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Road Map

—From Extraction to Stewardship

GND
2.N Finance
Finance — Executive Summary

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Financial institutions shape the future through their allocation of resources in the present. Control of investment therefore gives command over our collective futures. Today, taken as a whole, the financial system is doing too little to decarbonise our economy, too much to generate and sustain our deeply unequal economy, with private financial power deepening climate breakdown. Without deep reform, private finance will accelerate climate breakdown. At the same time, public investment is currently too low to drive the scale of change needed.

At the heart of a UK Green New Deal must therefore be a transformation of our financial system so it can mobilise and direct the resources and investment needed to drive decarbonisation. Rapid and just transition requires the largest peacetime mobilisation of resources in our history. To deliver this, four changes are required: the reorientation of private financial institutions to serve social needs through new macroprudential rules and binding green fiduciary duties for institutional investors; the repurposing of central banking to guide our economies toward rapid transition including the use of new tools such as credit guidance; the creation of a new architecture of international finance that can fund a global just transition; and finally, an expansion in the scale and ambition of public finance and fiscal policy including increased public investment and mission-oriented public banking. A transformation in the ambition of public investment in particular must anchor a Green New Deal. Taken together, financing a just transition will require the creation and expansion of institutions that can shape investments through new forms of public, democratic control.
In the dying days of her premiership, Theresa May brought forward legislation to follow the advice of the independent Committee on Climate Change and set a net-zero carbon target for the UK for 2050. This follows the overwhelming vote in parliament for Britain to declare a “climate emergency.”

Yet in defiance of the prime minister, the government’s scientific advice, the clear will of parliament and – we shouldn’t forget – those tens of thousands protesting in recent months, later reports claimed that the Treasury was attempting to apply the brakes to Britain’s decarbonisation programme. Using the (spurious, but eye-catching) figure of a £1 trillion cost, Chancellor Philip Hammond was quoted warning the prime minister that tackling climate change would mean “the cost meant that less money would be available for schools, police, hospitals and other areas of public spending.”

If you wanted a story that summarised everything that was wrong with how the Treasury thinks about the environment, it’s all there: the defiance of government and parliament in the name of allegedly sound finance; the use of opaque figures based solely on its own authority; the leak to the press against the rest of government; the woeful failure to consider government spending as anything other than a zero-sum game; and above all else, the thoughtless weighting of allegedly “financial” concerns against all other objectives.

This report presents the case for reform of Britain’s main economic and financial ministry, as a crucial part of delivering a UK Green New Deal in government. It argues that trust in government has decayed, and that the Treasury’s own commitment to flawed metrics and a narrow focus on financial sustainability has contributed materially to this. The Green New Deal, interpreted here principally as the need to implement a rapid programme of decarbonisation that is socially just, could be the opportunity to restore that lost faith in government. Indeed this report argues that a transition may well be difficult to achieve on any other basis and that the Treasury itself must now take a lead in its delivery.

1— Delivering a Green New Deal in government

We should start with the big picture. A net-zero carbon target of 2050 is not enough for the UK, given the legacy of our historic emissions and the desire to establish this country as an international leader in decarbonisation (and environmental policy more generally). We will need a tighter target, and a plan devised on the basis of best available scientific advice on how to get us there. To achieve this, we will need a society-wide mobilisation, changing how we work and live. Government action at the top will need to be met by initiatives from below. This, in turn, will only be possible on the basis of popular consent.1

But as the decade since the financial crisis has demonstrated only too well, our institutions do not have popular consent. Trust in government is low, particularly trust in senior civil servants,2 and even the long-established metrics of economic success, like GDP, are losing their appeal. It’s not too hard to understand why this happened: for at least a decade, assurances from those experts centred on the claim that there would be, in the unfortunate phrase, “no return to boom and bust”. When the bust happened in 2007–8, it shattered that belief; when “normal” times failed to return, real wages failing to recover as the years of austerity dragged on, that belief could not be reconstructed.

It is simply not the case, in these conditions, that the standard neoliberal model of governance – in which economic decisions are made at a distance, by reference to narrowly-defined “economic” criteria – will work. Journalist Aditya Chakrabortty reported on a debate during the 2016 EU referendum campaign in Newcastle, when an economist trying to explain how a Leave vote would damage GDP was heckled by a woman at the back of the hall: “That’s your bloody GDP, not ours!” This attitude is completely understandable: the promise of GDP is shattered, in that it has risen (slowly) over the last decade – but wages have not.

This disintegration in legitimacy of the tools of government, however, is occurring at the same time – and is linked to – their crumbling as effective tools of economic management. To cope with the demands of climate change and environmental collapse more generally, it will not be enough to refer to GDP: a measure notoriously indifferent to environmental damage, of any sort. And to cope with the emerging data economy of near-zero marginal cost production and the shift away from traditional price mechanisms, it will not be enough to refer to GDP: a measure notoriously bad at accounting for unpriced production and consumption.

It is possible to imagine solutions to these issues that do not rely on consent. An authoritarian “solution” to environmental crisis can be plausibly imagined, imposed on society from on high. But for a government committed to creating a “radically fairer, radically more democratic” society, this is totally unacceptable – and, in any case, seems destined to fail, given the likelihood of societal backlash. The gilets jaunes are a standing rebuke to technocratic attempts to impose solutions to the environmental crisis without popular consent.3

We should be in no doubt about the scale of the transformation needed to achieve the decarbonisation targets the Green New Deal is demanding. And this will only be achievable on an equitable basis, if it is achieved at
all: Since we know the top 10% (across all countries) are responsible for 45% of carbon emissions globally, the only programme that can be reasonably justified is one that places any economic costs of transition on the very broadest shoulders. A government committed to conventional economic metrics as its own measure of success will underestimate these considerations, and, by doing so, will undermine the conditions for the success of any future programme of environmental transformation.

Recreating the forms of consent for economic management, however, will require a deep shift in how government operates: not just a shift in policy, but a shift in institutions. It is not only that policy is not trusted, but the mechanisms of delivering policy and the aims of the policies themselves are not trusted sufficiently – and everything we know about the current development of the economy suggests the problem will only worsen from here on in. Other things being equal, environmental destruction will accelerate, and the digitisation of everyday life (through technologies like 5G and the Internet of Things) will deepen, weakening (in turn) the ability of any government, of any stripe, to secure consent.

The challenge for any radical government, then, will be in winning and maintaining new forms of consent for its programme. Much of this work will have to be done before an election but, assuming a majority can be secured, this new government will require a clear programme of action. That should include making the necessary changes to the machinery of government itself. It will govern departments learning to think and act in new ways. And, most of all, it will mean the department at the centre of economic policymaking dramatically shifting its own ways of thinking and working

2— The Treasury at the centre of Whitehall

The Treasury remains the single most powerful department inside the UK government. Its combination of economic policymaking, plus control of the governments’ purse-string, its historic relationships to key centres of economic power – most prominently in financial services – and, in the last two decades, its domination by two unusually powerful chancellors of the exchequer give it an exceptional weight inside the structures of government. As former head of the domestic civil service, Lord Kerslake, noted in his 2017 review of the Treasury’s functions, the role the department has played “in arbitrating and even initiating domestic policy” has led to the Treasury taking on roles far beyond its notional remit, a process known colloquially in Whitehall as “Treasury control”. Austerity, pursued with single-mindedness by George Osborne, has reinforced the Treasury’s domination not only of economic strategy but, thanks to its tight controls over spending, wider economic policy.

This relates directly to the issue of consent. Although often seen as a purely technical department of state, with a narrow focus on the “hard” facts of the balancing books and setting department budgets, the Treasury has always been a deeply political arm of the state. The majority of Treasury staff are not economists or statisticians, and the Treasury’s share of the Government Economic Service headcount has fallen in the last two decades, even as government employment of economists has risen. Instead (and despite official disavowals, as we shall see), it takes a far broader and strategic view of government priorities as a whole. But this has a direct bearing on governance in general since weaknesses in that strategic oversight turn steadily into an accumulation of failures across government as a whole. That, as Kerslake noted, feeds back directly into an erosion of trust, within other government departments, for businesses and others dealing with government, and of course for the wider public.

In contrast to some historic arguments from progressives, Kerslake did not come down in favour of breaking up the Treasury, or of establishing a new economic policymaking department in opposition to it. Rather, the Kerslake Review recognised the potential of a refocused economics and finance ministry able to deliver on the core economic objectives of government. This chapter seeks to build on his closely-argued conclusions and supports his belief that a single strategic focus for economic policymaking remains essential.

Delivering for the environment?

With this command across government, the Treasury should be ideally placed to help deliver on the all-encompassing social challenge of climate change. Dealing with climate change – both to decarbonise and to adapt to its consequences – will require a cross-government response. There is simply no room for dealing with it in isolation. A department that has such wide-reaching powers and authority inside government should be able to set the strategic direction and the pace of change for the whole of government.

Yet, despite some initial moves under then-Chancellor Gordon Brown, most notably in publishing the pathbreaking Stern Review on the economics of climate change in 2006, and the Treasury’s response to climate change (and indeed environmental and social challenges more generally) has been woeful. Some of this can be put down to the decisions made by is chancellors in recent years: and, in a democratic system, we should expect any government department to act in line with its ministers’ wishes. The line of accountability should, in theory, run from the minister back into parliament, and ministers and the government are ultimately held to account by general elections. It would be unreasonable to blame the Treasury for not prioritising climate change when the chancellors running it manifestly do not prioritise it, either.

But the difficulties arise when there are reasonable grounds to suppose that despite both their own policy and official scientific advice, the Treasury has worked to other priorities. And where it has not worked to other priorities, it has consistently failed to utilise the potential it has to deliver on Britain’s commitment to decarbonisation and the environment more generally. A government seeking to make the transformational changes decarbonisation will require – to say nothing of the other necessary shifts to a more democratic and fairer economy that are a fundamental part of Labour’s programme – will also need to address the operations of the Treasury head-on.

In particular, once a Green New Deal programme moves beyond a relatively (excessively) relaxed net-zero carbon date of 2050 to a date closer to the present and more appropriate for the UK’s historic contribution and aspirations to global leadership, the challenges placed on government will be significant. Once that economic programme also includes the developmental work of how we work, how we quantify economic success, and how we view the long-term goals of the economy, it becomes essential for the Treasury to think and act differently.

Given the constraints imposed on us by the work of the IPCC, we have limited time to act; but the time frame over which actions must be taken are longer than Whitehall – including the Treasury – is generally inclined to think about. Specifically, we need government departments able to begin actions now that may not bear full fruit until a decade or so in the future, beyond only longer-term investments in renewables and other key infrastructure. This is two full terms of parliament, so the implication is that we will need not only a clear focus by government departments on environmental objectives but a clear and compelling justification for holding them through and beyond a standard electoral cycle. Building and maintaining consent over a whole decade of transformation will be impossible without that.

3— Modest ambitions

Official thinking in the department, however, tends to the long-term, and certainly away from objectives that lie outside the narrow confines of pure neoclassical economics, productivity and growth chief amongst them. John Kingman, former second permanent secretary at HMT, described the department’s primary role as “stopping bad things happening”, with economic objectives only a second-order

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consideration. He meant, in other words, the exercise of a tight restraint on departmental spending decisions: unobjectionable, in itself, but problematic if the definition of “bad things” stretches too wide.

Elsewhere, Dan Corry, former special advisor to Gordon Brown during his time as chancellor, has suggested that the Treasury’s focus on growth and productivity was an improvement over its previously narrower fixation on the question of finance alone – ignoring, or at least downplaying, the very significant impact spending decisions have on the wider economy. He attributes this broadening of focus to the Treasury “responding to the wishes of its political masters”. At the very least, there should be no reason in principle why the Treasury cannot take a broader view of its own economic remit.

And whilst former permanent secretary, Sir Nicholas Macpherson, readily acknowledged that the Treasury is “much more strategic” today than it was in decades past, he has elsewhere defined those strategic goals in strikingly narrow terms: “The Treasury’s long-term objectives are primarily around creating macroeconomic stability, supporting policies that improve the trend rate of growth of the economy and seeking to keep the public finances in a stable position.”

There are a number of striking things about this. This is a remit narrowly defined even by the standards of economic policy. For a department with a “licence to meddle” and an unerring ability to stick its nose into every part of the government’s business, it appears narrower still. There is nothing here directly about purpose – which, whatever we might think the economy should be doing in the short-term, would surely form part of a long-term aim for the economy. What, after the short-term, would surely form part of a Treasury’s “unique position to promote coordination and policy coherence on environmental policy between and across government departments.”

They stand in contrast, too, to the conclusions of the National Audit Office, who found that the Treasury, through the Spending Review process, had “an important opportunity…to encourage a coordinated approach to meeting environmental targets.” There is a real potential here for the department, in recognising its more strategic role, to define that role to include long-term environmental objectives.

### 4 — Treasury actions damaging environmental objectives

However, the department has persistently fallen short on the environment, where “stopping bad things happening” is the order of the day, and a combination of spending controls and (presumed) business objectives are enforced. The evidence from the last decade shows the Treasury repeatedly and consistently imposing its own priorities on decisions with environmental outcomes. It is, of course, difficult to reconstruct decision-making inside Whitehall, but from press reports and select committee and other evidence, significant examples can be demonstrated where it “rode roughshod” over other departmental objectives:

- During the original negotiations on carbon budgets, over 2008–9, all departments were required to draft a Carbon Plan and accept responsibility for emissions in the parts of the economy over which they had a remit and policy levers. The Treasury reportedly refused to accept any responsibility for any part of the economy, claiming it had no policy levers it could use.
- Osborne’s 2012 “dash for gas”, announcing the installation of up to 30 new gas-fired power stations to replace Britain’s ageing fleet, was condemned as “plan Z” by the chief executive of the government’s own advisory Committee on Climate Change.
- In March 2013, it was reported that Dave Ramsden, chief economist at the Treasury at the time, “killed off” a proposed interdepartmental committee on resource depletion and climate change. The proposed “Office of Resource Management” was supported across Whitehall, with the manufacturers’ trade body, the Engineering Employers Federation, backing the moves, citing growing concerns from manufacturers about access to raw materials.

- The old Department for Energy and Climate Change (DECC) placed a £1bn bid for capital funding of carbon capture and storage projects onto the 2015 Spending Review process, using competitive bids for projects. DECC figures showed a return of £4.50 for each pound invested to 2030, and £3.7bn “social benefits” to 2050. These were calculated on the basis of an additional £30bn cost to meeting climate change targets for 2050, given the increased expenditure that would be needed on more expensive renewable generation technologies. However, once the bid was submitted, Treasury asked DECC to assess the costs of cancelling the CCS competition but did not give DECC sufficient time to complete this (necessarily complex) exercise. As a result, it was not possible to assess fully the costs of cancellation and Treasury withdrew its funding, in a move described as “devastating” by one expert select committee witness.
- The zero carbon homes policy was cancelled in July 2015, apparently to “reduce net regulation on housebuilders”. But this even ran against industry wishes, with many in the construction industry “surprised and…in some cases, angered” because the Treasury had “been working towards implementing the policy for over a decade”.
- The Climate Change Levy, introduced in 2001 to incentivise the use of renewable energy, was summarily abolished by then-Chancellor George Osborne in 2015, citing the cost-savings necessary under austerity. Yet in 2013 the tax advantages offered to oil and gas producers were extended to cover onshore shale gas production, at substantial cost to the Treasury itself. This bias in favour of minor adaptations to existing energy supplies has been cited as a prime example of departmental short-termism on the environment.

- In November 2016, ClientEarth, an environmental NGO, successfully sued the Department for Food, the Environment, and Rural Affairs (DEFRA) in the High Court for failing to deliver projects that would bring the UK into compliance with the law on air pollution as soon as possible. During the course of the hearing, it emerged that the Treasury had used the 2015 Spending Review to block DEFRA’s plans for an extensive network of clean air zones on cost grounds. The Environmental Audit Committee flagged this as a particularly egregious example of the Treasury’s strong bias towards short-termism.

- The Green Investment Bank, originally recommended by the Committee on Climate Change to meet Britain’s green infrastructure investment needs, was set up (without powers to create credit) in 2012 by the Conservative-Liberal Democrat Coalition government to promote private-sector environmental investment. With government seed funding of £3bn, it was expected by then-Business Secretary Vince Cable to leverage in £15bn of private sector investment. But after just three and a half years of operation, during which it funded 100 projects with £12bn of total investment, the government sold the whole operation (which it had funded out of its own coffers) to Macquarie, with no guarantees about its future operation. This was described as “deeply regrettable” by the House of Commons Public Accounts Committee in early 2018. An earlier National Audit Office report found that the GIB had invested in 100 projects, attracting £2.50
5— Damaging the green economy

It should come as no surprise, given this pattern, that Lord Kerslake noted that many of the contributors to his review found the Treasury to be “arrogant, overbearing and negative” in its dealings with other departments. But aside from the wider point, Kerslake makes about the culture of the department, there is a specific concern here regarding its impact on what he himself regards as a core function of “supporting high growth firms”.

Because the Treasury is so willing to intervene across departments, and to do so against their own objectives, it can act to undermine trust in government in general, since it is not possible to know if a seemingly solid commitment from one branch of government will not be overturned or undermined by the Treasury further down the line. The issue is critical to those looking to invest in long-term and potentially riskier projects, as many renewable and decarbonisation investments will inevitably be. Successive governments from 2010 have had clear objectives favouring renewables investment and action on climate change. But Treasury behaviour has consistently worked against them.

The result is that investment in specifically renewable and low-carbon projects has been damaged. Ernst and Young’s “Renewable Energy Attractiveness Index” suggested that investors were “confused” by “inconsistent” government actions on support for new, high potential firms and sectors: for example, Charles Roxburgh, current second permanent secretary, notes the Treasury’s seemingly valuable co-ordinating role in supporting fintech, “where we have also worked very effectively between the Government and, in that case, small entrepreneurial businesses to help the UK become a world leader ... ”. At least part of the issue (hinted at in Roxburgh’s answers to later Select Committee questions about the Green Investment Bank) is the desire to assume that new industries no longer require specific government support, and to move too quickly to a reliance on market mechanisms. But this short-term approach is exactly part of the problem here.

The slump in renewables investment is a direct instance of the lack of consent over government actions that we have framed this essay around. If government is not trusted, long-term challenges will not be met. The Treasury’s desire to chase short-term cost-savings here directly works against any long-term ambitions it might have to deliver towards environmental goals, even where the government has specifically set objectives (most notably in the carbon budgets) to achieve those goals. This does, in fact, beg the question: what does the Treasury itself see as its long-term aims?

6— The Treasury’s long-term plans

Any national ambition to tackle climate change and wider environmental degradaion must involve longer-term thinking. The endemic short-termism of both British private capitalism, and British government institutions, is well-known. But the Treasury does have long-term aims and objectives. Unfortunately, they are cramped and determinedly narrow-minded. Looking at the Treasury’s most recent departmental plan reinforces the point. Objective 2 seeks the “enabling” of “strong, sustainable and balanced growth”. “Sustainable growth” is then defined in paragraph 31:

> Drive up the UK’s productivity through investment in all forms of infrastructure and through enhancement of the UK’s business environment and approach to supporting high growth firms, taking forward actions set out in the 2017 Autumn Budget and the Industrial Strategy White Paper

> Deliver a programme of work to help the UK become a leader in the development and adoption of new technologies and encourage greater private investment and research

> Take advantage of opportunities and minimise risks from EU exit, supporting the UK’s negotiating position across a range of policy areas including energy, environment, migration and competition policy

This absolutely could not be more clear about the lack of priority given to the environment. The reference to “sustainable growth” should not be misread: it’s not about the environment, but a reference to something closer to Macpherson’s claims, seen earlier, about the “trend rate growth”: growth is “sustainable” in Treasury terms, not when it can happen without damaging the environment, but when it happens as a result of raising that presumed underlying rate of growth of the economy. This is why the stress on productivity appears so early on: the underlying assumption, in line with economic theory, is that increases in productivity growth will lead to increases in the trend rate of growth, and therefore make any headline growth increases “achievable”.

The “unsustainable” alternative, in Treasury terms, would be to deliver headline growth that was, in fact, nothing but a bubble, which subsequently bursts. The classic example of this might be Tory Chancellor Nigel Lawson’s late 1980s bubble when a combination of major tax cuts and interest rate cuts delivered very rapid growth for a Treasury that saw it as a way into the recession of the early 1990s. Or the so-called “Barber Boom”, when Tory Chancellor Antony Barber cut taxes and raised public spending to promote growth in the early 1970s, producing rapid growth for a few years before running hard into rising inflation.

These are clear and simple examples of the kind of macroeconomic mismanage- ment the Treasury’s own rules are set up to avoid, and few could reasonably disagree with them. But once we look beyond the very short-term issues of macroeconomic management – issues, it should be noted, that have largely been left to the independent Bank of England since 1997 – that problems arise. It was the Treasury, in conjunction with the newly- created Financial Services Authority (FSA) and the newly-independent Bank of England, that managed to preside over the spectacular inflation of a debt bubble during the 2000s, in the belief that this was essentially nothing to worry about. The period since the bursting of that bubble has resulted in some self-reflec- tion from senior figures, but, in the spirit of the Bourbons (who “forgot nothing, and learned nothing”), the department has rather reverted to type, prioritising short-term spending cuts to the detriment of the government’s other long-term social goals, as we have seen above.

As the House of Commons Environmental Audit Committee put it, with considerable understatement, it is “not clear whether the Treasury’s use of the term sustainability aligns with the concept of sustainable develop-
7 — Missing opportunities

The tragedy here is that none of this is inevitable. The issue is obviously not one of competence – the Treasury’s staff are universally recognised as smart and dedicated. Nor is it about some malign conspiracy at the heart of the civil service to undermine action on the environment. It is rather than the institution’s official belief that it does not have a meaningful strategic role in the economy to undermine even its narrow interest.

So a broader view of financial stability, in the light of climate change, is obviously desirable, and the Bank of England should be commended for setting a lead on the issue.

Even as the economy has recovered from the consequences of climate change and wider environmental destruction, the Treasury should shift its thinking. But the shift needs to involve more than just a passive adaptation to circumstances. As current governor of the Bank of England, Mark Carney, has argued, “risks [from climate change] will ultimately be minimised if the transition to a low-carbon economy begins early and follows a predictable path.” The Treasury must begin to follow suit. As argued by GFC Economics’ recent report, this should involve closer coordination between the fiscal and monetary authorities in delivering core government objectives.

Recommendation 2: the Treasury and Bank of England should agree a charter at the earliest possible opportunity, specifying the shared objectives of government policy in the context of a ten year programme to implement a Green New Deal.

Recommendation 3: the Treasury should add the economic risks from climate change and wider environmental degradation to its departmental risk register, and maintain an ongoing assessment of future risks.

The Office for Budget Responsibility currently produces long-range forecasts for the government fiscal position. Running over the next few decades, these obviously should not be considered forecasts in the conventional sense, but rather as guides to future issues and challenges for the government’s finances. At present, these focus closely on demographic change, looking particularly at the impact of a growing population on demand for healthcare and pension spending. Labour policy, announced by Shadow Chancellor John McDonnell in November 2017, is to expand the OBR’s remit to also include the fiscal consequences of climate change and environmental damage, which are likely to be severe. Research by the World Wide Fund for Nature (WWF) suggests that, if an unmitigated rise in global temperatures to 4 degrees by 2100 occurs, the simple economic costs to the UK by 2050 could include three-month droughts, costing up to £35bn of GDP (1%), and 354,000 jobs, or an acute shock to crops and livestock farming (for example, from disease, flooding wildfires, poor weather events and heatwaves), at up to £29.6bn of GDP (0.9%) and 347,000 jobs lost.

These sorts of fiscal measures exclude the wider concerns we have raised in this paper, but pushing the OBR and other government agencies to model and take account of their long-term, unmitigated costs will help drive through the change in thinking that is needed. In addition, the OBR, properly resourced, can start to function as a centre for expertise in such modelling, drawing on insights from the burgeoning field of ecological macroeconomics.

However, the government’s own current use of Computable General Equilibrium (CGE) modelling (by the OBR, HMRC, and elsewhere in government) has been questioned as providing potentially unsuitable grounds for making longer-term and large-scale policy recommendations. Synapce Energy Economics highlighted the assumption of pre-existing full employment, implying no net new job creation is possible, the failure to model health and other social benefits, and the absence of modelled international sector (as particularly problematic. Alternatives are available: for example, Cambridge Econometrics simulation-based modelling of the four carbon budgets suggested that, instead of the slight cost to GDP implied by CGE modelling, “meeting the reduction in greenhouse gas emissions set out in the first four carbon budgets will lead to a net 1.1% increase in GDP by 2030, the creation of an additional 190,000 jobs and higher real disposable incomes (£565 per household per year).” Government revenues would be improved by £5.7bn by 2030, on this forecast.

The point here is not to recommend one modelling technique or another – simply to indicate that no single economic model can be appropriate for the consideration of a complex and society-wide programme for decarbonisation and environmental transformation. The Treasury (and government economics in general) must become more open to alternative approaches, and develop sensible analytical techniques for policymaking on the basis of multiple modelling procedures and mixed methodologies.
seek to develop a deeper capacity in environmental and ecological economics, promoting pluralism in modelling, and actively seeking to recruit, train, and develop capacity in-house. The Government Economics Service Fast Stream and other recruitment criteria, and other continuous professional development should be widened to cope.

9 — The Green Book

The claim to superior evidence, on the basis of seemingly rigorous economics, is a key mechanism for Treasury control. As Christine Berry says, “evidence-based policy has become they a holy grail through which economic modelling has acquired a near monopoly on what counts as ‘evidence’, smuggling in hugely significant value judgements in the guise of objective analysis.” This applies particularly to dealing with the assessment of environmental goals, where objectives are frequently hard to assess against monetary costs or benefits, and where techniques used to provide such assessments are themselves of questionable merit.

The “Green Book” is the Treasury’s own guide to spending decisions on “policies, programmes and projects.” Its aims, as described by Tom Scholar, current Permanent Secretary, are to provide “guidance to help officials develop transparent, objective, evidence-based appraisal and evaluation of proposals to inform decision making.” The latest update, the first full revision since 2003, builds on a partial amendment in 2011 in allowing a wider range of criteria to be brought in when making assessments of projects and other proposed items of expenditure. In addition to the standard cost-benefit analysis, the Green Book now also allows consideration of “non-market impacts” for subjective wellbeing and environmental goods, where there is robust evidence available.

However, desirable as this expansion of permissible criteria may be, the Green Book still insists that market prices should be used as far as possible. As Diane Coyle and Marianne Sensier note, this focus on market prices gives rise to a “Matthew Effect”, whereby “to him that has more shall be given”: since existing market prices are formed on the basis of existing economic activity, judging the results of planned interventions by market prices alone will strongly bias decisions towards what already exists. For example, if transport investment is judged by the willingness of people to pay for improved transport, this will be biased towards those with more capacity to pay. Decision-making then becomes a series of self-fulfilling prophecies, with investment decisions automatically bent towards those places where prior investment decisions had already produced an impact.

Coyle and Sensier describe how this biases the Treasury against investment in projects outside of already successful areas, notably London and the South-East, and the regional bias of public investment is strikingly bad in the UK. But the same problem applies to any project that seeks to reshape economic possibilities, since – of necessity – those possibilities will be above and beyond what already exists, and (ideally) will be seeking to make more than simply marginal adjustments around what already exists. As former head of the civil service, Gus O’Donnell, has noted elsewhere, “Cost benefit analysis that uses market prices effectively endorses the status quo distribution of income”, to which we would add “and path of development.” A transformative Labour government, seeking to both shift the balance of power and wealth in favour of the rest of the country, and to decarbonise the economy, should treat the redraft of the Green Book to reflect this as a priority.

It is beyond the scope of this chapter to make specific proposals on the rewrite, but the form of appraisal suggested by Coyle and Sensier has a number of advantages. It adapts cost-benefit analysis to wider local and sector-specific knowledge, appraising against broader social standards, and making more details use of clear, mixed-methods analysis for large scale interventions all look appropriate. Existing Green Book rules will still largely apply for smaller-scale investments, but where the intention is to help deliver a transformative project – and, in particular, where a series of investment projects are likely to need to be enacted sequentially to deliver decarbonisation – the Green Book will need a significant overhaul. Work on preparing the ground could usefully begin now.

Recommendation 5: that the Green Book guidance for investment in projects is redrafted in the light of the need to meet tight decarbonisation and other targets, requiring a broader assessment of social and environmental impacts.

The Labour Party should open an immediate expert-led review of the current Green Book, looking to make recommendations on improving the existing text in light of the finding of rapid, socially-just decarbonisation and minimising environmental damage.

10 — Discount rates

There are, however, deeper issues opened up if we are serious about broadening the basis for economic decision-making. The most fundamental of these is in the assessment of policies whose impacts will either only appear late, or whose impacts may only appear after a significant period of time. The conventional means to consider this is to apply a discount rate to benefits arriving in the future, with those benefits further in the future considered to be worth less than those closer to the present. This is intended to reflect both the innate uncertainty of future events (we cannot know for certain whether a planned event will occur, or if we ourselves will be there to enjoy it, or who else will be); and, more questionably, the expectation that future generations will be richer than ours, and therefore their enjoyment from benefits (considered in the form of more income) will be lower than ours. The use of this discounting procedure is fundamental to the type of cost-benefit analysis the Green Book (and government decision-making more generally) embodies. At present, government guidance assumed a 1.5% discount per year for “pure” time discount, and 2% per year for the assumed reduction in marginal utility of income. The lower the discount rate, the more important the future will be in our decision-making today.

However, it has been subject to powerful challenge from environmental economists, perhaps most strikingly in the 2006 Stern Review of the Economics of Climate Change, referenced earlier. Nicholas Stern and his team presented a first-principles argument that the correct social discount rate to consider when approaching the costs of climate change and climate change mitigation, given the very long-term and plausibly catastrophically high costs of climate change, is very close to zero. A lower discount rate means that action taken today to combat climate change is more likely to pass a cost-benefit analysis test. As the NAO report on sustainability found, “aspects of HM Treasury’s methodological approach to evaluating the relative merits of bids during the spending review favoured projects that deliver benefits in the short-term rather than the long-term.”

This problem appears most strikingly in the estimate (included in the “pure” time preference) of “catastrophic risk”, by which the Green Book means “unpredictable risks not normally included in appraisal”: in other words, an allowance for unexpected and unpredictable events, like natural disasters or technological change. The Green Book sets this at 1% of the total 1.5% for “pure” time preference. The Stern Review proposed a value for this component of 0.1%, reflecting the catastrophic potential of climate change – a very low discount rate to reflect the actual risk of the end of meaningful human civilisation. The Green Book sets its value ten times higher, based not on a methodical assessment of future risks, but, bizarrely, on the death rate in the United Kingdom in 1981. This is obviously backwards-looking, and a measure tied, more to the point, cannot under any circumstances be considered a plausible estimate of catastrophic or systemic future risks from environmental collapse. Treasury notes claim the Green Book estimate “harmonises” the Stern Review with existing estimates; in reality, it does no such thing.
Additionally, Gus O’Donnell and his co-authors have argued that where we want to take a broader view of impacts, beyond the merely monetary and into considering broader wellbeing, it is very difficult to present an argument that the marginal utility of such impacts declines over time. This, in turn, suggests a lower discount rate is more appropriate when considering broader measurements of welfare than the purely fiscal.

Finally, there is the long-term consideration of the expected rate of growth of consumption. As we have noted earlier, there are three major considerations, post-2008, that have affected GDP: first, that an increasing volume of economic activity is occurring outside of conventional markets (such as digital content production) and cannot easily be measured; second, the serious risk that growth in the major advanced economies has been permanently reduced (often referred to as “secular stagnation”); third, that GDP itself is losing its prominence as a desirable proxy for welfare. By biasing the measurement of GDP downwards, all of this would itself be losing its prominence as a desirable proxy for welfare. By biasing the measurement of GDP downwards, all of this would further into the future, or where uncertain damage to the environment. Clearly this situation, in which people asked to report on their own wellbeing adapt rapidly to their circumstances. It is for this reason that single, aggregate wellbeing measures, sometimes proposed as alternatives to GDP (Bhutan’s “Gross National Happiness”, for example) are generally rejected in favour of a dashboard of indicators.

Wellbeing measures, and particularly subjective wellbeing measures, have been criticised, broadly for two reasons: first, that a complex indicator like wellbeing is hard to interpret in a way that (for example) real wages or unemployment are not; second, that the relationship between policy and aggregate wellbeing outcome is not always clear, and data produced only with a lag; and third, the subjective wellbeing especially is subject to the problem of adaptive expectations, in which people asked to report on their own perceived wellbeing adapt rapidly to their circumstances. It is for this reason that single, aggregate wellbeing measures, sometimes proposed as alternatives to GDP (Bhutan’s “Gross National Happiness”, for example) are generally rejected in favour of a dashboard of indicators.

Critically, the relationship between personal wellbeing and environmental damage is not always clear: it is entirely possible for one to be maximised, even across a whole population, whilst doing immense damage to the environment. Clearly this situation is unlikely to be sustained for any length of time, but the issue we collectively face is more like one of constrained optimisation: maximising wellbeing given some environmental constraints. Kate Raworth has presented an attractive popularisation of this concept in her Doughnut Economics, and her “doughnut”, with economies ideally falling in the ring between achieving some baseline wellbeing without breaching environmental limits, is a neat graphic metaphor.

Nonetheless, with the growing uncertainty of GDP measurement, the desire amongst the public to see government respond to real needs, and – critically – the need to win legitimacy for a long-term programme of economic transformation all strongly point towards adopting a far broader set of metrics of economic progress. IPPR and NEF have both recently made proposals on broadening our indicators of progress, whilst ONS have already begun publishing wider economic indicators, but shifting the focus will require political direction.

Recommendation 7: a broader suite of measures of economic progress should be placed front-and-centre of economic policymaking, with Treasury taking the lead in the reporting and disseminating the new approach. GDP can retain its function as a broad measure of economic output but should be considered downgraded in policymaking.

Recommendation 8: we follow the National Audit Office in recommending a broadening of the bilateral (Treasury-to-department) Spending Review process to include cross-government groups on key environmental objective

– for example, focusing on biodiversity loss, or on meeting departmental carbon budgets. The Treasury should take the lead in facilitating the creation of themed groups on key environmental objectives as soon as possible in the Spending Review process. The new post of Treasury minister for environmental economics should take ownership of the negotiations, with support from the Chief Secretary.

Recommendation 9: Treasury non-executive directors should be appointed by reference to expertise in environmental economics and economic transformation.

We would expect a future Labour government, in addition, to appoint a full complement of special advisors through the Council of Economic Advisors, following the model of Gordon Brown’s Chancellorship.

13— An example to watch: New Zealand’s new approach

It’s entirely possible for a finance and economics ministry to take a different approach to that of the UK Treasury. New Zealand’s Treasury, a direct equivalent to HMT in a comparable Parliamentary system, published its “Living Standards Framework” (LSF) in December 2018. This contains a broad range of “wellbeing indicators”, including “cultural identity, environment, housing, income and consumption, and social connections”, intended to guide policy. The approach and the framing are not new – David Cameron, for instance, was an early enthusiast for a “wellbeing” approach to economic policy. But New Zealand is the “first western country to design its budget around wellbeing priorities”. Published at the end of May 2019, this first “wellbeing budget” delivered significant increases in mental health funding and offered an assessment of its measures against the Living Standards Framework.

More significantly, however, was the transformation in the Treasury’s own Budget-setting processes. The (familiar) spending rounds in which departments bid for their own funding, using their departmental priorities, before entering into a negotiation with the Treasury assessing against value-for-money and narrowly defined economic objectives were overhauled. In their place, assessment throughout the Budget process was made against the wellbeing indicators in the Living Standards Framework, with committees of departments at Cabinet level...
working on priority areas inside the LSF. The result has been to encourage cross-departmental collaboration with many programmes in the Budget the “result of new, collaborative approaches.” The intention on the part of the Treasury and the New Zealand government is to embed the approach over coming years, with an explicit wellbeing-based impact assessment built into next year’s budget round.

This exposes some of the limitations of the wellbeing approach under circumstances where environmental degradation has to be considered an urgent national and global priority. In the New Zealand case, whilst the environment forms a part of the approach, it is only one of a number of different wellbeing indicators – rather than a priority in its own right, or, more fundamentally, a meaningful constraint on action. And whilst some attempts have been made to combine wellbeing measures with environmental measures, these have not resolved the fundamental lack of relationship (or even potential contradiction) between the two. However, as part of a reconsideration of the purpose of the Treasury, and as part of the effort to develop a legitimacy for government intervention on the economy, over a significant period of time, the bold approach of the New Zealand government warrants close attention.

Recommendation 10: that progress of New Zealand’s wellbeing budgets are monitored over the next few years with a view to incorporating lessons and best-practice into UK budget making.

Footnotes
1 James Pickard, (6 June 2019), “UK net zero emissions target will ‘cost more than £1tn’”, Financial Times.
2 See also the argument presented in Martin Craig, (November 2016), “Treasury’s control and the British environmental state”, Speri Paper 24, Sheffield Political Economy Research Institute.
3 Antonio Gramsci, Selections from the Prison Notebooks, tr. Hoare, Q., Nowell Smith, G., London:
Road Map to a GND — Finance


House of Commons Environmental Audit Committee (17 November 2016), "Sustainability and HM Treasury", Fifth Report of Session 2016-17, para.3.


National Audit Office (12 December 2017), The Green Investment Bank, London: HMSO.

Lord Keslake (February 2017), Rethinking the Treasury, Keslake review of the Treasury, p.


Coalition Agreement, 2010: "The Government believes that climate change is one of the gravest threats we face, and that urgent action at home and abroad is required. We need to use a wide range of levers to cut carbon emissions, decarbonise the economy and support the creation of new green jobs and technologies. We will implement a full programme of measures to fulfil our joint ambitions for a low carbon and eco-friendly economy." Conserva- tive Manifesto, 2015: "We have been the greenest government ever... we will continue to support the UK Climate Change Act... we will cut emissions as cost-effectively as possible." See also the "Clean Growth" pillar of the 2015 government’s Industrial Strategy: BEIS (November 2017), Industrial Strategy: building a Britain fit for the future, Cmd.8628, London: HMSO.

Ernst and Young (September 2015), Renewable Energy Country Attractiveness Index 2015, p.35.

WWF (17 July 2012), "Treasury are undermining renewables industry”.

2020 Renewables Ltd., written evidence to the inquiry, 2016.


Chalmers & Rees, oral evidence to House of Commons Treasury Select Committee (24 October 2018), Inquiry into “Work of the Treasury”, HC 1668, Q66.

"...we would look on the Green Investment Bank as having been successful at that early intervention, to address a market failure. A mark of its success is that we do not need to provide that financing because the private sector has come in." Charles Roxburgh, oral evidence to House of Commons Treasury Select Committee (24 October 2018), Inquiry into “Work of the Treasury”, HC 1668, Q71.


Industrial Strategy Commission (November 2017), Final Report of the Industrial Strategy Commission. ; see also House of Commons Public Administration Select Committee (15 March 2015), Leadership for the long-term: Whitehall’s capacity to address future challenges, para 6: "There is long-term thinking in Government, but the evidence is that the short-term dominates..."

BBC News (9 March 1999), “Budget blunders”.

House of Commons Environmental Audit Committee (17 November 2016), "Sustainability and HM Treasury", Fifth Report of Session 2016-17, para.5.

National Audit Office (July 2016), "Sustainability in the Spending Review", Briefing for the House of Commons Environmental Audit Committee, para.12.

House of Commons Environmental Audit Committee (17 November 2016), "Sustainability and HM Treasury", Fifth Report of Session 2016-17, para.16.


UK Sustainable Investment and Finance Association (February 2016), Written evidence to the House of Commons Environmental Audit Committee inquiry into “Sustainability and HM Treasury”, p.49.


Cambridge Econometrics (10 September 2014), The Economics of Climate Change Policy in the UK: An analysis of the impact of low-carbon policies on households, businesses and the macro-economy, Cambridge, p.3.


New Zealand Treasury (May 2019), The Wellbeing Budget.

See, for example, the “Happy Planet Index” from the New Economics Foundation. (NEF, 2016). The Happy Planet Index 2016, London: New Economics Foundation.
Public Finance for a Green New Deal: Why We Need to Change the Rules

Alfie Stirling, David Powell & Frank Van Lerven, New Economic Foundation (NEF)

1— Introduction

The physics of climate science are clear. The global economy must be re-embedded within sustainable limits – consciously and deliberately – within little more than a decade. If not, we face irreversible shifts in weather, temperature and average sea levels that could ultimately prove fundamentally incompatible with a future in which all human societies can flourish.

Perhaps for the first time in the UK, recognition of the sheer scale of change required has begun to go mainstream. In May 2019, the UK government’s official advisors on emissions policy, the Committee on Climate Change (CCC), called on government to achieve ‘net-zero’ emissions by 2050. The CCC acknowledge upfront this would require transformation in every resource and energy intensive sector of the economy, from power generation to heat, construction, manufacturing industry and agriculture. But perhaps even more significant was the CCC’s recognition that this could no longer be done sequentially, sector-by-sector. In their view, the only remaining option for the UK is simultaneous, economy-wide transformation requiring the largest peacetime mobilisation of resources in the country’s history.

Climate change is very far from the only socio-environmental problem that we face. But it is perhaps the most urgent. It is now clear that a Green New Deal is needed to reorient economies towards the required investment, employment and redistribution of resources and opportunities that are essential to avoid its worst impacts.

2— The case for public borrowing and investment

Nothing on the scale of a Green New Deal can be delivered in the UK without far more active and interventionist public finance and fiscal policy. But that is not to diminish the importance of reshaping and guiding private finance as well.

Monetary policy needs to evolve quickly. Lower comparative interest rates are needed in support of sustainable industry and could be achieved through modification to existing vehicles like the Bank of England’s so-called ‘term funding scheme’. The Bank of England also needs to take decisive action in reducing the carbon intensity of the financial ‘assets’ it is willing to buy and hold. Financial regulation and prudential policy must shift focus as well. In particular, private banks should be instructed to hold back more reserves for loans to carbon intensive industry – reducing the overall attractiveness of dirty investments. And most significant of all, the structure of the banking market itself needs to be shaken up with the creation of a new network of public purpose, green investment banks that operate at breadth and scale across the entire country.

Vital though these measures are, focusing on reforms to private finance alone will not be sufficient. The reasons for this are twofold. The first is pure pragmatism and feasibility. Nothing on the scale and speed of required investment has ever been achieved before without direct state financial support. As research at the Breakthrough Institute has shown, the five most successful deliberate reductions in carbon – although modest by comparison to what needs to now be achieved – all came off the back of public sector led governance and investment. In the UK, the CCC has also acknowledged explicitly that public subsidy and price signalling alone will not be enough, while the Treasury have reportedly acknowledged that the CCC’s new targets would not be credible without plans for ‘increased government spending’.

The second reason for financial reform is even more important. Fairness. Alongside urgency, social and economic fairness must be a guiding principle of climate transition. Investment will be needed not just in the places where private markets (however guided) can make use of the profit motive of firms alone. Funds will also need to flow into projects and investments that yield the highest social returns for people and communities, and sometimes in the absence of direct commercial interests. This means supporting jobs, economic security and social well-being among places and industries that are already neglected by the UK’s current economic model. To this end, the funding for a green industrial strategy cannot be intermediated by private investors alone. And many of the supporting measures that are essential to rebalance, reorient and rebuild the UK economy – from investing in skills, public transport, and a decent and humane social security system – will also require significant public funds.

Public investment on this scale requires an accompanying strategy for raising the necessary resources. Tax reform will be important in changing behaviour in industry and consumption. Making sure any tax reforms are progressive (those with the highest levels of income and asset-based wealth contributing the largest proportionate share) will also ensure the impact of change are fairly distributed. The receipts generated from taxa-
tation will also provide much needed finance. But a key point is that economy wide trans-
formation is too big a task to be left to those in the present to finance alone.

Instead, public borrowing is needed to also pool resources across time. When a country builds a school or a hospital, public borrowing is invariably used by governments to ensure that all future pupils and patients who stand to benefit also contribute a fair share to the original investment, by helping to pay down future interest payments out of their future taxes. The green transition should be considered along similar lines. Transition needs to happen now, but just as it would be unjust to allow future generations to suffer the climate consequences of today's unsustainable economy, so too is it unfair that those who happen to be paying their taxes today are forced to meet the bill – whether in higher taxes or consumer prices, or lower wages and profits. The financing of a Green New Deal should be borne equally across present and future generations and long-term public borrowing is the fairest and most efficient way to achieve this aim.1

3— Unlocking transformational public borrowing

Paradigm-shifting policy change doesn't happen overnight. Realising a green transformation across the economy will require the mobilisation of ideas and political leverage on a scale rarely seen in modern UK history. Such a paradigm shift has only happened twice in the past 70 years – with the creation of the welfare state in the 1940s and the deregulation of industry and finance in the 1980s. But as our colleague Miatta Fahnbulle has written, delivering a Green New Deal that is democratic, fair and effective requires deep and comparable institutional change once again.

Developing the right reforms to unlock and deploy public investment at sufficient scale represents a monumental challenge in and of itself. To meet this challenge, the very rules for managing the public finances need to be recast. But doing this with rather than against existing institutions will be key, whether the Treasury and its independent watchdog – the Office for Budget responsibility – or the Bank of England itself. History suggests that for this to succeed, the case for evolution needs to begin within and between institutions themselves, and by tackling the logic of incumbent rationales head on.2

4— Proposal 1: Modernising the fiscal rules

Most advanced economies manage their public balance sheets through ‘fiscal rules’ – targets for public debt and borrowing over a medium-term horizon. But these rules are ill-equipped for either the enormity, or urgency, of the present climate challenge. Such targets are therefore a key limiting factor to transformational public finance.

The precise details of the fiscal rules themselves in the UK have been written and rewritten over the past two decades, often revised to suit short-term political expedi-
ency. But the broad overall prescription – to limit public debt borrowing – has remained unchanged. Gordon Brown’s so called ‘golden rule’ stated that borrowing for day-to-day spending should never exceed average tax receipts over a full economic cycle. And its counterpart, the ‘sustainable investment rule’, prevented public debt rising from above 40% of GDP. Today, the government’s charter for budget responsibility limits public sector net borrowing to less than 2% of GDP by 2020-
21 and states that net debt must also be fall-
ing in 2020-21. Within the UK’s current fiscal rules, the maximum level of additional public borrowing (compared with the current forecast) possible at the start of the 2020s would be around 1% of GDP.3 But if the current commitment in the government’s fiscal rules to ‘return the public finances to balance at the earliest possible date in the next Parliament’ is retained, the scope for additional borrow-
ing for investment would be expected to fall to zero (if not negative) by the mid-2020s at the latest.

The overall level of public investment required to fund a Green New Deal is impos-
sible to forecast accurately. This is partly because it is a function of technological and economic uncertainty. But also because it is dependent on the outcome of legitimate democratic debate over questions of fairness and social justice. But what is clear is that current limits to public borrowing are demonstrably in tension with a just climate transition. The CCC estimates a total resource cost to transition of between 1-2% of GDP by 2050 (although the Department for Business, Energy and Industry reportedly estimates a higher cost) and which could come from a mixture of public and private finance.4 However, the CCC’s estimates are narrow in scope. For example, they do not include the additional resources needed to help ensure the benefits and opportunity of green transition are broadly shared (for example in the form of social security, skills training and social hous-
ing). Furthermore, they do not reflect the fact that much of the required public investment may be need to be frontloaded. Estimates for capital costs – such as for new infrastructure – are presented as average annualised contri-
butions to resource costs in the CCC’s esti-
mates. But where publicly financed, these investments would feature as larger upfront increases in public debt and borrowing.

Outside of major transition or recession, public borrowing in ‘normal’ times has historically been around 1.3% of GDP per year. Yet by the mid-2020s, even this baseline level of net borrowing would be precluded by the current fiscal rules – let alone the level of additional borrowing required for an effective and fair Green New Deal. As such, and under current fiscal rules, sufficient public invest-
ment in climate transition would necessitate cuts elsewhere: requiring trade-offs between long-term societal health and wellbeing with those of a sustainable economy and climate. This would be harmful at the best of times. But in view of growing pressure on public resources from other structural changes like an aging population, technological change and globalisation, such trade-offs are likely to prove intolerable.

But how have we got to a place where our fiscal rules are an active impediment to tackling one of the greatest existential risks to both economy and society? At least, three basic assumptions from mainstream macroeconomic underpin the current broad design of UK fiscal rules:

• First, that a country’s economy operates on a medium-term cycle of modest boom and bust – in apparent iso-
lation from the environmental systems (or indeed other structural changes such as globalisation or demographic change) within which it is embedded.5

• Second, and partly given that the economy apparently operates within its isolated, uninterrupted cycle, it is assumed that the right level of public debt and borrow-
ning for public good should on average remain largely unchanged across time.6 Moving above this average is thought to raise market interest rates above their ‘efficient’ level, thus dis-incentivising prof-
itable and productive private investment that could otherwise have taken place.7 At worst it can cause a crisis of confidence in the domestic economy, leading to crip-
pling high interest rates and inflation.

• Finally, in order to minimise these risks, it is assumed that increases in net borrow-
ning beyond the long-term average are only ever temporary, and in response to eco-
nomic shock (for example through higher social security payments going to the unemployed, the costs of which would then fall automatically as the econ-
omy recovers).8

Collectively these assumptions lead to a relatively simple policy prescription which is absorbed into the very culture of Treasury administration: public debt and borrowing must always be minimised during the ‘boom’ years in order to create ‘fiscal space’ – room for further borrowing – during and after the bad years. Hence the current limits to debt and borrowing in the present fiscal rules can only be ‘review(ed)’ once, and if, the UK
economy experiences ‘significant negative shock’.15

Even when assessed on its own terms, this approach to managing the public finances suffers from a logical oversight. Essentially, the current fiscal rules assume that the best time to use fiscal space is always after a crisis has already taken place. But with respect to addressing the economic and social crises that would be brought about by climate change and global warming, this assumption is wholly inappropriate. In view of such a structural, rather than cyclical problem, preventative investment to reduce current and future emissions today would be many times more efficient at delivering public well-being than waiting to intervene until after a changing climate has caused a ‘significant economic shock’. Instead, the rules steer policy makers towards holding back space to borrow in the future, rather than borrowing for preventative investment today. This is despite the fact that being able to pay a little more unemployment benefit is an entirely inappropriate contingency when faced with food and land shortages caused by rising in global temperature and sea levels.

In short, the current fiscal rules embed 20th century ideas of fiscal responsibility, where the greatest risks to a country were deemed to be the market’s reaction to the public balance sheet, rather than genuinely existential threats to the economic system and societal wellbeing. But in view of what we know must now be done to avert irreversible climate change, the current fiscal rules represent the definition of irresponsibility for the 21st century.

The first step to solving this problem can nonetheless be achieved through evolution, rather than revolution, in the current rationale underpinning fiscal rules. Even within mainstream economic literature, the validity of using the existing stock of debt as a proxy for responsible future borrowing has been discredited.16 Instead, in the UK, the Treasury should begin work immediately on how to define new fiscal targets in terms of more direct and accurate measures of how much fiscal space it actually has. To do this effectively will require the development of two new analytic tools:

- First, development of a framework for assessing, measuring and forecasting ‘fiscal space’. Fiscal space should be defined in terms of the amount of additional public borrowing possible before the marginal economic costs of further borrowing are likely to outweigh any potential benefits from investment (for example by causing a crisis in private investment, treasury bond issuance or a collapse in the value of sterling). New research at the International Monetary Fund (IMF) has set out the beginnings of a framework to measure a given country’s ‘fiscal space’ through an assessment of: exposure to shock, access to finance and present economic and institutional structures.17 Building on the work at the IMF and elsewhere, a systematic approach to measuring fiscal space should be modified, trialled and formalised for a UK context. Such a framework would allow the Treasury to more accurately (and more accountably) assess the level of fiscal space available to the UK at a given point in time.

- A framework for conducting cost-benefit analysis of how to use fiscal space (through higher or lower levels of debt and public borrowing). The Treasury should look to adapt and develop existing cost-benefit methodologies to assess the comparative effects of different uses of fiscal space with respect to either averting or responding to future economic shocks. Assessing scenarios in response to climate related risks should predominate, but risks related to demographic and the financial system should also be included. Such a tool would allow policymakers to accurately assess the implications of holding back fiscal space compared with the implications of borrowing for investment, and therefore allow politicians to come to an informed view on the best combination of fiscal intervention or fiscal prudence at a given point in time.

Development of such tools would allow fiscal policy to operate with at least a similar level of sophistication as present day monetary policy. Just as it is considered equally harmful to overshoot or undershoot the inflation target, so too should it be considered just as irresponsible to underuse fiscal space as it is to over-use it. This principle is true at all times, but the stakes are especially high today in view of the climate consequences of failing to re-embold the economy within safe limits on time.

5 — Proposal 2: Greater monetary and fiscal coordination around fiscal space

In view of a crisis such as that presented by climate breakdown, policy makers could also use the management of fiscal space as a focal point for tighter coordination between monetary and fiscal policy – and in support of a common objective for economy-wide transformation. Indeed, both throughout history and even among advanced economies today, central banks and treasuries have successfully used such coordination to tackle some of the biggest socio-economic challenges of their time, from recovering from war to supporting ambitious industrial or socio-economic transformation.18 Besides the stated objectives of current policies like so called ‘quantitative easing’ – reducing long-term interest rates by buying up debt in the marketplace – buying up public debt in particular also has powerful spill-over effects for fiscal space. In the UK, the Bank of England continues to hold £435 billion of government debt. In doing so, the Bank ensures demand for this debt remains strong, pushing down the interest rate that government is expected to pay. In the UK’s case, this has contributed to a decade of record low borrowing costs for the Treasury. The direct effect of this is to significantly increase the government’s fiscal space beyond what it would otherwise have been. The Bank’s QE programme therefore significantly increased the scope for productive public spending, but this opportunity was largely wasted by economically harmful austerity politics and the accompanying tightening of the fiscal rules under Coalition and Conservative governments. Failure to make the most of this fiscal space also made it harder for the Bank of England to deliver on its own objectives as well, since after 2009 the Bank of England could not cut interest rates any further directly to stimulate economic recovery.19

Besides a new framework for managing fiscal space at the Treasury (see previous proposal), a Green New Deal may also require a revised institutional arrangement for more explicit cooperation between the Bank of England and the Treasury. Such an arrangement would allow the Bank to support the Treasury in maximising its fiscal space so that it can be deployed in the interests of both institutions. One way to achieve this could be to introduce new supplementary targets in the Bank’s mandate. A further option could be to introduce a third institution – such as a public investment bank (or network of banks), hereafter green investment bank (GIB) for shorthand – to increase commercial green lending for business growth in green industries, housing, technological innovation, and social and physical infrastructure.20 Such a GIB would need a democratic mandate or ‘mission’ from government (for example, from the Department for Business, Energy and Industrial Strategy as well as local authorities) to support a Green New Deal.

The advantage of the latter approach is that it would also help to provide a backstop against short-term political negligence from government in the form of underusing fiscal space for ideological reasons: or ‘surplus bias’.21 Instead, a framework could be developed – such as government demonstrably failing to meet legally binding climate targets, or failing to provide sufficient stimulus during a large economic shock – the Bank of England could be given the power to delegate additional investment in green infrastructure to the GIB. To ensure the extra lending could always be funded, the Bank of England could
accompany such a delegation in lending with additional purchases of GIB bonds from third party private investors. The demand for these bonds would help ensure that the GIB always had fiscal space within which to operate when required.

Footnotes
1 Intergovernmental Panel on Climate Change, accessed June 2019,
2 Committee on Climate Change, “Net Zero - The UK’s contribution to stopping global warming”, May 2019,
4 Yannis Dafermos et al, “Can green Quantitative Easing (QE) reduce global warming?”, Foundation for European Progressive Studies Policy Brief, July 2018,
6 Laurie Macfarlane, New Economics Foundation, accessed June 2019,
9 Jim Pickard, “UK net zero emissions target will ‘cost more than £1tn’”, FT, 5 June 2019,
11 Simon Wren-Lewis, Mainly Macro, accessed June 2019,
13 Office for Budget Responsibility, “Economic and Fiscal Outlook”, March 2019,
14 Committee on Climate Change, (2019)
15 New Economics Foundation analysis of average annual public borrowing since 1950 based on OBR, accessed June 2019, (https://obr.uk/data/) and ONS, accessed June 2019, data. The average excludes years where GDP growth was negative, as well as the five years following negative GDP growth.
16 Alfie Stirling, IPPR Commission on Economic Justice Policy Paper, “Just About Managing Demand”, April 2018,
17 University of Oxford, Department of Economics, accessed June 2019,
18 GOV.UK, accessed 2019
19 Olivier Blanchard, “Public debt and low interest rates”, January 2019
20 International Monetary Fund, accessed June 2019,
21 Frank van Lerven and Josh Ryan-Collins, “Bringing the helicopter to ground: A historical review of fiscal-monetary coordination to support economic growth in the 20th century”, August 2018.
22 Stirling, “An alternative to QE: was Billy Bragg right all along?”, Open Democracy, 23 April 2018.
25 Stirling, IPPR (2018)
26 Stirling, IPPR (2018)
2.3

Green Central Banking

Fran Boait, Positive Money

1 — Introduction

To transition to a low-carbon economy, banks and other financial institutions will need to shift billions of pounds away from fossil fuels and ensure they fill the ‘gap in green investment’. It’s clear, however, that a changing climate threatens the profits and stability of the private financial sector, either through physical damage from weather events or revaluations caused by technological or policy changes.

Central banks, as coordinating institutions at the heart of the financial system, are aware that they have a role to play in managing these issues. The Bank of England and other central banks currently see their task as ensuring that climate change and the low-carbon transition do not damage financial stability. Encouragingly, this discussion is accelerating fast through central banks, academia, civil society and the mainstream media - including the financial press.

In the UK, action is being taken by The Bank of England which in April 2019 announced it would disclose its own climate risk after significant pressure from civil society and academicians. This is radical. Central banks are historically orthodox and establishment institutions steeped in mainstream economics, which itself does not recognise how the market failure of climate change points to huge flaws in orthodox economics. Impressively it is now mainstream to argue that climate change and society’s response to it create risks that threaten the stability of the financial system.

Whilst that shift is welcome, if it is the only approach taken the Bank runs the risk of leaving meaningful action until it is too late. Unless it considers the long-term viability of the economy, concern for climate risk looks incoherent. Currently Bank officials reject the arguments put forward by many in civil society calling for their assistance in raising investment for the low-carbon transition. Central banks are public institutions responsible for regulating finance, so should contribute towards closing the green investment gap. Considering climate change only as a financial stability risk will not be sufficient for meaningful action.

A Green New Deal must also look to ensure that throughout a green transition the economy is made more equitable and equal. Power cannot stay as it has been: concentrated. If we’ve learned anything from the 2008 global financial crisis, it’s that the instability of the financial system will always undermine social and environmental progress. That means we can’t deliver the ambitious Green New Deal we need to whilst maintaining the status quo: a financial sector which is inherently extractive, rent-seeking, and concentrates wealth and power among fewer and fewer hands.

One of the key problematic design features of the current money and banking system is how commercial banks have abused their power to create new money when they lend. By pumping 80% of new loans into property and financial markets, they have inflated asset bubbles whilst fuelling wealth inequality and building up a private debt mountain, exposing the economy to financial instability. At the same time, they have undertaken excessive credit allocation to environmentally destructive activities like fossil fuel extraction, and insufficient lending to green industries.

It is well within the capacity of central banks to do more to accelerate decarbonisation and change the rules of the game away from an extractive rent-seeking financial sector. We present several policies that the Bank of England could adopt, ranging from the adaptation of existing rules and schemes to bold new tools to address underlying problems in the system. Of course, central bank policy cannot take place in a vacuum, and must speak to the current institutional framework and wider context, including developments both in government policy and financial markets. Designing a climate-friendly central bank for the 21st century is fundamentally a political process. A substantial literature now exists on the financial and economic effects of climate change. It is time policymakers took this on board and envisaged a new mandate for the Bank of England to reflect it.

We start by looking at the big topic that is gaining traction: climate risk, and whether improvements to financial regulation can be the game changer for deflating the carbon bubble. Then we look at the central bank’s role in accelerating green investment. Finally, we turn to how wider issues are key to making sure a Green New Deal includes significant financial sector reform.

2 — Climate risk to financial stability

Climate-related financial risk has been a huge driver in getting climate change on the agendas of central banks and financial institutions. There are two main sources of risk that climate change presents to the financial sector: transition, and physical damage.

‘Transition’ risk results from the revaluation of assets due to changes and costs associated with the shift to a low-carbon economy. The overvaluation of fossil fuels (or other high-carbon industries) is called the ‘carbon bubble’. Financial instability will be caused by the inevitable bursting of the bubble, so if we account for transition risk now, we can - in theory - deflate the carbon bubble in a more managed and less volatile way. Financial losses from the drop in value of fossil fuels is already underway: for example, a Carbon Tracker Initiative report showed how the EU’s largest five power generators collectively lost over 37 per cent of their value
Disclosure
To date, the primary answer to ‘what do we do about climate-related financial stability risk?’ has been ‘disclosure of the current risk on banks’ balance sheets’. The rationale is that we first need to assess the risk financial institutions are exposed to. Transition risk can be assessed by understanding how much of a bank’s balance sheet would be affected by a change in fossil fuel pricing or energy demand. As outlined above, the methodology of calculating that risk is complex: unfortunately this fact has been used to argue against seeking mandatory disclosure. The argument goes ‘if we don’t know how to measure it yet we shouldn’t make it mandatory because it won’t produce useful data’. The counter argument is of course ‘let’s make it mandatory - accelerate the process and good practice will emerge.’

Over the last two years civil society has been calling on central banks to lead the way in disclosing the climate risk of their balance sheets; since central banks are calling on banks and large finance institutions to disclose risk, surely they must lead by example? In the UK, this argument has already been won. In April the Bank of England announced it will be disclosing an assessment of how it manages climate-related financial risk in its 2019/20 annual report. Alongside this the NGFS (Network for Greening the Financial System), of which the Bank of England is on the steering committee, made further demands on financial institutions asking them to take significant steps in accounting for climate risk. For one, supervisors are encouraged to set expectations to ensure financial firms are adequately addressing the financial risks from climate change. And secondly, firms are encouraged to take a long-term, strategic approach to the consideration of these risks, and to embed them into their business-as-usual governance and risk-management frameworks.

These developments are welcome and heading in the right direction, but in order for disclosure to be effective, it should be mandatory. There are some excellent banks leading the way, particularly those championing the Platform for Carbon Accounting Financials (PCAF). A 2018 Prudential Regulation Authority survey showed that most banks are still some way from the necessary level of disclosure: only 10% manage climate risks comprehensively and take a long-term strategic view, while 30% of banks still only consider climate change as a corporate social responsibility issue. We have to be sceptical about certain banks and their willingness to move. A report released in March 2019 showed that since Paris climate agreement banks have financed $1.9 trillion of fossil fuel projects with financing on the rise each year. Accord-

ing to one source some banks see fossil fuels as safe investments amidst increasing political, economic, and environmental instability. Disclosure is important in informing investor behaviour: the sooner disclosure happens, the sooner trends away from fossil fuel investments take place. Against this backdrop it’s clear that we cannot afford to wait for the private sector to ‘voluntarily disclose’ or to align their investments with a 1.5°C world. Disclosure must be mandatory.

Macropolicy
Since the 2008 crash, financial stability has been added to central bank mandates in response to the fact that systemic risks posed by commercial banks cannot be understood by looking at those banks individually. New tools have been developed to look at, for exam-

ple, the risk of the mortgage market creating financial instability. There have been proposals to take this further by specifically targeting risks brought about by climate change. This approach could be hugely important in deflating the carbon bubble, simultaneously increasing financial flows towards a green transition whilst ensuring financial stability.

Once again, the challenge regulators face is the complexity of calculating risk. Proposals range from very simple - tagging certain assets as ‘green, amber, or red’, which would help immediately allocate capital away from certain sectors - to much more complex. New taxonomies have been put forward, but critics have suggested that this could risk a lot of inaction, as committees get stuck arguing over the exact taxonomy to use. Additionally, complex regulation tends to favour bigger financial institutions with the ability to identify loopholes, while putting a comparatively large burden on smaller, mission-driven banks.

To mitigate any systemic risks, a ‘brown-penalising factor’ must be introduced, e.g. higher capital requirements for loans carrying carbon risk, or entities that are severely reliant on fossil fuels. This would reflect the growing systemic risk of investing in carbon intensive activities, and could discourage lending that contributes to climate change. It would also give banks a buffer to withstand carbon bubble related losses and the repricing of stranded assets. There isn’t currently any clear regulatory mechanism that would deflate the carbon bubble. So it was disappointing that during the development of The EU Sustainable Finance Action Plan there was a significant amount of resistance to a brown penalising factor, and much more support for a green supporting factor. A green supporting factor would mean banks have to hold less capital against loans to green markets, but critics say this would actually be a bad thing, as it promotes financial instability and greeningwash. It’s clear that the
industry is putting up significant resistance to having to hold increased capital against lending to carbon intensive activity. Unless there is progress on the regulatory side of climate risk, then the impact of disclosure will be too limited.

3 — Driving investment for the green transition

Monetary policy
A key battleground in the fight for greener central banking has been corporate bond purchases: as part of central banks’ quantitative easing (QE) programmes, corporate bonds have been purchased from the market. Studies have shown that a disproportionately high amount have been bought from fossil fuel companies such as Shell and BP. The Bank of England has defended these purchases arguing that they have to be ‘market neutral’, and it just so happens that fossil fuel companies fulfil the criteria. A recent study2 shows that the ECB invests more than 110 billion euros (about 63% of the program) towards the four most carbon-intensive sectors (fossil fuel extraction and distribution, the automotive sector, the most energy-intensive industries, and electricity generation).

Monetary policy is not market neutral. Since the crash, QE has been shown to have real distributive effects by increasing wealth inequality3. Additionally, using their own reasoning of market neutrality, the purchase of any corporate bonds by central banks shouldn’t be undertaken because it moves into the realm of picking winners, which is fiscal policy. Putting that aside, purchasing the most bonds in high-carbon sectors seems at odds with speeches Mark Carney has been making about climate change4. Civil society has exploited this inconsistency repeatedly and finally in April 2019 the Bank of England announced it would be undertaking its own climate risk assessment. That won’t be completed until 2020, but the hope is that this will result in them being forced to review and change the criteria used for selecting their corporate bond purchases.

Green QE
Since both the inception of the Green New Deal and start of QE in the UK there has been a proposal of Green QE: as we are already using the Bank of England’s power to create money as a response to a recession through a programme of QE, the new money should be directed into the green economy in the form of purchasing green bonds — those that use more renewable energy, transport and heating infrastructure to clean, renewable, and sustainable systems. Though there have been a number of proposals on the table, none have been picked up. This is primarily due to the fact that the status quo around the conversation on monetary policy has not shifted significantly.

QE policy should have meant breaking the taboo that central banks can create money (on vast scales), and therefore triggered a debate on how the monetary system works, and whether its current design is fit for purpose. Despite significant efforts, this discussion is yet to hit the mainstream, and the orthodoxy around current monetary policy shouldn’t be underestimated. There have been countless critiques of QE from all sides, including academia5, civil society6 and the finance industry, but central banks still push back with the same assertion that QE was a market neutral undertaking and is not at odds with their mandate. They state that Green QE, however, would be. Part of the frustration with this argument is that this debate is situated within a larger debate on macroeconomics, and the flaws in the Financial Policy Committee (FPC) oversight of the crash. Encouragingly there is a growing debate about what new banking institutions are needed for a GND (see Greening the UK financial system chapter).

Additionally, the UK is a laggard in terms of issuing public debt tied to green investment (sovereign green bonds) - it is well behind France and the US. This reluctance is tied to its conservative approach to banking and government debt. The UK government privatised the Green Investment Bank, a perfect institution for issuing green bonds, and has peddled an economic myth that government debt hurts growth7. The UK government could easily start issuing a green sovereign bond, and Green QE could also involve purchasing such bonds on the secondary market.

Reforming the Bank of England’s Mandate
The arguments claiming that a greener central bank should be directed towards the green economy in the form of purchasing green bonds should not be dismissed, and central banks would need to learn how to adapt the Monetary Policy Committee (MPC) decision-making process to incorporate the macroeconomic impact of the climate crisis. In light of this review, the Chancellor of the Exchequer should update the remit for the MPC to require that its decisions take account of (and effectively communicate) the links and potential trade-offs between climate sustainability and price stability.

The Bank of England isn’t the only central bank which has been willing to talk climate risk but not take the implications of this discussion to their conclusion - mandate update. In a recent paper of 133 central banks reviewed, only 12% had a sustainability mandate. “Often it is more talked about than action when it comes to central banks and climate change, but with only a decade to transition our economy in the face of climate change, this complacency cannot continue.

Credit policy
The main driver of the 2008 global financial crisis was the build up of debt and credit by the private sector with banks lending unprecedented amounts to property and financial markets. Due to this lending dynamic, the UK economy is skewed towards an oversized financial sector and prone to property bubbles. After the crash this problem was, to an extent, identified by politicians as needing to change, with a need to ‘rebalance the economy’8. However despite the rhetoric, policies have not delivered, and net lending to SMEs and the green economy has not increased. The lending profile of banks is essentially unchanged9, with the vast majority still flowing into property and financial markets.

The era of financial deregulation that started in the 1980s followed by central bank independence in the 90s has seen finance ministries relinquish responsibility of social and economic outcomes of the financial sector. Following the crash, reform has focused on the management of an inherently risky system, instead of reforming the system so it works in a more beneficial way for wider society. The consequence is that both types of institution seek to pass the blame for adverse economic and social outcomes to the other: the Treasury claims that monetary policy,
and more recently financial stability, is and should remain outside of its control, while the Bank refuses to engage on issues outside its mandate. Because of this, the UK’s economic policy framework lacks a full appreciation of the importance of the distribution of credit in the economy. The Bank of England has several levers which influence where credit is allocated, such as its collateral framework and refinancing operations. Because of its mandate, it is unable to align these levers with broader social and economic objectives. The Treasury ignores the question of where credit is distributed, because the tools to influence it sit under the control of the Bank of England. However, bank lending and systemic factors within the money and banking system are a source of endemic financial instability, economic stagnation, and inequality. Delivering a Green New Deal requires the central banks’ role be updated to include addressing these issues.

Credit guidance, where the central bank uses its power to direct credit into different parts of the economy, is gaining support among economists. Credit guidance used to be common practice where banks had to lend to non-financial, productive firms in the economy. A sustainable Bank of England must be able to use its power to increase lending into green and sustainable productive sectors of the economy.

The wider financial system

Central banks and the banks they regulate are part of a wider complex financial system including pension funds, insurance companies, credit ratings agencies, hedge funds, shadow banks and plenty of other actors. The good news is that central banks have a lot of clout and influence with the rest of the financial sector: as academics have pointed out, the important role central banks play is key in ‘leading by example’, by ‘signalling’ and using their ‘narrative power’ to shape the agenda and help close the vacuum of leadership in this area. The less good news is the financial system is huge, powerful, and complex. Proposals include the need to delist companies from the UK Stock Exchange that are failing to tackle climate change, as put forward by the Labour Party; the need for regulators to better understand and regulate shadow banking and shadow money; and the need for pension funds and asset managers to divest in fossil fuels, and invest in green and sustainable parts of the economy.

4 Conclusion

The climate risk discussion has been an important step forward in the debate of how we get the huge global financial sector to wake up to climate change. Putting climate change in a language that the financial sector understands has allowed us to open and accelerate the debate, and identified some pioneers that clearly want to lead the decarbonisation of the financial sector.

However, getting to where we need to go in the next decade requires a step change in action that few people have really envisioned. Closing the green investment gap requires finance to be directed from the private and public sector. As powerful public institutions underpinning the financial system, central banks must have their mandates and toolkits updated to ensure a transition to a low carbon economy. A Green Bank of England is a key step towards a Green New Deal.

Footnotes
- Konstantin Bikas, "How Has Bank Lending Fared Since the Crisis?", June 2018
- Environment Agency, “The costs and impacts of the winter 2013 to 2014 floods”, February 2016, SC140025/R1
- Chunka Mui, “PG&E is Just the First of Many Climate Change Bankruptcies”, January 2019
- Mainstreaming Climate, accessed June 2019
- Carbon Accounting, accessed June 2019
- Alison Kirsch et al, “Banking on Climate Change”, 2019
- Task Force on Climate-Related Financial Disclosures, accessed June 2019
- Stanislas Jourdan & Wojtek Kalinowski, “Aligning Monetary Policy with EU Climate Targets”, April 2019
- Mark Carney, “A New Horizon”, speech at European Commission Conference, March 2019
- Pierre Monnin, “Monetary Policy and Macropudential Regulation and Inequality”, April 2017
- Positive Money, accessed June 2019
- BBC.co.uk, accessed June 2019
- Bikas, “Bank Lending”
- Josh Ryan-Collins, “Should Credit Be Guided”, January 2019
- Dirk Bezemer et al, “Credit where it’s due”, December 2018
- Larry Elliott & Richard Partington, “Labour weighs up delisting UK firms if they fail to fight climate change”, The Guardian, 10 May 2019
2.4 Greening the UK Financial System

Maria Nikolaidi

1— Introduction

The decarbonisation of the UK economy is now more urgent than ever. This transition will require a significant amount of large-scale investments in low-carbon infrastructure, energy efficiency and green technologies. One of the main aims of a Green New Deal will be to promote such investments.

But how will these investments be financed? Clearly, public finance will play a key role. Both tax revenues and debt finance need to be used in order to fund the transition to a low-carbon economy. However, public finance will not be enough. Private finance will also be very important. This means that the financial system needs to be radically reshaped in order to support these investments and to lead, at the same time, to a rapid reduction in those activities that increase carbon emissions.

There are at least two reasons why a radical transformation of the UK financial system is necessary. First, the amount of funding that the financial system provides to ‘green’ projects is negligible. There are some initiatives by banks, including UK ones, which intend to support green lending. However, this lending is still extremely low.

Second, and most importantly, the current financial system is excessively ‘brown’. The big banks finance a significant number of carbon-intensive projects. For example, Barclays is one of those UK banks that has funnelled a lot of money to fossil fuels. During the 2016-2018 period this amount of money was equal to £85 billion. In addition, it has been shown that the corporate quantitative easing (QE) programme that the Bank of England has implemented over the last years has supported much more those sectors that have a higher contribution to the generation of greenhouse gas emissions rather than those that are less environmentally harmful. Finally, the existing banking system provides a large amount of consumer loans. Many of these loans are used in order to buy consumer goods that are carbon- and energy-intensive. In this way banks enhance our unsustainable way of living.

So, the current financial system is not fit for purpose. How can it be transformed in order to support a Green New Deal? I set out below four broad proposals that could make the UK financial system greener.

2— Proposal 1: Developing and supporting green banks

The UK banking is largely oligopolistic. A small number of banks dominate the sector, such as HSBC, Barclays, RBS and Standard Chartered. An implication of that is that too much power has been concentrated in the hands of too few bankers. Although these banks have an incentive to represent themselves as ‘sustainable’, this is not enough to induce them to have a strong commitment to support massively green projects and reduce drastically the amount of fossil fuel and other carbon-intensive projects that they support.

But one large Green Investment Bank will not be enough. In order to deal better with the different needs of each UK region, a strong network of regional green banks needs to be developed. The Green Investment Bank could support these banks, for example, by channeling to them part of the funding that it can raise in capital markets, as KfW does in Germany.

The re-development of the Green Investment Bank could draw on the experience of other green investment banks, like Kreditanstalt fuer Wiederaufbau (KfW). KfW is a public green investment bank in Germany that has played a key role in low-carbon energy financing. KfW is able to provide a large amount of green funding at a low cost not only because it receives public subsidies, but also because the bonds that it issues, which are bought by both domestic and international investors, are guaranteed by the government. KfW also has a commitment to provide lending to small and medium enterprises (SMEs) that are willing to support green energy projects.

But these banks are too driven by their goal to increase steadily their profits.

There is thus an urgent need to develop and support banks that have explicit ‘green’ targets. The development of such banks would not only have a substantial contribution to the financing of the low-carbon transition. It would also put more pressure on the big banks to go greener and it would potentially reduce the oligopolistic features of the UK banking system.

For the UK, a first step in this direction would be to radically redefine the role of the Green Investment Bank. This bank was founded in 2012. Despite the fact that it was initially public, it was sold to the Macquarie Group in April 2017. This has significantly reduced its capacity to play a strategic role in supporting the shift to a low-carbon economy in the UK.

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is based in the Netherlands, but it also operates in the UK. Triodos funds exclusively green projects that are socially responsible. One way for the government to support banks like Triodos would be to provide tax credit incentives to those that invest in the financial products of those banks.

3 — Proposal 2: Greening the Bank of England’s monetary policy

Over the last few years, the Bank of England and other central banks around the globe have implemented QE programmes. Via these programmes they have bought a large amount of government and corporate bonds. By buying these bonds they have reduced their yields, as well as the interest rate of other financial assets. The overall aim has been to stimulate economic activity, bringing inflation closer to the target of 2%.

However, as mentioned above, research has shown that the corporate QE programme implemented by the Bank of England has favoured those sectors that contribute more to the generation of greenhouse gas emissions. Therefore, instead of continuing implementing a QE based on the existing criteria, the Bank of England could alternatively buy only green bonds via a green QE programme. In this way it could lower the cost of funding of those green projects that rely on bond finance.

Research has shown that if a green QE programme was to be implemented around the world, global warming could be reduced. The Bank of England could play a leading role in this area by becoming the first central bank to implement a green QE programme. In this way it could lower the cost of funding of those green projects that rely on bond finance.

How could the collateral framework be aligned with climate change? One way would be to introduce climate-related criteria for the assets that can serve as collateral. For example, loans or securities that are linked with projects that generate a large amount of greenhouse gas emissions could be excluded from the collateral framework. In addition, the Bank of England could include in this framework more assets that are related with projects on energy efficiency and renewables.

Additionally, the Bank of England could adjust haircuts depending on the climate impact of each asset: haircuts on green assets could go down and haircuts on brown assets could go up. By doing so, the demand for green assets by banks could increase and the demand for brown assets could decline. This would benefit the financing of the low-carbon transition.

Interestingly, the Bank of England has recently announced that they intend to disclose the way that they manage risks that have to do with climate change. Although this is a step in the right direction, we are still very far from the implementation of a green QE or the development of a climate-aligned collateral framework.

4 — Proposal 3: Greening financial regulation

An important aspect of financial regulation refers to the amount of capital that banks need to hold in order to deal with financial distress. The higher the amount of capital that a bank keeps, for a given level of risk, the safer it is considered to be since capital can be used to absorb losses in the case of loan defaults. However, banks typically avoid holding a large amount of capital since this can reduce the return on investment for their shareholders. This is why financial regulators step in and require that banks hold capital based on the riskiness of their assets.

How could capital requirements become greener? There are two ways for this to happen. First, banks could be asked to hold less capital against green loans. This is called the ‘green supporting factor’. Such an adjustment of capital requirements could potentially make banks provide more green loans to the economy. However, asking banks to hold less capital could undermine financial stability.

Second, financial regulators could impose higher capital requirements for brown loans. This is the so-called ‘brown penalising factor’. Such requirements would reduce the finance that banks provide to high-carbon projects. It could also make them reallocate loans towards green projects. However, an abrupt implementation of the ‘brown penalising factor’ could reduce economic activity substantially since brown activities and sectors consist a large part of our carbon-based economy.

Both of these forms of green differentiated capital requirements could potentially reduce greenhouse gas emissions and thus global warming. So, despite the fact that they might have some potential adverse side effects that should be carefully analysed, they can be used as tools to promote the low-carbon transition.

However, none of these suggestions can be implemented without having a clear taxonomy on what constitutes a green and a brown asset. Such a taxonomy would also be extremely useful for the implementation of the green monetary policy measures mentioned above. The European Commission has recently worked on the development of a green taxonomy. UK financial regulators could benefit from this. However, policy makers have not yet clearly supported the development of a brown taxonomy, which is equally essential and urgent.

5 — Proposal 4: Making climate-related financial disclosures mandatory

Climate change is very likely to have an adverse impact on financial stability. First, it can make events like droughts, floods and hurricanes more frequent and more severe. These events can destroy physical capital, such as factories and houses, reducing the ability of households and firms to repay their debt. This in turn could affect the balance sheet of banks, if the risks are uninsured, or the balance sheet of insurance companies, if
the risks are insured. These are the so-called ‘physical risks’.

Second, the implementation of climate policies, the change in investors’ or consumers’ sentiments or new technologies could cause an abrupt reallocation of funds from brown assets to green assets. Such a reallocation could decrease the price of brown stocks and bonds and could cause defaults on brown loans. In that case, the balance sheet of the financial institutions that hold brown assets would be adversely affected. These are the so-called ‘transition risks’.

But such a transformation is a very challenging task. Implementing the proposals outlined above will require a radical rethinking of the role of the government, the Bank of England and the financial institutions in a world in which environmental breakdown is more likely than ever in human history. It will also require the coordination of many think tanks, academics and different types of stakeholders. We should be ready to take up the challenge.

The development of climate stress test methodologies by academics could also contribute to the establishment of mandatory climate-related financial disclosures. Although these methodologies are at an early stage and there are various challenges that need to be addressed, it is expected that they will significantly improve over the next years. Policy makers should be ready to take up the challenge of asking financial companies to implement such methodologies. The Bank of England has started working in this direction, but these efforts need to be intensified. Moreover, some banks have conducted some kind of environmental stress tests but the majority of them are not assessing the climate risks that they might face.

6— Reshaping finance as a key element of a Green New Deal

A Green New Deal will not be sufficiently effective if the financial system does not undergo a radical green transformation. Redirecting credit and funds from brown activities towards green ones will significantly facilitate the transition to a low-carbon economy. It will also accelerate the reduction of greenhouse gas emissions, which is so urgently needed in order to keep global warming close to 2 degrees and prevent a ‘Hothouse Earth’ future.

Such transformations have already started. In 2017 the Task Force on Climate related Financial Disclosures (TCFD) was established. TCFD, which has been actively supported by the Bank of England, intends to develop methodologies that will allow financial companies to consistently disclose climate-related risks. However, their approach is that this should be done on a voluntary basis. This is not enough. The disclosure of climate-related financial risks should be mandatory.

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