Andrew Bailey: Tackling climate for real – the role of central banks

Speech by Mr Andrew Bailey, Governor of the Bank of England, at Reuters Events Responsible Business, 1 June 2021.

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The Bank of England's mission is to promote the good of the people of the United Kingdom by maintaining monetary and financial stability. Our understanding of how we can best deliver that stability, and what factors are relevant to it, evolves with time. This is unsurprising as our economy and financial system are not static, so neither should be how we go about fulfilling our mission.

The UK economy and financial system have undergone significant transformations in recent decades – as examples of this, services have risen and manufacturing has declined as a share of output[1], debit card transactions have overtaken cash transactions[2], and the share of activity in the financial system accounted for by non-banks has risen[3].

These types of structural shifts have had broad effects, including in our world on the transmission of monetary policy and the resilience of the financial system. We have taken action in response; for example after the financial crisis we increased capital requirements for banks so the financial system could act as a shock absorber rather than amplifier – the benefits of which we have most recently seen in the response to Covid-19.

Just as we have had to adapt to these changes, to fulfil our mission going forwards we need to look ahead to the structural shifts we face over the coming years and decades. That will mean hearing central bankers like me speak about things that we have not in the past – terms like central bank digital currencies, cyber risk, and climate change are now firmly part of our lexicon.

This is not about us adding new things to our mission, nor is it about doing that which is rightly for others. It is about taking these new things into account alongside the old as we go about fulfilling our mission, delivering monetary and financial stability through time.

Climate change

Climate change is an obvious, and indeed urgent, example of this. The physical effects of climate change, such as rising sea levels and more frequent severe weather events, as well as the transition to a net-zero economy, through changes in government climate policy, technology and consumer preferences, create financial risks and economic consequences.

The question is not if but where, to what extent, and how should we respond. Answering all three of those questions has been at the heart of our work on climate change over the past 6 years. Ignoring them is not an answer. Indeed the longer we wait, the greater the costs of adjustment.

The UK was one of the first countries to embed in legislation a commitment to achieve net-zero greenhouse gas emissions by 2050.[4] Meeting that goal will require an unprecedented structural shift in the economy, particularly on the supply side. Everything from the way we produce and consume goods and services will need to change for this economy-wide transition to take place.

The primary levers for driving that transition rest not with central banks, but with governments through setting climate policy, with industry through innovation and investment, with private finance through allocating investment, and with consumers through the choices they make. These important and difficult decisions bring both social and economic consequences.[5]

Role of central banks

So what then is the role of central banks?

Let me start by emphasising what it is not. We are not here to "solve" climate change or drive the transition. Those with the mandate and the tools to lead this fight sit elsewhere. But central banks do have a role to play, and an important one at that.

Our economy and financial system are not immune to planetary-level changes or society's response to them, indeed it would be absurd to suggest otherwise. Elon Musk aside – we cannot diversify away from our exposure to the planet. In that sense climate change is the ultimate systemic risk.

Physical risks can damage property and other infrastructure[6], disrupt business supply chains and food systems, influence productivity and health, and, more broadly, can lead to potentially wide displacement and even conflict. This can reduce asset values, result in lower profitability for companies, damage public finances, and increase the cost of settling underwriting losses for insurers.

Transition risks, arising through changes in climate policy, technology and shifting consumer preferences could prompt a reassessment of the value of a large range of carbon-intensive assets – leaving some 'stranded'. In turn, this will give rise to credit risk for lenders and market risk for insurers and investors.

Yet these physical and transition risks are not reflected in the market prices of most financial assets.[7] Structural barriers such as the lack of climate disclosure, the lack of clear sector-level climate policies, firms not internalising the cost of emissions, and the short time horizon of some investors, all contribute to what Nick Stern has described as the greatest market failure the world has ever seen.[8] A sharp shift towards a new equilibrium as a result of recognising the full extent of this market failure could create significant financial losses in a 'climate Minsky moment'.

Maintaining monetary and financial stability in light of these risks therefore demands a timely, coherent and coordinated policy response from the authorities. The importance of the Bank's role in this has been recognised through the Chancellor's recent remit and recommendation letters to the Bank's policy committees, which set out that the transition to a net-zero economy is now a part of the government's economic strategy that the committees must have regard to.[9]

So what does this mean a central bank should do in practice?

Financial system

First, and foremost, it means building resiliency at a micro and macro level. We do this by ensuring the financial system proactively manages and pre-emptively mitigates the financial risks from climate change. That task falls squarely within the mandate of the Prudential Regulation Authority (PRA) and the Financial Policy Committee (FPC).

The PRA has set supervisory expectations for banks and insurers to ensure they adopt a strategic approach to climate change and develop capabilities to effectively identify, measure, manage, and where outside appetite, mitigate the financial risks from climate change. This is a necessary component of protecting the safety and soundness of PRA-regulated firms.

The FPC, alongside the PRC, will launch next week a Climate change Biennial Exploratory Scenario exercise – the CBES – to assess the resiliency of individual banks, insurers and the wider financial system to different climate scenarios. This type of scenario modelling and analysis is critical to enabling real decisions on climate-related risks by financial firms and policymakers. Assessing resiliency against a range of scenarios enables us to prepare for what might happen in the absence of certainty about what will happen.

Some have called on us to go further and incentivise change through imposing lower capital requirements for 'green' exposures and higher capital requirements for 'non-green' or carbon-intensive exposures. As the prudential regulator, any incorporation of climate change into regulatory capital requirements would need to be grounded in robust data and be designed to support safety and soundness while avoiding unintended consequences or compromising our other objectives. In my view, the case for this has yet to be clearly established and possibly may never be. But our work to improve climate disclosures, scenario analysis, and risk management, could help unlock such assessments.

Macroeconomy

Beyond the financial system, achieving economy-wide net-zero emissions will require greening the way we heat our buildings, manufacture industrial goods like steel and cement, generate electricity and produce food. This could prove to be an opportunity for the economy to regenerate ageing capital and raise productivity. Analysis done by the Network for Greening the Financial System (NGFS) and National Institute for Economic and Social Research by 2050 suggests that such an orderly transition could lead to some increase in global GDP, and lower unemployment relative to prior trends. These positive effects should be larger in countries like the UK that are net importers of energy.

However, as I mentioned earlier, much of that rests on how the transition proceeds. The lesson from previous episodes of structural change is that they never involve a frictionless re-allocation of capital. And a disorderly transition, where more severe policies are introduced later in the horizon to compensate, could result in both lower growth and higher inflation from rising energy and materials costs in the economy.

In either case, the economic impacts from such transition scenarios over the medium term will likely be much lower than the growing challenges from physical risks. Under current climate policies, which are insufficient to reach net-zero emissions, analysis from the NGFS scenarios suggest that up to 13% of global GDP would be at risk by 2050, even before accounting for the potential consequences of severe weather events.

Monetary policy

These risks to the economic outlook make climate change and the transition to a net-zero economy also relevant factors for the conduct of monetary policy. The typical policy horizon for monetary policy is two to three years, and so many of the effects of climate change (particularly tipping points) will manifest beyond that timeframe.

But the effects of climate change matter for monetary policy because structural shifts in the supply side of the economy can affect not only future point-in-time macroeconomic variables, but also the expected natural rate of interest (r*) and the natural rate of unemployment (u*).

The physical and transition risks from climate change are relevant to these issues, although the economic modelling and research to estimate the relative size of these effects has only started to emerge in recent years. To take one example of the complexities involved in making such an assessment, the natural rate of interest might face both downward pressure from expectations of severe weather events[10] and upwards pressure from demand for investment to replace carbon-intensive capital stock (such as replacing petrol cars with electric ones).

This dynamic is not unique to climate change. We see it in other structural shifts such as the post financial crisis trend of weak productivity, and the growth in intangible capital.[11]

To improve our understanding and better inform future monetary policy, we need more research on this topic. I am pleased to say that the Bank plans to do more in this space, both in its own capacity and through working with other central banks and international bodies.

As well as being relevant to the setting of monetary policy, climate change and the transition to net-zero are also relevant for the implementation of it. The Bank recently became the first central bank to set out a comprehensive framework for greening a monetary policy asset portfolio – the £20bn stock of sterling corporate bonds acquired via our Corporate Bond Purchase Scheme (CBPS).[12] This will remain a monetary policy tool, with its overall target stock of assets set by the MPC in order to achieve its primary inflation objective. However, from Q4 this year we will make adjustments to our approach to the composition of this portfolio in order to incentivise companies to take actions contributing to an orderly transition to a net–zero economy. Given the relatively small scale of these holdings – in the context of sterling and global capital markets – we hope this change will by example influence how larger investors take account of climate risks in their own asset allocation decisions.

Some may worry this change moves us away from central banks' core responsibilities, into territory best left for governments. However, the case for taking this action is clear, it is in line with the change in the MPC's remit I described earlier, and far from impeding the effective execution of our policy objectives, it may well contribute to a future outcome that delivers a more stable monetary and financial system.

Conclusion

I have spoken about the relevance of climate change and the transition to a net-zero economy to central banks. It is about faithfully executing our mission for monetary and financial stability, taking into account those structural shifts on the horizon. That brings with it several analytical challenges and demands new ways of thinking – we welcome this. But it is clear that the biggest component of the journey to net-zero rests not with central banks, but with government, through the delivery of sector-level climate policy pathways – without these the real economy cannot adjust effectively. That is one element of uncertainty in climate change within the gift of governments to solve, and many are working hard to do so.

I will be speaking later this week at the Green Swan Conference where I will set out in more detail the work the Bank has done on climate change and where we go from here. As we look ahead to a decade that climate science tells us must deliver real climate action, I can promise you this, the Bank of England will continue to play its part.

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1 The share of manufacturing output in GDP has fallen from around 17% in 1990 to around 9% more recently, while the share of services has increased from around 70% to around 81% over the same period. Further details here: GDP output approach – low-level aggregatesOpens in a new window

2 See payment volume trends by type in UK Payments Market Report 2020Opens in a new window, UK Finance

3 FSB Global Monitoring Report on Non-Bank Financial Intermediation 2020Opens in a new window

4 Climate Change Act 2008 (Order 2019)

5 See Chapter 6 of The Sixth Carbon Budget: The UK's path to Net-ZeroOpens in a new window, the Committee on Climate Change

6 As an example of damage exacerbated by climate change – a recent study from Strauss, B.H., Orton, P.M., Bittermann, K. et al. (2021) estimates that $8.1bn of the $62.7bn of economic damage caused by Hurricane Sandy (New York, 2012) was attributable to climate change driven rises in sea-levels

7 See Chapter 6 of IMF Global Financial Stability Report 2020Opens in a new window

8 The Stern Review on the Economics of Climate ChangeOpens in a new window (2006)

[9] See Government announcement of climate considerations being embedded across UK principal financial regulators Opens in a new window

[10] Dietrich, Müller, and Schoenle (2021) – 'The Expectations Channel of Climate Change: Implications for Monetary Policy'

[11] Monetary policy in the intangible economy - speech by Jonathan Haskel, University of Nottingham, February 2020

[12] See 'It's not easy being green – but that shouldn't stop us: how central banks can use their monetary policy portfolios to support orderly transition to net zero' speech by Andrew Hauser and Options for greening the Bank of England's Corporate Bond Purchase Scheme discussion paper