

Greening the Bank of England COVID-19 QE programme

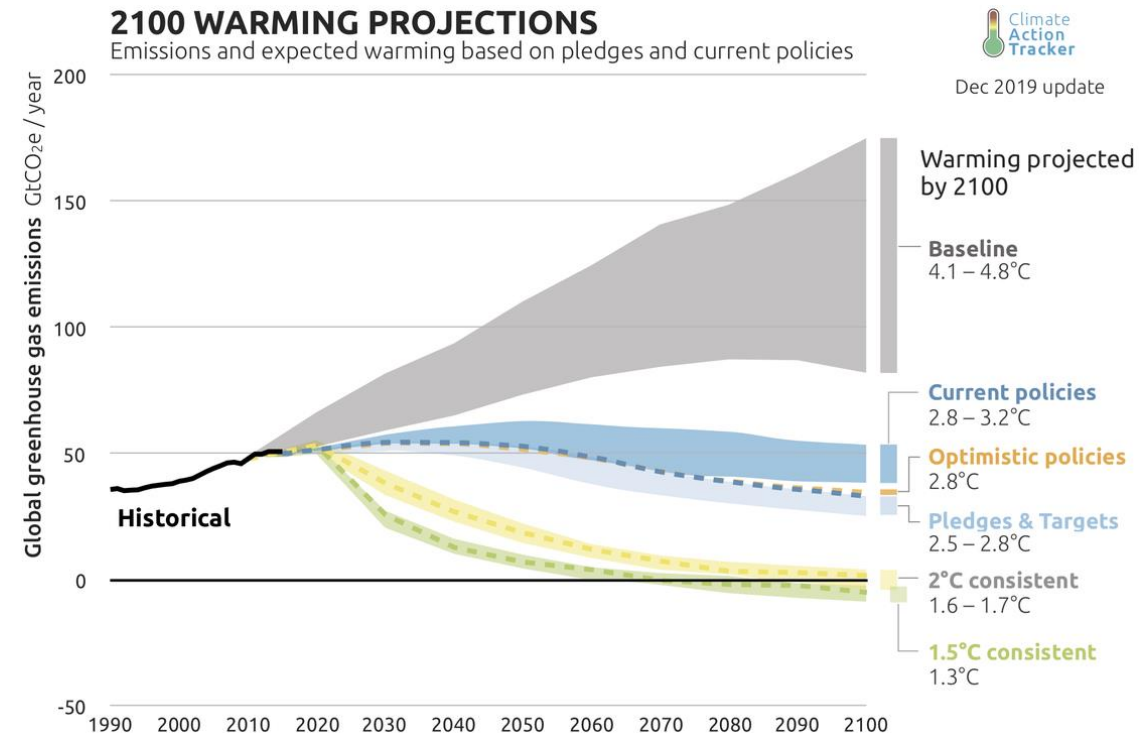
Maria Nikolaidi, University of Greenwich

GPERC/PEGFA Webinar Series, 18 June 2020



1. COVID-19 and the climate crisis

- Despite the recent reduction in greenhouse gas emissions due to COVID-19, we are still on a path of **3°C** or **4°C global warming** by the end of this century.
- In order to achieve the targets of the **Paris Agreement**, the reduction in emissions in the next few years should be extremely rapid.



Source: Climate Action Tracker, <https://climateactiontracker.org/global/temperatures/>

1. COVID-19 and the climate crisis

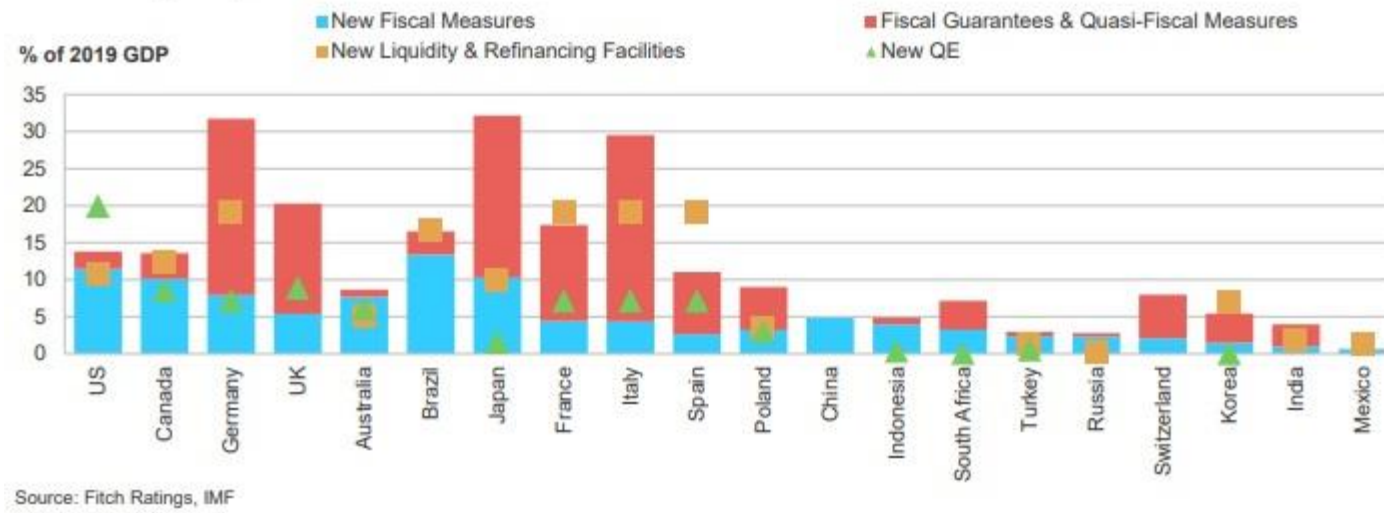
What is the current stance of **climate policies**?

- Over the last months many **fiscal and monetary policies** have been implemented due to COVID-19. However, in most cases these policies have disproportionally supported carbon-intensive sectors without imposing **environmental conditionalities**.
- There is no credible plan for the implementation of Paris Agreement-aligned climate policies during the **recovery period**. The European Green Deal is one plan, but is not ambitious enough.

1. COVID-19 and the climate crisis

- So far, the aggregate direct fiscal stimulus measures correspond to USD 5 trillion (7.1% of 2019 GDP).
- This outweighs the scale after the **global financial crisis**, when the advanced economies undertook a fiscal easing of 3% to 4% of GDP.

Macro Policy Response - Fitch 20



1. COVID-19 and the climate crisis

- An example of a COVID-19 monetary policy measure is the Bank of England corporate **Quantitative Easing (QE)** programme.
- In March 2020 the Bank of England (BoE) announced a £200bn expansion of a bond-buying programme QE programme due to **COVID-19**.
- As part of this expansion, the BoE is now increasing by **£10 billion the sterling non-financial corporate bonds that it holds**, taking the stock of purchased corporate bonds under its Corporate Bond Purchase Scheme (CBPS) to £20 billion.
- The aim of the QE programme is to reduce the interest rate on corporate bonds, allowing firms to undertake investment at a **lower cost**.

1. COVID-19 and the climate crisis

- Three **questions**:
 1. Is there a carbon bias in the BoE QE?
 2. How can the current corporate QE programme become greener?
 3. Is the greening of monetary policy sufficient?

2. The carbon bias of the BoE QE

- The BoE determines a **list of eligible bonds** by looking at the universe of the sterling non-financial corporate bonds and applying specific criteria.
- The BoE **criteria** are primarily the following:
 1. The bond should have been issued in **sterling** by **non-banks**
 2. The residual **maturity** of the bond should be at least 3 months and the bond should have been issued at least one month before the Bank of England list of eligible bonds was published
 3. The bond is rated **investment grade**
 4. The amount in issue is at least **£100 million**
 5. The issuer of the bond should have a material contribution to the UK economy

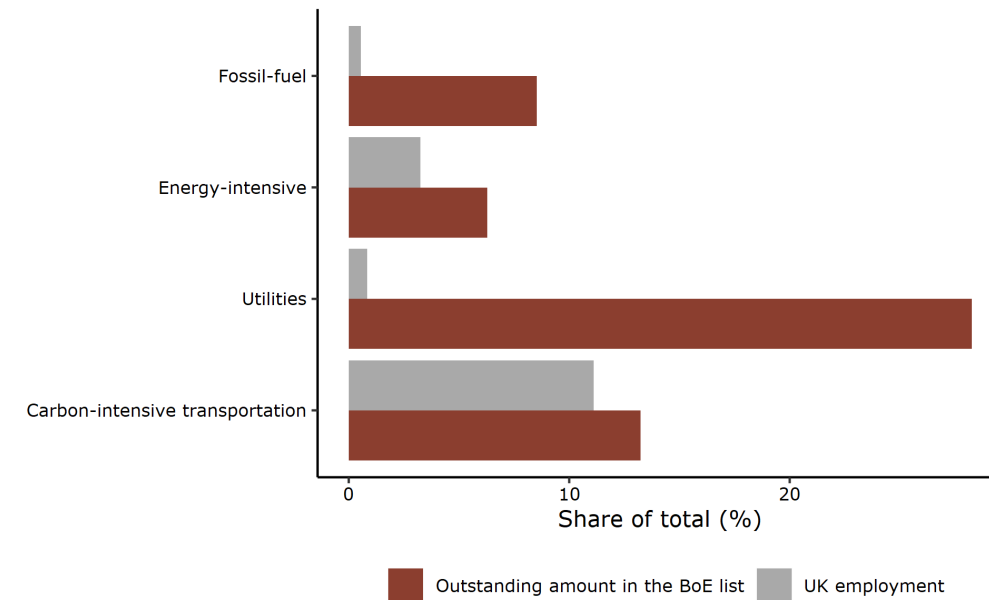
2. The carbon bias of the BoE QE

- The **BoE list of eligible bonds**, that was announced on the 4 June 2020, has an outstanding amount of £148bn and consists of 382 bonds.
- The first column of the table on the right shows the **outstanding amount of corporate bonds** that are included in the BoE list.
- Sectors with a high contribution to emissions are **over-represented** in the BoE list.
- This is in line with the findings of Matikainen et al. (2017) who have investigated the carbon bias of the initial round of the Bank of England corporate QE.

NACE code	Sector	BoE eligible bonds by amount outstanding (%)	Contribution to UK employment (%)	Contribution to UK GVA (%)	Contribution to UK GHG emissions (%)
A	Agriculture, forestry and fishing	0.1	1.2	0.6	12.3
B	Mining and quarrying	0.4	0.2	0.8	5.9
C	Manufacturing	24.9	8.0	10.3	19.7
D	Electricity, gas, steam and air conditioning supply	23.8	0.4	1.7	19.6
E	Water supply; sewerage, waste management and remediation activities	9.9	0.6	1.4	5.9
F	Construction	3.1	7.2	6.3	3.3
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	5.0	14.7	10.8	4.3
H	Transportation and storage	4.5	4.7	4.0	21.8
I	Accommodation and food service activities	0.5	6.6	2.7	0.9
J	Information and communication	12.7	4.5	6.6	0.4
K	Financial and insurance activities	0.3	3.3	7.1	0.0
L	Real estate activities	4.7	1.7	13.8	0.2
M	Professional, scientific and technical activities	2.3	8.0	7.7	0.6
N	Administrative and support service activities	3.8	8.4	5.0	0.9
O	Public administration and defence; compulsory social security	0.0	4.2	4.6	1.3
P	Education	1.3	8.3	5.8	0.7
Q	Human health and social work activities	2.0	12.4	7.4	1.6
R	Arts, entertainment and recreation	0.0	2.8	1.5	0.4
S	Other service activities	0.6	2.6	1.5	0.0
T	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	0.0	0.2	0.3	0.0
		100.0	100.0	100.0	100.0

2. The carbon bias of the BoE QE

- Using a more granular approach to carbon intensive sectors, we **further confirm the carbon bias** of the BoE list of eligible bonds (see the figure).
- We identified four **carbon intensive sectors** based on the 4-digit NACE classification of Battiston et al., 2017, Battiston and Monasterolo, 2019, Alessi et al., 2019):
 1. fossil-fuel sectors
 2. energy-intensive sectors
 3. utilities
 4. carbon-intensive transportation
- The carbon-intensive sectors comprise approximately **56%** of the value of the bonds that are part of the BoE list despite the fact that their employment share is only **16%**.



Source: Dafermos, Gabor, Nikolaidi and van Lerven (forthcoming)

2. The carbon bias of the BoE QE

- What is the **source** of the carbon bias?
- To investigate that, we downloaded data for the **universe of corporate bonds** from Thomson Reuters Eikon by applying the BoE criteria.
- The **carbon bias** already exists in the universe of bonds, but it **becomes higher** as the eligibility criteria are applied.

Sector	1: All sterling non-financial corporate bonds (%)	2: (1)+eligible maturity (%)	3: (2)+investment grade (%)	4: (3)+eligible amount in issue (%)	BoE list (%)
Fossil-fuel	3.8	4.1	5.1	5.0	8.5
Energy-intensive	3.4	3.5	4.1	4.2	6.3
Utilities	12.4	12.6	16.2	15.6	28.3
Carbon-intensive transportation	9.0	9.3	10.1	10.1	13.2
Non carbon-intensive sectors	71.5	70.5	64.5	65.1	43.7
Total	100.0	100.0	100.0	100.0	100.0

Source: Dafermos, Gabor, Nikolaidi and van Lerven (forthcoming)

3. How can the BoE QE become greener

- In order to decarbonise the BoE list, we remove bonds of carbon-intensive sectors and add green bonds and bonds issued by companies that are potentially 'green' or are at least not carbon-intensive.
- **Green bonds** are any type of bond instrument where the proceeds are exclusively used to fund green projects, such as projects related with renewables, energy efficiency and climate change adaptation. Thomson Reuters Eikon identifies which bonds are green.
- **'Potentially green'** sectors are identified using the recently developed EU Taxonomy.

3. How can the BoE QE become greener?

- The **EU Taxonomy** makes a distinction between three different types of mitigation activities:
 1. Already low-carbon
 2. Transition
 3. Enabling
- **NACE 4-digit** codes are provided for these activities. A company that (i) belongs to these NACE sectors and (ii) meets some screening criteria, is taxonomy eligible.
- In our analysis, we identify as **potentially green** all those EU Taxonomy sectors that are not carbon-intensive.

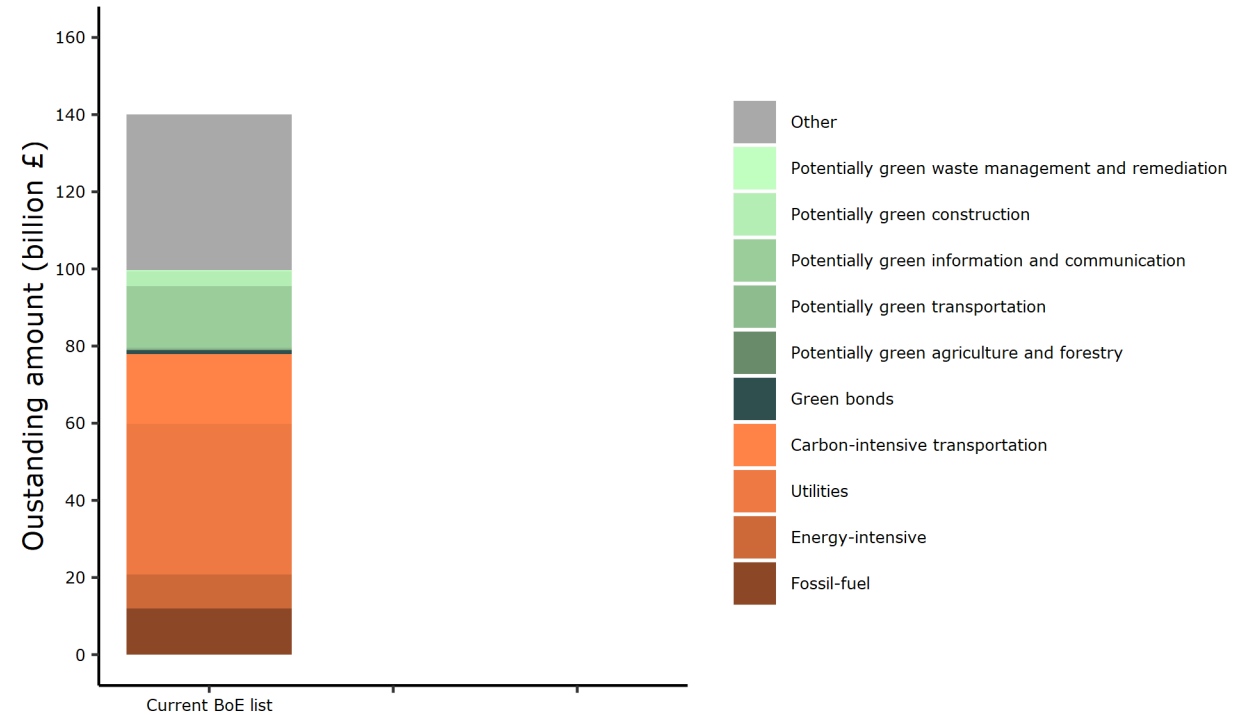
EU taxonomy for sustainable finance

Type of activity	Technical screening criteria	Examples
1) Activities that are already low carbon. Already compatible with a 2050 net zero carbon economy	Likely to be stable and long-term	• Zero emissions transport • Near to zero carbon electricity generation • Afforestation
2) Activities that contribute to a transition to a zero net emissions economy in 2050 but are not currently operating at that level.	Likely to be subject to regular revision, tending towards zero emissions.	• Building renovation; • Electricity generation <100g CO₂/kWh • Cars <50g CO₂/km
3) Activities that enable those above.	Likely to be stable and long-term (if enabling activities that are already low carbon) or subject to regular revision tending to zero (if enabling activities that contribute to transition but are not yet operating at this level).	• Manufacture of wind turbines • Installing efficient boilers in buildings

Source: European Commission (2019), https://ec.europa.eu/info/files/190618-sustainable-finance-teg-report-taxonomy_en

3. How can the BoE QE become greener?

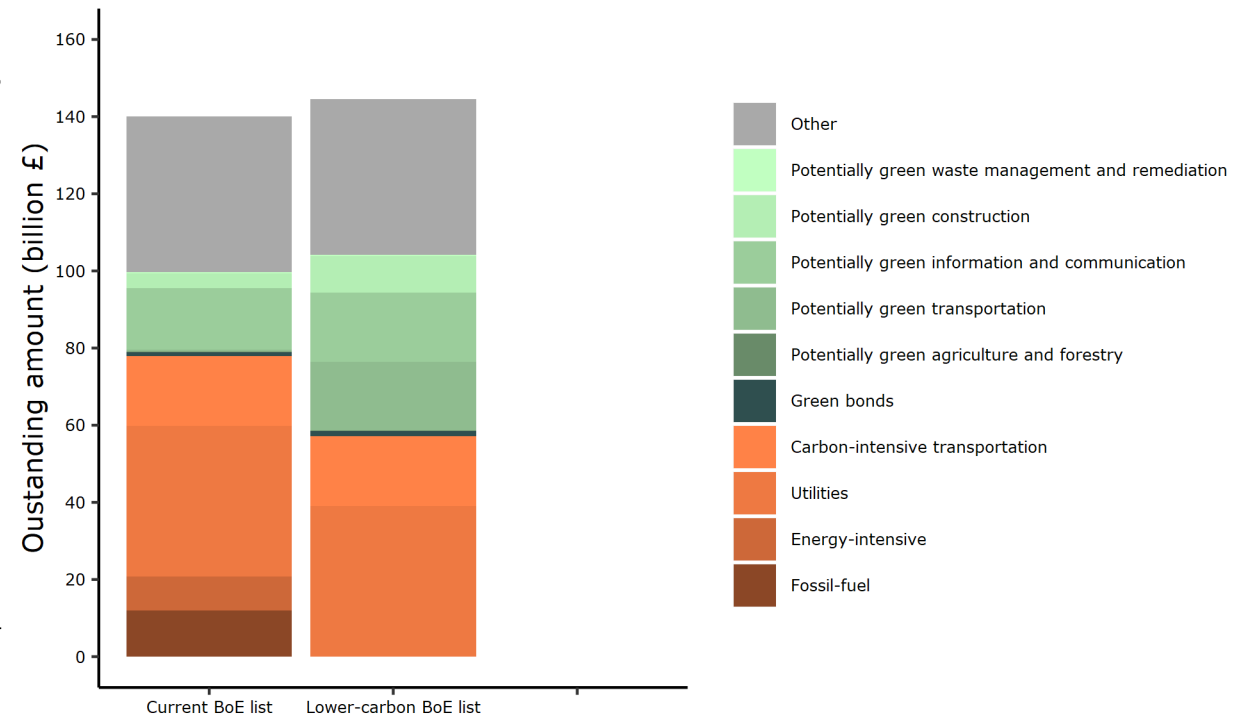
- The **current BoE list** includes 48 bonds issued by potentially green sectors and 3 green bonds (see the figure). This corresponds to about 15.5% of the outstanding amount of bonds corresponds to green bonds and potentially green sectors.
- Note that the number of bonds that we analyse are slightly lower than those included in the BoE list, since for some bond issuers we lack data about the NACE 4-digit sector that they belong to.



Source: Dafermos, Gabor, Nikolaidi and van Lerven (forthcoming)

3. How can the BoE QE become greener?

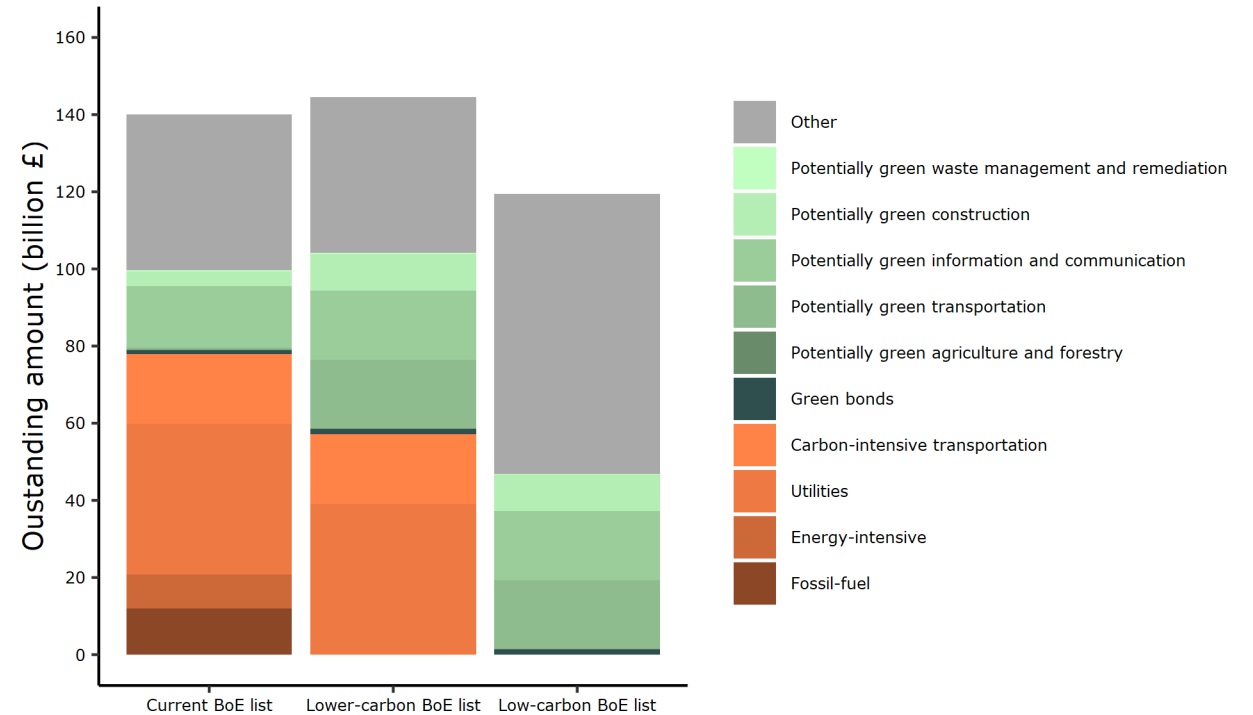
- In order to decarbonise the BoE list of eligible bonds, we first **remove bonds** issued by fossil-fuel and energy-intensive sectors.
- We **replace** them with (i) green bonds and (ii) bonds issued by companies that belong to what we call ‘potentially green’ sectors and have at the same time a relatively low emission intensity.
- In our **lower-carbon BoE list**, the carbon-intensive sectors correspond to 40% of the outstanding amount instead of 56%.
- The proportion of green bonds and bonds issued by potentially green sectors has increased from 15.5% to 32%.



Source: Dafermos, Gabor, Nikolaidi and van Lerven (forthcoming)

3. How can the BoE QE become greener?

- Our greener BoE list is only partially decarbonised.
- In our **low-carbon BoE list** we have also **excluded** bonds issued both by utilities and carbon-intensive transportation.
- We **replace** these bonds with bonds issued by ‘other’ companies that do not belong to the carbon-intensive sectors (e.g. hospitals, restaurants, universities).
- The outstanding amount of bonds declines slightly compared to the current BoE list (£120bn vs £140bn).



Source: Dafermos, Gabor, Nikolaidi and van Lerven (forthcoming)

3. How can the BoE QE become greener?

Issues for further investigation:

- Our analysis relies on a greenness/brownness using primarily the NACE 4-digit sectors. There is a need for more detailed **data** about greenness/brownness.
- How can the climate **transition risks** be captured in asset purchases?
- What would be the impact of the greening of QE on **carbon emissions**?

We intend to look into these issues as part of our ClimateWorks Foundation – INSPIRE project on ‘Climate change and central bank asset purchases’.

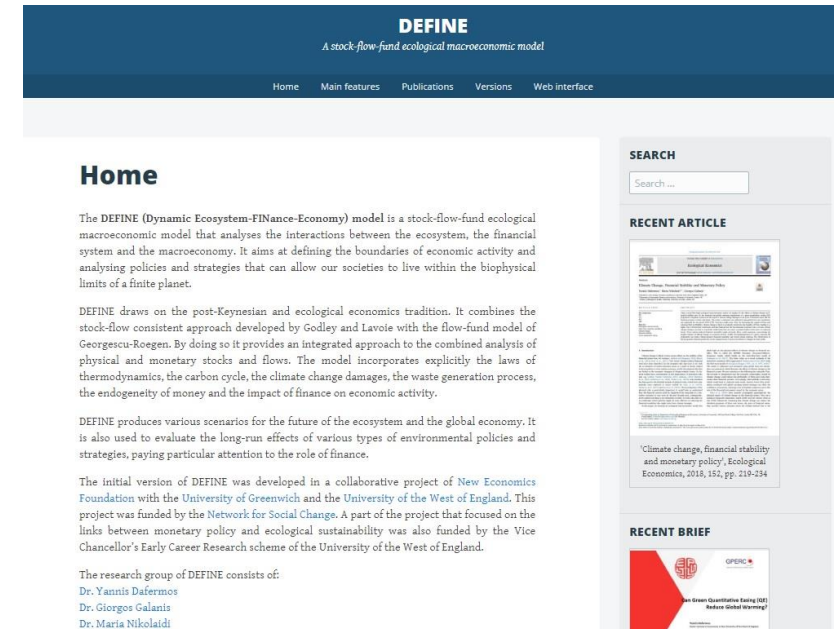
4. Is the greening of monetary policy enough?

There are additional monetary policy initiatives that can contribute to the transition to a low-carbon economy.

- First, apart from changing the structure of the existing QE programme, central banks also consider the possibility of running a **separate permanent corporate QE programme** that will have as an aim to support green bonds on a secular basis. Such a programme could support the expansion of the green bond market.
- Second, central banks could green their **collateral frameworks** which determine the way that bank use collateral to get liquidity from central banks.
- Third, central banks can green their corporate funding facility programmes and their longer-term liquidity facilities (e.g. TLTROs).

4. Is the greening of monetary policy enough?

- However, green monetary policies are not sufficient to ensure the transition to a low-carbon economy.
- Fiscal policies have a stronger and more substantial role to play for achieving such a transition quickly.
- There are various forms of **green fiscal policies** that can reduce global warming more than green monetary policies (see e.g. Dafermos and Nikolaidi, 2019). Some examples:
 1. Carbon taxes
 2. Green subsidies
 3. Green public investment
- **Green industrial policies** and changes in **consumption patterns** have also a very important role to play in achieving the low-carbon transition.



www.define-model.org

References and next PEGFA/GPERC webinar

Forthcoming NEF brief:

- Dafermos, Y., Gabor, D., Nikolaidi, M. and van Lerven, F. (2020). Decarbonising the Bank of England pandemic QE: perfectly sensible?

Next PEGFA/GPERC webinar

- Monday, June 22
- Title: Cooperatives: democracy, equality, and efficiency
- Dr Adotey Bing-Pappoe is a lecturer in International Business and Economics at the University of Greenwich
- Bio: Dr Adotey Bing-Pappoe is an expert in cooperatives. He is current Secretary of the African Cooperative Union and is leading on the credit union initiative. He has previously worked as an economist in Zambia, edited reference books on Africa, and been director of the Africa Centre, London.





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