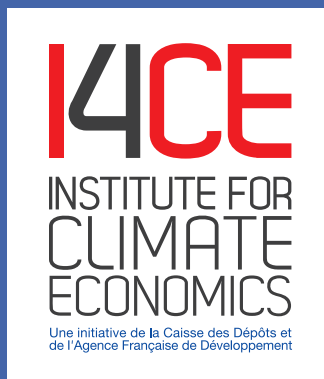


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FINANCIALREGULATION



Implementing prudential transition plans for banks: what are the expected impacts?

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The Institute for Climate Economics is an expert association in economics and finance whose mission is to support action on climate change. Through its applied research, the Institute contributes to the climate policy debate. It also publicly publishes analyses to support the work of financial institutions, governments and local authorities.



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EXECUTIVE SUMMARY

Political context

The European Union has made rapid progress on the issue of transition plans for companies and banks. First of all, the CSRD directive obliges each listed company to publish its plan for achieving carbon neutrality by 2050. Published by EFRAG this summer, the standards set for these plans can be considered ambitious and commensurate with the challenges they face. With regards to banks, it is now clear that they will be required to publish their transition plan. **What remains under debate is whether these transition plans should be integrated into prudential regulations**, which would open the way to numerous possibilities of action and sanctions by supervisors.

This debate is currently taking place in the context of the negotiations on the banking package, and more specifically the revision of the Capital Requirements Directive (CRD). The EU is discussing the **introduction of transition plans in Pillar 2 of the prudential regulation**, which determines the supervisory process of banks, and verifies that their risk management processes, and capital adequacy match their risk profiles.

Two options are currently on the table:

- 1 the one proposed by the European Commission, with **the implementation of two standards**: one standard for the **transparency requirements** of banks, that of EFRAG; and **a second standard for the prudential** part and the control of supervisors, which would be defined by the European Banking Agency (EBA), and which would relate only to a few sectors considered as highly risky
- 2 the more general proposal by several researchers and taken up by various MEPs to use **only the EFRAG standard and to integrate its level of ambition into the Pillar 2 prudential requirements**

In the second option, the bank's transition plans are based on a strategic vision of the transition of all the bank's activities. The bank must have a vision of the **transition sector by sector, with a 2050 neutrality objective, as well as intermediate objectives**. Moreover,

it must understand how each **financing granted will contribute to the attainment of the objectives of the plan**. The prudential transition plan must also make it possible to check that the **internal processes are consistent** with this vision.

In order to understand the value of a global and robust vision of prudential transition plans, and to feed into the debates currently underway in the European Parliament, I4CE has conducted a **qualitative analysis of the expected impacts**. By meeting with nearly thirty experts from the banking sector and the academic world, and by benefiting from the views of various European supervisors, we looked at the impacts of integrating global transition plans into prudential regulation on:

- **the credibility of the banks' commitments** and their actual implementation
- **the obstacles** that banks currently face internally
- **the real economy sectors**: fossil fuels, renovation and the automotive sector

Will transition plans strengthen the credibility of bank commitments?

Compared to a transition plan for certain sectors only, incorporating the transition plan into prudential regulation based on EFRAG's standards would :

- **Establishing a strategic vision** and greater sectoral coverage
- **Ensuring the scientific credibility** of targets
- **Enable consistency** with European policy objectives

Furthermore, one of the main impacts expected from this new prudential obligation is to **remedy the current lack of effective implementation of net-zero commitments**. Supervisors would then have the ability to **verify the actual implementation** of the transition plan and to **take corrective action** if it proved to be deficient. A requirement for prudential tran-

EXECUTIVE SUMMARY

sition plans shared at European level would avoid 'prisoner's dilemma' situations and would push all European banks to integrate climate issues in a more harmonised way. Finally, their integration into the SREP would emphasise the coherence of internal procedures with the objectives determined by the plan.

Prudential transition plans could help overcome the various bottlenecks faced by banks

The second type of impact expected from prudential transition plans is to act on internal blockages within banks. These are two types of blockages: **structural blockages and blockages linked to conflicts of objectives.**

For the structural bottlenecks currently present within banks, the transition plans should push banks to rethink their structuring in terms of **team organisation, human resources, and the integration of climate issues** into their internal processes when deciding on the granting of financing.

Beyond structural objectives, banks also face bottlenecks related to the **conflict of objectives between the risk-based approach and the subjective perception of climate issues.**

Specifically, the transition plan would help banks overcome this tension and join the dual materiality dynamic defended by the European authorities. This involves recognising the risks inherent in green assets, but also helping banks to anticipate the drop in profits from fossil fuel activities. It also involves better integrating environmental materiality into risk management tools.

Fossil fuels, real estate and the automotive industry: three sectoral examples of the role of prudential transition plans

In order to understand the impact of prudential transition plans in the real economy, three sectors were chosen, based on their key role in reducing GHG emissions and their importance to the banking sector.

The fossil fuel sector: prudential transition plans should accelerate their **gradual and orderly exit.** Transition plans would strengthen and give credibility to commitments in the fossil fuel sector, including clarifying the carve-out policy for new projects.

The energy renovation, the central issue is the choice of indicators, because an artificial greening of portfolios must not lead to the exclusion of low-income households from credit. These households are the main ones concerned by the renovation objectives. It is therefore important to ensure that the objectives of transition plans are relevant, with targets for the volume of loans or renovations granted, rather than targets for emissions reductions.

The automotive sector, the bank is a key player as it finances both manufacturers and vehicle buyers, as well as the many players in the sector (subcontractors, garages, dealers, etc.). Banks must continue to support the transition of the automotive sector in their commitments set out in the transition plans, not only by proposing offers adapted to the purchase of electric vehicles but also by extending their strategy to all the production chains and professions in this sector.

Conclusion

The ongoing battle at European level over the standards that will prevail in prudential transition plans should be decided by parliamentarians by the end of the year. This will be followed by the EU Trilogue and implementation by supervisors. **These changes in European regulations are essential to bring about the necessary changes in the practices of banks and their supervisors.** However, as the Governor of the Banque de France, François Villeroy de Galhau, reminded us in his speech at Climate Finance Day, the next stage will be that of the Basel Committee. This proposal must be discussed in this arena, which brings together the world's largest economies, in order to ensure consistency at the international level. One positive sign is that, after several years of silence due to the Trump administration, **the Financial Stability Board has opened the door to integrating transition plans into prudential regulations.**

EXPECTED IMPACTS FROM PRUDENTIAL TRANSITION PLANS

CREDIBILITY OF COMMITMENTS

- **Sector-wide vision** of their customers' transition
- **Targets consistent** with science and public policies
- **Clarification of escalation policy** towards a counterparty
- **Effective implementation** of the plan

INTERNAL BLOCAGES FACED BY BANKS

- **Structure and internal processes** coherent with the plan
- **Strengthening human resources**
- **Collection of necessary data**
- Adoption of a **longer view**
- **Evolution of transition risks** and costs' perception

REAL ECONOMY

FOSSIL FUEL :

- **Acceleration** of the **gradual exit**
- **Integration of the full life cycle** of infrastructures
- **Anticipation of losses** due to stranded assets

REAL ESTATE :

- **Setting the appropriate indicators for energy renovation**
- Supporting energy **renovation for low-income homeowners**

AUTOMOTIVE :

- **Supporting electric vehicles** financing
- **Integration of risks related** to the **ecosystem's** transformation

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INTRODUCTION

Following an initial study on the integration of prudential transition plans into Pillar 2 of prudential regulation (see Box 1)¹, the purpose of this research paper is to study ex ante the impact that the introduction of these plans could have on banks. The main purpose of the study is to analyse how their practices and their participation in financing the transition could evolve. The impact study also looks at how these prudential plans² can strengthen climate risk management.

The study will be based on the main French banks, but the conclusions -except for the of the renovation sector- are relevant for the whole European level.

At present, many banks are making climate commitments, particularly in the framework of collective commitments, within the Net Zero Banking Alliance^{3,4} for example. However, several recent studies have shown that these commitments, made outside a clear regulatory framework, are not sufficiently ambitious, or, when they are, they are rarely respected by the banking institutions. The data available on banks' climate commitments and their monitoring is sometimes difficult to access and is based, for the most part, on the work of NGOs^{5,6,7,8}. In the French context, these data are also provided by supervisors⁹ and in the framework of market initiatives such as the Sustainable Finance Observatory¹⁰.

The various studies by NGOs and supervisors highlight several shortcomings in banks' climate initiatives: these voluntary commitments are often made with distant deadlines, no timetable

and no binding deadline for the achievement of milestones. These long-term pledges do not allow for a clear plan of action and encourage institutions to delay climate action.

In addition, there is the issue of monitoring the commitments made by banks, which is currently insufficient. In France, the banking supervisors point out that major methodological efforts are still needed to monitor exposures so that the data published is sufficiently reliable and comparable from one bank to another¹¹. On an international level, recent work¹² corroborates this observation that climate transparency commitments are not being met.

Finally, these net-zero commitments reflect a fragmented vision of the transition, focused on supporting the transition only in a few sectors. For this transition to be achieved however, it is not only a question of reducing emissions linked to the energy sector alone, but also of acting on the transition of all economic sectors to transform our fuel-intensive economic models into a low-carbon economy.

Based on these various observations, it appears certain that voluntary commitments by banks alone won't be sufficient to facilitate an orderly transition. Due to this, prudential transition plans, currently under discussion, should be considered as an avenue that should be pursued. The following study proposes to analyse the impacts of such a proposal on the financing of the transition, on the obstacles present within banks and on three key sectors (fossil energies, energy renovation and automobiles).

1. I4CE et al, "Integrating a bank transition plan obligation into Pillar 2".

2. Dikau et al., "Net Zero Transition Plans".

3. The Net-Zero Banking Alliance is an initiative launched in April 2021 by UNEP-FI to mobilise the financial sector in the fight against climate change. Banks have committed to align their lending and investment portfolios with net zero emissions by 2050. It is part of the Glasgow Financial Alliance for Net Zero, chaired by Mark Carney

4. GFANZ, "Recommendations and Guidance on Net-zero Transition Plans for the Financial Sector".

5. Reclaim Finance, "Oil and Gas Policy Tracker".

6. Oxfam, "Notation des banques françaises, critère 'changement climatique'".

7. Friends of the Earth and Reclaim Finance, "French banks' colossal carbon footprint: a matter of state".

8. Rainforest Action Network et al, "Banking on climate change, Fossil fuel finance report 2020".

9. ACPR-AMF, "Sectoral policies and fossil fuel exposure of French financial market participants - Second joint ACPR/AMF report".

10. The Sustainable Finance Observatory, "Commitments Monitoring of Financial Actors".

11. ACPR-AMF, "Sectoral policies and fossil fuel exposure of French financial market participants - Second joint ACPR/AMF report".

12. Thomä and 2 degrees Investing Initiative, "0% of PCAF signatories comply with PCAF reporting requirements".

I. WILL TRANSITION PLANS STRENGTHEN THE CREDIBILITY OF BANK COMMITMENTS?

►► KEY MESSAGE

- More ambitious than net-zero commitments, bank transition plans are based on a strategic vision of client transition, sector by sector. The plan ensures that internal processes are consistent with this vision.
- Integrating the transition plan into prudential regulation based on the EFRAG standard would ensure a high level of ambition, scientific credibility of targets and consistency with European policy objectives.
- Integrating the review of transition plans into the SREP would ensure their effective implementation, avoiding 'prisoner's dilemma' situations and emphasising the consistency of internal procedures.

1. Rather than a net-zero vision, prudential transition plans should encourage banks to deploy a sector-wide vision of their customers' transition

As mentioned in the introduction, the banks' net zero commitments and their sectoral policies are currently limited to covering only certain climate-damaging sectors. They focus on activities related to coal or unconventional hydrocarbons - covering only partially the issues related to these activities¹³ - and set commitments on a few key sectors for the transition. Banks are currently operating under this logic, which is not sufficient enough to ensure that the real economy is reoriented towards climate objectives.

Banking transition plans are far more comprehensive and strategic instruments, going beyond a 'net-zero commitment' vision of the financial player. They should encourage banks to develop a global decarbonisation

strategy and to understand how the various economic sectors will evolve between now and 2050, with intermediate milestones and in relation to the public policies deployed. Once this analysis has been made, the bank needs to understand how its clients are positioned within this dynamic, and how the bank can support this transformation. For financing intended for large companies, the bank will be able to build part of its transition plan on the basis of plans provided by the large companies.

13. ACPR-AMF, "Sectoral policies and fossil fuel exposure of French financial market participants - Third joint ACPR/AMF report"

BOX 1: INCLUDING A REQUIREMENT FOR BANK TRANSITION PLANS WITHIN PILLAR 2

A previous report published by I4CE¹⁴ returned to the proposal put forward by several NGOs and by Frank Elderson at the European Central Bank, as well as François Villeroy de Galhau at the Banque de France¹⁵, to include in prudential regulations a requirement for transition plans for banks. These would set out each bank's decarbonisation strategy by 2050, indicating their intermediate targets, by that date, by sector. They would indicate the procedures to

be put in place internally to achieve them, ensuring that the commitments cover all the activities of the institutions concerned.

The report also looks at the levers for action by supervisors in the event of non-compliance by banks with this obligation, such as requests for training, changes in remuneration practices, or even additional capital requirements. It also explains how the

legislative texts could be more precise with regard to transition plans, notably in level 2 texts, and how to operationalise this proposal for supervisors, such as the certification of plans and human resources issues for supervisors.

Transition plans are described as a useful tool under Pillar 2 to reduce the risks faced by banks and to ensure the implementation of an orderly transition.

2. The introduction of an obligation would improve the credibility of transition plans

The CSRD already provides for the publication of transition plans for banks, as does the banking package currently under discussion. However, their approach and level of ambition differ. EFRAG, which is in charge of developing reporting standards, proposed a particularly robust and detailed reporting framework in the summer of 2022, whereas the current text of the banking is vague and does not provide a clear definition of transition plans. Given the shortcomings of the voluntary commitments, it seems appropriate to make robust transition plans mandatory within the framework of prudential regulation and more particularly within Pillar 2. A regulatory framework would make it possible to both raise the ambition and scientific robustness of the objectives set by banks in the context of transition plans upstream, and to ensure that these objectives are respected downstream.

By setting objectives consistent with scientific realities and European public policies

The voluntary commitments of the banks are now being questioned regarding the lack of overall coherence of the objectives they propose to implement, with both the constraints set by the scientists, and with the political objectives of the European Union. The global objective set by

scientists is to contain global warming below the threshold of 1.5°C¹⁶ and the climate objectives set by the European Union correspond to a 55% reduction in greenhouse gas emissions by 2030 compared to 1990 levels and to carbon neutrality in Europe by 2050¹⁷. These targets are not mentioned in the banks' voluntary transition plans, which currently do not fit into a more coherent European or even global framework.

→ **For maximum impact:** Prudential transition plans should ensure that banks' intermediate objectives and long-term targets are based on both scientific objectives and the deployment of European public policies. This articulation must be reflected in a coherence at the level of the different European texts (CSRD, CSDD and banking package)

By supporting the transition of all their customers

These transition plans integrated into Pillar 2 of prudential regulation would make it possible to adopt a global vision of the transition. The objective is to provide more

14. I4CE et al, "Integrating a bank transition plan obligation into Pillar 2".

15. Villeroy de Galhau, "7th Annual Sustainability Week".

16. Intergovernmental Panel on Climate Change (IPCC), "Special Report on the Impact of Global Warming of 1.5°C above Pre-industrial Levels and Corresponding Greenhouse Gas Emission Pathways".

17. European Council and Council of the European Union, "Climate Change: What the EU is doing".

general support for the various economic sectors in the transition process.

In terms of sustainable financings sustainable, such financing by French banks is increasing significantly for certain categories of products, for example for green property loans for households (from 62 to 147 billion from 2019 to 2020 for the 6 major French banks)¹⁸. These figures however, should be put into perspective, as these loans finance the acquisition of A, B or C rated housing and they mainly finance the acquisition of already existing housing, with no impact on the energy performance of the housing stock. In other segments, volumes remain low, such as for green consumer credit (stable at 2.5 billion for the six major French banks), which can be used, for example, to purchase an electric vehicle¹⁹.

It is imperative, however, that banks not only provide green financing, but also map out and deploy financing options and services that will accompany the transition of all their customers, especially those that are currently involved in fuel-intensive sectors. The objective for banks is to ensure that their customers make the necessary investments to get on the transition path. It is not enough for banks to use only exposure measures to fossil fuels or overall portfolio alignment with the Paris Agreement indicators²⁰²¹ to achieve this.

Banks need to develop their own vision of the transition of the different economic sectors and understand how their financing is consistent with the transition plan determined by the bank. This implies the need for banks to develop their own sectoral vision, but above all to evolve their internal procedures²² and develop specific indicators. To do this, they will initially be able to rely on external visions of the challenges and needs of the transition, via the energy-climate strategies and the sectoral roadmaps in particular²³. For corporate customers, banks will be able to rely on the transition plans provided by the large companies. Banks will have to keep a critical eye on the feasibility of these plans and on the associated financial strategy.

These plans, and the associated internal procedures, should help clarify fossil fuel financing policies. To be consistent with the recommendations of the International Energy Agency in its latest 'Net Zero by 2050'²⁴, banks should no longer provide financing for any new project with

too great a climate impact, such as new coal, gas or oil operations. The latest scenarios published by the IEA propose trajectories that exclude all new fossil fuel production projects²⁵ and ask companies to focus on the transition of existing assets. Beyond the IEA scenarios, the above-mentioned climate objectives require a significant and rapid reduction in fossil fuel production as well as the non-extraction of a large part of the reserves currently being exploited and under development²⁶.

→ **For maximum impact: Banks need to develop their vision of the transition of each economic sector, and develop internal procedures and indicators to understand how each funding allocation fits into their transition plan.**

Clarifying procedures for dealing with counterparty or project non-compliance with climate requirements

Many banks which have made commitments to support their counterparties in their transition do not anticipate the possibility of a counterparty repeatedly refusing to make the transition or failing to implement its transition plan. Only three of the nine largest French banks have a clear escalation procedure leading to actions such as non-renewal of loans, sale of securities or withdrawal if a dialogue on the bank's climate requirements cannot be established with a counterparty²⁷.

However, these procedures should be systematically formalised within bank transition plans, so that the steps and the calendar of an actions and sanctions escalation policy can be followed within the bank in the event that this situation arises. This escalation policy can include public demands on companies regarding their transition plans, negative votes against their climate plans if they are not robust enough, etc. As part of these procedures, suspensive clauses could also be integrated upstream, upon which the bank's obligations towards its counterparties would be based.

→ **For maximum impact: banks should have an escalation strategy for large companies if they fail to meet their transition plan**

18. The Sustainable Finance Observatory, "Transformation of Financial Practices and Flows".

19. The Sustainable Finance Observatory.

20. ACPR-AMF, "Sectoral policies and fossil fuel exposure of French financial market participants - Third joint ACPR/AMF report"

21. Institut Louis Bachelier et al., "The alignment cookbook - A Technical Review of Methodologies Assessing a Portfolio's Alignment with Low-carbon Trajectories or Temperature Goal".

22. I4CE et al, "Integrating a bank transition plan obligation into Pillar 2"

23. Such as those developed by the ACT - Assessing Low Carbon Transition Initiative for example

24. International Energy Agency, "Net Zero by 2050 - A Roadmap for the Global Energy Sector".

25. Defined as projects for which the final investment decision has not been taken before the end of 2021

26. IPCC, "AR6 Climate Change 2021: The Physical Science Basis"

27. ACPR-AMF, "Sectoral policies and fossil fuel exposure of French financial market participants - Second joint ACPR/AMF report".

3. Making prudential transition plans mandatory would improve their effective implementation

Ensuring that all banks implement their transition plan, guaranteeing a level-playing field

The integration of mandatory transition plans into Pillar 2 of prudential regulation would provide a better guarantee of monitoring of the plans, compared to the current situation where non-compliance with voluntary commitments is not monitored by the authorities. This, however, is dependent upon the provision of sufficient resources to enable supervisors to carry out effective controls²⁸. This integration of transition plans could be accompanied by gradual supervisory actions requested under the supervisory process (SREP), and as a last resort, by sanctions consisting of additional capital requirements as a temporary solution, while the bank concerned complies with the supervisor's new requirements regarding compliance with its commitments²⁹.

Furthermore, prudential transition plans would bind the different financial stakeholders and avoid 'prisoner's dilemma' situations. In the current situation, banks have little incentive to follow up on their commitments once they have been published, as they are not sure that other banks will also meet their targets, and therefore do not want to be the only ones to actually implement them. Banks would be able to move forward within a common timeframe if mandatory and supervised transition plans were implemented, thereby ensuring a similar degree of commitment from all banks.

Clarifying the necessary internal procedures and providing common indicators for all stakeholders

Prudential supervision of banking transition plans is based on the verification of banks' internal procedures. By clarifying all the procedures that banks must adopt (governance, funding decision criteria, risk management, team organisation, remuneration policies, etc.), supervisors ensure that the internal functioning of the bank's activities is consistent with the objectives set out in the transition plan. It is the evolution of these various internal procedures that ensures that the bank is implementing its transition plan.

To verify whether bank transition plans have been implemented effectively, banks and their supervisors will still need to rely on indicators. These indicators cannot simply measure an overall exposure or alignment indicator³⁰. They need to be more granular and be used to assess the progress of banks in relation to their objectives on a sectoral basis.

In the absence of common indicators, it is difficult to measure the monitoring of the commitments made by the banks, as the data can only be compared and therefore evaluated by an external observer³¹. The European standards proposed by EFRAG including a requirement for transition plans should improve the current situation by providing common definitions in terms of climate targets³². The approach currently being developed by the ACT for Finance initiative³³ could also be useful for supervisors.

28. NGFS, "Workstream 'Supervision' Mandate - April 2022 / April 2024".

29. For developments on these specific points, see : I4CE et al, "Integrating a bank transition plan obligation into Pillar 2".

30. Institut Louis Bachelier et al, "The alignment cookbook - A Technical Review of Methodologies Assessing a Portfolio's Alignment with Low-carbon Trajectories or Temperature Goal".

31. ACPR-AMF, "Sectoral policies and fossil fuel exposure of French financial market participants - Second joint ACPR/AMF report".

32. EFRAG, Exposure draft. ESRS E1 Climate Change. Basis for conclusions.

33. <https://actinitiative.org/>

II. PRUDENTIAL TRANSITION PLANS COULD HELP OVERCOME THE VARIOUS BOTTLENECKS FACED BY BANKS

► KEY MESSAGE

- **Banking transition plans could act on structural blockages. They should systematise the integration of climate issues into all teams (reorganisation, training and recruitment), internal processes and data.**
- **Banks are also faced with obstacles linked to the conflict of objectives between the risk-based approach and the subjective perception of climate issues. The transition plan would allow banks to overcome this tension and be a part of the dual materiality dynamic defended by the European authorities by extending their time horizons and modifying their perceptions.**

1. Overcoming structural challenges in the organisation of banks

Rethinking the structure and processes of banks

REORGANISE THE TEAMS TO ENABLE THE TRANSITION PLAN OBJECTIVES TO BE ACHIEVED

The integration of climate issues by banks may be limited by the way in which their teams are organised, which should be part of their transition plans.

This can take many forms, such as the lack of a defined channel or insufficient interaction between case managers and transition plan teams in order to effectively handle controversial cases.

Another structural example is the existence of an oil & gas team separate from the renewable energy team, which hinders the implementation of the transition plan. In fact, fossil fuel transaction teams are still encouraged to carry out as many transactions as possible rather than taking a global perspective of their clients' transition. It is therefore necessary either to provide for the extinction of this team or for a reorganisation in line with the objectives of the transition plan.

Prudential transition plans involving the meeting of the teams in charge of energy could not only allow for a more adequate measurement of the progress made, but also a stronger incentive to redirect transactions and a sharing of expertise on these subjects. This is a major challenge for the teams in terms of upgrading their skills, but also an opportunity for these professions to regain their attractiveness. The transition plan is therefore a tool that modifies the internal organisation of banks, in particular through the reorganisation of the teams it proposes, by ensuring that climate issues are addressed in a coherent manner.

Furthermore, the subject of climate change is still very often perceived as a separate issue, which requires the mobilisation of a dedicated team separate from other areas of expertise. This approach, which has already been adopted by several banks, is entirely relevant if it is complemented by training for all teams. As the transition and climate change issues are subjects that affect all sectors of the economy and influence all of the bank's activities and business lines, this issue needs to be addressed in a cross-cutting and interdisciplinary manner, in parallel with the ad-hoc centres that also enable progress to be made thanks to their specific skills. Furthermore, a certain con-

tinuity in the counterparties' contacts through the training of the account managers will enable the continuation of the dialogue already in progress with clients and recourse of new contacts from the centers of expertise is only required on occasion. The prudential transition plans could thus make it possible to establish climate as both a new form of support function that provides its expertise to all the teams via dedicated centres, and as a minimum expertise to be acquired by all the business lines.

SYSTEMATISE THE CONSIDERATION OF THE CLIMATE FACTOR IN THE BANKS' INTERNAL PROCESSES

Banks currently use very precise risk indicators to make a variety of decisions that allow them to automate their response to specific situations. The implementation of such an operation with regard to climate risks, however, has not yet been fully accomplished due to the methodological difficulties encountered. Furthermore, the indicators currently used in the decision-making process only reflect single materiality -financial materiality-, not double materiality³⁴. Prudential transition plans could encourage the creation of a set of indicators needed for climate decision-making, thus integrating them systematically into banks' decision-making processes.

An example has already been given in the case of Natixis, which has implemented a Green Weighting Factor (GWF) to routinely integrate its transition objectives into its processes³⁵. This tool leads Natixis teams to assign a climate score to each financing operation, which enables them to determine its climate impact and the transition risk it carries. Most important, the GWF then links this rating to the amount of internal capital allocated to each transaction. As a result, this tool systematises the process of taking into account the climate factor in all Natixis operations via an internal mechanism at the bank, by modifying the cost of the analytical capital in response to the climate score.

In order for these decision-making processes to be smoothly integrated into the banks' usual operations, it is also necessary to overcome internal communication difficulties, with the banks' various subsidiaries and with the various teams, which are often unevenly mobilised. The introduction of a transition plan obligation monitored by the European supervisors would thus make it possible to strengthen the implementation of these internal processes and to ensure that the objectives are followed up, avoiding the current situation where decisions concerning the climate are not sufficiently integrated into the banks' decision-making processes and where the responsibility of the players on this subject is relatively diluted.

Finally, it can be emphasised that these new ways of making decisions require a paradigm shift for banks. Unlike the way other risk factors are treated, climate change cannot be anticipated on the basis of historical data as it is an unprecedented phenomenon. From this point of view, internal processes need to undergo a significant evolution compared to the methods usually used by banks.

Addressing the significant human resource needs

The implementation of transition plans can also help to overcome a major difficulty encountered by banks faced with the subject of transition: the initial and ongoing training of players. In fact, the integration of climate commitments by the various bank business lines is hindered by a lack of expertise in this area. This is due to difficulties in mobilising junior and senior specialists and teams that are certainly highly visible but still small in number. These training needs will generate substantial costs for the banks, but as this effort is required in a similar way for each bank, there are no competition concerns between European banks.

TRAINING AND PREPARING PROFESSIONS FOR THE TRANSITION

The major changes that are required of employees within banks, for example, account managers who have to promote new products, such as green consumer loans or energy renovation loans, or risk teams who have to integrate new indicators into their decision-making, cannot be implemented without appropriate training for all players.

At present, it is often difficult for an account manager to question a counterparty's transition plan because it does not correspond to his or her field of expertise. The same transition plan may be assessed in a very heterogeneous manner depending on the institution and the person responsible for validating it. In order to harmonise the decision-making of employees and to strengthen their skills on this subject, the prudential transition plans should include continuous training on climate and environmental issues.

Banks also face difficulties recruiting personnel (particularly senior personnel) specifically trained in environmental issues, due to a lack of people with dual skills in climate and finance, who are most of the time forced to train on their own as a result of the lack of initial training courses that combine these two fields. This difficulty is all the more paradoxical with regard to junior personnel, as the number of students interested in these subjects is growing. It is perhaps due to a form of conservatism on the part of educational institutions, which is a problem that is partly exogenous to the financial

34. Boissinot et al., "Aligning financial and monetary policies with the concept of double materiality: rationales, proposals and challenges".

35. Natixis, "Green Weighting Factor and climate trajectory - Responsible Finance - Groupe BPCE - Global Financial Services".

sector. A joint report published by WWF France and the association Pour un réveil écologique highlights this problem through figures from a survey of more than 500 finance students: 75% would like to see transition-related issues better integrated into their training³⁶. Many educational institutions were aware of this gap between student expectations and course offerings, and three quarters of them indicated that they were planning to redesign their courses by 2023-2024. However, the schools' ranking systems do not include criteria related to these issues, and a majority still rely on the goodwill of professors to integrate these themes rather than on a formal obligation.

At the same time, interviews with experts on these training issues revealed a potential reluctance on the part of senior personnel within banks to see their expertise challenged by juniors with more training on the subject when they enter the job market.

As discussed in the previous section on internal organisation, bank transition plans should enable banks to invest more massively and sustainably in training their teams. It could be interesting to consider the training issues for each of the branches of a bank (risk, business lines, finance department, networks, etc.). These plans, integrated into Pillar 2 of the prudential regulations, could also smooth out the major discrepancies between banks in terms of the appropriation of these subjects by their teams. These plans, integrated into the prudential regulations, could also smooth out the significant differences between banks in terms of the appropriation of these subjects by their teams.

CONSOLIDATE THE SIZE OF THE TEAMS ALREADY IN PLACE

The changes to be made within the banks in terms of human resources are of course measured in qualitative terms, but also in quantitative terms. The subject of climate change is cross-cutting and requires the recruitment of a sufficient number of stakeholders to achieve the changes needed to meet the commitments. The interviews conducted with the banking institutions revealed that the teams are still very small despite the high visibility within the institutions, and that they have to carry out very time-consuming tasks, for example when working on financing stocks. To give a concrete example, the energy retrofit targets that banks may set themselves require the collection of Energy Performance Certificates (EPC) of buildings already in the portfolios, and thus a time-consuming task of data collection and inclusion of environmental criteria (see section III.2). The tasks related to the assets in stock and past transactions are therefore added to the new processes to be integrated on current

transactions and greatly increase the human resources needed to achieve the environmental objectives. Prudential transition plans could ensure that sufficient human resource support is allocated to the issue within each bank.

INCREASING THE ATTRACTIVENESS OF THE BANKING SECTOR ON THE SUBJECT OF TRANSITION

We can also underline the problem of the sector's attractiveness to young candidates who are personally committed to the climate issue, who may be disappointed by institutions that are not sufficiently committed to the issue, or that are not considered credible enough³⁷. A growing number of finance students looking for internships, work experience or jobs include this criterion in their search, with 60% systematically inquiring about the environmental policies of the financial institutions to which they intend to apply³⁸. From this point of view, the introduction of prudential transition plans that give credibility to the banks' commitments and ensure that they are monitored by the authorities may make it possible to give guarantees to the young candidates that the institutions are currently struggling to recruit.

■ Collect and handle the necessary data

GATHERING THE DATA NEEDED TO IMPLEMENT AMBITIOUS COMMITMENTS

Many banks report that a major barrier to their engagement in the transition is the lack of sufficiently detailed and easily accessible climate-related data, for example to assess their climate impact or environmental risk exposure. In this respect, energy renovation is a sector where several institutions have encountered difficulties when seeking to integrate indicators such as the EPC when granting home loans. SMEs and TMEs are also players that banks find difficult to assess due to a lack of available data.

It should be emphasised however, that this difficulty is relatively endogenous and stems in part from an approach to climate issues through the spectrum of risk. The lack of granularity in the analysis of climate risks currently undertaken by banks prevents them from integrating the climate factor as a tool that would allow them to really weigh all factors in the balance when making decisions. However, on a certain number of sectors, actions are being taken. With regard to the issue of EPC, for example, several banks interviewed have worked with ADEME to obtain EPC for their property portfolio, and one of them has been able to set up a data collection system that is sufficient to start adding this data

36. WWF France and Pour un réveil écologique, "Former à une finance écologique - Comment répondre à l'intérêt des étudiants pour la transition environnementale ?"

37. Finance for Tomorrow and Birdeo, "Sustainable Finance Jobs".

38. WWF France and Pour un réveil écologique, "Former à une finance écologique - Comment répondre à l'intérêt des étudiants pour la transition environnementale ?"

to its inventory. There remains a disparity in the stages of progress in the collection of data, which appears to be correlated with the level of commitment on the part of the banks.

Institutions have been motivated in recent years by the development of regulations on certifications such as the DPE in the property sector, notably with the publication of the Climate & Resilience Law in August 2021³⁹, which will eventually prohibit the letting of homes with low energy performance. With the risk of such properties losing value as such measures increase, banks have been under greater pressure to act and to seek data on this issue.

The role of recent European regulations on data transparency can also be highlighted, with the Sustainable Finance Disclosure Regulation (SFDR)⁴⁰ and Article 8 of Taxonomy Regulation⁴¹, coming into force in 2019, which requires banks to be more transparent on climate issues, and therefore to provide more detailed data on their portfolios. Since this more detailed data will have to be provided in order to comply with the legal requirements, it is conceivable that banks will also use this data in their internal procedures. This collection of data will be facilitated by the coming implementation of the ESAP (European Single Access Point)⁴², which allows centralised access to information published by financial institutions. Finally, it should be noted that the CSRD (Corporate Sustainability Reporting Directive)⁴³ of 2021, which applies to all European companies with more than 250 employees or listed companies, provides banks with a legal basis for demanding a credible transition plan from their counterparties concerned by this directive.

The question of data is therefore perhaps no longer an issue until it is available. For inflows, it is a matter of banks requesting additional information when examining requests for financing by their counterparties. When it comes to stocks, the issue is that data collection is not always useful. This is because it is necessary to know how to process and compare these data using methodologies and expertise that are still sometimes underdeveloped and not harmonised. This last observation is particularly relevant to developing countries, where the resolution of this issue is still uneven⁴⁴.

The integration of transition plans into prudential regulations should encourage banks to collect and process the available data in a systematic and more harmonised way from one bank to another.

ESTABLISH COMMON TRAJECTORIES AND INDICATORS

Banks also face the problem of a lack of uniform trajectories and indicators, for example with regard to the accounting of greenhouse gas emissions: some of the indicators used by banks do not allow for the emissions of the entire production chain of counterparties to be taken into account. It is therefore difficult to compare banks' voluntary commitments, as they do not use the same indicators^{45 46}.

Prudential transition plans can help overcome this difficulty by setting up a global steering system jointly developed with the economic and political authorities, and by imposing indicators that are not defined by the banks themselves, but that are common to the entire sector. Greater consistency with the indicators used in the transition plans of counterparties, which have also become mandatory, could also be found.

In France, the Sectoral Transition Plans initiative⁴⁷ led by ADEME is a useful example of a common definition of a sectoral trajectory, with the development of trajectories in the cement, building, transport and construction sectors, etc.

39. French Law No. 2021-1104 of 22 August 2021 on combating climate change and strengthening resilience to its effects. In particular, Article 160 which qualifies energy slums as indecent housing.

40. Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability disclosure in the financial services sector.

41. Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088

42. Proposal for a Regulation of the European Parliament and of the Council establishing a European Single Access Point (ESAP) providing centralised access to published information relevant to financial services, capital markets and sustainability.

43. Proposal for a Directive of the European Parliament and of the Council amending Directives 2013/34/EU, 2004/109/EC and 2006/43/EC and Regulation (EU) No 537/2014 as regards sustainability reporting by companies.

44. NGFS, "Final report on bridging data gaps".

45. ACPR-AMF, "Sectoral policies and fossil fuel exposure of French financial market participants - Third joint ACPR/AMF report"

46. Sustainable Finance Observatory, "Recommendations of the Scientific and Expert Committee on Unconventional Hydrocarbons and Alignment Strategies"

47. DEME, "Sectoral Transition Plans for Industry".

2. Overcoming the obstacles of conflicting objectives within banks

Resolving the tension between participation in transition financing and the risk-based approach favoured by banks

GREEN ACTIVITIES ARE NOT RISK-FREE

Although green activities may be less prone to transition risks, they are not systematically free of them, and other 'traditional' risks as well as physical risks may also affect them⁴⁸. For example, while some technologies are already mature⁴⁹ and known to be financed, other transition-friendly technologies may be at a less mature stage and therefore naturally risky. Although green activities may therefore be less risky than their carbo-intensive alternatives in the medium to long term, in the short term they may well present risks that need to be managed.

This may hamper banks' action in financing their transition. The introduction of prudential transition plans can help to overcome this difficulty if supervisors develop clear recommendations on how to deal with these divergent profiles. Their integration into the supervision process (SREP) should allow the development of a dynamic approach adapted to the specificities of individual banks without undermining their relevance.

PROFITS FROM FOSSIL FUEL ACTIVITIES REMAIN HIGH

Despite repeated calls from governments⁵⁰ and pressure from NGOs⁵¹, profits from fossil fuel activities remain important for some banks⁵². This loss of profit will occur in particular in the fossil and climate-damaging sectors, which are currently a very significant source of income for banks: by way of illustration, in 2019 the 12 largest investment banks in the world generated 2.9 billion in commission income from fossil fuel projects, which represents 7% of their revenues^{53 54}.

In order to meet their transition plan, banks will probably have to lower their profitability expectations and extend their return-on-investment period. This is a thorny issue, because while common regulation at the European level will put all

banks on the same level, they will be competing with non-European banks.

OPERATIONALISING AND COMPLETING THE RISK-BASED APPROACH IN BANKS' TOOLS

A purely financial materiality approach is difficult to implement, as a measure of greenhouse gas emissions is not equivalent to a risk metric. It is also complex to accurately determine the potential financial impacts due to physical risk for various reasons, such as the heterogeneity of the methodologies adopted or the difficulty of estimating financial losses⁵⁵. The measurement of transition risk is also complicated by the uncertainty surrounding the future dynamics of the low-carbon transition and therefore by the impossibility of defining a probability distribution of these dynamics⁵⁶.

The introduction of prudential transition plans could help to overcome these problems by fully integrating environmental materiality into risk management beyond the reporting exercise. Through the establishment of sectoral objectives in line with the development of economic sectors, this issue can already be integrated in an operational manner as a first step. It is, however, still essential to refine the methods for analysing the financial risk (physical and transitional) in a parallel approach. Even with a transition plan in place, there is still a 'residual' climate risk to be managed by the bank. This risk-based approach can also be complemented by other ways of integrating climate change into banks' decision-making processes, as discussed above. (*see part II.1*)

The tragedy of horizons: Taking a longer view

Since former Bank of England's governor Mark Carney's speech in 2015⁵⁷, in which he highlighted the ongoing 'tragedy of horizons' that is preventing climate action by the financial sector, the term has been used to refer to the disconnect between the short-term view taken by banking institutions and the need for a long-term approach to addressing climate change issues. The term has since been

47. ADEME, "Sectoral Transition Plans for Industry".

48. NGFS, "Capturing risk differentials from climate-related risks A Progress Report"

49. Such as mature renewable energies or the construction of electric vehicles

50. Le Maire, "Closing speech of the Climate Finance Day".

51. Reclaim Finance, "Broken promises".

52. ACPR-AMF, "Sectoral policies and fossil fuel exposure of French financial market participants - Second joint ACPR/AMF report".

53. Friends of the Earth, and Reclaim Finance. "Banks' colossal carbon footprint: a matter of state"

54. Goetz, « Pourquoi les banques d'investissement ne peuvent pas se passer des énergies fossiles ».

55. I4CE and al, "Addressing challenges of physical climate risk analysis in financial institutions"

56. I4CE and al, "Scenario analysis of transition risk in finance - towards a strategic integration of deep uncertainty".

57. Carney, "Breaking the Tragedy of the Horizon - Climate Change and Financial Stability"

regularly used in central bank climate statements⁵⁸. It was first highlighted in 2011 by Andrew Haldane, Chief Economist at the Bank of England until 2021, in a speech highlighting the biases induced by excessive discounting of future earnings⁵⁹.

This short-termist vision of financial actors has also been analysed by numerous research studies which seek to highlight the causes - maximisation of current profits, mode of remuneration of managers, absence of actions generating partnership value - and the consequences on the strategy of companies⁶⁰. Long-term investors may also be concerned by this vision⁶¹.

Since the very function of a transition plan is to propose an action plan for the year 2050, with a number of intermediate milestones between now and then, it is a tool of choice for overcoming this ‘tragedy of the horizons’. Making these prudential plans mandatory would help banks to take a longer-term view and thus make decisions that are more compatible with the transition horizons.

Perceptions of the risks and costs of financing the transition delaying climate action

A PERCEPTION OF A VERY HIGH COST OF CHANGE

The cost of change is perceived as very high by many banking stakeholders, believing that there is no premium for the first stakeholder to act on climate change - except for certain banks that are close to the public sphere and historically committed, where the scale of the changes to be made is less. The ‘prisoner’s dilemma’ that is thus created (*see part 1.3*) could be solved by the implementation of prudential transition plans, which would disseminate information to all stakeholders, so each bank could have confidence that its neighbours are committed to respecting the objectives set by them. Furthermore, transition plans can also reverse the costs of change by imposing additional capital requirements on institutions whose transition plan is not respected.

LACK OF INFORMATION AND CONFIRMATION BIAS WITHIN BANKING INSTITUTIONS

The last obstacle that can be identified as a major hindrance to banks sufficiently considering climate risks and participating in the financing of the transition is sociologi-

cal and goes beyond the framework of this analysis. It has to do with what can be described as a ‘confirmation bias’: when confronted with stakeholders who attach little importance to these issues in the context of their professional activity, the banking professions perceive climate change as an exogenous problem. This does not necessarily mean that they are not personally convinced of the need for a transition, but rather that they often perceive it as a political issue that is only partially related to the financial and banking sector. As each stakeholder is therefore confirmed in his or her perception by the others, a form of confirmation bias may arise.

To break this effect, the players in the banking sector must undergo a paradigm shift. There will need to be discussions with external players, and there will need to be training and increased expertise internally so that climate issues become an integral part of the bank’s processes and concerns. Prudential transition plans can support these phenomena by providing for commitments concerning the training of stakeholders and by ensuring that the actions undertaken mobilise all the bank’s business lines and hierarchy.

Finally, the transition plan obligation could help to overcome the idea that transition is an exogenous fact that cannot be influenced. The obligation could replace the old confirmation bias with a new one: that the implementation of the transition plan is an integral part of the mission of each bank employee.

58. Elderson, “Overcoming the Tragedy of the Horizon”

59. Haldane, “The Short Long”

60. Moussu, “Financial markets and short-termism”.

61. Ervin, “Long-Term Investors: Finding the Right Model”.

III. FOSSIL FUELS, REAL ESTATE AND THE AUTOMOTIVE INDUSTRY: THREE SECTORAL EXAMPLES OF THE ROLE OF PRUDENTIAL TRANSITION PLANS

►► KEY MESSAGE

- Bank transition plans would help to promote an orderly phase-out of the fossil fuel sector: by clarifying the carve-out policy for new investments, reducing the risk of instability associated with stranded assets and avoiding buyouts by lesser players..
- For energy renovation, care should be taken that the objectives of transition plans do not lead to a credit exclusion of low-income households. The plans could act on different issues, such as slowing down the obtaining of data, or proposing loans with interest repayable on the sale of the property
- Finally, the banks must continue to support the transition of the automotive sector in their commitments set out in the transition plans, not only by proposing offers adapted to the purchase of electric vehicles but also by extending their strategy to all the production chains and businesses in this sector.

1. The gradual withdrawal from the fossil fuel sector, a movement encouraged by the adoption of transition plans but with impacts to be anticipated

The definition of the coal, oil and gas sector is broad, including both the extraction and processing of resources, their transport, end uses, etc.⁶²⁶³ The prudential transition plans will have a direct impact on this sector, which is most affected by the need for transition⁶⁴. As its financing is highly segmented due to the plurality of activities that make it up, the players in this vast chain are all links on which the prudential transition plans will have to act. Support towards the exit of this sector needs to take into account these multiple stages in order to be effective and coherent.

A number of questions arise with regard to the objectives that banks may set for themselves in their transition plans, particularly in a context where divestment and phasing out of the sector are highly emphasised, and where companies in the sector are not adopting convincing transition plans. In particular, it is possible to anticipate the complications that may arise

from such a movement, partly prompted by prudential transition plans and the potential role of players other than European banks in the financing of this sector. Also with regards to the issue of stranded assets, which is very prominent in this sector.

Credibility and reinforcement of current commitments to phase out the fossil fuel sector

Banks' commitments to divest from fossil fuels are still very often based on a single turnover criterion that does not in itself capture the real impact of companies' activities. Moreover, the turnover threshold for fossil fuel extraction and exploitation remains high. Although these thresholds are regularly lowered by the banks, particularly with regard to coal, several institutions maintain thresholds of around 25%⁶⁵.

62. ACPR-AMF, "Sectoral policies and fossil fuel exposure of French financial market participants - Third joint ACPR/AMF report"

63. Sustainable Finance Observatory, "Recommendations of the Scientific and Expert Committee on Unconventional Hydrocarbons and Alignment Strategies"

64. IEA, "World Energy Outlook 2021"

65. ACPR-AMF, "Sectoral policies and fossil fuel exposure of French financial market participants - Second joint ACPR/AMF report"

Under these conditions, a diversified company that derives a limited share of its revenues from the production of these energies can easily avoid exclusion even if its oil and gas production is significant or even if it develops new projects. This is especially the case as current sectoral policies are often limited to coal and unconventional fossil fuels but do not target so-called conventional production.

Shell and Chevron, which are among the largest producers in the shale oil and gas sector, can therefore continue to be financed by a bank that has adopted an unconventional oil and gas policy, since the share of their activities that relate to this sector does not exceed 30% of their total activities⁶⁶.

In order to curb these practices and reinforce the requirement of thresholds, it is essential that the right monitoring targets and indicators are selected, respecting the available scientific evidences with a timeframe that takes into account geographical realities.

If banks are to make a real contribution to the phasing out of fossil fuels, they will also need to be able to influence the transition plans of fossil fuel companies, to check that they are consistent and implemented (*see Part II below*).

Further reflection on the full life cycle of fossil fuel infrastructure

Despite the fact that today, 100% of the major French banks have committed to stop financing coal exploration, production, and processing⁶⁷. However, some continue to support - *via* exceptions - companies that develop new mining or power plant projects and only 43% of them are also engaged in services related to the construction of power plants to support the transition of this sector⁶⁸.

For the conventional oil and gas sector, banks are slow to adopt clear exit policies: only two French banks^{69 70} have adopted an exit strategy from the sector, while all others continue to finance new projects directly or by financing the companies that develop them.

Furthermore, fossil fuel companies can reposition themselves by selling - not closing - part of their fossil fuel assets, leaving these assets operational. The need to close fossil fuel infrastructure is embedded in the sectoral policies of some financial actors and should be considered by all.

The prudential transition plan must make it possible to anticipate and prepare the evolution of companies in this sector: by analysing the situations of possible future stranded assets via early shutdowns and by verifying that compensatory investments in renewable energies are indeed planned.

Although communicating actions to accompany the transition are more complicated to put forward than massive disinvestment, a reflection on the complete life cycle of these infrastructures is therefore necessary and more effective.

Acting on banks' fossil fuel investments by preventing other actors from taking over

The fossil fuel divestment movement, which has been supported by various NGOs for years, has been criticised for its lack of effectiveness in terms of its impact on the real economy and on the actual reduction of greenhouse gas emissions⁷¹.

AVOIDING ASSET TAKEOVERS BY NON-EUROPEAN PLAYERS

There are many non-European regions of the world where European regulations have little impact on the decisions taken by bank subsidiaries. Strong fossil fuel exit regulations and institutional commitments can even lead to a perverse effect in some countries, where banks will invest more in companies in the sector abroad⁷². In South Africa, for example, several French banks continue to feed the coal sector, notably through the mining developer Glencore⁷³. Thus, the prudential transition plans should ensure that banks' commitments are met in Europe and on other continents.

Beyond the banks' non-European subsidiaries, financing of the fossil fuel sector may also take place through players such as banks outside the European Union, which would then take over from banks subject to European regulations. This risk is more difficult to integrate into transition plans than in the case of non-EU subsidiaries.

THE RISK OF A 'SHADOW BANKING FOSSIL' TO BE PUT INTO PERSPECTIVE

A common assumption is that the introduction of climate regulations on the banking sector, such as the introduction

66. Rainforest Action Network et al, "Banking on climate change, Fossil fuel finance report 2020".

67. The Sustainable Finance Observatory. "Transformation of Financial Practices and Flows"

68. The Sustainable Finance Observatory.

69. Crédit Mutuel announced on 26 October 2021 that it would stop financing any new oil and gas exploration, production or infrastructure projects.

La Banque Postale, for its part, has already planned to stop financing exploration, production and infrastructure projects, while at the same time undertaking not to have in its portfolio, by 2030, any company in the sector that does not have a transition plan aimed at moving away from these energies. (Source ACPR/AMF)

70. ACPR-AMF, "Sectoral policies and fossil fuel exposure of French financial market participants - Third joint ACPR/AMF report"

71. Hansen and Pollin, "Economics and Climate Justice Activism".

72. Cojoianu et al, "Does the fossil fuel divestment movement impact new oil and gas fundraising?"

73. See for example: Reclaim Finance, "Coal: Crédit Agricole breaks its own policy".

of transition plans, would only shift the problem to other less regulated institutions, such as private equity.

Several reports tend to show that shadow banking⁷⁴ tends to acquire fossil assets and that disinvestment by banks could encourage this phenomenon⁷⁵⁷⁶. This hypothesis is often put forward by the banks themselves: if their financing were to be reduced, other stakeholders would simply take over from them, thus reinforcing the initial situation. This argument, in certain situations, can then be used to justify climate inaction.

Other conflicting sources point instead to the lack of massive investment in fossil fuels by institutions such as funds⁷⁷. It can also be noted that for the firms concerned, financing through the shadow banking system is more expensive than through traditional finance, which still penalises this type of investment and tends to reduce the attractiveness of this hypothesis. Furthermore, as the traditional and shadow banking sectors are closely linked, the regulations in question would also have an impact on the means of action of shadow banking stakeholders⁷⁸. In addition, as mentioned above, measures such as prudential transition plans may be designed in such a way that banks encourage their counterparties to make transitions rather than to seek funding elsewhere.

In conclusion, it should be noted that less regulated players such as private equity would probably not have the capacity to absorb all the investment volumes if the banks disinvested massively and rapidly. As a result, the banks' argument for inaction has less weight since a rapid transition would not allow other players to take over all of the financing lines. When we look at the specificities of private equity, we can also see that they would not necessarily have an interest in investing massively in the fossil fuel sector, despite certain 'hit and run' opportunities. Their model, which unlike that of the banks does not allow them such a diverse range of activities, is therefore even more sensitive to exposure to stranded assets.

Anticipating stranded assets, a risk that transition plans can address

It is currently difficult to identify indicators to effectively measure banks' exposure to climate risks, especially as the political incentives to support the transition and exit from this sector are unclear. This complicates the task of measuring the coming phenomenon of stranded assets, particularly

in highly exposed sectors such as fossil fuels. Calculations to measure banks' exposure to coal, for example, regularly produce results indicating that French banks have very little exposure, with an exposure of significantly less than 1% of assets⁷⁹. However, this calculation does not take into account the exposures of counterparties that operate with coal-fired electricity. This observation is supported by academic studies calculating the amount of stranded assets at the global level: they show that the stranded fossil assets are located in emerging producer countries (China, India, Russia, Saudi Arabia, etc.) and in Anglo-Saxon financial centres (New York, London, Toronto, etc.). Some researchers estimate the value of the world's stranded assets in the oil and gas sector at more than US\$1,000 billion, i.e. the amount of future profits lost as a result of the climate policies put in place⁸⁰.

The indicators used in the transition plans must therefore be carefully thought out upstream to adequately reflect the way in which the stakeholders are exposed. Furthermore, a more global reflection on these indicators could help to advance the issue of measuring the phenomenon of stranded assets. Currently being published by EFRAG⁸¹ and by the Sustainable Finance Observatory⁸² should enable progress to be made on this essential subject by providing truly relevant quantitative and qualitative indicators and by creating harmonisation between financial and non-financial players.

There are indications that, despite an accurate measure of the scale of the phenomenon, many industry players are already anticipating the increase in stranded assets in the fossil fuel sector and are already moving away from it. This has made insurers more reluctant to accept the risks posed by certain industries such as coal, which also makes it more difficult to finance the sector⁸³. Insurers are the ultimate stakeholders in the risk chain, and they are now increasingly reluctant to take on this role in relation to climate, physical or transition risks. This could have a direct impact on banks, which, despite their willingness to continue financing the sector, could not take the risk of financing uninsured companies.

Beyond the question of its measurement, this notion of stranded assets is crucial in this sector. Opinions differ on how this issue could be managed. Some researchers and NGOs are in favour of strengthening bank reserves to deal with losses⁸⁴⁸⁵, others propose solutions that also involve

74. Non-bank financial intermediation (NBFi), known until 2018 as "shadow banking", refers to a system of fundraising and lending involving actors who do not belong to the traditional banking system, although they may conduct activities similar to those of banks (Source Banque de France)

75. Malek and al., "Transferred Emissions: How Risks in Oil and Gas M&A Could Hamper the Energy Transition"

76. Private Equity Stakeholder Project, "Private equity propels the climate crisis. The risks of a shadowy industry's massive exposure to oil, gas and coal."

77. Clarke, "BoE's Ramsden: Climate Rules Won't Prompt Rush to Shadow Banks".

78. Gelzinis, "Addressing Climate-Related Financial Risk Through Bank Capital Requirements".

79. ACPR-AMF, "Sectoral policies and fossil fuel exposure of French financial market participants - Second joint ACPR/AMF report".

80. Semieniuk et al, "Stranded Fossil-Fuel Assets Translate to Major Losses for Investors in Advanced Economies".

81. EFRAG, Exposure draft. ESRS E1 Climate Change. Basis for conclusions.

82. Sustainable Finance Observatory, "Recommendations of the Scientific and Expert Committee on Non-Conventional Hydrocarbons and Alignment Strategies".

83. Willis Towers Watson, "Ready and Waiting? Power and Renewable Energy Market Review 2019".

84. Dafermos and Nikolaidi, "Greening capital requirements".

85. Ford et al, "A safer transition for fossil banking".

public funding, for example via proposals to create a 'bad bank'⁸⁶⁸⁷.

Once again, the implementation of transition plans can contribute to mitigating the negative impacts of this hardly avoidable phenomenon by ensuring that banks monitor it more closely and are therefore better able to handle it. Depending

on the solutions adopted for stranded assets, bank transition plans can also facilitate mixed public and private financing strategies and provide visibility to all stakeholders.

The concept of stranded assets is most often associated with the fossil fuel sector, but it also exists in other sectors, such as real estate or the automotive industry.

2. Energy renovation in the real estate sector, a difficult task to translate into portfolios and with significant social impacts

Similar to the fossil fuel industry, the real estate sector is very directly affected by this transition, as it accounts for 36% of greenhouse gas emissions on a European scale, and only 3% of buildings with an A-rated energy performance⁸⁸. Only the private property sector will be examined here, as the public sector has different means of financing and is less dependent on the banking sector. The implementation of transition plans is made difficult in this sector by the difficult choice of indicators to best introduce energy renovation in the evaluation of portfolios and by the potential social impacts of the implementation of regulations in this area.

Measuring the efforts and obstacles of banks in the real estate sector

The valuation of their portfolio is a major issue for financial institutions, as they risk losing the value of their real estate assets. The issue of stranded assets is of direct concern to this sector, and investors are already aware of the risks associated with low energy performance buildings with the increase in regulations around the DPE. In France, the Climate & Resilience law adopted in 2021 provides for progressive bans on renting and rent increases for the worst-rated housing⁸⁹. Other European countries have put in place a variety of instruments to encourage energy renovation. These regulations also reduce the property value of the most energy-intensive properties: the Netherlands uses a mix of fiscal and economic policies, as well as a neighbourhood-by-neighbourhood approach to decarbonise its building stock⁹⁰. The impacts of the introduction of prudential transition plans could include an acceleration of this type of process and thus help to put into perspective the current blockages encountered by banks, which would risk a loss of value of their property in a business-as-usual scenario.

Measuring portfolio decarbonisation is also complicated by the characteristics of the property sector. It is first necessary to distinguish between portfolios of properties owned directly by the bank, and portfolios of real estate loans, which may be granted to individuals (acquisition of housing), to companies (acquisition of offices) or to developers (construction of housing, industrial or tertiary buildings). The next step is to assess the situation of each of these buildings, in a context where data is sometimes difficult to access (see Part II.1).

For retail loans, this task, as already mentioned, is very time-consuming and can result in the line-by-line evaluation of hundreds of thousands of loans. It is also necessary to have information to predict the investments needed for a future energy renovation. However, the issue of missing data on EPCs is being addressed by banks in the ECB's 2022 climate stress test exercise. The ECB has asked financial institutions to collect the EPC associated with the real estate loans in their portfolios, or alternatively to use proxies to provide an estimate of the energy performance of the buildings concerned⁹¹. Thus, this type of information has been collected by banks to comply with this mandatory exercise. The data collected for this purpose can then be re-used in the framework of the transition plans and improved as and when required.

Even once these data issues are resolved, the indicators for setting targets within transition plans remain difficult to determine for the property sector. Using a measure of portfolio greenhouse gas emissions or kWh/square metre might be considered the simplest and most practical measure, but it would not capture the non-linearity of emission reductions in the case of ongoing or future renovation. Rather than proposing a measurement at a point in time, it could be interesting for transition plans to measure the shares of the

86. Institut Rousseau, Giraud, and Nicol, "Fossil assets, the new subprimes?"

87. Carré et al., "How Banking Regulation can serve the Ecological Transition"

88. Renovate Europe, "Infographics - Renovate Europe".

89. LAW No. 2021-1104 of 22 August 2021 on combating climate change and strengthening resilience to its effects.

90. See the French High Council for the Climate report which compares public policies on renovation in France, Germany, the Netherlands and Sweden: High Council for the Climate, "Renovating better: lessons from Europe".

91. European Central Bank, "Methodology: Climate Risk Stress Test".

portfolio concerned that are fully renovated, partially renovated, to be renovated, certified by a label, etc. It may be useful to consider indicators such as the volume of renovation projects financed, the number of houses treated, or the number of heavy renovations completed, to compare them with national objectives and to measure more accurately the progress of the banks' portfolios in this regard.

Furthermore, the decarbonisation efforts of banks in this sector should also be measured against the obstacles they encounter in using the various tools that have been put in place. For example, banks currently feel that they are only making small profits on the small renovation loans they could offer, as the fixed costs remain high. In addition, the expertise of the teams working on the real estate sector is often weak with regard to the issue of energy renovation. Finally, as has been pointed out in other parts of this report (see *part II.2* and the remainder of this section), the banks themselves have testified in interviews that they are reluctant to use a logic of artificial greening of their real estate portfolios, which would have the consequence of excluding their most modest clients from access to credit and would ultimately have little impact on the real economy. In addition to the more general bottlenecks identified in this report, the transition plans will therefore have to take into account these different sectoral difficulties as far as real estate is concerned. For example, transition plans may require targets for financing renovations per year in line with national targets (as a percentage of stock). They will also have to take into account the fact that the housing sector is diverse with different issues for different stakeholders (households, businesses, developers, construction, etc.).

Encouraging energy renovations for low-income homeowners

Restricting home loans for energy-intensive housing is unthinkable, as of the 4.8 million French energy warehouses (dwellings with a DPE rating of F or G), more than half are occupied by low-income households, including 1.5 million owner-occupiers⁹². The National Observatory of Fuel Poverty (ONPE) indicates that among French households in the first quintile⁹³, nearly 20% live in a thermal sieve⁹⁴, and that 58% of sieve occupants own their home⁹⁵. Since a majority of individuals finance their renovation from their savings - 72% of architects' private clients in Europe would be in this situation⁹⁶, and Secours Catholique indicates that in France, on average, 40% of the cost of the work is borne by households⁹⁷ - it would be difficult for transition plans to address

the property sector without considering their impact on the owners of the properties concerned. This impact is all the more crucial as it is also part of a time horizon issue, since the cost of energy renovation work is only amortised by the energy savings after an average of 30 years, whereas banks today offer loans with a time horizon closer to 15 years. As developed in part II.2, the different time horizons of banking institutions, in relation to long-term climate issues, are again obstacles to action.

While some banks have committed to various forms of green loans⁹⁸, none have set more global objectives for the greening of their property portfolio. During the interviews, several institutions mentioned that including an environmental criterion in the granting of credit could affect the most vulnerable part of their clientele. Climate objectives could lead to the refusal of loan applications from certain households wishing to acquire a poorly classified home. They could contribute to increasing the cost of credit, since the bank would include the risk incurred in the case of poorly classified buildings in the cost. In both cases, this could result in the less well-off households being excluded from access to housing credit.

To solve this problem, an innovative solution mentioned by the financial institutions during the interviews could take the form of a European loan system with a low interest rate and interest repayable only over a 30-year period, or when the building is sold or transferred by its owners. The loan would thus be linked to the property rather than to the owner household. 27,000 per building could renovate enough European buildings to meet the EU's climate targets⁹⁹. This average should be put into perspective because the amount of renovation work varies greatly from country to country in Europe, and is generally proportional to the value of the property. Nevertheless, this tool could prove to be very relevant to encourage the renovation of low-income homeowners' properties, while reducing the loan management costs for the issuing institution.

Other solutions are also possible: banks could, for example, set up loans that include the purchase of the house and its energy renovation at the same time, thus offering subsidised rates to households accepting this offer and allowing the work to be carried out before the household moves in. This proposal is also currently being considered by several financial institutions in interviews. These different solutions could be included in the commitments of the prudential transition plans, thus making it possible to respect the objectives set in terms of renovation.

92. Ministry of Ecological Transition and Solidarity and Ministry of Territorial Cohesion, "Plan rénovation énergétique des bâtiments".

93. The first quintile of the living standards distribution refers to the fifth of the population corresponding to households with the lowest standard of living.

94. A term for dwellings ranked in the two lowest categories of the country's Energy Performance Certificate scheme, ratings of F and G

95. Observatoire National de la Précarité Énergétique, "Tableau de bord de la précarité énergétique".

96. Renovate Europe, "Infographics - Renovate Europe".

97. Secours Catholique, "Permettre aux foyers modestes propriétaires de passer à l'énergie verte pour 1 € symbolique"

98. The Sustainable Finance Observatory, "Monitoring the Commitments of Financial Actors". The Observatory mentions that Crédit Mutuel, Groupe BPCE and Banque Postale have published commitments in favour of energy renovation.

99. Renovate Europe, "How to Unlock the Renovation Wave?"

Most of the solutions devised by experts in the real estate sector propose a combination of initiatives by private banks and public investment, as is the case for the type of European loan already mentioned. As the amounts needed for the transition in this sector are very large, the action of the banks provided for by the transition plans will have to be articulated with complementary measures from the States and the European Union. Finally, it can be noted that the measures put in place by the banks will also have to be accompanied by work concerning the concrete implementation of energy renovations, in order to ensure that owner-occupiers are sufficiently encouraged to accept that work be carried out in their dwellings, which in many cases requires owner-occupiers to find accommodation elsewhere during the time of the work.

Finally, banks will need to increase their expertise in this area in order to be able to guide their low-income clients, as in other sectors where this type of question may arise. In the case of energy renovation, this may mean providing support in obtaining the relevant public grants, and possibly acting as a trusted third party in dealing with the construction worker who will be entrusted with the renovation of the house. The prudential transition plans can help to support this increase in skills and, beyond that, ensure that the banks' commitments systematically take into account the social impacts of the actions undertaken in the energy renovation sector.

3. The ongoing transition of the automotive industry

Banking institutions are involved in the automotive sector at many stages of the industrial chain: they provide financing to suppliers, manufacturers, dealers, customers (which can be households, companies or local authorities), and garages. They are therefore involved with both supply and demand side stakeholders, and their activities within this sector will also be affected by the objectives of the prudential transition plans. The acceleration of their role in the financing of electric cars, which is already underway, will have to be accompanied by the assumption of responsibility for the stranded assets generated by the transition of the sector at different stages of the production and consumption chain.

Supporting the crucial role of banks in financing electric vehicles

Sales of electric vehicles have already been steadily increasing in recent years, without the Covid-19 epidemic affecting this trend. In 2020, the number of sales of this type of vehicle tripled. This steady increase is linked to the numerous regulations put in place at European and French level, such as the emission standards for new vehicles¹⁰⁰, the planned end of the sale of combustion engine vehicles¹⁰¹, the introduction of Low Emission Zones (ZFE)¹⁰² or the obligation for local authorities to acquire a certain proportion of low carbon vehicles in their fleet¹⁰³.

Banks have a key role to play in this dynamic, in which they

are already participating, particularly with the development of 'leasing' offers or rental with option to purchase, which are already numerous and could be further developed in the years to come. Particular attention should also be paid to the second-hand car market, which is less studied than the new car market even though it is two to three times larger in France¹⁰⁴. As the second-hand market is still almost non-existent for electric vehicles, as the renewal of the fleet is long, proposing interesting offers for new vehicles could also be a way of accelerating their arrival on the second-hand market, so that households with a smaller budget can also access them.

However, the additional effect of special offers from banks may not be significant given the already steady growth of this sector and the key role of public support in lowering the cost of electric vehicles. In this situation, it might be justified for transition plans to encourage not only the financing of such vehicles and the infrastructure needed for them, such as charging stations, but also to accompany the whole transition of the sector, including the issue of stranded assets and the transformation of the sector more generally.

Avoiding a disorderly transition in a sector that is changing on many levels

The transition of the automotive industry will have important impacts on the various players in the sector. For example, it is likely that European households and companies subject

100. Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO₂ emission performance standards for new passenger cars and light commercial vehicles and repealing Regulations (EC) No 443/2009 and (EU) No 510/2011 (Text with EEA relevance.)

101. Le Monde with AFP, "Voitures thermiques : le Parlement européen vote pour l'interdiction de leur vente neuves à partir de 2035".

102. Decree no. 2020-1138 of 16 September 2020 on the regular non-compliance with air quality standards giving rise to an obligation to set up a low-emission zone - Légifrance.

103. Decree No. 2021-1491 of 17 November 2021 on obligations to purchase or use low and very low emission road motor vehicles in application of Directive (EU) 2019/1161 of the European Parliament and of the Council - Légifrance.

104. The car market has been undergoing rapid change as a result of the Covid-19 health crisis over the past three years. The usual proportions between new and used markets seem to remain relatively stable. See : Bezat, "In 2021, for the second year in a row, new car sales have plateaued" and David, "Second-hand vehicles: the market begins to restructure".

to the various regulations mentioned above will choose to acquire a new electric vehicle more quickly than in the absence of regulation, thus accelerating a stranded asset dynamic with regard to old thermal vehicles, which they will then seek to dispose of, possibly by reselling them.

The second-hand market is already beginning to internalise the declining value of thermal vehicles following the introduction of regulations. In cities that have implemented an EPZ, diesel vehicles are selling for an average of 6% less than elsewhere in France, and 2% less in cities that have announced plans to implement an EPZ in the future¹⁰⁵. These observations can be qualified, however, as the effects of EPZs are not yet fully understood, particularly in cities such as Paris where the absence of weekend regulation complicates the analysis. However, these figures seem to confirm the likelihood of the formation of stranded assets with a depreciated value in the thermal car market in a context of transition. A potential rebound effect can be envisaged in the case of a massive repurchase of these vehicles by households not living in the vicinity of EPZs, but if the dynamic of regulation towards thermal vehicles is confirmed, the downward trend in the prices of these second-hand vehicles should be confirmed in the long term.

Other players in the automotive sector will also be affected: internal combustion engine production plants could be converted to the electric battery industry, with probable impacts on jobs in the sector. This could be the case for some factories, but many subcontractors, who specialise in the various components specific to internal combustion engines, will see their business disappear. Garages, a profession that comes into play after the production and distribution of vehicles, will also have to evolve their technical skills with the transition to electric cars.

Prudential transition plans can once again help avoid a disorderly transition of this sector, which will be transformed in many ways in the years to come. As part of the transition plans, banks could be encouraged to identify the role they could play in the management of thermal cars that have become stranded assets, and to accompany their counterparties whose businesses will be transformed. These plans can once again limit the social impacts of a disorderly transition by anticipating, for example, the closure of certain production lines and factories, and the consequences in terms of employment.

105. Hoarau and Civel, “Stranded to Be? Diesel Ban and Used Car Markets”.

CONCLUSION

At present, the voluntary commitments made by banks are not sufficient to address the climate and environmental challenges, both in their initial content and in their subsequent implementation. A banking transition plan, made mandatory by prudential regulations, would improve the credibility and ambition of these commitments. Integrating this obligation into the SREP would both have a maximum impact on the financing of the transition and promote an orderly and progressive implementation of the transition.

Depending on their characteristics, these transition plans may also enable banks to overcome the obstacles currently encountered in terms of structuring, human resources, data collection, trade-offs between transition financing and risk-based approaches, or even perceptions of transition issues by the players in the banking sector. As a result, they can encourage banks to provide transition financing.

The impact of the implementation of these plans can also be seen at a sectoral level. The three sectors studied here, fossil fuels, energy renovation and the automotive industry, will be greatly impacted by the implementation of such a regulation, notably through the issue of stranded assets. The implementation of these plans could help to avoid a disorderly transition in these sectors in order to limit the negative economic and social effects of the anticipated changes.

As a final point, it is important to emphasise that prudential regulation cannot be the only springboard for the transition of the banking sector and, beyond that, the European economy. It is always part of a broader economic policy mix, within which prudential transition plans are a building block for an orderly transition of the different sectors concerned.

ANNEX

Interviews

FEDERATIONS AND LOCAL ORGANISATIONS

- **Finance for Tomorrow**, Raphaël LEBEL

ACADEMICS AND THINK TANKS

- **Climate Policy Initiative (CPI)**, Nikole PINCO, Angela PASTOR
- **École Polytechnique**, Edouard CIVEL
- **National Research Institute for Agriculture**, Food and the Environment (INRAE), Quentin HOARAU
- **Nantes University**, Adrian POP
- **University of Paris Dauphine**, Anna CRETÉ
- **University of Paris 1 Panthéon-Sorbonne**, Jézabel COUPPEY-SOUBEYRAN
- **University of Edinburgh Business School**, Theodor COJOIANU
- **2° Investing Initiative (2DII)**, Riwan DRIOUICH, Anne SCHOENAUER

NGO

- **Reclaim Finance**, Lucie PINSON, Paul SCHREIBER

BANKING SECTOR

(interviews conducted partly in the context of a previous research note also on transition plans¹⁰⁶)

- **Crédit Agricole**, Aurélie BELLHASEN, Aurélie SMORTIEZ
- **European Investment Bank**, Tatiana BOSTEELS, Wouter MEINDERTSMA
- **Groupe BPCE**, Delphine BARTRE, Valérie DERAMBURE
- **BNP Paribas**, Marie-Laure AKA, Nathalie JAUBERT, Valérie ORMEZZANO, Catherine ROYERE
- **La Banque Postale**, Adrienne Horel-Pages, Skender SAHITI-MANZONI, Zineb TAZI, Nicholas Vantreesse

106. I4CE et al, "Integrating a bank transition plan obligation into Pillar 2".

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