



BANK OF ENGLAND

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Dear Mel,

Thank you for your letter of 3 February 2020, regarding the financial risks from climate change. Your letter posed three sets of important questions:

- How transparent it is to consumers whether their savings are being invested consistent with a path to net-zero carbon emissions;
- How to manage climate-related risk, including those relating to potentially mispriced hydrocarbon assets; and
- How climate-related risks might be incorporated within capital regulation.

Reporting to consumers

Corporate disclosure is the foundation of reporting to consumers on whether their investments are consistent with a path to net-zero carbon emissions. In 2015, catalysed by the Bank of England, the Financial Stability Board set up a private sector Task Force on Climate-related Financial Disclosures (TCFD) to develop standards on climate reporting. The TCFD made its final recommendations to the 2018 G20 Summit in Hamburg, with a comprehensive disclosure standard that encompasses recommendations on governance, strategy, risk management, metrics and targets, including carbon emissions.

The TCFD has widespread and growing support. As of February 2020, more than 1000 organisations, representing a market capitalisation of over \$16.7 trillion and controlling assets of \$138 trillion, have pledged their support. It represents the best view of the private sector, capturing the opinions of the companies that must disclose in order to access finance and the providers of capital from across the financial system who increasingly use these metrics.

TCFD metrics and targets can help investors determine a firm's or a portfolio's exposure to climate-related risks and opportunities, and potentially its alignment with net-zero transition paths. The reporting therefore provides a base for banks, insurers, investors and supervisors to assess the consistency of their portfolios with the path to net-zero.

The question now is how to use the information that is reported under the TCFD to build a system where the alignment of portfolios to net-zero can be assessed and measured. The traditional approach has been for investors to follow some of the various Environmental, Social and Governance (ESG) ratings of companies. But with respect to climate change this has a range of shortcomings, including the huge variation in the measurement of ESG criteria, and the reality that approaches typically place low weights on environmental factors. In other words, the 'E' is dominated by the 'S' and the 'G'.

Taxonomies to identify environmental outperformance, such as the EU's Green Taxonomy and the Green Bond Standard, can help but they tend to be binary (either dark green or all brown). This can have the unintended consequences of excluding companies that are actively changing their business models for the transition. Mainstreaming sustainable investing for the whole economy will require a richer taxonomy – 50 shades of green – that can capture companies that are emitters today but have concrete plans to reduce emissions to net-zero in the future.

There are several ways that asset managers, pension funds and insurers could report the level of preparedness for the transition of a given portfolio:

- At the most basic level, the percentage of assets in a portfolio that comply with TCFD disclosure recommendations could be reported;
- A step further would be an assessment of the percentage of assets that are Paris-aligned (that is, are aligned to net-zero);
- To be clear, that would mean a net-zero target (for scope 1,2 and ideally scope 3 emissions), short term milestones for companies to track progress, details of governance (including potentially how executive compensation is tied to success, and comprehensive disclosure in line with the TCFD);
- And, at the most sophisticated end of the spectrum, are measurements that capture the 'degree warming' potential of the portfolio. These measure the quality of transition plans relative to the Paris goals. Companies with plans to reduce to net-zero emissions, or beyond, are rated at 1.5 degrees or below. Those that are not Paris-aligned will have a higher degree rating depending on how much their emissions exceed the Paris-consistent level. Some firms, like Axa and Allianz, have already voluntarily disclosed this information. They are now feeding into a TCFD group that is considering whether the warming potential of assets, or any other metric, is the best way to measure consistency with the transition to net-zero.

Managing climate-related risks

Since 2015 the Bank has been assessing and communicating how these changes will give rise to financial risks.

If commitments to net-zero are realised, many carbon-related assets will not be viable. At one extreme, the IPCC 1.5 degree report finds that no more than 349 Gt of carbon can be emitted, assuming a target probability of 66% for limiting the rise in global temperatures to 1.5°C. In contrast, proven oil and gas reserves contain approximately 510 Gt of carbon, and coal reserves another 425 Gt¹ - meaning that the combustion of *developed* oil and gas reserves alone would exceed the budget for 1.5 degrees of warming. According to a frequently cited academic study,² 80% of the world's known coal reserves, 30% of oil, and 50% of gas reserves are unburnable if emissions are to be consistent with keeping temperature rises below 2 degrees.

¹ http://ggon.org/wp-content/uploads/2019/12/GGON19_OilGasClimate.EnglishFinal.pdf

² McGlade and Ekins (2015), 'The geographical distribution of fossil fuels unused when limiting global warming to 2°C'

Some market prices have already begun to adjust. For example, the transition away from coal has resulted in the combined market capitalisation of the top four US coal producers falling by over 99% since the end of 2010. And studies have found that growing, undeveloped reserves have a *negative* impact on oil firms' value, particularly where assets are more carbon intensive to produce and deliver.³

In the absence of an early and smooth transition to a net-zero economy, the risks of a delayed but abrupt transition will rise. This could precipitate a sharp reassessment of asset values and of climate risks, destabilise markets, spark a pro-cyclical crystallization of losses, leading to persistent tightening of financial conditions a climate Minsky moment.

To ensure that the financial sector is resilient to such a scenario and can support a smooth transition that will avoid it, the Bank has been examining the risks that climate change poses to the safety and soundness of regulated banks and insurers. The Bank's approach was set out in detail in the PRA's April 2019 supervisory expectations for banks and insurers, which covered expected approaches to the integration of climate-related risks across governance, risk management, scenario analysis, and disclosures.⁴

The Bank has recently also launched a climate stress test that will run through 2021 to examine the resilience of the largest banks, insurers, and the financial system to different climate pathways.⁵ This pioneering exercise will require firms to investigate how their borrowers would cope with different scenarios, including one where a transition to a net-zero world is delayed and abrupt. This stress test will inform how risks and opportunities develop in the face of material carbon fluctuations at the firm- and system-level. Following the Bank's lead, 15 other central banks and supervisors around the world are now engaged in similar exercises.

Capital rules and brown penalising factors

The Bank of England's approach to setting capital requirements is determined by its statutory objectives for financial stability and for the safety and soundness of banks and insurers, as elaborated by the remits from the Chancellor to the Bank's Financial Policy and Prudential Regulation Committees. Consequently, the Bank takes a risk-based approach to setting capital requirements.

Where there is evidence that green assets are less risky, this can be factored into the internal models that banks use to set capital requirements. For example, analysis by colleagues at the Bank found that mortgages against energy-efficient properties are 18% less likely to be in payment arrears than mortgages against energy-inefficient properties.⁶ In general, however, absent explicit direction in its remit, the Bank would not advantage green lending in its risk-based supervision. Its approach would match the inherent riskiness of the assets. To do otherwise would be to mix climate policy with prudential policy.

The Bank is also examining the case for a brown-penalising factor that introduces additional capital charges on polluting and potentially risky activities. However, there are impediments to implementing such a measure, including: the lack of a universally accepted definition of brown and the tendency of definitions to focus on extremes, and most importantly the possibility of activities transitioning from brown to green over time. The adoption of a brown penalising factor is also hampered by the absence of data that allows us to measure the riskiness of an asset. This makes it harder to calibrate any impact and to justify adjustments to the capital framework.

³ Atanasova and Schwartz (2019), 'Stranded fossil fuel reserves and firm value'

⁴ <https://www.bankofengland.co.uk/prudential-regulation/publication/2019/enhancing-banks-and-insurers-approaches-to-managing-the-financial-risks-from-climate-change-ss>

⁵ <https://www.bankofengland.co.uk/paper/2019/biennial-exploratory-scenario-climate-change-discussion-paper>

⁶ <https://www.bankofengland.co.uk/working-paper/2020/does-energy-efficiency-predict-mortgage-performance>

To address this, the Bank is feeding its own research and thinking into the group of around 50 central banks and supervisors that are part of the Network on Greening the Financial System's review of the quantification of risk differentials. The 2021 climate stress test will also provide additional data on the links between climate risks and write-downs for different types of assets.

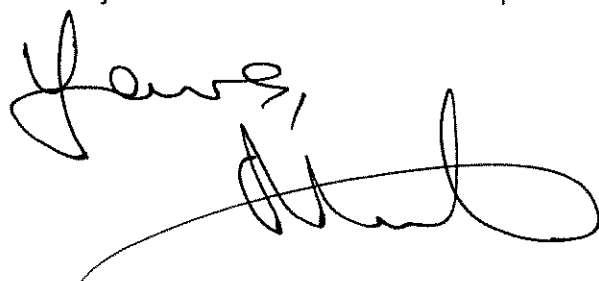
Potential role for legislation

As support for TCFD is widespread and growing across the financial sector, we are approaching the point when TCFD disclosures need to become mandatory.

Other jurisdictions are starting to move in this area – in France, Article 173 has required reporting on environmental issues for several years, and under its Green New Deal, the EU is investigating how best to integrate climate disclosures, such as into the Non-Financial Reporting Directive⁷. In co-hosting COP with Italy this year, the UK has made it a priority to work with the FSB, other international bodies like IOSCO, the IFRS and other countries to establish pathways towards mandatory disclosure through international standards and national regulation or legislation.

The pathway to mandatory reporting in the UK can build on steps taken already by the Financial Conduct Authority (FCA) and Department for Work and Pensions (DWP). The FCA are due shortly to consult on new climate-related financial disclosure rules for certain issuers aligned with the recommendations of the TCFD. And the DWP have introduced an amendment to the Pensions Bill to require pension funds to disclose their strategies for managing climate change under the TCFD.

I hope the information set out in this letter addresses your questions relating to the Bank's work on climate-related financial risks. My colleagues and I will, of course, respond to any further questions the TSC may have in this critical area at an important time.

A handwritten signature in black ink, appearing to read 'Hans', followed by a large, stylized flourish or signature mark.

⁷ https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2020-580716_en