Answer from the French *Institut des Actuaires* to FSB consultation on Supervisory and Regulatory Approaches to Climate-related Risks

Does the report highlight the most important climate-related data (qualitative and quantitative)
for supervisors' and regulators' identification of exposures and understanding of the impacts of
climate-related risks of financial institutions and across financial sectors? Please provide
examples of climate-related data deemed most relevant and that should be prioritised.

The objectives pursued must be made more explicit, particularly for reporting. The triptych of reporting - governance - strategy provides an easy entry point to regulation but runs the risk of not covering the issues correctly and effectively due to its generality.

In particular, reporting, like a projection, can serve

- to passively monitor the behaviour of market players
- to require them to be transparent in order to improve their practice,
- or to verify compliance with mandatory standards.

Prudential data (such as solvency ratios) are an important element of this reporting, in addition to more descriptive data such as the composition of investment portfolios with regard to climate issues (carbon intensity, etc.).

In this respect, forward-looking prudential approaches such as those used in Europe under Solvency II only include very short-term shocks and is not suitable for an instantaneous assessment of the climate impact on solvency. Moreover, the probabilistic approach (calculation of a best estimate which is an average of stochastic scenarios) applied to a global and non-mutualisable phenomenon would make little sense. The most relevant exercises at this stage therefore consist of projections, following the example of exercises such as the ORSA under the European Solvency II regime, provided that they are carried out on time scales more in line with the development of future climatic disasters. However, these high value-added (and highly expensive) reports can pursue different objectives:

- To identify risk areas in the first place.
- To encourage/compel the search for measures to prevent risks and prevent companies from becoming trapped in insolvency zones

On this last point, the question of climate risk is posed differently from traditional risks, particularly financial risks, by requiring a system-wide approach that takes feedbacks into account (see question 5).

The report does give examples of climate related data. However, no ranking is provided of which climate related data is the most important. Furthermore, it will be useful to have a summary (e.g. table, matrix) that shows the data collected, the quality of the data, the number of companies that provided the data and which climate related risks(physical, transition and liability risks) the data enables us to evaluate. This can give a first insight for future reports/studies on the type of climate data that is available across different sectors and what type of data to give priority to depending on the end goal of the report. This can help build up a common framework and consistency among climate related studies.

2. Does the report draw attention to the appropriate areas to increase the reliability of climate-related data reported by financial institutions?

The issue of data crystallises an important part of the problems linked to the control of climate risk in the financial field:

- exposure of the market to the formation of oligopolies with competition difficult to introduce
- risk of poor data quality or relative significance (criticisms made by some parties on ESG data);

- granularity of data: for example, the geographical exposure of an institutional investor's assets: is this achievable at a reasonable cost? is it exploitable? should it lead to the abandonment of entire regions by the investors and the corporates? does insufficient granularity not empty the system of a large part of its objectives, but, on the other hand, is sufficiently precise granularity manageable?
- 3. Does the report appropriately identify the elements of a common high-level definition of climate-related risks (physical, transition and liability risks)?

Reaching a common definition of risk is highly desirable not only to establish methodologies, analyses and measures that are consistent from one country or institution to another, but also to promote a common understanding by the actors, which is a determining condition for their commitment by facilitating their understanding of the issues at stake. The framework set out in the report appears to be at least a good format and a good compromise in terms of precision and concision.

4. Do the proposed recommendations help accelerate the identification of authorities' climaterelated information needs from financial institutions and work towards common regulatory reporting frameworks? Please elaborate on areas where the recommendations could be enhanced, if any.

The climate transition is coupled by a requirement for frugality, to which the regulatory sphere must not remain alien.

The question of the cost and intensity of the efforts to be made for this reporting and this supervision of climate risk is very important, because given the limited resources, it conditions the quality of reporting and information in general.

Over the past 20 years, we have seen the development of increasingly complex prudential and accounting standards, which consume computing power and data. This is a well-established fact in the insurance sector.

The inclusion of data-intensive prudential standards, based on complex processes, mobilising large, slow and heavily used computing resources (and highly experienced people), has led to the development of new cost centres within insurance companies, the importance of which is far from negligible and which largely consumes the productivity gains that information technologies and the progress of software's editors have been able to bring in this area.

It is logical and legitimate that taking climate risk into account requires efforts of similar intensity. However, the question of the sustainability of the business model in these conditions will be raised. And this, while the climate risk imposes an imperative of frugality...

It is therefore very important that these steps, which will induce an additional burden (which may involve a reduction in the vigilance and resources allocated to other risks), be constantly surrounded by a concern for efficiency, a very clear definition of the objectives pursued and a concern for the cost they imply.

Incorporating systemic risks into supervisory and regulatory approaches

5. Does the report identify relevant system-wide aspects that should be considered as part of supervisory and regulatory approaches to incorporate systemic risks arising from climate change? Please elaborate on other aspects that should be considered, if any.

In the case of a global risk such as climate risk, the individual capacity to avoid it seems marginal. The massive implementation of identical avoidance measures by all market players (withdrawal from certain sectors, certain geographical areas, etc.) may have very harmful effects (some of which the report identifies as the inability of the economic sectors concerned to finance their transition) and, by creating macroeconomic and macro-prudential market movements, would result in deadlocks. In this respect, the report is entirely right to promote a broad and systemic approach, including feedback loops.

The current floods in the Mediterranean basin illustrate in a very concrete way the fragile balance between knowledge of the risk, the ability/legitimacy to pool it and therefore its insurability (a statistically recognized excessive exposure to a climate risk would/could result in a massive insurance exclusion over the areas concerned).

Conversely, it would be logical to take into account the positive effects of the measures generally promoted, around financing the transition, reducing carbon emissions and preserving biodiversity.

6. Does the report accurately reflect the extent to which current supervisory and regulatory tools and policies address climate-related risks?

An excellent, high-quality synthesis, with concrete examples and feedback from various countries. Starting from the analysis of what is being done and the shortcomings identified is a sound approach. The report gives a good overview of the current tools and practices used in several reports and international organizations. However, the report also states "There is the need to further develop scientifically based methodologies, analytical tools and capacity as the financial sector gains deeper understanding of climate related risks, their impact and experience with the measurement methodologies". In light of this comment, it will be useful to have an overview or summary of the benefits and drawbacks of the current methodology and practices that are already in place. This can be an addition on to section '5.3. Potential macroprudential tools and policies' in the sub section 'Relevant work of standard-setting bodies and authorities', where the practices and approach from different international bodies are given, it will also be of interest to know the limit and benefits of the approach used in those reports.

It is clear that much progress can still be made, not only to extend reporting content but also to direct efforts more effectively. Such an analysis would help to capitalize on what is being done and what has been tested, to reorient, if necessary, and to select the most promising approaches, based on this feedback.

7. Do the proposed recommendations on incorporating systemic risks into supervisory and regulatory approaches, including the expanded use of climate scenario analysis and stress testing for macroprudential purposes, address the appropriate areas? Please elaborate if there are any other features or tools that should be considered.

It is clear, however, that such risk forward-looking approaches can only be validly adopted by companies if the determining elements of the scenarios are thought out and determined at the market level by the competent institutions. Otherwise, the construction of scenarios would be very costly, obviously marked by a high degree of heterogeneity of approaches and therefore of little interest in terms of results.

A good demarcation between the players is a guarantee of efficiency:

- institutions in charge of regulation or supervision for the definition of scenarios,
- data providers, preferably regulated, to supply companies and authorities,

 companies to take charge of translating the scenarios (of climate change, financial markets, macroeconomic data on growth, inflation, demographics, etc.) into their own business plans and risks.

Early considerations on other macroprudential tools and policies

8. Are there other areas of work, literature or research being conducted on macroprudential tools and policies on climate-related risks that should be considered in the report?

It is important to emphasise that this type of approach requires great humility. Overly simple approaches based on first-order effects are generally of little value when dealing with complex systems. The phenomena to be observed are among the most complex, chaotic and unstable there is, since they combine macro-economic, political, social and demographic aspects with financial aspects, with numerous feedbacks that are sometimes difficult to identify and fluctuate according to the situation (a negative correlation may become positive in the event of a crisis and vice versa), all over a very long period of time (some thirty years) that leaves a great deal of room for divergence in the scenarios.

Modelling many aspects of these phenomena and dynamics would probably be a very hypothetical exercise. A pragmatic approach that attempts to take into account the interactions and feedbacks between sectors in a lump-sum manner seems to be a pragmatic starting point.

It is important that descriptive scenarios allow for a rethinking of the impacts by segment and to reflect on the cross or secondary impacts on the portfolios. They are therefore valuable, as they allow the syndication of several businesses.

It is quite possible that the examination of the strategies implemented or planned by the companies in their projection exercises could, over the course of the exercises, allow for a deeper understanding of the feedbacks at work and progress in the scenarios.

Additional considerations

9. Are there any other issues that should be considered in future work of the FSB on supervisory and regulatory approaches to climate-related risks?