term policy signals are also required to support the efficient deployment of capital to the wider economy. The current focus on financial regulation will not be sufficient. A policy and regulatory framework drawing together the financial and real economy sectors will be critical for investors to assess and manage climate-related risks, to support innovation, and to invest in low-carbon and climate-resilient opportunities.

A holistic decarbonisation strategy, with a common objective to reduce emissions in all industrial sectors to net zero (or near zero) by 2050, requires a broader set of policy and regulatory measures such as a meaningful EU carbon price, ambitious targets for renewables and energy efficiency, robust vehicle emissions standards and progressive measures for the energy performance of buildings.

Ensuring a 'just transition' will require greater consideration of how to appropriately support workers and communities in industries most affected. Further steps to fully implement the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD) would be welcome as a key tool to bridge investment and decarbonisation objectives.

More economies, including the UK, France, Norway, Finland and Chile have committed to net zero carbon emissions creating significant investment opportunities within Europe and beyond with all the associated economic, social and environmental benefits. With an effective and comprehensive decarbonisation strategy, Europe will generate the necessary investment in low-carbon and climate-resilient technologies, markets and business models – demonstrating real leadership at this crucial moment in our history.

Without it, investors face growing and systemic climate-related risks across all economic sectors and geographies, more potential for stranded assets (assets that have suffered from unanticipated or premature write-downs) and more disrupted industries. This is a test Europe must not fail. ●



## Dimitris Zafeiris

Head of Risks & Financial Stability  
Department, European Insurance and  
Occupational Pensions Authority (EIOPA)

### Decarbonisation of the economy and understanding climate risks: the role of regulation

Considering what financial regulators can do to support the decarbonisation of the economy means understanding the risks and transmission channels through which the supervised financial entities themselves would support - or stand in the way of - this process.

In that context, the starting point is usually that financial companies often are large asset managers. Insurers, accounting for more than 10 trillion euro in investments in the European Economic Area (EEA) is a key example. Insurers can have an impact on the decarbonisation of the economy either by channelling capital towards sustainable investments, or through active ownership, making active use of voting rights in the companies they are investing in. The most important channel through which regulation can have an impact is the financial strength of the sector, which in turn safeguards capital flows into the real economy.

A risk-based supervisory framework does not simply dictate any investment policies to achieve a particular political or environmental goal. The

focus should be on actively engaging and highlighting risks, best practices and opportunities in the investment universe. Furthermore, legislation or other forces should not incentivise companies unnecessarily to invest with undue short-term objectives, but rather support long-term planning and horizons.

*"A risk-based supervisory framework does not simply dictate any investment policies to achieve a particular political or environmental goal."*

- DIMITRIS ZAFEIRIS

In practice, regarding the capital flows, achieving a 'common language' is essential. Therefore, a taxonomy or a common framework for assessing what type of sectors and activities aggravate or mitigate climate change is key. In addition, relevant data needs to support the assessments. That is why disclosure - also for real-economy firms, when it comes to climate impact - is necessary. Finally, models that translates climate-relevant exposures to financial risks need to be further developed. Once these necessary conditions are in place, regulators and supervisors are in a good position to include climate risks in their assessment and monitoring tools in particular in sensitivity analysis and stress tests.

At the European Insurance and Occupational Pensions Authority (EIOPA), we are already taking first steps into that direction. Through the dialogue with market participants and with national competent authorities, we are able to discover risk channels and to document real risk exposures, which eventually could become subject of a supervisory discussion directly with affected undertakings.

Currently, one of the main challenges is the lack of a commonly agreed scenario generation framework. For example, how to assess the impact of an increase in natural catastrophes - not only in one defined period (e.g. a year) but also combined with an increase in the probability of increased extreme weather events every year from now on - is still a question.

How will this factor impact pricing, profitability of non-life insurers - and are there risks that will become simply un-insurable? Moreover, >>>

>>> a regards the transition risk on the asset side, a better understanding of the likely transmission mechanisms and price effects of a combination of political changes, legal changes and public opinion is required.

Regulators, including EIOPA and the financial entities themselves are actively working on these issues. In the coming years, relevant tools such as stress testing and scenario analysis will dramatically change. In return, this change will stimulate the debate and improve the understanding of the risks stemming from the climate change. With these risks clearly defined, the role of the supervisors and regulators to support the decarbonisation of the economy will become more important. ●

## Mario Nava

Director, Horizontal Policies,  
DG for Financial Stability, Financial  
Services and Capital Markets Union,  
European Commission

### The decarbonisation strategy and sustainable finance tactics of the EU

In the Art of War, Sun Tsu, a Chinese general, military strategist, writer and philosopher from the sixth century BC, stated: "Strategy without tactics is the slowest route to victory. Tactics without strategy is the noise before defeat." By strategy, he meant an over-arching plan to dominate the battlefield, exploiting the enemy's weaknesses; by tactics, the specific actions aimed at implementing the plan, such as deciding where and when to attack.

Man-driven climate change is regarded as serious as the threat of war. Indeed, for more than a decade now, the United Nations has warned us that the danger posed by war to humanity and our planet is matched by global warming. Moreover, climate change itself, with the resulting upheavals from droughts, loss of arable land and inundated coastal areas, is a driver of war and conflict.

In order to mitigate climate change and the risks it poses to life on Earth, the European Union (EU) has adopted



an ambitious strategy: the 2030 Climate and Energy Framework and a long-term vision on a climate-neutral Europe by 2050. The former consists of targets and policy objectives for the period 2021-2030, such as cutting greenhouse gas emissions by 40% from 1990 levels; the latter shows how climate neutrality can be achieved in the next 31 years through technological innovation, citizen empowerment and policy coherence, while ensuring social fairness during the transition.

*"The EU is determined to mobilise private finance to reach climate neutrality by 2050."*

- MARIO NAVA

To actualize such vision, however, around EUR 175-290 billion of additional investments will be needed each year until 2050, underscoring that these will have to be financed mainly through private capital, since public money won't be sufficient. With its EUR 100 trillion of assets, the EU financial sector has a key role to play in filling such investment gap. To that end, in March 2018 the EU's tactics were revealed, consisting of an action plan on financing sustainable growth, centred on three policy goals:

1. Managing financial risks stemming from climate change, resource depletion, environmental degradation and social issues.
2. Reorienting capital flows towards sustainable investments in order to achieve sustainable and inclusive growth.

3. Fostering transparency and long-termism in financial and economic activity.

As part of such action plan, the European Commission (EC) has already established a unified EU classification system (or taxonomy) of sustainable economic activities, determined sustainability disclosure requirements by financial markets participants and financial advisers toward end-investors, and created two new categories of low-carbon benchmarks. Further initiatives presented in the plan include: (i) developing standards and labels for sustainable financial products; (ii) strengthening companies' disclosures of climate-related information; (iii) incorporating sustainability in prudential requirements; and (iv) proposing to include environmental, social and governance factors in the mandates of European supervisory authorities.

Finally, since the EU is responsible for only 11% of global greenhouse gas emissions, it's paramount to join forces with other jurisdictions, working together to build a global approach to mobilize private capital towards sustainable investments. To that end, in September the EU will launch an International Platform on Sustainable Finance, which will facilitate the exchange of information and best practices on sustainable finance among countries. ●

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