



**Finance Watch**

Making finance serve society

# A silver bullet against green swans

Incorporating climate-related financial  
risk into bank and insurance prudential rules

A Finance Watch report



**November 2021**

*“...there are clear benefits to acting early: the short-term costs of the transition pale in comparison to the costs of unfettered climate change in the medium to long term...”*

**European Central Bank,**

Economy-wide climate stress test, September 2021

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## Executive Summary

**Climate-finance link:** The world's leading regulators, supervisors and researchers have long recognised the link between climate change and financial stability. Financial institutions contribute to accelerating climate change by financing greenhouse gas emitting activities. In turn, they themselves are impacted by the devastating consequences of climate-related events, as well as transition measures towards a more sustainable economy. Analyses by the Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA) confirm the urgent need to reduce greenhouse gas emissions and warn of the devastating consequences of delaying action. This means that, in order to avoid a climate-related financial crisis, actions to address the risks that climate change poses to the financial system need to be taken without undue delays.

Much policy debate swirls around possible prudential policy measures to effectively address climate-related financial risks and ensure the financial sector's resilience. Tackling the risk of "green swans" represents a particular challenge. "Green swans" are defined as disruptive climate-related events, which pose an existential threat to the economy and humanity, with the dual characteristic of being certain to occur and of commanding highly unpredictable consequences. As prudential regulation for banks and insurance companies is based on three sets – or "pillars" – of rules, each holds potential to address the problem. Given the current circumstances, capital measures applied under Pillar I provide the most coherent, impactful and feasible solution – "a silver bullet" against "green swans".

Yet, regulatory and supervisory efforts so far have been concentrated on the exploration of the scope and drivers of climate-related risks, as well as the possibilities to tackle them via "soft" prudential rules – disclosures, scenario analyses, internal risk management and governance (Pillars II and III). Significant methodological obstacles and data availability challenges remain to adequately measure and model climate-related risks. Therefore, none of the Pillar II and III measures have yet delivered tangible results to make financial institutions resilient in the wake of major climate upheavals.

**Disclosures and prices – Pillar III measures:** Climate risk disclosures provide for market transparency, play a major role in market price formation and are a basis for informed financing decisions. Harmonised and reliable disclosures are indispensable to direct financial flows towards sustainable projects and prevent greenwashing. However, the economic role of prices is to reflect average future expected value of assets, not their value in case of extreme events. Even accurate prices will not ensure resilience of financial institutions against climate-related events. Just disclosing risk-relevant information does not create incentives for financial market participants to change their behaviour as long as profits can be made from financing activities.

**Risk management, scenario analysis and governance – Pillar II measures:** Supervisors and the financial industry are undertaking substantial work to address climate-related financial risks via risk management practices, scenario analyses (so-called "stress tests"), business strategies and governance. Still, significant challenges remain to develop reliable, science-based and comparable risk identification and measurement methodologies for climate risk. Among these are data gaps and limitations of the models that simulate economic effects of climate change. Climate-related commitments – most prominently net-zero commitments – lack comparable and robust methodologies and need to be supported by clear milestones and a monitoring process. Given all this, none of the Pillar II measures have yet led to financial institutions building capital buffers for climate-related risks.

**Minimum capital requirements – Pillar I measures:** Current capital rules for financial institutions do not consider climate-related financial risks, whereas capital proves the most impactful tool to address risks, as it acts as a buffer to absorb losses in crisis situations. Proposals to address climate-related financial risks via prudential capital requirements provide a feasible approach and can be implemented without further delay. Capital requirements for financing activities, which are the major contributors to climate change such as fossil fuel production, should be increased in line with their climate risk profile. This solution follows a **precautionary approach** and overcomes the existing data and methodological challenges to measure climate risks precisely. The approach is also coherent with the risk-based nature of prudential regulation.

**Whilst each of the three prudential Pillars has its specific role to play, Pillar I is the most important to ensure the resilience of the financial sector and its ability to support the economy in the future. The financial crisis of 2008 remains a close-enough reminder. Focus on other “softer” prudential measures carries the risk of missing a critical time point for impactful action while concentrating on complacent exploration of options, which will neither be timely nor effective enough in tackling the financial stability risk induced by climate change.**

## 1. Introduction – The link between climate and financial institutions

**Leading regulators, supervisors and researchers from around the world have long recognised the financial stability implications of climate change and financial nature of climate-related risks.** The G7 Finance Ministers and Central Bank Governors Communiqué from 5 June 2021 confirmed this as well.<sup>1</sup> Financial stability is at risk, as climate change-related extreme events will disrupt our ecosystems, infrastructures, supply chains, impact human health and mortality. These events will, in turn, lead to massive and abrupt devaluations of assets and collateral held by financial institutions, unexpected price swings and market movements impacting the whole spectrum of financial risks across our financial system.

**The major cause of climate change is greenhouse gases emitted by burning fossil fuels. In accordance with estimates published in August 2021 by the Intergovernmental Panel on Climate Change (IPCC)<sup>2</sup>, the carbon budget of our planet will be exhausted within the next seven to 12 years.** If we do not stop net greenhouse gas emissions by then, global temperatures will reach above 1.5°C compared to pre-industrial levels, leading to irreversible and devastating climate events. Given the existing proven fossil fuel reserves, no new exploration is acceptable. The International Energy Agency (IEA) also concluded that there is no room for new fossil fuel exploration if emissions are to reach net zero by 2050, as the demand for fossil fuels will drop sharply: by 90%, 75% and 55% for coal, oil and gas respectively.<sup>3</sup> With this, financing of new fossil fuel exploration and production jeopardises a well-functioning economy in the future, including the financial sector. Fossil fuel financing should, at the very least, not be incentivised as is currently the case with the favourable treatment it receives under prudential regulation, whether in the European Union (EU) or in other jurisdictions.<sup>4</sup> With the transition to a low-carbon economy, assets related to existing fossil fuel production and exploration will also be largely abandoned, i.e. become stranded, and therefore lose a significant part of their value.

**These macroprudential (financial stability) and microprudential (asset depreciation/stranded assets) risks mount on the balance sheets of financial institutions such as banks and insurance companies.** Despite the Paris Agreement commitments, the world's 60 largest banks have provided \$3.8 trillion to the coal, oil and gas industry since 2016, of which \$750 billion were provided in 2020 alone.<sup>5</sup> The largest US and European insurers have invested close to \$600 billion in fossil fuels, and the international insurance coverage underwritten for oil and gas was estimated to have total premiums of \$17.3 billion in 2018.<sup>6</sup> By providing finance and facilitating fossil fuel production, financial institutions are not only exposed to climate-related financial risks (CRFR), but they also help accelerate climate change and are caught in the so-called "climate-finance doom loop".<sup>7</sup>

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1 Specifically, the Communiqué stated: "We recognise that climate change poses increasing physical and transition risks to regulated financial institutions and to financial stability, and that these risks have distinct characteristics we need to take into account".

2 IPCC, [Sixth Assessment Report](#). The Carbon Tracker Initiative further develops a notion of carbon budgets.

3 International Energy Agency (IEA), [Net Zero by 2050, A Roadmap for the Global Energy Sector](#), Flagship Report – May 2021; IEA, [World Energy Outlook 2021](#), October 2021.

4 Refer to section 3.3 for explanation.

5 See the data collected by [Rainforest Action Network](#).

6 See [Insure Our Future campaign website](#).

7 Finance Watch: "[Breaking the climate finance doom loop](#)", June 2020; Finance Watch, "[Insuring the Uninsurable](#)", July 2021.



**Measures at all levels are required to tackle climate change, whereby each of the policy domains has to deal with the issues under its remit and in the scope of its objectives.**

Policymakers, regulators and experts broadly agree that prudential policy has its role to play in combating climate change by ensuring the associated risks are identified and taken into account by financial institutions. However, the views on the most appropriate prudential measures are widely divergent.

Different prudential solutions to incorporate CRFR into the existing prudential frameworks are presented in the sections that follow. All of the solutions are part of the debate among policy-makers, supervisors and experts. The paper discusses the potential of each of the options to address the problem. It concludes on the most appropriate – coherent, impactful and feasible – solution in view of the specific features of CRFR and urgency of the problem.

## 2. Green swans – Specifics of climate-related financial risks

Climate-related financial risks have specific features, which pose significant challenges when it comes to deploying existing prudential tools and approaches to tackle them.<sup>8</sup> Specifically:

- **Disruption risk:** Climate-related events are defined as “green swans” and have specific features, which makes them impossible to predict and model. In particular, green swans are characterised by: i) certainty of their occurrence despite highly uncertain impacts and the impossibility to determine the exact timing of their materialisation; ii) wide-ranging and existential impacts on the economy and the financial system; iii) a high degree of complexity, including cascade effects and chain reactions in the environment, economy and society.
- **Probabilities of climate-related events not reflected in past data:** Traditional risk modelling based on historical data is not possible as we are dealing with a forward-looking phenomenon, for which no past data can be used reliably to extrapolate the future. By definition, when the data eventually arrives, it will be too late to avert a global climate change-induced financial crisis.
- **Growing risk with prolonged inaction:** The magnitude and probability of climate change materialisation are increasing as long as no tangible actions are taken to reduce greenhouse gas emissions. Once global temperatures have exceeded their pre-industrial level by 2°C, the consequences on human society and the global economy will be irreversible and largely unpredictable.<sup>9</sup>
- **The time horizon of climate-related financial risks materialisation** can be significantly longer than the horizon of the current business forecasting, planning and risk management frameworks. This poses additional challenges for financial institutions to appropriately incorporate CRFR into their management practices.<sup>10</sup>
- **Environmental stability, including climate, is by nature a public good**, which comes at no cost to private agents. Coupled with the long materialisation horizons of

8 BIS, BdF – P. Bolton, M. Despres, L.A. Pereira da Silva, F. Samama, R. Svartzman, “[The green swan: Central banking and financial stability in the age of climate change](#)”, January 2020; NGFS First Comprehensive Report. [A Call for Action - Climate Change as a Source of Financial Risk](#), April 2019.

9 Climate scientists have introduced a notion of the tipping points in the climate developments, which represent thresholds in temperatures rise, which cannot be reverted and which can lead to large changes in the state of the system.

10 Mark Carney “[Breaking the tragedy of the horizon – climate change and financial stability](#)” speech, September 2015.

climate-related financial risks, this means that businesses and financial institutions do not have incentives to consider the implications of their activities for the environment/climate. Looking after public good is the mission of governments/regulators, not private agents.

### 3. The 'Three Pillars' – Prudential tools to incorporate climate-related financial risks

**The role of prudential regulation is to provide for the resilience of the financial system and protect against financial shocks, when financial institutions' problems spill over into the real economy and the burden of losses is shifted to taxpayers.** Regulation is risk-based, i.e. it includes the rules for financial institutions to identify, assess, manage and disclose the risks of their business activities and maintain sufficient capital to absorb losses. Prudential regulation for banks and insurance companies is based on three sets – so-called "Pillars" – of rules, each of which has its specific function in ensuring that financial institutions remain solvent.<sup>11</sup>

Given the financial nature of climate-related risks, we look below at different ways to manage these risks through prudential tools. **Is there a "silver bullet" against "green swans"? Which prudential rules are the most appropriate to deal with CRFR?**

#### 3.1 Pillar III – Market discipline and disclosures

##### The role of Pillar III

Pillar III comprises a set of mandatory disclosure requirements and standards to provide for market transparency. Via disclosures, market players such as investors and financial service providers receive relevant information to make informed financing, investment and trading decisions. Transparency also has an objective that market prices of assets can incorporate relevant information on the risks of such assets.

**Disclosure of sustainability-related information is probably the most widely discussed prudential measure to incorporate CRFR into financing and investment decisions.**

Proponents of prioritising disclosures as a means to manage CRFR argue that once there is sufficient reliable and comparable data on these risks, markets will fully price them in and financial institutions will incorporate them into their risk management. Disclosures also help channel financing towards more sustainable projects. Therefore, regulators and supervisors should concentrate on convergence towards a common and consistent set of global disclosure standards.

Numerous sustainable finance initiatives have embraced this logic. The most prominent of such initiatives is the Task Force on Climate-related Financial Disclosure (TCFD) of the Financial Stability Board (FSB). Yet, TCFD disclosure standards are grounded in a single materiality logic where only the impacts of climate change on businesses (outside-in) are considered. The EU sustainability

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11 The EU bank prudential rules are based on the international banking regulations (known as the Basel accord), defined by the Basel Committee on Bank Supervision (BCBS). The EU regulations implementing the Basel rules are the Capital Requirements Directive and Regulation (CRR/CRD). The EU insurance prudential rules are set by the Solvency II Directive (2009/138/EC) and the Commission's Delegated Regulation (EU)2015/35.



disclosure standards<sup>12</sup> follow a more comprehensive double materiality logic<sup>13</sup> – as they require the disclosure of the impacts that businesses exert on the environment through their activities (inside-out), i.e. in the case of financial institutions through their financing activities. Despite the significant efforts undertaken globally, a report by the Network for Greening the Financial System (NGFS), published in May 2021, finds that “climate-related disclosures by financial and non-financial companies are still limited, fragmented and inconsistent across economic sectors”.<sup>14</sup> In November 2020, the European Central Bank (ECB) concluded that only 3% of euro-area banks are disclosing climate information that would fully match its recommendations set out in the “ECB Guide on climate-related and environmental risks”.<sup>15</sup>

Having said the above, **even the most complete, comparable and reliable data on CRFR will not guarantee that financial institutions adequately manage these risks and remain solvent in the event that risks materialise.** The explanation lies in the nature of Pillar III requirements, the purpose of which is to provide transparency as a **basis** for sound risk management practices, and **not a substitute** for these. Arguments against a few popular fallacies about market prices are presented below.

- **Full pricing of CRFR fallacy:** The specific features of climate-related risks, which were highlighted in Section 2 above, make it very unlikely that these risks can be fully and accurately reflected in market prices. Scientific evidence suggests that even in the sectors where physical climate risks have been long studied, equity prices still do not adjust to incorporate the risk.<sup>16</sup>
- **Prices as a panacea fallacy:** Adequate pricing does not ensure risks are managed. Correctly-priced risk only means that the value of an asset reflects its weighted expected value, i.e. the average of possible future values weighted by their respective probabilities. But the goal of prudential rules is not only to ensure financial institutions can survive expected events. Prudential rules should guarantee that the financial system can also withstand extreme but still plausible events – so-called tail events.<sup>17</sup>
- **“Green” finance fallacy:** Proponents of transparency measures emphasise the importance of disclosures to channel more financing to sustainable projects and companies. However, stimulating sustainable investment will not be sufficient as such to mitigate climate change. Decarbonisation of the global economy is needed, i.e. effective reduction of greenhouse gas-emitting activities, which will not be achieved by merely disclosing information either on sustainable or on harmful activities as long as the financial incentives to invest in harmful activities remain strong.

**Conclusions on Pillar III measures:** Transparency measures play an important role in market price formation and provide a basis for informed investment/lending/underwriting decisions. Harmonised and reliable disclosures are a condition for directing financial flows to sustainable projects and for preventing of greenwashing, but this condition does not suffice by itself. Transparency is also a prerequisite, albeit not sufficient by itself, to correct market inefficiencies and

12 See the EBA [webpage on the current Pillar III](#) disclosure requirements and specific [iconographic](#) on the ESG disclosures for financial institutions.

13 See the European Commission’s [webpage](#) for the overview of the European Sustainable Finance Agenda.

14 NGFS, [Progress report on bridging data gaps](#), May 2021.

15 [ECB report on institutions’ climate-related and environmental risk disclosures](#), November 2020; [ECB Guide on climate-related and environmental risks](#), May 2020.

16 ECB “[Climate-related risk and financial stability – Financial markets and climate risks](#)”, July 2021, p. 36-37.

17 Center for American Progress, [Addressing climate-related financial risk through bank capital requirements](#), May 2021.

ensure market prices incorporate available information. This can contribute to inform about the build-up of risks and vulnerabilities in the financial system, which inevitably leads to bubbles followed by financial crises and economic downturns. However, disclosing risk-relevant information will not create incentives for financial institutions to change their behaviour and will not therefore ensure resilience of the global financial sector against climate-related events. For this, further risk management tools need to be deployed, the discussion on which follows below.

### 3.2 Pillar II – Risk management and supervisory review

#### The role of Pillar II

Under Pillar II, banks and insurance companies are obliged to establish risk management techniques and assess adequacy of their capital, to cover all the risks they can potentially face in the course of their business, which includes solvency.<sup>18</sup> Supervisory authorities then conduct their review and assess institutions' risk profiles from four different angles: **(i) business model, (ii) governance and risk management, (iii) capital and (iv) liquidity.**<sup>19</sup> Based on this assessment, institutions are required to maintain additional capital (Pillar II) for those risks, which are not covered by minimum regulatory capital requirements under Pillar I.<sup>20</sup>

The methods to identify material risks and ensure sufficient capital is available to cover those risks in excess of Pillar I capital are largely at the discretion of financial institutions, whereas supervisors provide standards and guidance. Stress tests and scenario analyses conducted internally by financial institutions and by supervisors are also part of Pillar II prudential measures. Consideration of climate-related risks has been added to the scope of these exercises by many supervisors; however, the so-called "climate stress tests" cannot actually be considered stress tests, but rather exploratory scenario analyses, which do not lead to conclusions about capital adequacy, as explained further below.

#### Box 1: EBA mandates to incorporate CRFR under Pillar II<sup>21</sup>

This box provides an overview of the current mandates given to the European Banking Authority (EBA) to develop and implement **Pillar II prudential measures for CRFR.**

Under **Article 98(8) of CRD 2**, the EBA was mandated to assess the potential inclusion of ESG risks in the supervisory review and evaluation process performed by competent authorities. To that end, the EBA's assessment must comprise, inter alia:

18 The process is known as the Internal Capital Adequacy Assessment Process (ICAAP) for banks and the Own Risk and Solvency Assessment (ORSA) for insurance companies. Based on the ICAAP/ORSA, financial institutions determine an internal value/amount, which is required to cover the expected and unexpected losses. This value is referred to as "economic capital" as opposed to the regulatory minimum capital required prescribed by the legislation, which is referred to as "regulatory capital". See [ECB Guide to the internal capital adequacy assessment process](#) (ICAAP Guide); [EIOPA Guidelines on own risk and solvency assessment](#).

19 See [EBA Guidelines](#) on the revised common procedures and methodologies for the supervisory review and evaluation process (SREP) and supervisory stress testing; [EIOPA Guidelines](#) on Supervisory Review Process.

20 For banks, capital demand resulting from the supervisory review consists of two parts. One is the Pillar 2 requirement (P2R), which covers risks underestimated or not covered by Pillar I. The other is the Pillar 2 guidance (P2G), which defines additional capital buffer to withstand stressed situations. P2R and P2G are determined by the supervisor based on the SREP results.

21 [EBA Action Plan on Sustainable Finance](#), December 2019.

- the development of a uniform definition of ESG risks including physical risks and transition risks;
- the development of criteria for understanding the impact of ESG risks on the financial stability of institutions in the short, medium and long terms;
- the arrangements, processes, mechanisms and strategies to be implemented by the institutions to identify, assess and manage these risks; and
- the analysis methods and tools to assess the impact of ESG risks on lending and the financial intermediation activities of institutions.

To execute the assessment, the EBA conducted a public consultation<sup>22</sup> and submitted the Report on management and supervision of ESG risks for credit institutions and investment firms to the Commission, the European Parliament and to the Council on 23 June 2021.<sup>23</sup> In the report, the EBA issued policy recommendations to EU legislators regarding the uniform inclusion of ESG risks in institutions' business strategies, governance and risk management, as well as in supervisory review and evaluation processes performed by competent authorities.

**Under Article 501c of CRR 2**, the EBA is mandated to assess if a dedicated prudential treatment of exposures related to assets or activities associated substantially with environmental and/or social objectives would be justified. The findings should be summarised in a report. The scope of this mandate is also quite comprehensive and it will require substantive data and quantitative analysis. The deadline for the report is **28 June 2023**, as set by the Renewed Sustainable Finance Strategy published on 6 July 2021 (original mandate ran until 2025).<sup>24</sup>

This section explores Pillar II measures already deployed or being explored by supervisors to address CRFR, and in particular those recommended in the EBA report on management and supervision of ESG risks. We assess the potential of these measures to ensure the resilience of financial institutions against CRFR.

**Financial institutions' risk management and capital assessment process.** Advocates of Pillar II prudential measures as a tool to address CRFR argue that financial institutions are best placed to assess and manage their risks, including CRFR. According to them, this can be achieved specifically via:<sup>25</sup>

- **Assessing CRFR at exposure/borrower level** when taking financing decisions, i.e. granting loans, deciding on investing in equity, bonds or other securities. Hereby exposures associated with higher CRFR would be treated less favourably, i.e. get lower internal risk rating and be subject to enhanced monitoring, receive less favourable pricing or be declined altogether in case of unacceptable risk.

22 EBA Discussion paper on management and supervision of ESG risks for credit institutions and investment firms, October 2020.

23 EBA [Report on management and supervision of ESG risks for credit institutions and investment firms](#), 23 June 2021.

24 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions, "[Strategy for Financing the Transition to a Sustainable Economy](#)", COM(2021)390, 6 July 2021.

25 The EBA refers to the approaches below as exposure, risk framework and alignment method correspondingly, cf. footnote 23.

- **Considering CRFR in the internal risk and capital/solvency assessment process.**<sup>26</sup> Financial institutions would need to assess their aggregate exposure to CRFR, which could result in additional internal capital being required to cover CRFR and/or higher capital requirements being imposed by the supervisor on an individual basis.
- **Aligning the institution's portfolio with the Paris Agreement, such as 2050 net-zero emissions (net-zero alignment).** In order to achieve this, financial institutions need to assess the current degree of alignment, define measures to achieve the full alignment and establish a corresponding monitoring process. In this sense, portfolio alignment is a measure of CRFR for the institutions themselves. As of now, numerous voluntary net-zero pledges have been made by various financial institutions.<sup>27</sup> These pledges are often used as an argument against imposition of further prudential rules to tackle CRFR.

**Whilst Pillar II measures are important as an integral part of prudential requirements, a number of significant obstacles and challenges makes them not capable of leading on their own to timely, effective and consistent outcomes when it comes to managing and mitigating CRFR in the financial system.** Several reasons concur to that situation:

- **No credible methodologies or tools have been developed yet to accurately identify and assess/measure CRFR.** The Basel Committee on Banking Supervision (BCBS) published in April 2021 two reports outlining numerous challenges and conceptual issues related to climate risk measurement and methodologies. The most notable of these include the specific features of CRFR (as was mentioned in Section 2 above), data gaps<sup>28</sup>, difficulties to translate climate-related events into financial impacts on institutions' portfolios (climate risk drivers and transmission channels).<sup>29</sup> Thus, one cannot expect that an individual financial institution will be able to come up with internal assessment approaches, which would be meaningful to address CRFR. Paradoxically, the EBA report on management and supervision of ESG risks, dated June 2021, confirms the issues identified by the BCBS and yet suggests that internal risk management tools should be used to manage CRFR in the financial system.<sup>30</sup>
- **None of the Pillar II measures have yet led to additional supervisory capital requirements** being imposed on financial institutions to provide for their resilience against CRFR. In 2020, most of the supervisors within the NGFS were "of the opinion that it is too early for imposing Pillar II capital requirements", among others due to above-mentioned challenges in quantifying CRFR.<sup>31</sup> The EBA report mentioned above comes to a similar conclusion, noting that only "in the medium-long term" supervisors will be able to assess if the banks' internal capital adequately covers CRFR.
- **By design, models and approaches used for Pillar II risk and capital adequacy assessment are largely at the discretion of each institution and not subject to the same level of supervisory scrutiny** as the models for regulatory minimum capital

<sup>26</sup> Starting from November 2020, financial institutions under direct supervision by the ECB have to comply with the ECB [Guide on climate-related and environmental risks](#): Supervisory expectations relating to risk management and disclosure.

<sup>27</sup> See [Net-Zero Banking Alliance](#), [Net-Zero Insurance Alliance](#), [Net-Zero Asset Owner Alliance](#), [Net-Zero Asset Managers Initiative](#).

<sup>28</sup> Also extensively investigated by NGFS, [Progress report on bridging data gaps](#), May 2021.

<sup>29</sup> BIS, [Climate-related financial risks – measurement methodologies](#); [Climate-related risk drivers and their transmission channels](#), April 2021.

<sup>30</sup> EBA [Report on management and supervision of ESG risks for credit institutions and investment firms](#), 23 June 2021, p. 62, 95-97.

<sup>31</sup> NGFS, "Guide for Supervisors Integrating climate-related and environmental risks into prudential supervision", Technical document, May 2020, p. 52.

requirements (Pillar I).<sup>32,33</sup> Given the challenges to measure CRFR, Pillar II approaches are likely to result in heterogeneous outcomes rather than provide for a consistent approach to manage CRFR across the financial system.

- **Net-zero alignment is also by far not a reliable tool to manage CRFR:** A lot of work is required to be done on data gaps, methodologies and metrics to ensure net-zero commitments are effective and credible. Different studies indicate that different existing methodologies are incomplete and incomparable, thus increasing the risk of greenwashing.<sup>34</sup> The present debate on net-zero alignment<sup>35</sup> highlights a need for guidance before alignment plans can be treated as a truly credible and science-based commitment.<sup>36</sup> And lastly, net-zero targets need to be supported by credible monitoring and enforcement mechanisms. The limits of the current voluntary commitments against the growing volumes of fossil fuel financing were highlighted in a number of reports.<sup>37</sup> Finally, and most importantly, CRFR arise from the exposures of financial institutions to assets threatened by climate change (outside-in financial materiality) whereas the very concept of net-zero alignment, beyond its many methodological limitations, deals with inside-out environmental materiality. In other words, even if “net-zero alignment” were a rigorous concept (it is not), it would, by construction, be meaningless to assess the resilience of specific financial institutions to climate change, and therefore more generally, financial stability. For example, planting trees will not hedge a specific financial institution from its stranded assets risk.

**Supervisory “stress tests”.** The world’s leading supervisors put a lot of value on climate “stress tests” as a tool to identify and manage CRFR across the financial system. Indeed, the results of such exercises offer valuable insights into the climate-risks of financial institutions and potential channels and effects of their materialisation. These insights help shape supervisors’ actions and also raise awareness among financial institutions to enhance their risk management practices and adapt business models. However, there are significant limitations to the so-called “stress tests”, some of which had been highlighted in Finance Watch’s report “Breaking the climate-finance doom loop”.<sup>38</sup> Despite the progress made on supervisory stress tests since then, certain important challenges remain essential:

- **The majority of “stress test” exercises have focused on transition risks and failed to address the physical risks** induced by climate change. Recent attempts to incorporate physical risks have encountered significant practical challenges to do so. Refer to Box 2 for an overview of the results of the “climate pilot exercise” by the French

32 Internal models used to determine regulatory minimum capital requirements (Pillar I) are subject to the requirements of the [ECB Guide to internal models](#), as well as corresponding supervisory approval process.

33 As per the ECB ICAAP Guide, which provides guidance on the internal capital adequacy assessment by banks, “[t]he ICAAP is, above all, an internal process, and it remains the responsibility of individual institutions to implement it in a proportionate and credible manner. Pursuant to Article 73 CRD, ICAAPs have to be proportionate to the nature, scale and complexity of the activities of the institution”.

34 ShareAction, [Paris-alignment methodologies for banks: reality or illusion?](#), April 2021; Portfolio Alignment Team (led by D.Blood, I.Levina), [Measuring portfolio alignment: Assessing the position of companies and portfolios on the path to Net Zero](#), Q4 2020.

35 C. Hodgson et al., [Banks’ green pledges under scrutiny](#), Financial Times, 2 November 2021.

36 I.E.Vernoit, K.Levick, [What role for public policy in developing a net-zero financial sector?](#), Responsible Investor, 12 May 2021.

37 See, for instance, AMF Climate and Sustainable Finance Commission, [Companies and carbon neutrality: initial conclusions and issues identified](#), October 2021; G. Giraud, C. Nicol, S. Benaiteau, M. Bonaventure, V. Chaaoub, M. Jégo, A. Tsanga, G. Mitteau, L. Philippot, A. Poidatz, P. Schreiber, [Fossil assets: the new subprimes? How funding the climate crisis can lead to a financial crisis](#), June 2021.

38 Finance Watch, [“Breaking the climate finance doom loop”](#), June 2020; Finance Watch, [“Insuring the Uninsurable”](#), July 2021.

supervisor ACPR (Autorité de Contrôle Prudentiel et de Résolution). The ECB economy-wide climate stress test, the results of which were published in September 2021, did incorporate physical risk factors, albeit only a limited amount of risk categories were included, whereas inclusion of further ones was left to future work.<sup>39</sup>

- **“Stress tests” ignore the disruption risk dimension**, which results from the unpredictable and non-linear nature of climate-related events, and from the interconnections among natural systems that can amplify climate impacts<sup>40</sup>, which together make modelling climate risks with any degree of precision impossible.<sup>41</sup>
- **“Stress tests” have not yet led to, and were not even intended to lead to, conclusions about the capital adequacy** of tested financial institutions.<sup>42</sup> These “stress tests” should be regarded as “pilot exercises” of an exploratory nature, as reflected in the name of the ACPR’s “climate pilot exercise” or the “biennial exploratory scenario” launched by the Bank of England.<sup>43</sup> So far, only the ECB has assumed the possibility of imposing qualitative or quantitative requirements on a case-by-case basis on the results of its supervisory review in 2021, albeit stating that a more comprehensive review will take place in 2022.<sup>44</sup>
- **Transmission channels between climate events and financial implications for the balance sheets/capital** of affected institutions require further exploration before these are fully understood. As the BCBS report from April 2021 highlighted, “Existing analysis does not generally translate changes in climate-related variables into changes in banks’ credit, market, liquidity or operational risk exposures or bank balance sheet losses. Instead, the focus is on how specific climate risk drivers can impact narrowly defined sectors of particular economies, individual markets, or top-down assessments of the macro economy as a whole”.<sup>45</sup> The report concludes that significant further research and empirical evidence are required. The EBA pilot exercise on identifying and mapping climate risks in the banks’ portfolios reached similar conclusions.<sup>46</sup>
- **The existing scenarios do not take into account the feedback loop, i.e. the impact which the financial sector itself has on transition and climate developments.** There can be scenarios where the financial system plays a hampering role in transition so that the resulting impacts of scenarios (risks) might be underestimated.<sup>47</sup>

The ECB has made progress to overcome some of those challenges in its EU-wide stress test exercise; however, the ECB also outlined that a significant amount of work is yet to be

39 S. Alogoskoufis, N. Dunz et al, [ECB economy-wide climate stress test: Methodology and results](#), ECB Occasional Paper Series, No 281, September 2021, p. 30 and p. 65.

40 BCBS, [Climate-related financial risks – measurement methodologies](#); April 2021, p. 16.

41 D. Spratt, I. Dunlop, [Degrees of risk: Can the banking system survive climate warming of 3°C?](#), Breakthrough - National Centre for Climate Restoration, August 2021, p. 8-17.

42 NGFS, [Scenarios in Action: A progress report on global supervisory and central bank climate scenario exercises](#), Technical document, October 2021, p. 19.

43 Bank of England, [Key elements of the 2021 Biennial Exploratory Scenario: Financial risks from climate change](#), 8 June 2021.

44 Frank Elderson, Vice-Chair of the Supervisory Board and Member of the Executive Board of the ECB, [“All the way to zero: guiding banks towards a carbon-neutral Europe”](#), speech at the conference on “The Role of Banks in Greening Our Economies” organised by the European Bank for Reconstruction and Development and Hrvatska narodna banka, 29 April 2021.

45 BCBS, [Climate-related risk drivers and their transmission channels](#), April 2021, p. 2.

46 EBA, [Mapping climate risk: Main findings from the EU-wide pilot exercise](#), 21 May 2021.

47 S. Battiston, I. Monasterolo, K. Riahi, B. J. van Ruijven, [Accounting for finance is key for climate mitigation pathways](#), Science, 28 May 2021: Vol. 372, Issue 6545, pp. 918-920.



undertaken towards “a comprehensive climate stress-testing framework”.<sup>48</sup> The limitations of climate scenario exercises were confirmed by the NGFS based on the experience of 30 central bank and supervisors across the world.<sup>49</sup>

**Governance and business strategies** are overarching components of the prudential toolkit in the context of Pillar II. By embedding CRFR and wider sustainability risk considerations into corporate governance and business strategies of financial institutions, prudential rules can help account for the public good nature of climate/environment, overcome short-termism in the management of risks and align commercial goals with objectives of environment preservation. In fact, in order to implement the risk management tools discussed above, financial institutions need to start by defining corresponding business strategies and establishing appropriate governance arrangements such as managing bodies, internal controls and remuneration systems, which support the objectives. Thus, **business strategies and governance should be considered in conjunction with other prudential measures and not as stand-alone tools to manage CRFR**. This is important to remember when discussing solutions to tackle CRFR in the financial system.

### Box 2: ACPR 2020 Climate Pilot Exercise – Main results and limitations

**In May 2021, the ACPR published the results of its climate pilot exercise conducted from July 2020 to April 2021.** The exercise was declared “unprecedented”, yet it “revealed an overall “moderate” exposure of French banks and insurers to climate risks”. As a contradiction to this overall conclusion, the ACPR highlighted that the vulnerabilities associated with climate risk are not negligible and that financial institutions must take steps to integrate CRFR into their financial risk assessment process. The French control and resolution authority also pointed out the exercise limitations and methodological difficulties in view of the uncertainties of climate events. Overall, the exercise demonstrated that climate scenario analyses as a prudential tool require a lot of work before these can be reliably deployed to manage CRFR.

The declared ambitious elements of the exercise included the 30-year time horizon of assessment, sector-specific scenarios, “innovative” dynamic balance sheet hypothesis<sup>50</sup> and coverage of both transition and physical risks. **However, a closer look at the exercise design and results reveals its limitations:**

- Banks’ existing models are not adapted to make long-term projections so that the results of different financial institutions end up not fully comparable; on the insurance side, tools and skills to make such long-term projects are not necessarily available either.

48 S. Alogoskoufis, N. Dunz et al, [ECB economy-wide climate stress test: Methodology and results](#), ECB Occasional Paper Series, No 281, September 2021, p. 64-67. Some of the most notable of advancements have been the following: i) analysis of banks’ credit and market portfolios at exposure level, thus accounting for firm-specific vulnerabilities to climate risk factors; ii) capturing key transmission channels of climate risks by means of employing models specifically developed for the exercise; iii) analysis of the interactions between physical and transmission risks. Yet, with reference to the identified limitations, the following avenues of future work have been outlined in the ECB report: i) modelling of the banks’ endogenous reactions and their feedback loop to real economy; ii) consideration of additional physical risk hazards; iii) inclusion of additional sets of bank portfolios such as retail portfolio, which could not be considered due to lack of sufficient data or of sufficient granularity; iv) modelling contagion dynamics in the financing sector that could amplify the impact of climate risks.

49 NGFS, [Scenarios in Action](#): A progress report on global supervisory and central bank climate scenario exercises, Technical document, October 2021.

50 The dynamic balance sheet hypothesis assumes that financial institutions can adjust the composition of their portfolios with the time in response to the materialisation of climate-related risks, i.e. banks can reduce their lending in the sectors most affected by climate change and insurers can stop insuring certain customers and activities.

- Only two out of nine participating banking groups were able to make specific work on physical risks of climate change. Significant data and methodological challenges, such as identification of sectors sensitive to physical risks, availability of data on physical location of borrowers and their value chain, remain in this area. Similarly, insurers found it difficult to use climate event data “to derive the impacts of an increase in the claims on their portfolios, due to the incompatibility of the data with internal models and assumptions”.
- The exercise did not consider important second-round effects of risk materialisation such as cross-sector spillovers, supply chain disruptions, which did not allow to reflect the feedback loop to financial institutions. Thus financial institutions did not significantly apply risk-reduction strategies.
- The so-called dynamic balance sheet assumption (i.e. the assumption that individual institutions will be able to adjust their balance sheets when risks materialise and, by this, avoid the effects of climate-related events for themselves) misses the systemic holistic view and the implications of the materialisation of CRFR at macro level. Most importantly, it neglects that when financial institutions stop financing and insuring society, i.e. adjust their balance sheets, the economy collapses, which in turn destabilises the financial system, i.e. causes disruption risk.
- Given the above limitations, “the exercise failed to show the potential emergence of an insurability risk”. Insurers assumed that they will be able to compensate increased frequency and severity of insurance events by an increase of premiums and that their customers would be able to absorb this increase.
- Unlike other similar supervisory exercises conducted by the EBA, which include scenarios of economic downturn with GDP contraction, the ACPR exercise did not assume any GDP decline; climate transition scenarios assumed slower growth only.

Finally, and most importantly in the view of its prudential role, the ACPR declared that “the objective here was not to ensure that financial institutions are sufficiently capitalised in the event of an extreme but plausible shock, but rather to make those institutions aware of the risks induced by climate change and their transmission channels”.

**Still, despite the discussed limitations, the ACPR exercise provided some insights, which show that climate change and economic transition will have a significant impact on the balance sheets of financial institutions** so that prudential action is required now rather than waiting for long years to refine the methodologies and gather data:

- Probabilities of default across different sectors of banks' exposure are almost always lower for the orderly transition scenario rather than sudden transition.
- Transition risk results in substantial increase in the cost-of-risk for banks; in particular, for exposures to sensitive sectors (such as mining, refining, oil, agriculture etc.) where the cost of risk rises threefold.
- Increased frequency and intensity of natural disasters led to the increase of premiums on the property-damage activities of insurers of 130 to 200%, which was assumed to be fully passed on to customers.



**Conclusion on Pillar II measures.** Pillar II prudential tools are intended to ensure that financial institutions develop and use risk management techniques in monitoring and managing the risks of their business. A substantial amount of work is currently undertaken by supervisors and the financial industry in regard to those tools to address the risks that climate change poses to the financial system. However, **significant challenges remain to develop reliable, science-based, comparable risk identification and measurement methodologies.** Climate-related commitments need to be supported by clear milestones and a monitoring process. None of the measures have yielded tangible results yet.

**This conclusion is supported by the results of the ECB assessment of banks' current progress on Pillar II measures,** whereby the ECB has concluded that banks' current practices fall short of supervisory expectations. Banks were found "not yet in a position to identify, manage and monitor [climate and environmental] risks at counterparty level". Also the banks' plans to set a framework for CRFR management do not yet ensure that most banks can properly manage these risks.<sup>51</sup> Even the study by BlackRock Financial Markets Advisory on "Development of tools and mechanisms for the integration of ESG factors into the EU banking prudential framework and into banks' business strategies and investment policies", which sparked a lot of controversy among civil society organisations<sup>52</sup>, concluded that "integration of ESG within banks' risk management and investment practices, as well as prudential supervision, is at an early stage" and "needs to be accelerated".<sup>53</sup>

Meanwhile, CRFR grow when inaction lingers, namely as more damage is inflicted on the environment and climate. CRFR remain completely unaccounted for by capital requirements (Pillar I) despite the fact that they constitute the main building block to ensure the resilience of financial institutions. Further work on Pillar II measures is important, as some of the limitations of Pillar II instruments that are described above might be resolved in the future. But even then, the limitations related to the specific characteristics of "green swan" events will remain, leaving financial institutions exposed.

### 3.3 Pillar I – Regulatory minimum capital requirements

#### The role of Pillar I

Pillar I of prudential rules defines mandatory regulatory minimum capital requirements. Regulatory capital is comprised of instruments on the balance sheet of financial institutions, such as equity, able to absorb unexpected losses so that financial institutions can remain solvent in a crisis.<sup>54</sup> As a main principle, the amount of capital required depends on the risk attached to the assets held by a bank/insurance company.

51 ECB, [The clock is ticking for banks to manage climate and environmental risks](#), Supervision Newsletter, 18 August 2021.

52 Finance Watch, Finance Watch denounces the incoherence of the selection of BlackRock by the European Commission to integrate ESG factors into EU banking frameworks, [Press release](#), 9 April 2020.

53 BlackRock Financial Markets Advisory, Development of tools and mechanisms for the integration of ESG factors into the EU banking prudential framework and into banks' business strategies and investment policies, [Final Study](#), May 2021 (published 27 August 2021); Executive Summary, p. 3, 7.

54 Financial instruments, which are recognised as "capital" or "own funds", are defined in [CRR Part II](#) (banks) and [Solvency II Directive Title I Section VI Section 3](#) (insurance companies). Having a minimum capital requirement in place does not mean that capital is held by financial institutions as a reserve – it just means that financial institutions must have a minimum amount of such instruments, which will be held liable in the order of first priority in case of losses. Capital is used by financial institutions to provide financing in the form of loans, investments etc.

Within the EU Capital Requirements Regulation (CRR) for banks, the minimum capital requirement – “own fund requirement” – is expressed as a percentage of risk-weighted assets (RWA). The RWA concept means that safer assets are attributed a lower allocation of capital, whilst riskier assets are given a higher risk weight. In other words, the riskier the assets, the more capital the bank has to fund itself with in order to be able to absorb losses if need be. The minimum amount of capital required from banks is 8% of their RWA.

In the EU Solvency II Delegated Regulation, an analogous principle is applied to determine capital requirements on investments made by insurance companies, albeit these requirements are defined in terms of risk-dependent capital charges for equity and bond investments.

**An important difference between Pillar I and Pillar II requirements is that Pillar I does not allow for discretion, i.e. minimum requirements apply equally to all institutions.** The only cases when some supervisory discretion can be applied are the capital buffers for banks, which come on top of Pillar I own funds requirements – capital conservation buffer, countercyclical buffer, systemic buffer and dedicated systemic buffers for global systemically important institutions (G-SIIs) and other systemically important institutions (O-SIIs).

**As of now, the lack of recognition of CRFR in Pillar I prudential regulation leaves financial institutions exposed. Thus, fossil fuel financing remains artificially cheap, as its cost does not include a price for CRFR.** This effectively shifts the burden of the future climate-related financial crisis to taxpayers as the financial institutions concerned are mostly, if not exclusively, too-big-to-fail institutions. Lack of prudential action so far is grounded in a paradox: policy-makers recognise the near-impossibility of modelling climate-related risks but say that they need such modelling to be done before intervening.

**Application of Pillar I capital requirements to cover CRFR would deliver the most tangible outcomes to ensure resilience of the financial sector to CRFR.** Recognising this, Finance Watch developed proposals that allow to incorporate CRFR into the current prudential frameworks for banks and insurance companies. The proposals can be implemented without waiting years for quantitative methodologies to be developed, knowing that these might never be available or be available too late to prevent the coming climate crisis from degenerating into a global financial crisis.<sup>55</sup> The proposals seek to increase minimum capital requirements for those types of exposures, which are clearly identifiable as the root cause of CO2 emissions – the main driver of climate change – and thus represent a high level of CRFR. The scope of such exposures covers fossil fuel exploration, expansion, exploitation and production activities and fossil fuel power plants.<sup>56</sup>

**The proposals differentiate between production and exploitation of existing fossil fuel resources on the one hand, and the exploration, expansion, production and exploitation of new resources on the other hand.** Such differentiation is based on the risk profile of the respective projects:<sup>57</sup>

55 Finance Watch, [Breaking the climate-finance doom loop: Finance Watch amendments proposal to the Capital Requirements Regulation and Solvency II](#), May 2021.

56 Fossil fuels are defined as coal, oil, natural gas, bituminous sand and shale gas.

57 Finance Watch, [“Breaking the climate finance doom loop”](#), June 2020; [“Insuring the Uninsurable”](#), July 2021, p. 24-27.

- *Assets associated with exploration, expansion and exploitation of new fossil fuel reserves will pose a particularly high financial stability risk and will, with near certainty, become stranded and lose 100% of their value.* This is supported by the conclusions of the IPCC and IEA that there is no room for new fossil fuel exploration in the net-zero 2050 scenario.<sup>58</sup> Therefore, prudential regulation should require that such exposures be entirely equity funded, i.e. impose a risk weight of 1250% for banks, or capital charge of 100% for insurance companies. Effectively, this means that every euro invested into new fossil fuel exploration will have to be backed by exactly the same amount of capital to cover the future losses on such operations.
- *Assets associated with exploitation of existing fossil reserves are at a high risk of becoming stranded and increasingly depreciating.* Therefore, such assets should be treated as the items currently associated with particularly high risk in prudential regulation and receive a credit risk weight of 150% as per Article 128 CRR (banks) or the highest capital charge applicable to equity and bond investments under the Solvency II framework (insurance), i.e. for equities a capital charge of 49%, and for bonds, the application of the highest (riskiest) credit quality step of 5/6 when determining the capital charge. Investments in fossil fuel assets should also be ineligible for the matching adjustment for insurance companies.
- *For banks using internal models to determine capital requirements (IRB approach), the above risk weights should represent the effective floor when determining the capital requirements for fossil fuel exposures.*

**The proposals apply the precautionary principle in line with the existing mandate of EU policymakers** as per Article 191 of the Treaty on Functioning of the European Union (TFEU) to combat climate change and take preventive action in case of risk. They represent **an impactful and feasible solution to protect the financial system against CRFR for a number of reasons:**

- **They treat CRFR qualitatively** and are based on the existing scientific evidence on climate scenarios, as referred to in Section 1.
- **They are coherent with the risk-based nature of prudential regulation**, as they use existing prudential tools and follow a risk-based approach to reflect CRFR in capital requirements. This is of major importance in the context of the **following misleading arguments**, which are often used in the public debate, in particular as justification for inaction:
  - Increasing capital requirements on fossil fuels would represent a “penalising factor”: Given that financial institutions are not yet required to maintain capital to cover CRFR, it is clearly more appropriate to speak about the removal of an implicit “subsidy”, that we could also call a “fossil fuel supporting factor”.
  - Higher capital requirements would misuse prudential regulation for economic policy measures: Finance Watch emphasises a purely risk-based approach to reflect the risk of assets that threaten the whole financial system. Conversely, the often debated “green supporting factor” for sustainable activities is unjustified, as no evidence exists that such activities prove less risky. Lowering capital requirements for sustainable assets and activities could create a financial bubble by attracting too much capital at an artificially low price.

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58 [Net Zero by 2050, A Roadmap for the Global Energy Sector](#), Flagship Report – May 2021.

- **The proposed requirements apply consistently to all financial institutions** and thus prevent undue discretion in assessing CRFR risks by individual banks/insurers, which is the case for Pillar II measures, and which opens potential to avoid higher capital requirements. Allowing for discretion is also of concern given the discussed data and methodological challenges in assessing CRFR.

Policymakers, supervisors and experts increasingly recognise that the regulatory capital requirements are the right tool to address CRFR in the financial system.<sup>59</sup> A report released in May 2021 by US independent policy institute Center for American Progress also presents a well-grounded case for using prudential capital requirements to tackle CRFR.<sup>60</sup>

**In addition to Finance Watch's proposal on risk weights/capital charges, dedicated systemic risk buffers as a further Pillar I tool can also be used** to capture the systemic risk component of climate change accelerating financing activities.<sup>61,62</sup> In their current design under EU legislation, systemic risk buffers cannot be considered as a sufficiently impactful solution, as the size of these buffers for individual institutions is determined at the discretion of the national supervisor and can be revised regularly. Historically, supervisory practices have not been fully convergent among supervisors with some of the national authorities not applying systemic risk buffers at all.<sup>63</sup> Application of such buffers can be explored, however, as an additional tool to the discussed exposure-level requirements, provided buffer requirements are appropriately set.<sup>64</sup>

Arguments have been made against using Pillar I prudential tools to manage CRFR. However, none of them is well grounded to justify inaction by regulators:

- **Argument: "Increase in capital requirements will undermine the ability of the financial sector to lend money to the economy, thus jeopardising recovery and transition".**

**Counter-argument:** this argument is flawed as it overlooks the fact that capital forms the core tool to ensure the resilience of financial institutions in case of a crisis and, thereby, their continuous ability to service the real economy. Safer, i.e. better capitalised, banks cannot hurt the economy.<sup>65</sup> If CRFR remain uncovered, the climate crisis will trigger a financial crisis and disrupt the supply of credit. As a consequence, taxpayers' money will have to be used to bail out failing banks, as it was the case in the financial crisis of 2008.<sup>66</sup> Moreover, the current lack of consideration of climate risk in prudential rules leads to a situation where financial flows are effectively attracted towards fossil fuel activities and away from either sustainable activities or activities transitioning towards sustainability.

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59 This Finance Watch proposal was recognised by a panel of 50 banks, NGOs, academics, regulators and investors from the United States, Canada, European Union and United Kingdom as the top-ranked policy proposal to tackle the link between climate change and financial instability. See [Financial Stability in a Planetary Emergency](#), Climate Safe Lending Network, April 2021.

60 G. Gelzinis, [Addressing Climate-Related Financial Risk Through Bank Capital Requirements](#), Center for American Progress, 11 May 2021.

61 Cf. 60; P.Monnin, [Systemic risk buffers – the missing piece in the prudential response to climate risks](#), Council on Economic Policies, June 2021.

62 NGFS, [Scenarios in Action: A progress report on global supervisory and central bank climate scenario exercises](#), Technical document, October 2021, p. 29.

63 ESRB [Systemic Risk Buffer \(SyRB\)](#) - Current SyRB rates and pending SyRB rates announced by designated authorities.

64 In 2022, the review of the EU macroprudential framework for banking will address appropriateness and sufficiency of the macroprudential rules to address financial stability risks arising from, among others, climate change.

65 Finance Watch, [How can safer banks hurt the EU economy?](#), December 2019.

66 G. Giraud, C. Nicol, S. Benaiteau, M. Bonaventure, V. Chaaoub, M. Jogo, A. Tsanga, G. Mitteau, L. Philippot, A. Poidatz, P. Schreiber, [Fossil assets: the new subprimes? How funding the climate crisis can lead to a financial crisis](#), June 2021.



- **Argument: “Increase in capital requirements will lead to a massive divestment of fossil fuel assets by banks and insurance companies, which will turn into a self-fulfilling prophecy about stranded assets”.**

**Counter-argument:** this can simply not happen for the financing of activities related to the existing fossil fuel reserves, as the proposed increase in capital requirements is not prohibitive in terms of cost of finance for the fossil fuel companies. This is supported by the fact that other activities already subject to the same capital requirements, such as venture capital firms, private equity and speculative immovable property still receive financing from banks and investment by insurance companies. Furthermore, the short-term profitability in the fossil fuel sector also suggests that the borrowers will be able to accommodate an increase in cost of finance.<sup>67</sup>

- **Argument: “Change in prudential capital rules for fossil fuel exposures can jeopardise economic and financial stability”.**

**Counter-argument:** this argument effectively asserts that under-pricing risk through ill-calibrated prudential rules would be a condition of financial stability. This defies the very purpose of prudential regulation and is obviously incoherent. The debate should focus instead on searching for sound solutions to ensure financial stability.

## 4. Conclusion

**Urgent action is needed now to tackle the climate-finance doom loop, whereby fossil fuel finance enables climate change and climate change threatens financial stability.**

Action by regulators and supervisors so far has failed to break this dynamic, in large part because of the difficulty of modelling the risks that climate change poses to financial stability. The efforts to date have focused on the Pillars II and III of prudential rules – internal risk management, governance, climate scenario analyses and disclosures, none of which have delivered tangible results to provide for the resilience of financial institutions in the wake of major climate-related upheavals. Climate-related financial risks remain completely unaccounted for within the prudential framework’s core element – regulatory capital requirements, which act as a buffer to absorb losses and are the most impactful tool to address CRFR. While regulators are waiting for better prudential solutions, they are effectively delaying transition and increasing future risks. This is hardly compatible with the fact that supervisors confirm that there are clear benefits of acting early to mitigate CRFR.

**Proposals by Finance Watch to address CRFR via Pillar I capital requirements provide a feasible approach and can be implemented without further delay.** The solution allows for overcoming existing challenges of climate-risk data gaps, availability of reliable and scientifically sound measurement and modelling methodologies. Moreover, regulatory capital requirements are indispensable to restore the internal coherence of prudential regulation, the aim of which is to reflect risks inherent in the financial institutions’ business.

Pillar I proposals are not meant to undermine the importance of Pillar II and III prudential measures, which have their specific role in the prudential framework. In its “Overview of Pillar 2 supervisory review practices and approaches”, the BCBS clearly highlights the importance of the three Pillars:<sup>68</sup>

<sup>67</sup> Data on profits of the six biggest oil and gas companies: Taxpayers for Common Sense, “Padding Big Oil’s Profits: Companies Bank Trillions, Taxpayers Get The Bill”, February 2020.

<sup>68</sup> BCBS, [Overview of Pillar 2 supervisory review practices and approaches](#), June 2019, p. 2.

*“When the Committee introduced the Basel II framework in 2004, a fundamental objective of the Committee’s work was to reinforce the minimum capital requirements of the first pillar with a robust implementation of the second pillar. This included efforts by banks to assess their capital adequacy and by supervisors to review such assessments. In addition, the disclosures provided under the third pillar of the framework would further ensure that market discipline is an effective complement to the other two pillars”.*

**Given the novelty of climate risks in the existing prudential framework, supervisory review is essential to generate an active dialogue between financial institutions and supervisors to establish credible and consistent approaches to manage these risks.** Ongoing work on all Pillars of prudential rules will help refine the approach to identify climate-related risks inherent to different types of economic activities, and raise the awareness amongst financial institutions to the acute threat they face. But this does not preclude the necessity and the urgency to reflect fossil fuel related risks in capital requirements, as Pillar I constitutes the founding block of prudential regulation.

A few concluding remarks are worth making to outline further areas of work on this topic:

- This paper concentrates on the EU prudential framework, but similar prudential rules should be implemented by other jurisdictions given the global dimension of climate change.<sup>69</sup>
- Efforts to incorporate CRFR into prudential rules can and should be further expanded to incorporate the impacts of CRFR via other financial risk types such as liquidity, operational and market risk.<sup>70</sup> Specifically, market risk can arise from a reduction in traded securities/ asset values as a result of price shocks caused by large climate events. From a liquidity risk perspective, climate risk can translate into i) a deterioration of market liquidity of the assets held by financial institutions, ii) a reduction of access to stable sources of funding in case of changed market conditions (e.g. when counterparties draw down deposits and credit lines). Operational risks will increasingly result from i) physical damage to financial institutions’ premises and communications, among others, inflicted by climatic upheavals, ii) legal and regulatory compliance costs, litigation and liability costs associated with business activities in areas associated with high environmental risks.<sup>71</sup>
- Prudential rules for other financial institutions – investment funds, pension funds and other non-banking financial institutions/ shadow banks – should be also reviewed in order to prevent risk shifting and build-up of risks on the balance sheets of those entities.

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69 Analogous legislative proposals on the Pillar I capital requirements have been debated in the House of Lords of the UK Parliament – refer to the [summary of the debate](#). Finance Watch also submitted its proposals in the [response to the to the discussion paper](#) “Navigating Uncertainty in Climate Change: Promoting Preparedness and Resilience to Climate-Related Risks” by the Office of the Superintendent of Financial Institutions (OSFI), April 2021, and in the [response](#) to the US Federal Insurance Office [Information Request on the Insurance Sector and Climate-Related Financial Risks](#), November 2021.

70 BCBS, [Climate-related risk drivers and their transmission channels](#), April 2021.

71 D. Brower, A. Raval, [Climate activists hail breakthrough victories over Exxon and Shell](#), Financial Times, 26 May 2021; L. Hook, [Oil majors gear up for wave of climate change liability lawsuits](#), Financial Times, 9 June 2019.



## About Finance Watch

Finance Watch is an independently funded public interest association dedicated to making finance work for the good of society. Its mission is to strengthen the voice of society in the reform of financial regulation by conducting advocacy and presenting public interest arguments to lawmakers and the public. Finance Watch's members include consumer groups, housing associations, trade unions, NGOs, financial experts, academics and other civil society groups that collectively represent a large number of European citizens. Finance Watch's founding principles state that finance is essential for society in bringing capital to productive use in a transparent and sustainable manner, but that the legitimate pursuit of private interests by the financial industry should not be conducted to the detriment of society. For further information, see [www.finance-watch.org](http://www.finance-watch.org)

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