Climate Safe Lending Network

The Climate Safe Lending Network - a global network of banks and stakeholders - response to the Basel Committee on the supervision and management of climate-related financial risks

16 February 2022

"If regulators want banks to 'wind-down' climate risk, then they need to 'level-up' capital requirements"

With the consequences of climate change on the future viability of the global economy becoming clearer, the most significant threat to financial stability may be 'hiding in plain sight'. Central banks cannot afford to overlook using Plllar-1 capital measures to address the least climate-aligned financial exposures.

At present, the Basel Committee consultation, focusing on incremental changes to disclosure and supervisory guidance, provides a sensible but timid approach which is not commensurate with the level of systemic risk. Without reinforcement that addresses capital rules (the first 'pillar' of the Basel requirements) it offers an incomplete intervention - 'half a bridge' over the climate chasm. With smart design, there can be ways of mitigating the risks from the most misaligned financial flows which could otherwise seriously undermine stability. The focus of our response is, therefore, designed to supplement the framing provided by the consultation to provide a

more comprehensive regulatory toolkit commensurate to addressing the risks from climate change.

Introduction to our response

The Climate Safe Lending Network (CSLN) comprises bankers, regulators, civil society organisations and academics from around the world.

CSLN believes there is both a need for, and widespread support for, the Basel Committee on Banking Supervision (BCBS) to promote Pillar-1 capital measures to improve the management and supervision of climate related financial risks at banks.

Overlooking Pillar-1 measures and relying only on PIllar-2 or Pillar-3 measures would be a short-sighted approach that conflicts with evidence that (a) many of the PIllar-2 measures are already available to supervisors yet are not being used,[1] (b) PIllar-3 measures on disclosures and reporting are necessary but insufficient to drive the behavioural and policy changes needed to meet prudential goals on their own.[2]

This consultation response builds on the growing literature that supports special capital requirements on bank assets that finance fossil fuel activities[3] and reflects the insights gathered at a roundtable of bankers and other Climate Safe Lending Network members held in January 2022.

[1] http://priceofoil.org/2021/08/24/unused-tools-central-banks/
[2] https://hbr.org/2021/05/overselling-sustainability-reporting
[3] https://www.finance-watch.org/publication/breaking-the-climate-finance-doom-loop/; https://www.climatesafelending.org/s/6-Financial-Stability-Planetary-Emergency.pdf; https://www.i4ce.org/wp-core/wp-content/uploads/2021/09/I4CE-rapport_Indexing-capital-requirements-on-climate.pdf; https://greencentralbanking.com/2021/09/14/study-fossil-fuel-capital-requirements

Q1. Has the Committee appropriately captured the necessary requirements for the effective management of climate-related financial risks and the related supervision? Are there any aspects that the Committee could consider further or that would benefit from additional guidance from the Committee?

Diagnosis

The Committee has selected a number of interventions, some of which may be helpful, although none depart significantly from current practice which are self-evidently not proving to be effective in guiding banks to meet regulators' expectations. In direct response to the question, the **Committee's recommendations are collectively insufficient** to adequately address climate-related financial risks. In particular they have avoided consideration of the most effective, feasible and impactful approach to managing the build-up of climate risk - namely the inclusion of Pillar 1 capital measures as a way to improve banks' capital adequacy against climate-related losses. Such measures would correct the underpricing of both micro- and macro-prudential climate-related risks and prevent the build-up of assets which would either be stranded (causing financial stress in the economy) or cause loss and damage through more severe climate impact (also causing financial stress in the economy, potentially irreparably).

The analysis presented by the Committee appears to be based on a narrow interpretation of single materiality, ignoring the **macro-economic tail risks** embedded in the 'double materiality' aspects of climate change (and biodiversity loss). The continued contribution to the causes of global environmental risk from the banking sector - the flow of finance to the expansion and exploration of fossil fuels (which the IEA scenario NZE2050 shows to be incompatible with limiting global average atmospheric warming to 1.5-degrees) and deforestation - contributes to worsening climate change and undermines long-term financial stability.

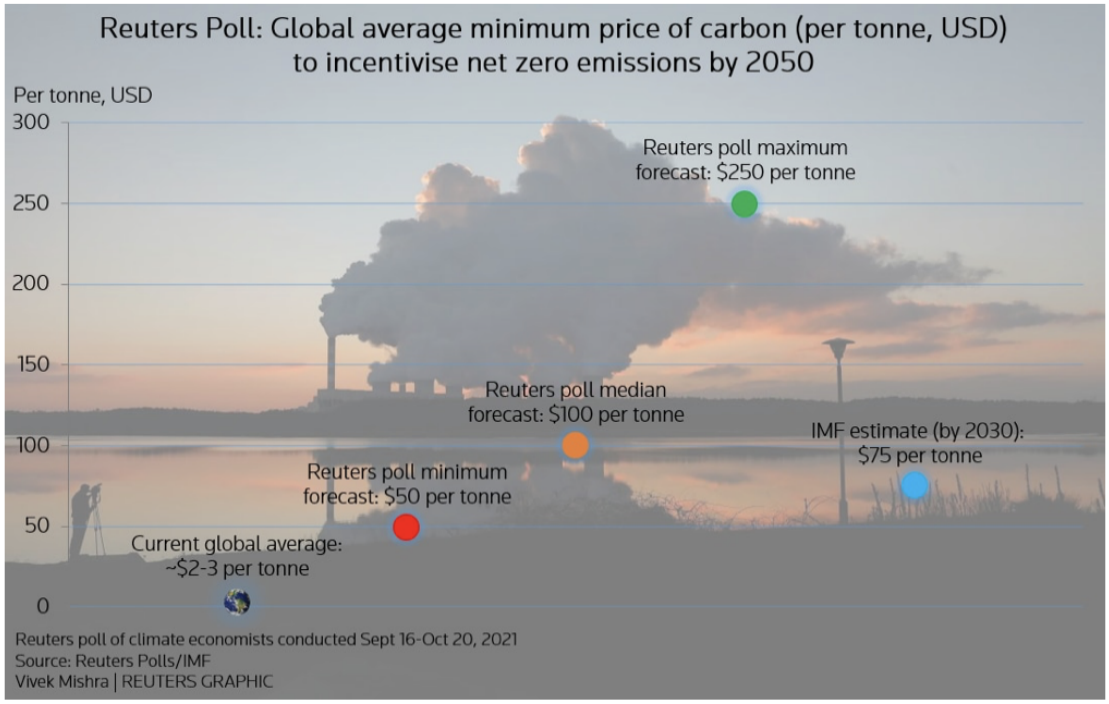
If there is a relatively rapid, orderly transition to a low/net zero carbon economy, there will be massive transition risk (for example, fossil fuel assets currently valued at many, many trillions of dollars will become worthless). If not, there will be massive physical risk (for example, many coastal population centres will become uninhabitable).

So the sum of physical and transition financial risks, arising now or in the future from climate change, is incalculable but enormous, and cannot be hedged or diversified away. Banks must be capitalised against this.

The estimates of loss and damage predicted by climate science are fundamentally different in nature from previous types of risk targeted by prudential regulation and extremely serious. They are likely to have non-linear secondary effects that will flow through the economy, undermining financial stability in ways which cannot be accurately allocated in advance but can now be predicted on a broader basis.

For example: current losses from climate-exacerbated wildfires in California alone were estimated to be $148.5bn in 2020, and flooding in Europe alone is estimated to cost $1tr per year by 2100 (https://www.nature.com/articles/s41558-018-0260-4).

The scientific estimates of the losses caused by climate change could be as much as **$3,000/ tCO2** (https://iopscience.iop.org/article/10.1088/1748-9326/ac1d0b). These latest insights contrast with the ineffectiveness of markets in pricing in climate risk with the imputed cost of carbon being paid today (around $2-3/tCO2 on average and the $50-250/tCO2 recommended by other market commentators (Reuters, 2021 - see below) and $75/tCO2 recommended by the IMF.



Reuters poll graphic on global minimum average carbon price

It is notable that the consultation does not mention or follow the spirit of **Core Principle BCP 16**, which requires capital adequacy to reflect a bank's market ***and macro-economic*** context. Given the consistency of global risks identified by sources, such as the Global Risk Report of the World Economic Forum, the macro-economic context must surely include climate change.

Whole sectors may have to be re-rated to reflect increasing climate risks in the future. Such risks, which are driven by rapid changes in global energy markets, technologies and climate policymaking, will eventually be priced into credit instruments for oil and gas companies in banks or public markets and other sectors. Bank regulators must ensure that banks are prudentially ready to weather potential disruption in these sectors.

The principles also miss the possibility that climate risks could accumulate in the banking sector in ways that could worsen the spread of distress between institutions, causing a disruption risk similar to the global financial crisis of 2008.

If acting only on the narrow micro-prudential elements of climate risk, central banks would be making a more fundamental choice: to reprice capital on the basis of vulnerability. In contrast, the BCBS proposal avoids measures that address causality, thereby failing to disincentivize continued flows of finance to assets causing climate damage and undermining financial stability. This is a clear, yet tacit, instance of market intervention by omission (not correcting a known source of systemic risk) in contradiction to most central banks' stated principle of market neutrality. A more balanced choice would be to ensure that capital requirements internalise the risks of activities that are not aligned with keeping climate change to within 1.5-degrees. This would be an example of a precautionary approach (also applicable to the risks associated with the **loss of biodiversity and the breakdown of critical natural living systems**). It would incorporate the lessons of the global financial crisis of 2008: that the best way to avoid a systemic breakdown is to **proactively prevent the build-up of 'toxic' assets** (with insufficient levels of capital to absorb systemic losses) **in the first place.**

The consultation document focuses on stress tests and pillar-2 and 3 responses at an individual financial institution level. These attempt to model inherently unpredictable outcomes that will differ from bank to bank. This makes an assumption that adding up the 'sum of the parts' will be sufficient for the whole; in effect gambling on whether the resulting capital protection will prove adequate for the extraordinary risks facing the financial system. Since assets and exposures are not static and are likely to flow around the financial system, this situation calls

instead for a **robust, ex-ante, sector-wide, capital intervention** that targets the **most significant sources of climate risk** on the balance sheets of all banks in the same way.

It is worth noting that the climate risk contribution of an asset derives from the nature of the asset and not from the characteristics of the credit institution holding it. Capital measures on fossil fuel exposures should thus be applied to all relevant assets and not only in cases when large exposure limits are breached, for example. An asset's contribution to climate risk could be verified through sectoral classifications and public databases, for example, whether the borrower is involved in expansion activities in the upstream and midstream oil and gas sectors (see Urgewald's Global Oil and Gas Exit List, GOGEL).

Whilst more banks and investors are signing voluntary commitments to achieving net-zero and reallocating capital from fossil fuels to climate-safe activities, regulators have a role to play in 'levelling-up' the rules for all to prevent laggard financial institutions being incentivized to continue adding to those exposures. All financial players remain exposed to the risk that climate change will be worsened by banks and investors that lag behind. Without intervention, this leads to the risk that there is an incentive for some banks to be **'fly-tipping'** risks, polluting the whole financial system without any direct consequences.[4] Regulations that help to internalise these risks will improve market outcomes and stability for all.

[4] "Fly-tipping" is the illegal dumping of waste materials, usually to avoid paying disposal costs.

Proposed Remedies & Solutions

Pillar-3 disclosures and translation into statement of impairment/provision against transition risk against 1.5-degree climate scenarios.

Under Pillar-3 measures, the Committee should consider mandatory disclosure of all GHG accounting per asset and asset category, both on-balance sheet and off-balance sheet. This should include the client scope-3 GHG emissions for the most significant climate impact sector. Such a requirement would level-up practice currently being integrated into voluntary codes (including the TCFD, NZBA, GFANZ).

In addition, GHG emissions accounting per sector can be compared to benchmarks and sector transition pathways necessary to limit average global atmospheric warming to 1.5-degrees. These should relate to 1.5-degree climate scenarios with no/low overshoot and without reliance on carbon dioxide removal technologies. A calculation of **contingent impairment value** (e.g., crystallising transition risk as financial loss) can be performed against the scenario for each sectoral exposure. This impairment value/contingent liability should be confirmed by the bank's auditor in the annual accounts. Each supervised entity could then provide its own comment as to whether it would make a provision for a part of this contingent impairment value. This aligns to Core Principles BCP 18 (problem assets, provisions) and BCP 27 (financial reporting and external audit).

Pillar-1 capital adjustments for marginal climate-misaligned asset exposures

Pillar-1 capital measures based upon financial stability risk, which is in turn driven by the climate impact of assets and the degree of misalignment with global climate objectives should be at the centre of the regulatory response to banks' climate risk exposures. This omission is surprising given the scale of climate risks and the progress made within the NGFS and needs to be urgently addressed by the BCBS. It is also evident that central banks are fully aware of how to respond to similar systemic risks having suggested consequential PIllar-1 measures to address cryptocurrency assets held by banks (BIS, 2021: https://www.bis.org/bcbs/publ/d519.pdf).

Capital requirements are designed to tackle systemic safety risks such as climate change. They are entirely appropriate for this. Not doing so would be to misuse the framework to favour an industry by allowing it to contribute to systemic risk. Whilst it is noted that banks are still relatively immature in being able to model and quantify climate risks from their activities:

(a) there is a marked increase in data availability and bank reporting under carbon accounting mechanisms such as the Partnership for Carbon Accounting in Financials (PCAF), and

(b) higher levels of uncertainty due to insufficient management of risks would be an argument for holding more capital, not less.

Whilst generally the preserve of supervisory intervention under pillar-2, a more formulaic approach under pillar-1 can be used to re-price capital in a consistent way which is proportional to the underlying risk.

Using the BCBS's own logical framework for how to re-price capital for cryptocurrency assets that contribute disproportionately to systemic risk (where banks carry a 1250% risk weight, or a one-for-one allocation of full equity in the RWA calculation) we could design a similar rule for climate-misaligned assets thus:

Proposal of a 'one-for-one rule covering capital adjustments for climate-misaligned assets.

1. For:
   1.1. any exposures (direct lending or corporate lending related to underlying assets) which represent the **expansion** (including new assets or expansion of existing assets) or **exploration** (e.g., reserves-based lending facilities) of fossil fuels production or downstream infrastructure; or
   1.2. any exposures (direct lending or corporate lending related to underlying assets) to land which has been subjected to **deforestation**

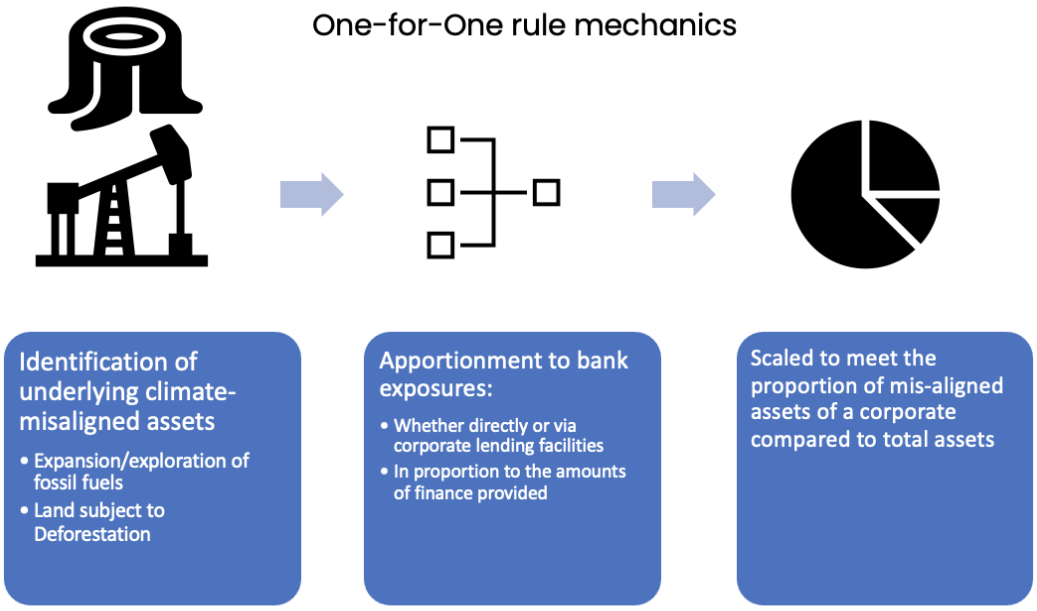
   The risk weighted asset will be calculated under a standardised approach applying a weighting factor of 1250% (full equity).

2. For direct or corporate lending facilities referred to in (1.1 and 1.2) above,
   2.1. the risk weighting will be apportioned to facilities held across all lending banks in relation to their share of total facilities provided [*taking into account the apportionments for syndicated lending*]; and in relation to the proportion of the total value of assets for a company represented by the underlying assets meeting the criteria of 1.1 and 1.2 (being expansion or exploration of fossil fuels, or deforestation) [*this way an*

entity which is caught by the regulation is treated proportionately - in relation to the quantity of misaligned activities. It is also the case that for bank exposures, which do not include finance flows to additional misaligned activities, there would be ***no additional capital requirement*** *hence reducing the broader economic impact of this measure.]*

3. Underlying assets can be '**time-stamped' and tagged** as part of company **transition plans** to recognise when the primary underlying change in status occurred at the level of the asset [*at which point in time an investment was made into expansion/exploration of fossil fuels or deforestation of land].* The risk-weight adjustment of 1250% for these assets will continue for exposures which are transferred to other banks. [*This prevents them from being classified as legacy/existing assets or ordinary agricultural land.*] This measure could be introduced retrospectively for assets with a 'time-stamp' of {1 November 2022 or later}.

The mechanics of a One-for-One rule on Capital Requirements relating to expansion and exploration of fossil fuels and deforestation:



Illustrative example:
Bank X makes aggregated loans to company Y with credit rating AA+.

According to data (identified from GOGEL, subject to audit) company Y is expanding/exploring its fossil fuel resources. The proportion of the new fossil fuel expansion from the total existing and future assets is PropEx(Y). [Expressed in terms of emissions potential]. On the basis of a minimum applied BIS ratio of 8%:

- Original capital held by bank X against the loan under standardised approach without reference to Credit Ratings / applying Dodd Frank etc (e.g. no adjustment) =
  8% x LoanAmt

- Capital currently held by bank X against the loan under regulatory approaches taking into account Credit Ratings (applying 20% support factor for AA+ rating) =
  1.6% x LoanAmt (see s.34 https://www.bis.org/bcbs/publ/d347.pdf)

- If **none of the activity within company Y was increasing capacity via expansion or exploration,** nor taking over assets which contributed to expanded capacity beyond a reference date (e.g. 1 Jan 2022), then the Capital applied under the proposed mechanism would continue to be (under the standardised approach): **8% x Loan Amt**

- If **all the activity within company Y is exploration for increased capacity** then PropEx(Y) = 1, Capital under the proposed mechanism would be
  (8 x1250%=) 100% x LoanAmt

- If the **cumulative expansion in capacity** (from a reference date, say, 1 Jan 2022) is, say, 10% of the total (present and future) capacity, then PropEx(Y) = 10%, Capital under the proposed mechanism would be
  (8 x 90%) + (8 x 1250% x 10%) = **17.2% x LoanAmt**

What makes such policy design feasible is that there are only consequences for banks who choose to continue flows of finance to climate-misaligned activities. Were a bank to implement policies curtailing investment in the expansion and exploration of fossil fuels and deforestation, then it would not be required to raise additional capital. Reducing the impact of policy implementation this way helps to make the introduction possible. The impact of this measure is also designed to impact behaviours by being a concentrated intervention. Studies have shown that

this compares very favourably to more universal but diluted interventions (I4CE, 2021).

Measures applied to the banking sector alone may create 'leakage' to non-banking sectors of the financial system including the shadow banking sector, and debt capital markets. This, in turn, will raise additional questions for securities regulators. The awareness of build-up and movements within shadow banking is something that banking supervisors should also maintain under the Core Principles. However, the banking sector has an inextricable link to governments via deposit guarantees. Securing banking sector stability via capital measures helps remove political risk for governments to act on transition at a pace which is commensurate with climate goals. If activity was to transfer elsewhere, this would have the effect of shifting political risk to capital markets, where it could be more freely priced and would be less likely to fetter the position of governments.

Q2. Do you have any comments on the individual principles and supporting commentary?

Principle 5 (Capital and liquidity adequacy): *"Banks should identify and quantify climate-related financial risks and incorporate those assessed as material over relevant time horizons into their internal capital and liquidity adequacy assessment processes"*.

In its current form, this principle does not fully translate the spirit of BCP 16 into climate-related financial risks. Crucially, BCP 16 requires supervisors to set capital adequacy requirements that reflect the risks undertaken by, *and presented by,* banks in the context of the markets and macroeconomic conditions in which they operate.

Clearly, banks that finance fossil fuel exploration and expansion are presenting risks for themselves and other banks. The proposed Principle 5 should make clear that capital should be adequate to manage risks that banks are exposed to themselves as well as risks that they are presenting to others (i.e., double materiality).

Basel principles call for this to be done in a forward-looking manner that anticipates losses from future changes to market conditions, which would naturally include losses caused as markets respond to climate change (see BCP 16, Essential Criteria 6).

To ensure that risks can be anticipated in this way, the principles should clarify that the application of Principle 5 will, in some cases, lead to meaningful quantitative increases in the capital requirements of regulated entities for certain assets and that regulators should consider implementation via Pillar-1 measures on those assets to reflect the seriousness of climate risks and ensure a level playing field between credit institutions. Principle 5 must embrace the possibility of Pillar-1 measures in unambiguous language. We suggest the following edit:

Proposed revision to Principle 5: *"Banks should identify and quantify climate-related financial risks and incorporate those assessed as material over climate-relevant time horizons into their internal capital and liquidity adequacy assessment processes. Supervisors should support this by setting minimum sectoral capital requirements in Pillar-1 for all bank assets that are exposed to or that contribute to climate-related financial risks."* [Reference principles: BCP 15, BCP 16, BCP 24, SRP 20, SRP 30]

One advantage of addressing climate risk through Pillar-1 measures is that it would remove the burden on banks to try and incorporate uncertain and forward-looking climate-related risks with little historical data into internal models that are not designed for - or suited to - modelling climate risk. Banks' internal capital models are normally designed around backwards-looking, data-driven risks; a Pillar-1 measure would obviate the need for this and avoid modelling-related delays in managing climate risks.

As for other Pillar-1 measures that apply to high risk assets, such measures should apply based on the nature of the asset and not of the bank. Proportionality criteria based on the size of the credit institution are not relevant to climate impact and should not be used to exempt smaller banks from rules on climate risk. Similarly, the characteristics of bank balance sheets are irrelevant to climate impact, so capital measures on relevant fossil fuel exposures should be generally applied and not limited only to cases where large exposure limits are breached, for example. In general, the application of Principle 5 must not depend on the business strategies or other characteristics of individual banks, to ensure that assets are not left under-capitalised and that confidence in the financial system is not weakened.

The uncertainty around the methodologies and data used to analyse climate risks, as mentioned in paragraph 23, is a further reason to ensure that banks are adequately capitalised in advance, rather than waiting for (perhaps impossible) quantifications and methodologies to mature before acting. In this sense, supervisors should take early action and disregard the speed of progress in climate modelling when setting phase-in periods for climate-related Pillar-1 capital measures.

The document alludes to the **tragedy of the horizon** (para 10) "*that some climate-related risks may also materialise beyond a bank's traditional two-to-three year capital planning horizon but within the maturities of longer-dated positions. Other climate risks may materialise over a much longer time horizon.*" But this is not reflected in Principle 5 (para 21) "*Banks should develop processes to evaluate the solvency impact of climate-related financial risks that may manifest within their capital planning horizons.*"
Selective application of this principle (e.g., acknowledging its presence whilst not acting preemptively) would be a fundamental abrogation of regulator responsibilities and financial stability mandates. **Climate change risks must be addressed within time horizons that match climate science, not investment horizons.**

Some groups argue that the difficulty in accurate future climate scenario modelling is a reason not to consider capital requirements. Financial industry lobby group, the **BPI,** argue that *climate-related risks have a negligible effect on the probability of bank failure over the standard horizon used in capital analysis.* This is based upon an unstated assumption that banks' portfolios will naturally refresh over a period of time and that risks will become avoidable over time. But if primary investment continues into climate-misaligned activity, the economy remains path-dependent upon high-carbon infrastructure and is not able to refresh its portfolio without passing on the same climate risks. The BPI argument is a fallacy since its focus on bank failure over the short-term does not recognise that climate risks become locked into the economy and as a consequence of not addressing this via capital requirements can **increase the risk of collective failure** in the longer term. Indeed, the committee makes reference (Principle 6) to concentration risk, seeking to assess transition risk by grouping together all of its lending that is reliant on continued fossil fuel (and, therefore, exposed to transition risk). However, without the avoidance of path dependency in the broader economy, these transition risks become unavoidable and would suffer connected failure under an 'inevitable policy response' (UNPRI, 2021).

The mismatch between time horizons calls for early and pre-emptive action. In addition to the path dependency effects described above, no one knows the precise time that climate risks will materialise. Credits will roll over, some will be repaid or replaced before climate risks materialise. But, if no capital increase is made in advance, there may be a disorderly repricing when a future risk materialises. The principles recognise this risk for mark-to-market exposures, but it should be applied more broadly (Principle 9, para 37: *"In evaluating mark-to-market exposure to climate-related risks, banks may consider how the pricing and availability of hedges could change given different climate and transition pathways, including in the event of a disorderly transition"*). For all fossil fuel assets, the uncertainty over the timing of any repricing is exactly the reason to raise capital now.

A precautionary approach is required to avoid the underestimation of climate risks or coming to misleading conclusions about capital adequacy, given the importance of this issue.

When considering impacts, central banks should address the impacts on the financial sector and economy as well as the micro-impact (para 21). Until macro-economic capabilities are developed to inform these impacts sufficiently, a **precautionary approach** should be applied to underpin assessments of the

macro-economic impact and the consequential financial stress for every financial institution.

Principle 8 (Comprehensive management of credit risk) requires banks to understand the impact of climate-related risk drivers on their credit risk profiles. This should be clarified to require that banks assess whether the transition plans of their clients are 1.5C-aligned or not (and outline the consequences if not).

Principles 12 and 18 (Scenario analysis, Role of supervisors) place a large degree of hope in scenario analyses and stress tests, despite their focus on historical data (looking for Black Swans rather than Green Swans). Stress tests today are not resulting in adjustments to capital requirements and there is insufficient evidence that they are driving behaviours. Even those adopting the scenarios suggested by the NGFS running to 2050 miss the risks of future warming from locked-in emissions. These impacts will not be fully felt until the second half of this century. The principles on stress tests should acknowledge these limitations and seek to address them; for example, by increasing the possibility for stress tests to increase capital requirements on climate risk exposures, or for Pillar-1 measures to reduce the burden on stress testing.

The network of banking supervisors should reflect on the potential for systemic intervention to align market practice. For example, in BCP 29 (the Abuse of Financial Services) there is established precedent for coordinated intervention; there is a clear underlying recognition that the financial system cannot be made safe until all institutions act safely. It recognises the need to enforce compliance from all institutions to prevent criminality leaking into the system. There do not appear to be calls from regulators, banks or other stakeholders to disapply such measures and instead rely upon voluntary codes of conduct without enforcement and compliance measures. Similarly, the benefits of using regulation to align all banks with climate-safe best practice, ensuring coordinated intervention and preventing leakage, could build upon voluntary codes and practice (e.g., NZBA and GFANZ) and prevent a situation where some banks impose systemic climate-related risks on the rest of the system.

Climate-related financial risks should include all relevant activities, not only fossil fuel, but also deforestation and other activities that significantly affect the GHG concentrations.

Q3. How could the transmission of environmental risks to banks' risk profiles be taken into account when considering the potential application of these principles to broader environmental risks in the future? Which key aspects should be considered?

The most important principle is to apply a precautionary approach towards environmental risks which relate to fundamental planetary boundaries and critical dependencies for social and economic life.

The parallel insight is to recognise that both inward (single materiality) impacts and outward (double materiality) impacts are required to maintain a genuinely prudential approach due to the transference of macro-economic impacts back into the banking sector.

The inward-looking financial materiality becomes visible when, for example, fossil fuels assets become stranded. This calls for asset-specific micro-prudential capital for fossil fuel assets, implemented through Pillar-1.

The outward-looking materiality is that fossil fuel assets subject bank assets, in general, to higher climate risk by contributing to climate change. This macro-prudential risk calls for generalised increases in bank capital to mitigate climate-related systemic risk across the entire banking sector. This macro-prudential risk could be addressed in a variety of targeted ways, such as through a capital surcharge on all fossil fuel exposures or by increasing the capital add-ons by an amount that can internalise an asset's contribution to climate risk (see the mechanics of the One-for-One rule above). Whichever route is chosen it needs to be included as a consistent intervention; it is no longer sufficient or prudent to anticipate that Pillar-2 measures will be sufficient on their own.

Additional issues to consider in implementing capital charges on fossil fuel assets include:

- *Defining climate-harmful activities*: The way in which climate-harmful (e.g., fossil fuel) assets are identified for bank prudential purposes could have a large impact on how banks mitigate their credit risk and how much they end up contributing to global climate risk. For example, capital requirements that apply based on what the financing will be used for, such as to refinance a gas field operation, would help to protect against asset-level stranding risks. These can be identified using taxonomies emerging in the EU and other regions (in particular taxonomies which define unsustainable activities, or those which do

'significant harm'). On the other hand, capital requirements based on the characteristics of the borrower, such as its revenue mix or net zero transition plans, may protect the system better against financial and climate-related systemic risks. Some combination of the two may be needed. In addition, the risk profiles of financial assets that support new fossil fuel extraction activities that would push global emissions beyond the safe carbon budget are far higher than those of assets that support existing fossil fuel and energy transition activities. A definition that distinguishes between new and existing fossil fuel activities would enable capital charges to be set at different levels as appropriate.

- *Implementation*: A survey of the size and types of banks' current fossil fuel exposures would support the design of an implementation plan for capital measures and help to determine suitable transition periods. Implementation via IRB could be effected through the use of sector-specific floors, for example. BCBS could encourage regulators to align transition periods with science-based decarbonisation pathways, while taking into account the solvency situation of the most fossil fuel-exposed banks under their supervision.

- *Calibration*: It will not be possible or necessary to calibrate precisely the amount of capital that banks should post against fossil fuel assets to mitigate their own losses from climate change and any losses they might contribute to elsewhere. This is because climate change is new, there is little data, and losses are likely to occur in non-linear ways through a combination of gradual and sudden changes and disruptions, as economies shift and climate impacts occur. This is challenging for regulators who are accustomed to intervening on the basis of historical data. However, it would be a serious failure of foresight if BCBS and prudential regulators around the world did not prepare for climate risks, which are certain to occur. Indeed, patchy data is a good start, and might be all that anyone has to go on until it is too late.

- *Displacement to other financial channels*: (also see mechanics of One-for-One rule above). A change in the pricing of climate risk at banks could shift fossil fuel financing towards capital markets, private equity, shadow banking etc., depending on the market characteristics in each region (such as more reliance on banks in Europe, or on capital markets in the US) and resurface as systemic threats elsewhere, creating a need to coordinate with other regulators. This is a normal activity for regulators and does not lessen

the primary duty on bank regulators to ensure that banks are adequately capitalised against fossil fuel risks they are carrying and against climate risks they are contributing to that could feed financial losses more generally. Any migration of climate related financial risks to institutions and investors outside the banking sector may decrease systemic risks in some circumstances.

- *Impact assessments*: Regulators should carefully question the assumptions of any economic models they rely on to estimate the costs of applying capital measures to fossil fuel assets. Models with circular logic that are pre-programmed to convert increases in bank capital into reductions in economic output are likely to produce a misleading picture. In contrast, modelling that is based on real world data about how post-GFC capital increases have affected bank lending and output is more likely to produce useful results. Impact assessments should also model the significant benefits of mitigating micro- and macro-prudential losses linked to climate change, and account for the economic and social benefits as better risk pricing encourages a shift from fossil to non-fossil energy production and a redeployment of bank capital stimulates growth and employment in new industries.

Closing Comments

The Climate Safe Lending Network welcomes the BCBS in opening this public consultation and looks forward to the open consideration of the issues raised within our response. The regulatory challenges relating to classes of asymmetric risk such as climate change and the nature of how risk is passed between different actors, leads to a design challenge. We notice that much of the regulatory landscape is designed to address 'complicated' challenges with more predictable outcomes and cyclical characteristics and is informed by searching for sufficient data. In contrast, many future challenges are 'complex' with less predictability in the near term, but more long-term certainty that the underlying conditions for economic and financial stability will be very different in the event of climate breakdown or loss of nature and biodiversity.

We would welcome the chance to invite the BCBS, NGFS and other central bankers to join us and other members of our network (of banks, investors, NGOs, academics and other experts) in exploring the design challenges for policies that could adequately address climate risk.